Appendix 1-E

2010 Laboratory Data *(on compact disc)*

Appendix 1-E1

2010 Overall Quality Control Assessment

Appendix 1-E1
2010 Overall Quality Control Assessment

1.1 Introduction and Executive Summary

The analytical data generated during the 2010 Phase 1 RCRA Facility Investigation (RFI), Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 by Columbia Analytical Services, Inc. (CAS), ACZ Laboratories, Inc. (ACZ) and ALS Laboratory Group (ALS) were reviewed and validated in conformance with of the Quality Assurance Project Plan (QAPP, Barr, March 2009).

This Quality Control (QC) assessment is divided into two major sections following this introduction. Section 4.2 provides the QC assessment for the chemical analysis performed by the laboratories. Section 4.3 provides the QC assessment for the field sampling procedures.

The QC assessment of the soil and groundwater sample analytical data collected for the 2010 Phase 1 RFI, Rhodia Silver Bow Plant, demonstrate compliance with the data quality objectives in the QAPP. The analytical results have been validated and determined useable as qualified in the data summary tables and associated databases.

The QC assessment of the field sampling procedures and data demonstrate compliance with the data quality objectives in the QAPP and the Phase I RFI Workplan (Barr, 2009). The field sampling procedures were appropriate. No introduction of contamination or negative effects on sample representativeness was observed.

1.2 Laboratory Analyses

Columbia Analytical Services Inc. (CAS) located in Kelso, Washington conducted the physical preparation and chemical analyses of the analytical samples requiring polychlorinated biphenyls (PCBs), metals, and general chemistry analyses. ACZ Laboratories, Inc. (ACZ) located in Steamboat Springs, Colorado conducted the radiological analyses, and ALS Laboratory Group (ALS) located in Salt Lake City, Utah conducted the physical preparation and analysis of the analytical samples requiring elemental phosphorus analysis by modified EPA 7580 as set forth in the QAPP.

As set forth in Section B10.3.2 of the QAPP, 10% of the analytical data were validated in accordance with U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic and Inorganic Data Review, (2005/2004) (Guidelines). Areas evaluated during the data validation process include holding times, initial and continuing instrument calibrations, surrogate and internal standard recoveries, laboratory control samples (LCS), matrix spike sample (MS) and matrix spike duplicate sample (MSD) data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. For the remaining data, the areas evaluated during the data validation process were focused to holding times, initial and continuing calibration summary data (where available), LCS, MS and MSD data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. In addition to the Guidelines, specific method criteria (SW-846) were also considered in the validation process as differences in some of the performance aspects exist between the Guidelines and the non-CLP methods used for the sample analysis. No Guidelines exist for the validation of radiological data, elemental phosphorus and general chemistry (chloride, fluoride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity,); therefore, a data quality review was performed to evaluate general conformity with the performance aspects of the individual analytical methods. As required by the United States Environmental Protection Agency (EPA), soil samples, results from the PCBs, metals, fluoride, and elemental phosphorus analyses were evaluated to the MDL. Where applicable, the PCBs, metals, fluoride, and elemental phosphorus data greater than the MDL and below the practical quantitation limit (PQL) are flagged with a "J" indicating an estimated concentration.

1.2.1 Laboratory Report Data Validation Summaries

Results from the analysis of soil and groundwater samples collected for the 2010 Phase 1 RCRA Facility Investigation, Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 are included in the following laboratory reports:

Columbia Analytical Services, Inc. Data Packages		
K1006615	K1006636	K1006676
K1006777	K1006867	K1007395
ALS Laboratory Group Data Packages		
1020002		

* ACZ Laboratories, Inc. data is contained within Columbia Analytical Services, Inc. data packages.

The individual data evaluations for the laboratory reports listed above are provided in Appendix Q-2. This assessment provides an overview of the overall quality control aspects of the project data. The data validation reports contain more specific details regarding the application of sample qualifiers assigned during the validation process. The laboratory data are considered to be usable as qualified in the data summary tables and databases.

1.2.2 Overview of Quality Control Assessment

The Data Quality Objectives of 95% completeness were achieved (Section A9.2.3 of the QAPP).

The following is a general summary of the QC assessment of the analytical results of project samples performed by CAS, ACZ and ALS. Deviations in the quality control aspects discussed in detail below are limited to those QC issues considered to be significant. Individual data evaluations provide specific results of the validation and subsequent data qualification (provided in Appendix Q-2).

The project samples were analyzed for one or more of the following parameter(s)/groups: polychlorinated biphenyl (PCB) aroclors, metals, chloride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity, fluoride, percent solids, elemental (white) phosphorus and radiological compounds as described in Tables 1-1, 1-2, 1-3, 1-4, and 1-5 of the QAPP.

No deviations to the specified methodologies published in the QAPP occurred.

The laboratories met sample holding time requirements for extraction and analysis. Although there is no published holding time for fluoride soil analysis, the fluoride data for the soil samples contained within sample delivery groups K1006636 and K1006676 are “J” qualified due to the analysis being conducted approximately five months after the samples were collected. The fluoride data associated

with the soil samples in the two sample delivery groups should be considered estimated concentrations. This is detailed within the individual data evaluations located in Appendix Q-2.

With a few exceptions, the samples were received in acceptable condition and properly labeled. Labeling discrepancies were resolved prior to sample preparation and analysis. The samples were received at the laboratories within the acceptable sample temperatures (0 to 6 degrees C).

Instrument initial and continuing calibration data generally met the acceptance criteria. Exceptions include elemental phosphorus analysis. Specific details regarding initial and continuing calibration deviations are described in the individual data evaluation.

The laboratory control sample (LCS) analyses met the relevant acceptance criteria (Section A9.2.2 of the QAPP). Following the request from EPA (via QAPP comments), MS/MSD percent recoveries [1] <30% and >150% force results to be qualified "R" unusable. The LCS spike recoveries for the 2010 soil and groundwater samples were within the EPA recommendations.

Matrix spike (MS) and matrix spike duplicate (MSD) samples were submitted at the frequency specified in the QAPP. Most of the MS/MSD sample results met acceptance criteria for percent recovery and associated relative percent difference (RPD) for each of the required analyses/target compounds (PCBs, metals, chloride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity, fluoride, percent solids, elemental phosphorus and radiological compounds). In the few instances where deviations were observed in specific samples of these matrices, acceptable LCS and LCSD (accuracy and precision) results were achieved, indicating in-control analytical systems during sample analysis. Following the request from EPA (via QAPP comments), MS/MSD percent recoveries [2] <30% and >150% force results to be qualified "R" unusable. The MS spike recoveries for the 2010 soil and groundwater samples were within the EPA

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[1] Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

[2] Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

recommendations. Minor deviations to the applicable MS/MSD laboratory criterion are discussed in detail in the individual data evaluations

Laboratory duplicate data met the relevant acceptance criteria (Section A9.2.1 of the QAPP) for precision with a few exceptions which are discussed in detail in the individual data evaluations. None of the deviations were considered significant or indicate systematic problems with the analytical processes performed.

Surrogate standards (for organic PCB analysis) met the acceptance criteria (Section A9.2.2.2 of the QAPP).

For the metals ICP analysis, interference check sample (ICS) acceptance criterion of +/-20% of the true value were met.

For the metals ICP and ICP/MS analysis, the contract required quantitation limit check standard solution (CRI) percent recoveries for chromium, iron, manganese, sodium did not meet the applicable Guideline criterion; however, no data were qualified because the CRI is not required in Method 6010 and Method 6020.

The majority of the ICP and ICPMS serial dilution data met the applicable criteria with three exceptions; the percent difference for magnesium in sample BG-9 (12-18) COMP; for beryllium and calcium in sample BG-16 (0-2) COMP; and for beryllium in sample BG-2 (2-12) COMP exceeded the laboratory acceptance limits and were qualified "J" estimated.

The ICPMS and mercury post-digestion spike data met the applicable criteria. A post-digestion spike for ICP analysis was not performed.

A minor deviation was made from the Guidelines relative to the affect of detected blank sample results on corresponding project sample results. In general, the Guidelines indicate that when sample concentrations are detected at or near the concentrations detected in the blank samples, the results should be presented as the CRQL/RL, with a corresponding "<" (less than) or U qualifier. However, the CRQLs are far greater than the final laboratory PQLs set forth in the QAPP. Therefore, when a project sample result is less than 5 times the associated blank sample concentration, the project sample result is reported with a "<" or U (EPA 2005 Organic Guidelines) qualifier.

Many target compounds were detected at very low concentrations in the laboratory method blank samples, no significant-gross-system-contamination issues were identified over the course of the analytical events. Samples impacted by blank sample concentrations have been qualified and are detailed in the individual data evaluations provided in Appendix Q-2.

1.3 Field Sampling

1.3.1 Field Sampling Quality Control

Field sampling procedures were performed in accordance with the Phase 1 RFI Work Plan (Barr, 2009).

Field quality control procedures included the collection and analysis of field duplicate samples and field blank samples to monitor the contamination introduced from improper field equipment decontamination, sample collection, sample transport, and laboratory analytical procedures. The results from the analysis of these samples demonstrate that the data are in compliance with the data quality objectives.

Sample identification techniques described in Sections A9 and B2 of the QAPP (Barr, March 2009) required the field (rinsate) blank samples be submitted to the laboratory as blind QC samples; therefore, the field blank samples were assigned a fictitious soil location name at the time of collection and their true identities were documented in the Field Logbook records. Field blank samples were collected in the following manner: The soil sampling equipment (i.e. stainless-steel bowl, and/or spoon, etc.) were rinsed with analyte-free, deionized water. The rinse water was poured into the appropriate sample containers for analysis. The data is presented in the data summary tables using the soil sample locations they were collected from along with the fictitious sample locations identified on the chain-of-custody forms.

Field sampling procedures and protocols were determined to be appropriate. As described in the QAPP, blank samples associated with the soil sampling were analyzed for corresponding sample analysis (PCBs, metals, chloride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity, fluoride, percent solids, elemental phosphorus and radiological compounds). Although several field blank samples had low levels of target analytes present below or near the MDL/PQL, no introduction of gross contamination or other adverse affects on sample representativeness were identified. The field blank sample results are summarized Appendix Q-4b and are detailed within the individual data evaluations in Appendix Q-2.

A total of four field duplicate samples were collected as specified in Section A9.3.2 of the QAPP. Precision (both field and analytical) was evaluated through a comparison of the duplicate data when both the native and duplicate sample had detected concentrations reported.

The precision was evaluated by calculating the relative percent difference (RPD) for the data pairs as follows:

$$RPD = \frac{D_1 - D_2}{(D_1 + D_2)/2} \times 100$$

Where: D_1 = concentration of sample
D_2 = concentration of duplicate sample

The RPD results for arsenic, cadmium, mercury, sodium, lead 210, radium 228, thorium 230, and uranium 234, 235 and 238 fell beyond the 40% criteria in one or more of the field duplicate pairs. However, RPD results are dependent on the heterogeneity of the samples. Higher RPDs are expected when results are at or near the PQL and do not always indicate poor precision. Data qualifiers were applied due RPD exceedences in only one case, and the data are qualified accordingly in the data summary tables. The field duplicate sample results are discussed in detail within the individual data evaluations.

Appendix 1-E2

2010 Individual Data Assessments

Data Validation Report
Laboratory Report / Batch: K1006615

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: January 26, 2011

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for metals, general chemistry, and radiochemistry analyses of the samples collected in 2010 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 340.2 modified, 6010B, 6020, 7471A; 9315 modified; modified EICHROM method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Internal standards
- Matrix spike results

The results for nine soil samples are contained in this laboratory report. The samples are identified as follows:

BG-5 (0-2) COMP	BG-5 (2-12) COMP	BG-5 (12-18) COMP
BG-9 (0-2) COMP	BG-9 (2-12) COMP	BG-9 (12-18) COMP
BG-13 (0-2) COMP	BG-13 (2-12) COMP	BG-13 (12-18) COMP

The samples were analyzed for metals (ICP/ICP/MS/mercury), general chemistry parameters (total solids and fluoride) and radiochemistry parameters (uranium 234 and 238, radium 226, lead 210, and thorium 230) as required using the methods detailed in the QAPP (Barr, March 2009).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA

quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit and below the practical quantitation limit are "J" qualified for the metals and fluoride analyses. The data qualifiers indicate estimated concentrations for the analyses. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected on June 22nd, 2010 packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 1.0 °C to 3.7 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Instrument Performance Checks – ICP/MS Tuning (ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the applicable acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for ICP/MS as required. Initial calibration verification (ICV) criterion of ±10% (of true value) for the target analytes was met during the initial calibration events.

The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient >0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of 20% of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The CCVs for the ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes' method detection limit and the

documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICPMS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury did not met the data validation criteria for frequency, run order and/or percent recovery as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s). The percent recoveries for ICP, ICPMS and mercury met the percent recovery criterion established in the Guidelines.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<"qualifier analyses with the exception of the radiochemistry analyses detailed below.

The ICP, ICP/MS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blank samples (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. Trace concentrations of beryllium, iron, manganese, and zinc were detected above the MDL in one method blank sample; however, no data were qualified because the soil sample concentrations were all greater than five times the method blank sample concentration. Although one or more target metal analytes were present in the ICBs or CCBs, their concentrations were extremely low (at or near the MDL) and do not indicate significant system contamination. No qualifiers were applied due to trace ICB or CCB concentrations.

ICP/ICP/MS Interference Check Samples (Metals Only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of ± 20% of the true value were obtained for both solution A and solution AB.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP and ICPMS serial dilutions (≤ 10 %D), between the undiluted and diluted results, where sample results are significantly greater than the MDL (>50x) with the exception of magnesium. The ICP serial dilution for magnesium for sample BG-9 (12-18) COMP exceeded the acceptance limits specified by the laboratory and the Guidelines and were "J" qualified (estimated). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (ICP/MS Analyses Only)

The ICP/MS internal standard data were acceptable. The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

Sample BG-9 (12-18) COMP served as the MS samples for the ICP, ICP/MS, and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery with the following exception. The MS percent recovery for iron for sample BG-9 (12-18) COMP served was not applicable because the associated sample concentration was greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Fluoride and Total Solids)

No Guideline criteria exist for fluoride and total solids analyses. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. Results for total solids were accepted as reported. The ICV, CCV data indicated that the laboratory and method criteria were met for fluoride. Sample BG-9 (12-18) COMP served as the MS/MSD samples for the fluoride analysis. In all but one case, the LCS and MS/MSD data indicated that the applicable laboratory and method criteria were met for the general chemistry analyses. For sample BG-9 (12-18) COMP, the MSD percent recovery did not meet the acceptable laboratory criteria; however, no data were qualified because the deviation was minor (1% below the laboratory criteria). Samples BG-9 (12-18) COMP served as the analytical batch duplicate sample for the general chemistry analyses. The analytical batch duplicate sample data indicated that the laboratory and method criteria were met for the general chemistry analyses. Trace concentrations of fluoride were present above the MDL in one or more of the method blank and CCB samples; however, no data were qualified because the blank sample concentrations were too small to have an affect on the associated project soil samples.

Radiochemistry Analysis (Lead 210, Radium 226, Thorium 230, and Uranium 234, 235 and 238)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Samples BG-10 (0-2) COMP, BG-10 (2-12) COMP, and BG-10 (12-18) COMP served as the MS samples for one or more of the radiochemistry methods. The LCS and MS data met the applicable criterion for accuracy. Samples BG-10 (0-2) COMP, BG-10 (2-12) COMP, and BG-10 (12-18) COMP served as the analytical batch duplicate samples for this data package. The replicate error ratios (RERs) met the laboratory acceptance limits for precision. One method blank sample had a detectable concentration above the practical quantitation limit (i.e. lower limit of detection (LLD) for uranium 234; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Discussion

The analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of uranium for sample BG-9 (12-18) COMP; therefore, the associated data was "J" qualified and should be considered estimated.

Data Validation Report
Laboratory Report / Batch: K1006636

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: January 26, 2011

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the metals, general chemistry, and radiochemistry analyses of the samples collected in 2010 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 340.2 modified, 340.2, 6010B, 6020, 7470A, 7471A, 9315 modified; modified EICHROM method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- ICP/ICP/MS interference check samples (Metals only)
- Laboratory control samples
- Matrix spike results
- Field blank samples

The results for six soil samples and two aqueous field blank samples are contained in this laboratory report. The samples are identified as follows:

BG-10 (0-2) COMP	BG-10 (2-12) COMP	BG-10 (12-18) COMP
BG-14 (0-2) COMP	BG-14 (2-12) COMP	BG-14 (12-18) COMP
BG-121 COMP (Field Blank)	BG-122 COMP (Field Blank)	

The samples were analyzed for metals (ICP/ICP/MS/mercury), general chemistry parameters (total solids and fluoride) and radiochemistry parameters (uranium 234 and 238, radium 226, lead 210, and thorium 230) as required using the methods detailed in the QAPP (Barr, March 2009).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different

than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit and below the practical quantitation limit are "J" qualified for the fluoride and metals analyses. The data qualifiers indicate estimated concentrations for the analyses. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected on June 3rd, 2010, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.6 °C to 6.0 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis.

Due to a miscommunication within the laboratory, the soil samples associated within this data package were extracted using the Bellack distillation procedure (EPA Method 340.1 modified) and not the distilled (DI) water distillation procedure required for the project's fluoride analysis. Following the discovery of this error, the laboratory prepared and analyzed the remaining soil samples (still refrigerated at 4 °C) for fluoride using the correct analytical method. This preparation and analysis took place on November 18th, 2010 approximately five months after the samples were collected. Although there is no published holding time for fluoride analysis of soil, the laboratory performed a small study to determine what if any effect this five month lag time had on the analytical results. This study included the reanalysis of several soil samples that were analyzed approximately five months earlier using the correct procedure, and comparing these new results with the initial data. The results indicated that there is a noticeable decrease (approximately 60% lower) in the detectable values of fluoride between the original analysis and the reanalysis. Based on this, the soil sample results for fluoride within this sample delivery group are "J" qualified and should be considered estimated based upon the results of this study. No other qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

The ICP, ICPMS and mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<"qualifier with the exception of the radiochemistry analyses detailed below.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. The ICP, ICP/MS, and mercury analyses ICB and CCBs met acceptance criteria for proper run order and the target metal analytes were less than the CRQL. Although one or more target metal analytes were present in the ICBs or CCBs, their concentrations were extremely low (at or near the MDL) and do not indicate significant system contamination. No qualifiers were applied due to trace ICB or CCB concentrations.

The method blank samples associated with the ICP, ICP/MS and mercury analytical batches were prepared and analyzed at the appropriate frequency. Trace concentrations of beryllium, iron, magnesium and zinc were detected above the MDL in the soil method blank sample; however, no data were qualified because the soil sample concentrations were all greater than five times the method blank sample concentrations. Beryllium, calcium and copper were detected above the MDL in the method blank sample associated with the aqueous batch. Since this aqueous method blank sample is only associated field blank samples BG-121 COMP and BG-122 COMP, no data were qualified based upon this method blank sample because the field blank sample concentrations are required to be presented as stated in the laboratory report for the data evaluation process.

ICP/ICP/MS Interference Check Samples (Metals Only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP and ICPMS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for ICPMS and mercury met the percent recovery criterion established in the Guidelines. The ICP CRI percent recovery for chromium, iron and sodium did not meet the acceptance limits specified in the Guidelines for the aqueous analytical run. Since Method 6010B does not require CRI analysis, qualifiers were not applied to the ICP data.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP serial dilutions (≤ 10 %D), between the undiluted and diluted results, where sample results are significantly greater than the MDL (>50x) with two exceptions. The serial dilution for magnesium for sample BG-9 (12-18) COMP exceeded the acceptance limits specified by the laboratory and the Guidelines and was "J" qualified

(estimated). The serial dilution for uranium exceeded the laboratory acceptance limits and the Guidelines; however, no data were qualified because the sample used for this serial dilution was not a project sample. A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

Samples BG-9 (12-18) COMP and non-project specific samples served as the MS samples for the ICP, ICP/MS, and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery. The MS percent recoveries for iron for sample BG-9 (12-18) COMP and a non-project specific sample were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Fluoride and Total Solids)

No Guideline criteria exist for fluoride and total solids analyses. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. Results for percent solids were accepted as reported. Samples BG-10 (0-2) COMP and non-project specific samples served as the MS/MSD samples for the fluoride analysis. The MS/MSD percent recoveries met the applicable acceptance criteria. Sample BG-10 (0-2) COMP and non-project specific samples served as the laboratory duplicate sample for the general chemistry analyses and the percent recovery met the applicable laboratory criteria for precision. The ICV, CCV, and LCS data indicated that the laboratory and method criteria were met for fluoride analysis. Trace concentrations of fluoride were present above the MDL in one or more of the laboratory method blank and CCB samples. The fluoride detection for the aqueous method blank sample must be presented as stated in the laboratory report. No data were qualified based upon the CCB sample concentrations because they were too small to have an affect on the associated project samples.

Radiochemistry Analysis (Lead 210, Radium 226, Thorium 230, and Uranium 234 and 238)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Samples BG-10 (0-2) COMP, BG-10 (2-12) COMP, BG-10 (12-18) COMP, BG-122 COMP and non-project specific samples served as the MS samples for the radiochemistry methods. The LCS and MS percent recoveries met the applicable criterion for accuracy. Samples BG-10 (0-2) COMP, BG-10 (2-12) COMP, BG-10 (12-18) COMP, BG-121 COMP and non-project specific samples served as the analytical batch duplicate samples for this data package. The replicate error ratios (RERs) met the laboratory acceptance limits for precision. One method blank sample had a detectable concentration above the practical quantitation limit (i.e. lower limit of detection (LLD) for uranium 234; however, per guidance from the laboratory (ACZ), method blank concentrations less than two times the practical quantitation limit are not controlled; therefore, no qualification of the data was deemed necessary.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. Samples BG-121 COMP and BG-122 COMP served as the field blank samples associated with this sample delivery group. The field blank samples were collected in the following manner: the sample equipment (i.e. stainless steel bowl, etc.) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. No target analytes were present above the MDL for metals and fluoride or above the practical quantitation limit for total solids analysis in the field blank sample associated with this data package except where noted below. One or more of the field blank samples had trace concentrations of fluoride, thorium 230 and multiple metals present above the MDL/LLD. The field blank sample data are summarized in Appendix Q-4b. Once these field blank sample concentrations undergo unit conversions (for comparison to mg/kg soil results), the fluoride and metals concentrations are very low and are unlikely to adversely affect final sample results, therefore, no data qualifiers were applied. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the thorium 230 field blank sample data.

Discussion

The analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of uranium (ICP/MS) for sample BG-9 (12-18) COMP. The associated data was “J” qualified and should be considered estimated where the RPD deviated from the laboratory criterion by more than 5 percent.

Data Validation Report
Laboratory Report / Batch: K1006676

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: January 28, 2011

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the metals, general chemistry, and radiochemistry analyses of the samples collected in 2010 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 340.2 modified, 6010B, 6020, 7471A, 9315 modified; modified EICHROM method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- ICP/ICP/MS interference check samples (Metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples

The results for twenty soil samples are contained in this laboratory report. The samples are identified as follows:

BG-7 (0-2) COMP	BG-7 (2-12) COMP	BG-7 (12-18) COMP
BG-8 (0-2) COMP	BG-8 (2-12) COMP	BG-8 (12-18) COMP
BG-11 (0-2) COMP	BG-11 (2-12) COMP	BG-11 (12-18) COMP
BG-12 (0-2) COMP	BG-12 (2-12) COMP	BG-12 (12-18) COMP
BG-15 (0-2) COMP	BG-15 (2-12) COMP	BG-15 (12-18) COMP
BG-16 (0-2) COMP	BG-16 (2-12) COMP	BG-16 (12-18) COMP

BG-101 (2-12) COMP (BG-8 (2-12) COMP DUP)
BG-102 (2-12) COMP (BG-15 (12-18) COMP DUP)

The samples were analyzed for metals (ICP/ICP/MS/mercury), general chemistry parameters (total solids and fluoride) and radiochemistry parameters (uranium 234, 235 and 238, radium 226, lead 210, and thorium 230) as required using the methods detailed in the QAPP (Barr, March 2009).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit and below the practical quantitation limit are "J" qualified for the fluoride and metals analyses. The data qualifiers indicate estimated concentrations for the analyses. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected on June 25th through 27th, 2010, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 0.3 °C to 4.3 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis.

Due to a miscommunication within the laboratory, the soil samples associated within this data package were extracted using the Bellack distillation procedure (EPA Method 340.1 modified) and not the distilled (DI) water distillation procedure required for the project's fluoride analysis. Following the discovery of this error, the laboratory prepared and analyzed the remaining soil samples (still refrigerated at 4 °C) for fluoride using the correct analytical method. This preparation and analysis took place on November 18th, 2010 approximately five months after the samples were collected. Although there is no published holding time for fluoride analysis of soil, the laboratory performed a small study to determine what if any effect this five month lag time had on the analytical results. This study included the reanalysis of several soil samples that were analyzed approximately five months earlier using the correct procedure, and comparing these new results with the initial data. The results indicated that there is a noticeable decrease (approximately 60% lower) in the detectable values of fluoride between the original analysis and the reanalysis. Based on this, the soil sample results for fluoride within this sample delivery group are "J" qualified and should be considered estimated based upon the results of this study. No other qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

The ICP, ICPMS and mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<"qualifier with the exception of the radiochemistry analyses detailed below.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. The ICP, ICP/MS, and mercury analyses ICB and CCBs met acceptance criteria for proper run order and the target metal analytes were less than the CRQL. Although one or more target metal analytes were present in the ICBs or CCBs, their concentrations were extremely low (at or near the MDL) and do not indicate significant system contamination. No qualifiers were applied due to trace ICB or CCB concentrations.

The method blank samples associated with the ICP, ICP/MS and mercury analytical batches were prepared and analyzed at the appropriate frequency. Trace concentrations of iron and magnesium were detected above the MDL in the soil method blank sample; however, no data were qualified because the soil sample concentrations were all greater than five times the method blank sample concentrations.

ICP/ICP/MS Interference Check Samples (Metals Only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP and ICPMS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for ICP, ICPMS and mercury met the percent recovery criterion established in the Guidelines.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP serial dilutions (≤ 10 %D), between the undiluted and diluted results, where sample results are significantly greater than the MDL (>50x) with two exceptions. The serial dilution for beryllium and calcium for sample BG-16 (0-2) COMP exceeded the acceptance limits specified by the laboratory and the Guidelines and were "J" qualified (estimated). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

Sample BG-16 (0-2) COMP served as the MS samples for the ICP, ICP/MS, and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery. The MS percent recoveries for iron and manganese for sample BG-16 (0-2) COMP were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Fluoride and Total Solids)

No Guideline criteria exist for fluoride and total solids analyses. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. Results for percent solids were accepted as reported. Sample BG-7 (0-2) COMP served as the MS/MSD samples for the fluoride analysis. The MS/MSD percent recoveries met the applicable acceptance criteria. Sample BG-7 (0-2) COMP served as the laboratory duplicate sample for the fluoride analyses and the percent recovery met the applicable laboratory criteria for precision. The ICV, CCV, and LCS data indicated that the laboratory and method criteria were met for fluoride analysis. Trace concentrations of fluoride were present above the MDL in one or more of the laboratory method blank and CCB samples. The fluoride detection for the method blank sample must be presented as stated in the laboratory report. No data were qualified based upon the method blank sample detection because the associated samples were already "J" qualified based upon the date of analysis (discussed previously). No data were qualified based upon the CCB sample concentrations because they were too small to have an affect on the associated project samples.

Radiochemistry Analysis (Lead 210, Radium 226, Thorium 230, and Uranium 234 and 238)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Sample BG-11 (12-18) COMP served as the MS sample for the radiochemistry methods. The LCS and MS percent recoveries met the applicable criterion for accuracy. Samples BG-7 (0-2) COMP and BG-16 (12-18) COMP served as the analytical batch duplicate samples for this data package. The replicate error ratios (RERs) met the laboratory acceptance limits for precision. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Field Duplicate Samples

Field duplicate samples were collected and analyzed as required by the QAPP. Sample BG-101 (2-12) COMP and BG-102 (2-12) COMP served as the field duplicate sample for this data package. Field duplicate soil samples met the RPD criteria (40%) as specified in the QAPP with the exception

of arsenic, mercury, sodium, lead 210, thorium 230, uranium 238. Arsenic was "J" qualified (estimated) based upon the RPD deviation for sample BG-15 (2-12) COMP and its corresponding field duplicate sample (BG-102 (2-12) COMP). No other data were qualified based upon the field duplicate RPDs because sample concentrations near the MDL can exaggerate the deviation of the RPD. However, since the field duplicate sample concentrations for lead 210, thorium 230, uranium 238 were within five times the practical quantitation limit (i.e. lower limit of detection (LLD), no qualifiers were deemed necessary.

Data Validation Report
Laboratory Report / Batch: K1006777

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: November 12, 2010

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the metals, general chemistry, and radiochemistry analyses of the samples collected in 2010 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 160.3 modified, 340.2 modified, 340.2, 6010B, 6020, 7470A, 7471A, 903.1 modified, 9315 modified; modified EICHROM method for lead 210 and uranium 234, 235 and 238 isotope analysis; and the Department of Energy's Environmental Survey Manual Method 4506 (ESM 4506) as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Summary calibration information
- Blank analysis
- ICP/ICP/MS interference check samples (Metals only)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

The results for sixteen soil samples and one aqueous field blank sample are contained in this laboratory report. The samples are identified as follows:

BG-1 (0-2) COMP	BG-1 (2-12) COMP	BG-1 (12-18) COMP
BG-2 (0-2) COMP	BG-2 (2-12) COMP	BG-2 (12-18) COMP
BG-3 (0-2) COMP	BG-3 (2-12) COMP	BG-3 (12-18) COMP
BG-4 (0-2) COMP	BG-4 (2-12) COMP	BG-4 (12-18) COMP
BG-6 (0-2) COMP	BG-6 (2-12) COMP	BG-6 (12-18) COMP
BG-100 (0-2) COMP (BG-1 0-2 COMP DUP)		BG-120 COMP (Field Blank)

The samples were analyzed for metals (ICP/ICP/MS/mercury), general chemistry parameters (total solids and fluoride) and radiochemistry parameters (uranium 234 and 238, radium 226, lead 210, and thorium 230) as required using the methods detailed in the QAPP (Barr, March 2009).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit and below the practical quantitation limit are "J" qualified for the fluoride and metals analyses. The data qualifiers indicate estimated concentrations for the analyses. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected on June 28th through June 30th, 2010, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 °C to 4.7 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Summary Calibration Information

The initial calibration (ICAL), continuing calibration (CCAL), initial calibration verification (ICV) and continuing calibration verifications (CCVs) are not QC elements for non-CLP data evaluation. Since the calibration data were provided in summary form within the laboratory report, the data, where available, were reviewed as part of the non-CLP data evaluation process but confirmation via raw data review was not performed.

The ICP, ICPMS and mercury ICVs and CCVs met the established laboratory acceptance criterion.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<"qualifier with the exception of the radiochemistry analyses detailed below.

Although not part of the non-CLP data review, one or more of the following blank samples (initial calibration blank (ICB) and continuing calibration blank (CCBs) were evaluated when provided in summary form within the laboratory report but confirmation via raw data was not performed. The ICP, ICP/MS, and mercury analyses ICB and CCBs met acceptance criteria for proper run order and the target metal analytes were less than the CRQL. Although one or more target metal analytes were present in the ICBs or CCBs, their concentrations were extremely low (at or near the MDL) and do not indicate significant system contamination. No qualifiers were applied due to trace ICB or CCB concentrations.

The method blank samples associated with the ICP, ICP/MS and mercury analytical batches were prepared and analyzed at the appropriate frequency. Trace concentrations of iron, magnesium, potassium and zinc were detected above the MDL in the soil method blank sample; however, no data were qualified because the soil sample concentrations were all greater than five times the method blank sample concentrations. Chromium, copper and iron were detected above the MDL in the method blank sample associated with the aqueous batch. Since this aqueous method blank sample is only associated with field blank sample BG-120 COMP, no data were qualified based upon this method blank sample because the field blank sample concentrations are required to be presented as stated in the laboratory report for the data evaluation process.

ICP/ICP/MS Interference Check Samples (Metals Only)

The interference check sample (ICS) and contract required quantitation limit standard (CRI/CRA) data review is not a QC element for non-CLP evaluation but the ICS and CRI data were evaluated when provided in summary form within the laboratory report but confirmation via raw data review was not performed. The ICP and ICPMS ICSs met the laboratory acceptance criteria for both solution A and solution AB. The CRI percent recoveries for ICPMS and mercury met the percent recovery criterion established in the Guidelines. The ICP CRI percent recovery for chromium, iron and sodium did not meet the acceptance limits specified in the Guidelines. Since Method 6010B does not require CRI analysis, qualifiers were not applied to the ICP data.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP serial dilutions (≤ 10 %D), between the undiluted and diluted results, where sample results are significantly greater than the MDL (>50x) with one exception. The serial dilution for beryllium for sample BG-2 (2-12) COMP exceeded the acceptance limits specified by the laboratory and the Guidelines and was "J" qualified (estimated). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Matrix Spike Results

Samples BG-2 (2-12) COMP, BG-120 COMP and non-project specific samples served as the MS samples for the ICP, ICP/MS, and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery. The MS percent recoveries for iron, manganese, potassium and sodium for sample BG-2 (2-12) COMP were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recovery.

General Chemistry Analysis (Fluoride and Total Solids)

No Guideline criteria exist for fluoride and total solids analyses. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. Results for percent solids were accepted as reported. Samples BG-2 (2-12) COMP and BG-120 COMP served as the MS/MSD samples for the fluoride analysis. The MS percent recoveries were below the acceptable laboratory criterion for fluoride for sample BG-2 (2-12) COMP; therefore, the data were "J" qualified (estimated) based upon this deviation. The remaining MS/MSD percent recoveries met the applicable acceptance criteria. Samples BG-2 (2-12) COMP and BG-120 COMP served as the laboratory duplicate samples for the fluoride analysis and its percent recovery met the applicable laboratory criteria for precision. The ICV, CCV, and LCS data indicated that the laboratory and method criteria were met for fluoride analysis. Trace concentrations of fluoride were present above the MDL in one or more of the laboratory method blank and CCB samples. Associated sample concentrations within five times the associated method blank sample concentrations were reported with a "<" or U (2004 Inorganic Guidelines) qualifier. This affected fluoride for samples BG-1 (0-2) COMP, BG-2 (0-2) COMP, BG-100 (0-2) COMP, BG-3 (0-2) COMP, BG-4 (0-2) COMP and BG-4 (2-12) COMP. No data were qualified based upon the CCB sample concentrations because they were too small to have an affect on the associated project soil samples.

Radiochemistry Analysis (Lead 210, Radium 226, Thorium 230, and Uranium 234 and 238)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Samples BG-120 COMP, BG-1 (2-12) COMP, BG-1 (12-18) COMP, BG-6 (0-2) COMP, BG-6 (12-18) COMP, and non-project specific samples served as the MS samples for the radiochemistry methods. Except for one case, the LCS and MS percent recoveries met the applicable criterion for accuracy. The radium 226 MS percent recovery was <1% above the laboratory criteria, since this sample was not related to the project, no data were qualified. Samples BG-120 COMP, BG-121 COMP, BG-1 (0-2) COMP, BG-6 (2-12) COMP, BG-6 (12-18) COMP and non-project specific samples served as the analytical batch duplicate samples for this data package. The replicate error ratios (RERs) met the laboratory acceptance limits for precision with the following exceptions. The RER for radium 226 and uranium 234 and 238 (sample BG-1 (0-2) COMP) and radium 226 (sample BG-6 (12-18) COMP) were above the laboratory criteria for precision; therefore, the associated data were "J" qualified and should be considered estimated concentrations. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Field Duplicate Samples

Field duplicate samples were collected and analyzed in accordance with the frequency and parameters specified in the QAPP. Sample BG-100 (0-2) COMP (BG-1 (0-2) COMP DUP) served as the field duplicate sample for this data package. Field duplicate soil samples met the RPD criteria (40%) as specified in the QAPP with the exception of cadmium, lead 210, thorium 230, and uranium 234 and 235. Sample concentrations near the MDL can exaggerate the deviation of the RPD as was the case for cadmium; therefore no cadmium data were qualified. However, since the field duplicate sample concentrations for the radiochemical parameters cited above were within five times the practical quantitation limit (i.e. lower limit of detection (LLD), no qualifiers were deemed necessary.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample BG-120 COMP served as the field blank sample associated with this sample delivery group. The field blank samples were collected in the following manner: the sample equipment (i.e. stainless steel bowl, etc.) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. No target analytes were present above the MDL for metals or above the practical quantitation limit for total solids analysis in the field blank sample associated with this data package except where noted below. The field blank sample had trace concentrations of fluoride, uranium 238 and multiple metals present above the MDL. The field blank sample data are summarized in Appendix Q-4b. Once these field blank sample concentrations undergo unit conversions (for comparison to mg/kg soil results), the fluoride and metals concentrations are very low and are unlikely to adversely affect final sample results, therefore, no data qualifiers were applied. Due to the nature of the analyses, the radiochemistry field blank sample data were used to evaluate if any gross system contamination occurred. No qualifiers were applied to the samples based upon the uranium 238 field blank sample data.

Discussion

The analytical batch duplicate sample RPDs met the applicable laboratory criteria with the exception of manganese and vanadium (ICP) and thallium and uranium (ICP/MS) for sample BG-2 (2-12) COMP. The associated data was “J” qualified and should be considered estimated where the RPD deviated from the laboratory criterion by more than 5 percent. This affects manganese for sample BG-2 (2-12) COMP.

Data Validation Report
Laboratory Report / Batch: K1006867

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: November 15, 2010

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) laboratory data for the polychlorinated biphenyls and general chemistry analyses of the samples collected in 2010 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (EPA 2005) and in general accordance with U.S. EPA Methods 160.3 modified and 8082 as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- Deuterated monitoring compounds (Surrogates)
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

The results for nine soil samples and one aqueous field blank sample are contained in this laboratory report. The samples are identified as follows:

FTS-21 (2-12)	FTS-22 (0-2)	FTS-23 (0-2)
FTS-24 (0-2)	FTS-25 (0-2)	FTS-26 (0-2)
FTS-27 (0-2)	FTS-28 (0-2)	FTS-121 (0-2) (Field Blank)
FTS-101 (0-2) (FTS-26 (0-2) DUP)		

The samples were analyzed for polychlorinated biphenyls (PCBs) and general chemistry parameters (total solids) as required using the methods detailed in the QAPP (Barr, March 2009).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; the end result may be slightly different data qualification.

In accordance with the Guidelines, sample concentrations greater than the method detection limit and below the practical quantitation limit are "J" qualified for the PCB analyses. The data qualifiers indicate estimated concentrations for the analyses. The non-detect concentrations are presented as "<MDL" in the data tables.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected on June 30th, 2010, packed on ice and sent to the laboratory (CAS, located in Kelso, Washington) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.6 °C to 0.0 °C upon receipt at the laboratory. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Initial Calibration and Initial Calibration Verification

The PCB initial calibrations (ICALs) and secondary source calibration verifications (SSCVs) met the established laboratory acceptance criterion.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) for the analysis of PCBs were analyzed at the appropriate frequency and yielded acceptable percent differences of less than 20% for Aroclors 1016 and 1260, indicating the analysis was in control.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<"qualifier analyses.

The method blank samples associated with the PCB analysis were prepared and analyzed as required. No PCBs were present above the MDL in the method blank samples. Instrument blank sample data were not provided by the laboratory as it is not a requirement of EPA Method 8082. While this is a deviation from the Guidelines, no PCB Aroclors were detected in the method blank samples and this procedure meets method criteria.

Deuterated Monitoring Compounds (DMC, Surrogates)

The laboratory acceptance criteria for the DMC percent recoveries for the PCB analysis in the project samples were met.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

Matrix Spike Results

As standard practice, the laboratory reported a shortened list of PCB compounds for MS/MSD data. No qualification was performed based upon this occurrence.

Sample FTS-21 (2-12) served as the MS/MSD sample for the PCB analysis. The MS/MSD data met the applicable laboratory and EPA acceptance criteria for percent recovery and RPD.

General Chemistry Analysis (Total Solids)

No Guideline criteria exist for total solids analysis. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. Results for total solids were accepted as reported. Sample FTS-21 (2-12) served as the analytical batch duplicate sample for the total solids analysis and the RPD data indicated that the laboratory and method criteria were met.

Field Duplicate Samples

Field duplicate samples were collected and analyzed in accordance with the frequency and parameters specified in the QAPP. Samples FTS-101 (0-2) (FTS-26 (0.2) DUP) served as the field duplicate sample for this data package. Field duplicate soil samples met the RPD criteria (40%) as specified in the QAPP.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample FTS-121 (0-2) served as the field blank sample associated with this sample delivery group. The field blank sample was collected in the following manner: the sample equipment (i.e. stainless steel bowl, etc.) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. No target analytes were present above the MDL/PQL in the field blank sample associated with this data package.

Discussion

Several samples required dilution due to the presence of elevated levels of PCBs. The reporting limits were adjusted to reflect the dilution. This affected samples FTS-22 (0-2), FTS-24 (0-2), FTS-26 (0-2), FTS-28 (0-2) and FTS-101 (0-2) (FTS-26 (0-2) DUP).

Data Validation Report
Laboratory Report / Batch: K1007395

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: January 26, 2011

The validation of the Columbia Analytical Services, Inc. (CAS, Kelso, Washington) and ACZ Laboratories, Inc. (ACZ, Steamboat Springs, Colorado) laboratory data for the metals, general chemistry, and radiochemistry analyses of the samples collected in 2010 to support the Phase 1 - RCRA Facility Investigation is complete as detailed below.

The analytical data were reviewed in accordance Barr's Data Validation SOPs which are based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review (EPA 2004) and in general accordance with U.S. EPA Methods 300.0, 350.1, 353.2, 365.2, 6010B, 6020, 7470A, 9310 modified, 9315 modified, 9320 and Standard Method 2320B as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009).

In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Instrument performance checks - ICP/MS Tuning
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Blank analysis
- ICP/ICP/MS interference check samples (metals only)
- Laboratory control samples
- Internal standards
- Matrix spike results
- Field duplicate samples
- Field blank samples

The results for six groundwater samples and one aqueous field blank sample are contained in this laboratory report. The samples are identified as follows:

MW-06-1	MW-02-3	MW-06-2
MW-02-4	MW-82-3 (MW-02-3 DUP)	MW-60-12 (Field Blank)
MW-06-3		

The samples were analyzed for metals (ICP/ICP/MS/mercury), general chemistry parameters (chloride, fluoride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity) and radiochemistry parameters (gross alpha and beta and radium 228 and 228) as required using the methods detailed in the QAPP (Barr, March 2009).

Overall Assessment

The QAPP specified that 10% of the project data be reviewed using CLP NFG (Guidelines) and the remaining data be reviewed in accordance with Barr's Data Validation Standard Operating Procedures (SOPs). Because 90% of the data was correspondingly validated using non-CLP criteria, the laboratory criterion were used for consistency, except where outliers exceeded 30-150% EPA quality control criteria. In summary, because the Guidelines have limits which are often different than, and in certain cases are more stringent than, the limits specified by the analytical methods and the laboratory generated limits; therefore, the end result may be slightly different data qualification.

The data are useable as reported and qualified and fulfill the data quality objectives (DQOs) for sensitivity, accuracy and precision as specified in the QAPP. The following sections provide specific validation details.

Holding Times, Preservation and Storage

The samples were collected on July 16th through 18th, 2010, packed on ice and sent to the laboratories (CAS, located in Kelso, Washington and ACZ, located in Steamboat Springs, CO) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of -0.5 °C to 4.1 °C upon receipt at the laboratories. The samples were stored at 4 °C until analysis. No qualifiers were assigned due to holding times, preservation, or storage issues.

Instrument Performance Checks – ICP/MS Tuning (ICP/MS Metals)

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

The tuning aspects of the inductively coupled plasma mass spectrometer (ICP/MS) met the applicable acceptance criteria for mass resolution and the percent relative standard deviation (%RSD) for the five consecutive replicates at <5%.

Initial Calibration and Initial Calibration Verification

The ICP and ICP/MS initial calibrations were performed at the appropriate frequency and run order, and met minimum percent recovery (%R) acceptance criteria for each of the target metals. Mean concentrations from 2 replicate exposures were reported for ICP and from 3 replicate exposures for ICP/MS as required. Initial calibration verification (ICV) criterion of ±10% (of true value) for the target analytes was met during the initial calibration events.

The cold vapor mercury initial calibration events met the acceptance criterion of a correlation coefficient >0.995 using a minimum of at least four calibration standard solutions. The ICV criterion of 20% of the true value was also met for the cold vapor mercury analysis.

Continuing Calibration Verification

The continuing calibration verification samples (CCVs) for the ICP and ICP/MS analyses met data validation criteria for frequency, run order and acceptable percent recoveries were achieved within the analytes' method detection limit and the documented upper linear range of the instrument. Mean concentrations from the 2 (for ICP) and 3 (for ICPMS) replicate exposures were reported as required.

The CCVs associated with the cold vapor mercury analyses met the established acceptance criteria for frequency and the calculated percent recovery of 20% of the true value.

The Contract Required Quantitation Limit (CRQL) Check Standard (CRI) sample data for ICP, ICP/MS, and mercury did not met the data validation criteria for frequency, run order and/or percent recovery as dictated in the Guidelines. The CRI samples reported in the data packages were analyzed at the beginning of the analytical sequence(s). The percent recoveries for ICP, ICPMS and mercury met the percent recovery criterion established in the Guidelines with the following exceptions. The CRI percent recovery for calcium, iron and manganese by ICP did not meet the acceptance limits specified in the Guidelines in two CRI samples. Since Method 6010 does not require CRI analysis, no data were qualified.

Blank Analysis

As stated in Section B10.3.2 of the QAPP, when project sample concentrations are "<" (less than) five times the associated blank sample concentrations, thus suspected false positives, they are shown at the concentration reported in the sample, with a "<"qualifier analyses with the exception of the radiochemistry analyses detailed below.

The ICP, ICP/MS and mercury analyses method blank samples, initial calibration blank (ICB) and continuing calibration blank samples (CCBs) were prepared and analyzed at the appropriate frequency and met acceptance criteria for proper run order. The method blank, ICB and CCB samples showed no detectable target analytes above the laboratory reporting limit for the ICP, ICP/MS and mercury analyses.

ICP/ICP/MS Interference Check Samples (Metals Only)

The ICP and ICP/MS interference check samples (ICS) were analyzed at the appropriate frequency and in the correct order during the analysis of the project samples. Acceptable results of ± 20% of the true value were obtained for both solution A and solution AB.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) were prepared and analyzed at the appropriate frequency for the target compounds and met the relevant acceptance criteria for percent recovery of the spike concentrations, indicating in-control analytical systems.

The laboratory met the acceptance criteria for the ICP and ICPMS serial dilutions (≤ 10 %D), between the undiluted and diluted results, where sample results are significantly greater than the MDL (>50x). A post-digestion spike for ICP analyses was not performed. The ICP/MS and mercury serial dilutions and post-digestion spike percent recoveries met the applicable criteria.

Internal Standards (ICP/MS Analyses Only)

The ICP/MS internal standard data were acceptable. The ICP/MS internal standard data were acceptable. The internal standards displayed percent relative intensity (%RI) within the 60-125% range.

Matrix Spike Results

Sample MW-06-2 served as the MS sample for the ICP, ICP/MS, and mercury analyses. The MS data met the applicable laboratory and EPA acceptance criteria for percent recovery. The MS percent recovery for calcium, manganese and sodium for sample MW-06-2 were not applicable because the associated sample concentrations were greater than four times the spike concentration thereby preventing accurate evaluation of the spike recoveries.

General Chemistry Analysis (chloride, fluoride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity)

No Guideline criteria exist for the general chemistry analyses. The general chemistry data were reviewed in accordance with Barr's SOPs included in the QAPP. The ICV, CCV data indicated that the laboratory and method criteria were met for the various general chemistry analyses (listed above). Samples MW-06-2 served as the MS/MSD samples for the general chemistry analyses. The LCS and MS/MSD data indicated that the applicable laboratory and method criteria were met. Samples MW-06-2 and MW-82-3 served as the analytical batch duplicate samples for the general chemistry analyses. The analytical batch duplicate sample data indicated that the laboratory and method criteria were met for the general chemistry analyses. The method blank samples showed no detectable target analytes above the laboratory reporting limit for the general chemistry parameters. Trace concentrations of chloride and sulfate were present above the PQL in one or more of the CCB samples; however, no data were qualified because the CCB sample concentrations were too small to have an affect on the associated project samples.

Radiochemistry Analysis (Gross Alpha and Beta and Radium 226 and 228)

Results were reviewed in general accordance with the analytical methods specified in the QAPP. Samples MW-06-3, MW-02-4 and non-project specific samples served as the MS samples for one or more of the radiochemistry methods. Except for one case, the LCS and MS data met the applicable criterion for accuracy. The MS percent recovery for radium 228 was slightly below the laboratory acceptance criteria, since the deviation was minor (<1%) no data were qualified. Samples MW-06-2, and non-project specific samples served as the analytical batch duplicate samples for this data package. The replicate error ratios (RERs) met the laboratory acceptance limits for precision with the following exception: the laboratory duplicate RER for gross beta analysis was slightly (2.01 versus a

limit of 2) for sample MW-06-2. Since the deviation was minor, no gross beta data were qualified. The method blank samples had no detectable concentrations above the practical quantitation limit (i.e. lower limit of detection (LLD) for the target radiochemistry analytes.

Field Duplicate Samples

Field duplicate samples were collected and analyzed in accordance with the frequency and parameters specified in the QAPP. Samples MW-82-3 (MW-02-3 DUP) served as the field duplicate sample for this data package. Field duplicate soil samples met the RPD criteria (30%) as specified in the QAPP with the exception of radium 228. Sample concentrations near the practical quantitation limit/LLD can exaggerate the deviation of the RPD. Since the radium 228 sample concentrations were within five times the LLD, no qualification was deemed necessary.

Field Blank Samples

Field blank samples were collected and analyzed at the required frequency as specified in the QAPP. Sample MW-60-12 served as the field blank sample associated with this sample delivery group. The field blank sample was collected in the following manner: the sample equipment (i.e. pump, tubing and/or hoses) were rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. Field blank sampling procedures and protocols were determined to be appropriate and were collected and analyzed at the required frequency as specified in the QAPP. No target analytes were present above the practical quantitation limit in the field blank samples associated with this data package except where noted below. The field blank sample had detections of metals above the practical quantitation limit. The field blank sample results are presented in Appendix Q-4b. Associated sample concentrations within five times the associated field blank sample concentrations were reported with a "<" or U (EPA 2005 Organic and 2004 Inorganic Guidelines) qualifier. This affected lead, nickel and/or zinc for samples MW-06-3, MW-06-1, MW-02-3, MW-82-3, MW-06-2 and MW-02-4.

Data Validation Report
ALS Laboratory Report / Batch: 34-1020002

Rhodia Silver Bow Plant – Butte, Montana
2010 – Phase I RCRA Facility Investigation
U.S. EPA Corrective Action Order on Consent,
Docket No. RCRA-2006-08-2004-0001

Date of Data Validation Report: November 12, 2010

The data validation of the ALS Laboratory Group (ALS) laboratory data for the elemental (white) phosphorus of the 2010 – Phase I RCRA Facility Investigation Work Plan samples contained in the aforementioned report is complete as detailed below.

The analytical data were reviewed in general accordance with the quality control aspects contained in the U.S. EPA Method 7580 and/or ALS Laboratory Standard Operating Procedure as specified in the Quality Assurance Project Plan (QAPP, Barr, March 2009). In general, the areas covered by the validation process include:

- Overall assessment
- Holding times, preservation and storage
- Initial calibration and initial calibration verification
- Continuing calibration verification
- Method blank analysis
- Laboratory control samples
- Matrix spike results
- Field duplicate samples
- Field blank samples

The elemental phosphorus results for eight groundwater samples and one aqueous field blank sample are contained in this laboratory report. The samples are identified as follows:

MW-06-3	MW-06-1	MW-02-3
MW-82-3 (MW-02-3 DUP)	MW-06-2	MW-60-12 (Field Blank)
MW-02-4		

The groundwater and aqueous field blank samples were analyzed for elemental phosphorus using U.S.EPA method 7580 as specified in the QAPP (Barr, March 2009). During the data validation process, procedural deviations from the initial calibration procedures defined the U.S.EPA method were identified and are detailed below. While a deviation from the published procedures, this deviation is not considered to have a significant adverse affect on the final usability of the data; therefore, no qualification of the elemental phosphorus data was performed.

As required by the QAPP, elemental phosphorus concentrations were evaluated down to the laboratory's method detection limit (MDL). Any sample concentrations below the practical quantitation limit but above the method detection limit are qualified with a "J" indicating an estimated value. The non-detected concentrations are presented as "<MDL" in the data tables.

The data met the data quality objectives (DQOs) and are useable as reported and qualified.

Holding Times, Preservation and Storage

The U.S. EPA method 7580 defines the holding time as five calendar days from collection to extraction for water samples that are chilled to 4 ºC upon sample collection. Following extraction (iso-octane procedure) the method recommends a maximum holding time of 30 calendar days until analysis for both water and soil samples. The project samples were collected July 16th through July 18th, 2010, packed on ice and sent to the laboratory (ALS, Utah) with an accompanying chain-of-custody form (COC). Per the chain-of-custody and subsequent laboratory acknowledgement receipt forms, the samples were received intact with a temperature of 2 ºC to 4 ºC upon receipt at the laboratory and were stored at 4 ºC until analysis. Subsequent holding times for extraction and analysis were met. No qualifiers were assigned due to holding times, sample preservation or storage issues.

Initial Calibration and Initial Calibration Verification

Satisfactory instrument calibration is crucial to ensuring the accurate qualitative and quantitative results for the target compound of the analysis. Initial calibration procedures define the linear range and mean calibration factors that are used for sample quantitation.

Method 7580 requires an initial calibration (ICAL) to be performed every 12 hours and that it consist of (at a minimum) a 5-point calibration standard curve. Calibration factors (CFs) and associated standard deviation of those CFs are then calculated and must meet a relative standard deviation (RSD) of $\leq$ 15%. The laboratory SOP requires a minimum 6-point calibration standard (quadratic) curve and a coefficient of correlation of $\geq$ 0.99. The ICAL performed on July 8th, 2010 met the laboratory's initial calibration criterion.

Initial (opening) calibration verification standards (ICVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results at the beginning of the analytical process. The ICVs should be representative of the mid-point of the calibration curve. ICVs are required to be analyzed prior to the analysis of the method blank samples and project samples and must fall within ± 15% of the known value. The ICVs associated with the analyses of project samples met requirements for frequency and the ± 15% difference (% D) criterion (from the associated mid-level standard in the ICAL).

Upon review of the initial calibration data for the elemental phosphorus analyses, the following EPA method and laboratory SOP deviations are noted.

The laboratory created the new "working stock solutions" on January 1st, 2008 and 2009, April 16th, 2009, January 5th, 2010 and on July 8th, 2010. The ICAL was performed on July 8th, 2010 and the project samples were analyzed on July 22, 2010. This ICAL frequency exceeds the 12-hour requirement as defined in EPA Method 7580. While the published laboratory SOP does not specify a frequency of ICAL, it does indicate in Section 2.1 that, "no substantial modifications from the promulgated method have been made". Since the laboratory considers the working standards to be very stable under appropriate storage conditions, no elemental phosphorus data were qualified.

The laboratory used a flame-photometric detector (FPD) for elemental phosphorus analysis instead of the nitrogen-phosphorus detector (NPD) listed in Method 7580. According to the laboratory, the NPD cited in the Method had problems with long-term stability and the FPD did not have similar difficulty. Initial calibration verification standards (ICVs) and continuing calibration verification

standards (CCVs) were analyzed at the beginning and end of each analytical sequence and after every ten samples to demonstrate continued acceptable calibration. No elemental phosphorus data were qualified based upon the use of the alternate analytical detector.

Continuing Calibration Verification

Ongoing calibration verification standards (CCVs) are prepared and analyzed to ensure that the instrument is capable of producing acceptable qualitative and quantitative results throughout the analytical process. The CCVs should be representative of the mid-point of the calibration curve. CCVs are required to be analyzed every 10 samples and must fall within ± 15% of the known value. The CCVs associated with the analyses of project samples met requirements for frequency and the ± 15% D criterion (from the associated mid-level standard in the ICAL).

Method Blank Analysis

The purpose of the method or laboratory blank sample is to evaluate the existence and magnitude of contamination problems resulting from laboratory extraction and analytical activities. Method blank samples were prepared and analyzed with every batch of 20 project samples (or less). The method blank samples were prepared and analyzed at the appropriate frequency and were non-detect for elemental phosphorus.

Laboratory Control Samples (Ongoing Precision/Accuracy)

Laboratory control samples (LCSs) are prepared and analyzed to provide information on the accuracy of the analytical procedures and the overall laboratory performance. LCSs are prepared and analyzed with every batch of 20 project samples (or less). The percent recoveries of the spike concentration in the LCS samples are required to fall between 75-125%. The LCS samples were prepared and analyzed at the appropriate frequency and met the acceptance limits of 75-125% for the elemental phosphorus analyses associated with the data package.

Matrix Spike Results

The purpose of matrix spike (MS) and matrix spike duplicate (MSD) samples is to evaluate precision and accuracy of the methodology on specific sample matrices by demonstrating acceptable percent recovery of the known spike concentrations. Matrix spike (MS) and/or matrix spike duplicate (MSD) samples were prepared and analyzed at the appropriate frequency (every batch of ≤ 20 samples) during the analytical events. Sample MW-06-2 served as the MS/MSD sample associated with the elemental phosphorus analysis. The percent recoveries and associated RPD met the criteria of 75-125% and ≤ 15% RPD, respectively.

Field Duplicate Samples

Field duplicate samples were collected and analyzed to determine the precision of the combined sampling and analytical process. Precision was determined by calculating the RPD for the data pairs where both values were above the method detection limit. Sample MW-82-3 (MW-02-3 DUP served as the field duplicate sample for this event and was non-detect; therefore, the RPD was not calculated. All data was accepted as reported.

Field Blank Samples

The purpose of the collection and analysis of field (rinsate) blank sample is to monitor the contamination introduced from improper field equipment decontamination and sample transport procedures. The field blank sample (MW-60-12) was collected in the following manner: The sample equipment (i.e. tubing and/or hoses) was rinsed with analyte-free, deionized water and the rinse water was poured into the appropriate sample containers for analysis. One field blank sample (MW-60-12) was collected during the groundwater sampling event and was non-detect for elemental phosphorus.

Appendix 1-E1
2010 Overall Quality Control Assessment

1.1 Introduction and Executive Summary

The analytical data generated during the 2010 Phase 1 RCRA Facility Investigation (RFI), Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 by Columbia Analytical Services, Inc. (CAS), ACZ Laboratories, Inc. (ACZ) and ALS Laboratory Group (ALS) were reviewed and validated in conformance with of the Quality Assurance Project Plan (QAPP, Barr, March 2009).

This Quality Control (QC) assessment is divided into two major sections following this introduction. Section 4.2 provides the QC assessment for the chemical analysis performed by the laboratories. Section 4.3 provides the QC assessment for the field sampling procedures.

The QC assessment of the soil and groundwater sample analytical data collected for the 2010 Phase 1 RFI, Rhodia Silver Bow Plant, demonstrate compliance with the data quality objectives in the QAPP. The analytical results have been validated and determined useable as qualified in the data summary tables and associated databases.

The QC assessment of the field sampling procedures and data demonstrate compliance with the data quality objectives in the QAPP and the Phase I RFI Workplan (Barr, 2009). The field sampling procedures were appropriate. No introduction of contamination or negative effects on sample representativeness was observed.

1.2 Laboratory Analyses

Columbia Analytical Services Inc. (CAS) located in Kelso, Washington conducted the physical preparation and chemical analyses of the analytical samples requiring polychlorinated biphenyls (PCBs), metals, and general chemistry analyses. ACZ Laboratories, Inc. (ACZ) located in Steamboat Springs, Colorado conducted the radiological analyses, and ALS Laboratory Group (ALS) located in Salt Lake City, Utah conducted the physical preparation and analysis of the analytical samples requiring elemental phosphorus analysis by modified EPA 7580 as set forth in the QAPP.

As set forth in Section B10.3.2 of the QAPP, 10% of the analytical data were validated in accordance with U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic and Inorganic Data Review, (2005/2004) (Guidelines). Areas evaluated during the data validation process include holding times, initial and continuing instrument calibrations, surrogate and internal standard recoveries, laboratory control samples (LCS), matrix spike sample (MS) and matrix spike duplicate sample (MSD) data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. For the remaining data, the areas evaluated during the data validation process were focused to holding times, initial and continuing calibration summary data (where available), LCS, MS and MSD data, laboratory duplicate sample data, laboratory method blank sample data and an overall assessment of the data. In addition to the Guidelines, specific method criteria (SW-846) were also considered in the validation process as differences in some of the performance aspects exist between the Guidelines and the non-CLP methods used for the sample analysis. No Guidelines exist for the validation of radiological data, elemental phosphorus and general chemistry (chloride, fluoride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity,); therefore, a data quality review was performed to evaluate general conformity with the performance aspects of the individual analytical methods. As required by the United States Environmental Protection Agency (EPA), soil samples, results from the PCBs, metals, fluoride, and elemental phosphorus analyses were evaluated to the MDL. Where applicable, the PCBs, metals, fluoride, and elemental phosphorus data greater than the MDL and below the practical quantitation limit (PQL) are flagged with a "J" indicating an estimated concentration.

1.2.1 Laboratory Report Data Validation Summaries

Results from the analysis of soil and groundwater samples collected for the 2010 Phase 1 RCRA Facility Investigation, Rhodia Silver Bow Plant, Corrective Action Order on Consent, Docket No. RCRA-08-2004-0001 are included in the following laboratory reports:

Columbia Analytical Services, Inc. Data Packages		
K1006615	K1006636	K1006676
K1006777	K1006867	K1007395
ALS Laboratory Group Data Packages		
1020002		

* ACZ Laboratories, Inc. data is contained within Columbia Analytical Services, Inc. data packages.

The individual data evaluations for the laboratory reports listed above are provided in Appendix Q-2. This assessment provides an overview of the overall quality control aspects of the project data. The data validation reports contain more specific details regarding the application of sample qualifiers assigned during the validation process. The laboratory data are considered to be usable as qualified in the data summary tables and databases.

1.2.2 Overview of Quality Control Assessment

The Data Quality Objectives of 95% completeness were achieved (Section A9.2.3 of the QAPP).

The following is a general summary of the QC assessment of the analytical results of project samples performed by CAS, ACZ and ALS. Deviations in the quality control aspects discussed in detail below are limited to those QC issues considered to be significant. Individual data evaluations provide specific results of the validation and subsequent data qualification (provided in Appendix Q-2).

The project samples were analyzed for one or more of the following parameter(s)/groups: polychlorinated biphenyl (PCB) aroclors, metals, chloride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity, fluoride, percent solids, elemental (white) phosphorus and radiological compounds as described in Tables 1-1, 1-2, 1-3, 1-4, and 1-5 of the QAPP.

No deviations to the specified methodologies published in the QAPP occurred.

The laboratories met sample holding time requirements for extraction and analysis. Although there is no published holding time for fluoride soil analysis, the fluoride data for the soil samples contained within sample delivery groups K1006636 and K1006676 are “J” qualified due to the analysis being conducted approximately five months after the samples were collected. The fluoride data associated

with the soil samples in the two sample delivery groups should be considered estimated concentrations. This is detailed within the individual data evaluations located in Appendix Q-2.

With a few exceptions, the samples were received in acceptable condition and properly labeled. Labeling discrepancies were resolved prior to sample preparation and analysis. The samples were received at the laboratories within the acceptable sample temperatures (0 to 6 degrees C).

Instrument initial and continuing calibration data generally met the acceptance criteria. Exceptions include elemental phosphorus analysis. Specific details regarding initial and continuing calibration deviations are described in the individual data evaluation.

The laboratory control sample (LCS) analyses met the relevant acceptance criteria (Section A9.2.2 of the QAPP). Following the request from EPA (via QAPP comments), MS/MSD percent recoveries [1] <30% and >150% force results to be qualified "R" unusable. The LCS spike recoveries for the 2010 soil and groundwater samples were within the EPA recommendations.

Matrix spike (MS) and matrix spike duplicate (MSD) samples were submitted at the frequency specified in the QAPP. Most of the MS/MSD sample results met acceptance criteria for percent recovery and associated relative percent difference (RPD) for each of the required analyses/target compounds (PCBs, metals, chloride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity, fluoride, percent solids, elemental phosphorus and radiological compounds). In the few instances where deviations were observed in specific samples of these matrices, acceptable LCS and LCSD (accuracy and precision) results were achieved, indicating in-control analytical systems during sample analysis. Following the request from EPA (via QAPP comments), MS/MSD percent recoveries [2] <30% and >150% force results to be qualified "R" unusable. The MS spike recoveries for the 2010 soil and groundwater samples were within the EPA

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[1] Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

[2] Percent recoveries include: laboratory control samples, matrix spike and matrix spike duplicates, surrogate standards, internal standards, interference check samples and initial and continuing calibration standards.

recommendations. Minor deviations to the applicable MS/MSD laboratory criterion are discussed in detail in the individual data evaluations

Laboratory duplicate data met the relevant acceptance criteria (Section A9.2.1 of the QAPP) for precision with a few exceptions which are discussed in detail in the individual data evaluations. None of the deviations were considered significant or indicate systematic problems with the analytical processes performed.

Surrogate standards (for organic PCB analysis) met the acceptance criteria (Section A9.2.2.2 of the QAPP).

For the metals ICP analysis, interference check sample (ICS) acceptance criterion of +/-20% of the true value were met.

For the metals ICP and ICP/MS analysis, the contract required quantitation limit check standard solution (CRI) percent recoveries for chromium, iron, manganese, sodium did not meet the applicable Guideline criterion; however, no data were qualified because the CRI is not required in Method 6010 and Method 6020.

The majority of the ICP and ICPMS serial dilution data met the applicable criteria with three exceptions; the percent difference for magnesium in sample BG-9 (12-18) COMP; for beryllium and calcium in sample BG-16 (0-2) COMP; and for beryllium in sample BG-2 (2-12) COMP exceeded the laboratory acceptance limits and were qualified "J" estimated.

The ICPMS and mercury post-digestion spike data met the applicable criteria. A post-digestion spike for ICP analysis was not performed.

A minor deviation was made from the Guidelines relative to the affect of detected blank sample results on corresponding project sample results. In general, the Guidelines indicate that when sample concentrations are detected at or near the concentrations detected in the blank samples, the results should be presented as the CRQL/RL, with a corresponding "<" (less than) or U qualifier. However, the CRQLs are far greater than the final laboratory PQLs set forth in the QAPP. Therefore, when a project sample result is less than 5 times the associated blank sample concentration, the project sample result is reported with a "<" or U (EPA 2005 Organic Guidelines) qualifier.

Many target compounds were detected at very low concentrations in the laboratory method blank samples, no significant-gross-system-contamination issues were identified over the course of the analytical events. Samples impacted by blank sample concentrations have been qualified and are detailed in the individual data evaluations provided in Appendix Q-2.

1.3 Field Sampling

1.3.1 Field Sampling Quality Control

Field sampling procedures were performed in accordance with the Phase 1 RFI Work Plan (Barr, 2009).

Field quality control procedures included the collection and analysis of field duplicate samples and field blank samples to monitor the contamination introduced from improper field equipment decontamination, sample collection, sample transport, and laboratory analytical procedures. The results from the analysis of these samples demonstrate that the data are in compliance with the data quality objectives.

Sample identification techniques described in Sections A9 and B2 of the QAPP (Barr, March 2009) required the field (rinsate) blank samples be submitted to the laboratory as blind QC samples; therefore, the field blank samples were assigned a fictitious soil location name at the time of collection and their true identities were documented in the Field Logbook records. Field blank samples were collected in the following manner: The soil sampling equipment (i.e. stainless-steel bowl, and/or spoon, etc.) were rinsed with analyte-free, deionized water. The rinse water was poured into the appropriate sample containers for analysis. The data is presented in the data summary tables using the soil sample locations they were collected from along with the fictitious sample locations identified on the chain-of-custody forms.

Field sampling procedures and protocols were determined to be appropriate. As described in the QAPP, blank samples associated with the soil sampling were analyzed for corresponding sample analysis (PCBs, metals, chloride, sulfate, ammonia, nitrate + nitrite, total phosphorus, bicarbonate and carbonate alkalinity, fluoride, percent solids, elemental phosphorus and radiological compounds). Although several field blank samples had low levels of target analytes present below or near the MDL/PQL, no introduction of gross contamination or other adverse affects on sample representativeness were identified. The field blank sample results are summarized Appendix Q-4b and are detailed within the individual data evaluations in Appendix Q-2.

A total of four field duplicate samples were collected as specified in Section A9.3.2 of the QAPP. Precision (both field and analytical) was evaluated through a comparison of the duplicate data when both the native and duplicate sample had detected concentrations reported.

The precision was evaluated by calculating the relative percent difference (RPD) for the data pairs as follows:

$$RPD = \frac{D_1 - D_2}{(D_1 + D_2)/2} \times 100$$

Where: D_1 = concentration of sample
D_2 = concentration of duplicate sample

The RPD results for arsenic, cadmium, mercury, sodium, lead 210, radium 228, thorium 230, and uranium 234, 235 and 238 fell beyond the 40% criteria in one or more of the field duplicate pairs. However, RPD results are dependent on the heterogeneity of the samples. Higher RPDs are expected when results are at or near the PQL and do not always indicate poor precision. Data qualifiers were applied due RPD exceedences in only one case, and the data are qualified accordingly in the data summary tables. The field duplicate sample results are discussed in detail within the individual data evaluations.

Appendix 1-E3

2010 Laboratory Reports

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

July 30, 2010 Analytical Report for Service Request No: K1006615

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow Plant background/26-46-0006.13-2010-400

Dear Andrea:

Enclosed are the results of the samples submitted to our laboratory on June 25, 2010. For your reference, these analyses have been assigned our service request number K1006615.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006615
Project:	Rhodia Silver Bow Plant Background	**Date Received:**	6/25/2010
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Nine soil samples were received for analysis at Columbia Analytical Services on 6/25/2010. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

Fluoride by EPA Method 340.2 Modified:
The matrix spike recovery of Fluoride for sample BG-9-12-18 COMP was within control criteria. A matrix spike duplicate was also analyzed, but produced results outside of control limits. The results of the original analysis were reported. No further corrective action was appropriate.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Iron for sample BG-9-12-18 COMP were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Radiochemistry

The analyses for the Radiochemistry parameters were performed at ACZ Laboratories in Steamboat Springs, Colorado. The results from this testing are included in their entirety herein.

Approved by _____ **Date** 7/30/10

Chain of Custody

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COPY

COC # 2646-31-1

SR# K1006665

PAGE 1 OF 3

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: Kevin McGinley

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
[redacted]											
BG-4 0-2 COMP	6/22/10	19:10		Solid	2	X	X	X	X		* BG-5 - See email
BG-4 2-12 COMP	6/22/10	19:15		Solid	2	X	X	X	X		* BG-5 See e-mail
BG-4 12-18 COMP	6/22/10	19:20		Solid	2	X	X	X	X		* BG-5 See e-mail
[redacted]											
[redacted]											
[redacted]											
[redacted]											
[redacted]											
[redacted]											

Analysis Requested

See Table 1-1, 1-3, 1-5, and 6 for details.

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_X_ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date: _____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn

Method 6020: Sb, As, Se, Tl, U

Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified ✓

Thorium 230: Method ESM4506 ✓

Radium 226: Method EPA9315 Modified ✓

Lead 210: Method EICHROM ✓

Report inorganics, general chemistry and organics to the MDL.

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #: 867092794821

Signature: Kevin McGinley

Printed Name: Kevin McGinley

Firm: Barr Eng. Co.

Date/Time: 6/22/10 12:00

RECEIVED BY:

Signature: [illegible]

Printed Name: [illegible]

Firm: CAS

Date/Time: 6/23/10 0910

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

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Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COPY

COC # 2646-32 - 1

SR# K1002665

PAGE 2 OF 3

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13 - 2010 - 400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: Kevin McGrip

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
[redacted]				Solid	2	X	X	X	X		
[redacted]				Solid	2	X	X	X	X		
[redacted]				Solid	2	X	X	X	X		
[redacted]				Solid	2	X	X	X	X		
[redacted]				Solid	2	X	X	X	X		
[redacted]				Solid	2	X	X	X	X		
BG-9 0-2 COMP	6/22/10	16:00		Solid	2	X	X	X	X		
BG-9 2-12 COMP	6/22/10	16:05		Solid	2	X	X	X	X		
BG-9 12-18 COMP	6/22/10	16:10		Solid	6	X	X	X	X		MS/MSD
[redacted]				Solid	2	X	X	X	X		

See Table 1-1, 1-3, 1-5, and 6 for details.

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_X_ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #: 8670 9279 9821

Signature: Kevin McGrip

Printed Name: Kevin McGrip

Firm: Barr Eng. Co.

Date/Time: 6/23/10 12:00

RECEIVED BY:

Signature: [signature]

Printed Name: [illegible]

Firm: CAS

Date/Time: 6/25/10 0910

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COPY

COC # 2646-34

SR# K100665

PAGE 3 OF 3

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13 2610-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: _____

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
BG-13 0-2 COMP	6/22/10	12:20		Solid	2	X	X	X	X		
BG-13 2-12 COMP	6/22/10	12:30		Solid	2	X	X	X	X		
BG-13 12-18 COMP	6/22/10	12:40		Solid	2	X	X	X	X		
~~BG-14 0-2 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-14 2-12 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-14 12-18 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-15 0-2 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-15 2-12 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-15 12-18 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-102 2-12 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		

Analysis Requested: See Table 1-1, 1-3, 1-5, and 6 for details.

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

__X__ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: __Margaret Treanor @ Barr__

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

__X__ V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn

Method 6020: Sb, As, Se, Tl, U

Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified

Thorium 230: Method ESM4506

Radium 226: Method EPA9315 Modified

Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

RELINQUISHED BY:

Shipping Tracking #: 867092799821

Signature: [signature]

Printed Name: Kevin McGilp

Firm: Barr Eng. Co.

Date/Time: 6/23/10 12:00

RECEIVED BY:

Signature: [signature]

Printed Name: [signature]

Firm: CAS

Date/Time: 6/25/10 0910

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

10

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC LH

Client / Project: Barr - Rhodia Service Request K10 06015

Received: 6/25/10 Opened: 6/25/10 By: AJ

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 17
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
3.5	1.0	286		7997500698 90	
3.7	na	265		867092799821	

7. Packing material used. *Inserts* (*Baggies*) (*Bubble Wrap*) *Gel Packs* (*Wet Ice*) *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y (N) *
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: * See client e-mail. Revised sample id's sent.

Total Solids

Client: Barr Engineering Company
Project: Rhodia Silver Bow Pl/26-46-0006.13-2010-4
Sample Matrix: Soil

Service Request: K1006615

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
BG-5 0-2 COMP	K1006615-001	06/22/2010	06/25/2010	06/30/2010	83.1	
BG-5 2-12 COMP	K1006615-002	06/22/2010	06/25/2010	06/30/2010	83.6	
BG-5 2-18 COMP	K1006615-003	06/22/2010	06/25/2010	06/30/2010	85.4	
BG-9 0-2 COMP	K1006615-004	06/22/2010	06/25/2010	06/30/2010	87.0	
BG-9 2-12 COMP	K1006615-005	06/22/2010	06/25/2010	06/30/2010	79.6	
BG-9 12-18 COMP	K1006615-006	06/22/2010	06/25/2010	06/30/2010	85.3	
BG-13 0-2 COMP	K1006615-007	06/22/2010	06/25/2010	06/30/2010	83.6	
BG-13 2-12 COMP	K1006615-008	06/22/2010	06/25/2010	06/30/2010	88.6	
BG-13 12-18 COMP	K1006615-009	06/22/2010	06/25/2010	06/30/2010	86.1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project:	Rhodia Silver Bow Pl/26-46-0006.13-2010-4	**Date Collected:**	06/22/2010
Sample Matrix:	Soil	**Date Received:**	06/25/2010
		Date Analyzed:	06/30/2010

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
BG-9 12-18 COMP	K1006615-006	85.3	85.3	85.3	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

206821

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	[illegible]
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K1005040-001	001	SOIL	1.31g	5.52g	3.55g	53.2		
2	K1005040-002	002	SOIL	1.31g	6.84g	5.36g	73.2		
3	K1005040-003	003	SOIL	1.31g	8.66g	7.10g	78.8		
4	K1005040-004	004	SOIL	1.31g	7.81g	4.87g	54.8		
5	K1005040-005	005	SOIL	1.29g	6.60g	3.50g	41.6		
6	K1005040-006	006	SOIL	1.30g	8.61g	5.44g	56.6		
7	K1005040-007	007	SOIL	1.31g	11.16g	8.42g	72.2		
8	K1005734-001	95302807-F010724	PAPERBOA	1.31g	2.33g	2.33g	100		
9	K1006485-001	PRC-2010-DU1-Comp-C	SEDIMENT	1.31g	17.77g	8.07g	41.1		
10	K1006519-001	EP055	SOIL	1.30g	11.64g	10.92g	93.0		
11	K1006519-002	EP056	SOIL	1.31g	10.35g	9.08g	86.0		
12	K1006519-003	EP057	SOIL	1.31g	13.25g	12.29g	92.0		
13	K1006519-004	EP058	SOIL	1.31g	15.88g	14.70g	91.9		
14	K1006519-005	EP059	SOIL	1.32g	14.30g	13.65g	95.0		
15	K1006519-006	EP060	SOIL	1.30g	10.35g	9.81g	94.0		
16	K1006519-007	EP061	SOIL	1.31g	16.77g	15.83g	93.9		
17	K1006519-008	EP062	SOIL	1.30g	11.61g	11.26g	96.6		
18	K1006519-009	EP063	SOIL	1.32g	14.67g	13.68g	92.6		
19	K1006519-010	EP064	SOIL	1.31g	15.88g	15.05g	94.3		
20	K1006519-011	EP065	SOIL	1.31g	11.69g	11.53g	98.5		
21	K1006519-012	EP066	SOIL	1.31g	14.19g	14.07g	99.1		
22	K1006519-013	EP067	SOIL	1.30g	14.64g	13.79g	93.6		
23	K1006519-014	EP068	SOIL	1.30g	14.94g	13.99g	93.0		
24	K1006519-015	EP069	SOIL	1.31g	18.18g	17.95g	98.6		
25	K1006520-001	EP070	SOIL	1.32g	15.98g	14.96g	93.0		
26	K1006520-002	EP071	SOIL	1.31g	16.34g	14.96g	90.8		

15

Group ID:	KWG1006311		
Analyst:	SArwood	**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	6/30/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K1006520-003	EP072	SOIL	1.30g	32.44g	31.58g	97.2		
28	K1006520-004	EP073	SOIL	1.32g	14.78g	13.21g	88.3		
29	K1006520-005	EP074	SOIL	1.31g	18.30g	15.88g	85.8		
30	K1006520-006	EP075	SOIL	1.32g	16.29g	14.10g	85.4		
31	K1006520-007	EP076	SOIL	1.32g	20.16g	19.83g	98.2		
32	K1006520-008	EP077	SOIL	1.30g	13.87g	12.87g	92.0		
33	K1006520-009	EP078	SOIL	1.32g	14.19g	13.18g	92.2		
34	K1006520-010	EP079	SOIL	1.31g	13.93g	12.95g	92.2		
35	K1006520-011	EP080	SOIL	1.32g	20.19g	19.32g	95.4		
36	K1006520-012	EP081	SOIL	1.32g	14.65g	13.75g	93.2		
37	K1006520-013	EP082	SOIL	1.31g	23.64g	23.13g	97.7		
38	K1006520-014	EP083	SOIL	1.32g	19.64g	19.23g	97.8		
39	K1006520-015	EP084	SOIL	1.30g	14.78g	14.00g	94.2		
40	K1006522-001	EP085	SOIL	1.31g	16.20g	14.94g	91.5		
41	K1006522-002	EP086	SOIL	1.31g	29.43g	27.74g	94.0		
42	K1006522-003	EP087	SOIL	1.30g	13.62g	12.88g	94.0		
43	K1006522-004	EP088	SOIL	1.32g	14.13g	13.38g	94.1		
44	K1006522-005	EP089	SOIL	1.31g	22.68g	22.15g	97.5		
45	K1006522-006	EP090	SOIL	1.33g	47.97g	45.86g	95.5		
46	K1006522-007	EP091	SOIL	1.31g	18.40g	17.66g	95.7		
47	K1006522-008	EP092	SOIL	1.32g	16.91g	15.70g	92.2		
48	K1006522-009	EP093	SOIL	1.31g	14.93g	14.71g	98.4		
49	K1006522-010	EP094	SOIL	1.31g	20.99g	20.04g	95.2		
50	K1006522-011	EP095	SOIL	1.31g	22.98g	21.94g	95.2		
51	K1006522-012	EP096	SOIL	1.33g	20.34g	19.23g	94.2		
52	K1006549-001	OL-SED-06	SEDIMENT	1.29g	15.33g	10.38g	64.7		
53	K1006549-002	OL-SED-09	SEDIMENT	1.32g	22.66g	15.05g	64.3		
54	K1006549-003	OL-SED-04	SEDIMENT	1.30g	12.66g	6.81g	48.5		
55	K1006549-004	OL-SED-05	SEDIMENT	1.31g	16.94g	12.50g	71.6		
56	K1006549-005	OL-SED-07	SEDIMENT	1.30g	16.28g	12.41g	74.2		
57	K1006549-006	OL-SED-08	SEDIMENT	1.32g	16.94g	10.31g	57.6		

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Group ID:	KWG1006311		
Analyst:	SArwood	**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	6/30/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
58	K1006549-007	OL-SED-01	SEDIMENT	1.32g	19.07g	15.00g	77.1		
59	K1006549-008	OL-SED-02	SEDIMENT	1.32g	16.81g	12.26g	70.6		
60	K1006549-009	OL-SED-03	SEDIMENT	1.33g	12.90g	10.12g	76.0		
61	K1006569-001	Residue 001	MISC. SOLID	1.31g	4.76g	4.72g	98.8		
62	K1006571-001	EP098	SOIL	1.32g	16.83g	16.40g	97.2		
63	K1006571-002	EP099	SOIL	1.31g	15.00g	14.34g	95.2		
64	K1006571-003	EP100	SOIL	1.31g	16.01g	14.88g	92.3		
65	K1006571-004	EP101	SOIL	1.29g	13.97g	11.91g	83.8		
66	K1006571-005	EP102	SOIL	1.29g	15.87g	14.68g	91.8		
67	K1006571-006	EP103	SOIL	1.31g	17.21g	16.00g	92.4		
68	K1006571-007	EP104	SOIL	1.30g	16.32g	15.14g	92.1		
69	K1006571-008	EP105	SOIL	1.31g	29.18g	28.27g	96.7		
70	K1006571-009	EP106	SOIL	1.31g	24.98g	21.78g	86.5		
71	K1006571-010	EP107	SOIL	1.29g	19.10g	16.71g	86.6		
72	K1006571-011	EP108	SOIL	1.30g	12.67g	11.30g	88.0		
73	K1006571-012	EP109	SOIL	1.30g	35.87g	35.28g	98.3		
74	K1006571-013	EP110	SOIL	1.30g	14.46g	13.28g	91.0		
75	K1006571-014	EP111	SOIL	1.32g	14.59g	13.13g	89.0		
76	K1006571-015	EP112	SOIL	1.30g	13.91g	13.61g	97.6		
77	K1006571-016	EP113	SOIL	1.31g	21.74g	21.24g	97.6		
78	K1006571-017	EP114	SOIL	1.30g	19.09g	18.19g	94.9		
79	K1006571-018	EP115	SOIL	1.30g	13.29g	12.20g	90.9		
80	K1006571-019	EP116	SOIL	1.31g	19.06g	17.59g	91.7		
81	K1006571-020	EP117	SOIL	1.30g	14.65g	14.43g	98.4		
82	K1006572-001	EP118	SOIL	1.32g	10.42g	9.75g	92.6		
83	K1006572-002	EP119	SOIL	1.32g	9.21g	8.75g	94.2		
84	K1006572-003	EP120	SOIL	1.32g	18.33g	17.96g	97.8		
85	K1006572-004	EP121	SOIL	1.31g	16.97g	16.27g	95.5		
86	K1006572-005	EP122	SOIL	1.31g	16.96g	16.23g	95.3		
87	K1006572-006	EP123	SOIL	1.32g	16.80g	15.22g	89.8		

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Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	BC
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
88	K1006572-007	EP124	SOIL	1.31g	18.16g	17.85g	98.2		
89	K1006572-008	EP125	SOIL	1.32g	16.33g	16.11g	98.5		
90	K1006572-009	EP126	SOIL	1.31g	18.33g	17.79g	96.8		
91	K1006572-010	EP127	SOIL	1.31g	12.28g	11.88g	96.4		
92	K1006572-011	EP128	SOIL	1.32g	13.00g	12.60g	96.6		
93	K1006572-012	EP129	SOIL	1.31g	12.80g	12.00g	93.0		
94	K1006572-013	EP130	SOIL	1.31g	13.38g	12.57g	93.3		
95	K1006572-014	EP131	SOIL	1.31g	17.63g	16.54g	93.3		
96	K1006572-015	EP132	SOIL	1.32g	17.81g	17.59g	98.7		
97	K1006572-016	EP133	SOIL	1.31g	11.54g	11.14g	96.1		
98	K1006572-017	EP134	SOIL	1.31g	14.15g	13.61g	95.8		
99	K1006572-018	EP135	SOIL	1.31g	19.91g	19.60g	98.3		
100	K1006572-019	EP136	SOIL	1.31g	23.54g	22.15g	93.7		
101	K1006572-020	EP137	SOIL	1.31g	10.19g	9.56g	92.9		
102	K1006592-001	CRWRF RDP	SOIL	1.31g	5.88g	3.22g	41.8		
103	K1006601-001	ND09C CURR-1	SOIL	1.32g	17.91g	17.66g	98.5		
104	K1006601-002	ND09C CURR-2	SOIL	1.31g	15.89g	15.21g	95.3		
105	K1006601-003	ND09C AREA 4-1C	SOIL	1.31g	22.11g	21.83g	98.7		
106	K1006601-004	ND09C AREA 4-2C	SOIL	1.31g	17.43g	17.31g	99.3		
107	K1006601-005	ND09C Metals-1	SOIL	1.32g	14.92g	14.79g	99.0		
108	K1006601-006	ND09C ORIG-2	SOIL	1.31g	22.19g	22.07g	99.4		
109	K1006601-007	ND09C ORIG-1	SOIL	1.31g	22.52g	22.29g	98.9		
110	K1006601-008	ND09C AREA1-4 C	SOIL	1.30g	21.91g	21.66g	98.8		
111	K1006601-009	ND09C AREA1-5 C	SOIL	1.32g	17.12g	16.92g	98.7		
112	K1006601-010	ND09C AREA1-3 C	SOIL	1.33g	13.94g	13.76g	98.6		
113	K1006601-011	ND09C AREA1-2 C	SOIL	1.31g	10.43g	10.35g	99.1		
114	K1006601-012	ND09C AREA1-1 C	SOIL	1.31g	11.01g	10.89g	98.8		
115	K1006601-013	ND09C AREA2-1	SOIL	1.31g	14.50g	14.36g	98.9		
116	K1006615-001	BG-5 0-2 COMP	SOIL	1.31g	7.45g	6.41g	83.1		
117	K1006615-002	BG-5 2-12 COMP	SOIL	1.33g	12.42g	10.60g	83.6		
118	K1006615-003	BG-5 2-18 COMP	SOIL	1.31g	11.38g	9.91g	85.4		

Group ID:	KWG1006311		
Analyst:	SArwood	**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	6/30/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
119	K1006615-004	BG-9 0-2 COMP	SOIL	1.30g	9.89g	8.77g	87.0		
120	K1006615-005	BG-9 2-12 COMP	SOIL	1.31g	10.62g	8.72g	79.6		
121	K1006615-006	BG-9 12-18 COMP	SOIL	1.31g	7.99g	7.01g	85.3		
122	K1006615-007	BG-13 0-2 COMP	SOIL	1.31g	8.08g	6.97g	83.6		
123	K1006615-008	BG-13 2-12 COMP	SOIL	1.31g	12.07g	10.84g	88.6		
124	K1006615-009	BG-13 12-18 COMP	SOIL	1.30g	11.25g	9.87g	86.1		
125	K1006621-001	WS #1	SOIL	1.31g	10.21g	5.30g	44.8		
126	K1006621-002	WS #1 Dup	SOIL	1.32g	12.28g	5.75g	40.4		
127	K1006621-003	WS #2	SOIL	1.33g	10.97g	9.11g	80.7		
128	K1006621-004	WS #2 Dup	SOIL	1.31g	15.43g	12.31g	77.9		
129	K1006621-005	WS #3	SOIL	1.31g	15.97g	11.16g	67.2		
130	K1006621-006	WS #3 Dup	SOIL	1.30g	14.80g	9.41g	60.1		
131	K1006627-001	Day 60-Sed-C-Surf-1 (-01)	SEDIMENT	1.31g	8.07g	1.92g	9.02		
132	K1006627-002	Day 60-Sed-C-Surf-2 (-02)	SEDIMENT	1.32g	11.35g	2.23g	9.07		
133	K1006627-003	Day 60-Sed-C-Bot-1 (-03)	SEDIMENT	1.31g	7.07g	1.88g	9.90		
134	K1006627-004	Day 60-Sed-C-Bot-2 (-04)	SEDIMENT	1.31g	8.75g	1.95g	8.60		
135	K1006627-005	Day 60-Sed-T-Surf-1 (-05)	SEDIMENT	1.31g	10.40g	2.19g	9.68		
136	K1006627-006	Day 60-Sed-T-Surf-2 (-06)	SEDIMENT	1.31g	9.53g	1.90g	7.18		
137	K1006627-007	Day 60-Sed-T-Bot-1 (-07)	SEDIMENT	1.31g	10.96g	2.26g	9.84		
138	K1006627-008	Day 60-Sed-T-Bot-2 (-08)	SEDIMENT	1.30g	8.64g	2.03g	9.95		
139	K1006630-001	EP139	SOIL	1.31g	10.59g	10.28g	96.7		
140	K1006630-002	EP140	SOIL	1.32g	9.30g	9.17g	98.4		
141	K1006630-003	EP141	SOIL	1.32g	17.96g	17.52g	97.4		
142	K1006630-004	EP142	SOIL	1.32g	27.17g	26.28g	96.6		
143	K1006630-005	EP143	SOIL	1.33g	17.42g	16.64g	95.2		
144	K1006630-006	EP144	SOIL	1.32g	17.70g	16.84g	94.7		
145	K1006630-007	EP145	SOIL	1.31g	10.62g	10.04g	93.8		
146	K1006630-008	EP146	SOIL	1.31g	12.44g	12.13g	97.2		
147	K1006630-009	EP147	SOIL	1.32g	13.93g	13.18g	94.1		
148	K1006630-010	EP148	SOIL	1.31g	13.59g	12.65g	92.3		
149	K1006630-011	EP149	SOIL	1.31g	14.12g	12.87g	90.2		

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
150	K1006630-012	EP150	SOIL	1.32g	13.04g	12.87g	98.5		
151	K1006630-013	EP151	SOIL	1.31g	14.83g	14.23g	95.6		
152	K1006630-014	EP152	SOIL	1.32g	13.51g	12.62g	92.7		
153	K1006630-015	EP153	SOIL	1.31g	17.95g	17.53g	97.5		
154	K1006630-016	EP154	SOIL	1.30g	14.35g	13.81g	95.9		
155	K1006630-017	EP155	SOIL	1.31g	18.62g	17.84g	95.5		
156	K1006630-018	EP156	SOIL	1.31g	21.02g	20.53g	97.5		
157	K1006630-019	EP157	SOIL	1.30g	22.43g	21.56g	95.9		
158	K1006630-020	EP158	SOIL	1.30g	21.78g	20.82g	95.3		
159	K1006631-001	EP159	SOIL	1.31g	16.35g	15.79g	96.3		
160	K1006631-002	EP160	SOIL	1.31g	17.06g	16.10g	93.9		
161	K1006631-003	EP161	SOIL	1.29g	10.87g	10.03g	91.2		
162	K1006631-004	EP162	SOIL	1.30g	22.55g	22.03g	97.6		
163	K1006631-005	EP163	SOIL	1.31g	18.49g	17.74g	95.6		
164	K1006631-006	EP164	SOIL	1.33g	21.38g	20.75g	96.9		
165	K1006631-007	EP165	SOIL	1.33g	20.65g	20.17g	97.5		
166	K1006631-008	EP166	SOIL	1.33g	16.77g	16.02g	95.1		
167	K1006631-009	EP167	SOIL	1.31g	17.27g	16.19g	93.2		
168	K1006631-010	EP168	SOIL	1.32g	23.67g	23.02g	97.1		
169	K1006631-011	EP169	SOIL	1.31g	12.49g	11.71g	93.0		
170	K1006631-012	EP170	SOIL	1.31g	13.00g	12.07g	92.0		
171	K1006631-013	EP171	SOIL	1.31g	11.07g	10.57g	94.9		
172	K1006631-014	EP172	SOIL	1.32g	14.72g	13.57g	91.4		
173	K1006631-015	EP173	SOIL	1.31g	10.73g	9.86g	90.8		
174	K1006631-016	EP174	SOIL	1.32g	14.97g	14.50g	96.6		
175	K1006631-017	EP175	SOIL	1.33g	12.05g	11.27g	92.7		
176	K1006631-018	EP176	SOIL	1.32g	13.00g	12.10g	92.3		
177	K1006631-019	EP177	SOIL	1.33g	14.99g	14.74g	98.2		
178	K1006631-020	EP178	SOIL	1.31g	15.24g	14.45g	94.3		
179	K1006632-001	EP179	SOIL	1.34g	9.12g	7.86g	83.8		
180	K1006632-002	EP180	SOIL	1.32g	23.72g	23.16g	97.5		

Group ID:	KWG1006311		
Analyst:	SArwood	**Reviewed By:**	CH
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	6/30/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
181	K1006636-001	BG-10 0-2 COMP	SOIL	1.32g	8.75g	7.58g	84.3		
182	K1006636-002	BG-10 2-12 COMP	SOIL	1.31g	9.02g	7.82g	84.4		
183	K1006636-003	BG-10 12-18 COMP	SOIL	1.33g	11.34g	9.70g	83.6		
184	K1006636-005	BG-14 0-2 COMP	SOIL	1.33g	11.39g	10.13g	87.5		
185	K1006636-006	BG-14-2-12 COMP	SOIL	1.32g	8.45g	7.59g	87.9		
186	K1006636-007	BG-14 12-18 COMP	SOIL	1.31g	9.95g	8.73g	85.9		
187	KWG1006311-1	Duplicate Client Sample	SOIL	1.31g	4.85g	3.19g	53.1	K1005040-001	
188	KWG1006311-10	Duplicate Client Sample	SEDIMENT	1.32g	17.05g	11.86g	67.0	K1006549-001	
189	KWG1006311-11	Duplicate Client Sample	SOIL	1.31g	20.18g	19.10g	94.3	K1006571-005	
190	KWG1006311-12	Duplicate Client Sample	SOIL	1.32g	17.72g	16.14g	90.4	K1006571-013	
191	KWG1006311-13	Duplicate Client Sample	SOIL	1.30g	13.11g	12.41g	94.1	K1006572-002	
192	KWG1006311-14	Duplicate Client Sample	SOIL	1.31g	17.80g	17.56g	98.5	K1006572-015	
193	KWG1006311-15	Duplicate Client Sample	SOIL	1.32g	13.11g	12.69g	96.4	K1006572-016	
194	KWG1006311-16	Duplicate Client Sample	SOIL	1.32g	12.13g	11.35g	92.8	K1006572-020	
195	KWG1006311-17	Duplicate Client Sample	SOIL	1.32g	6.54g	3.49g	41.6	K1006592-001	
196	KWG1006311-18	Duplicate Client Sample	SOIL	1.32g	17.36g	17.14g	98.6	K1006601-001	
197	KWG1006311-19	Duplicate Client Sample	SOIL	1.31g	11.66g	11.57g	99.1	K1006601-012	
198	KWG1006311-2	Duplicate Client Sample	PAPERBOA	1.30g	3.02g	2.96g	96.5	K1005734-001	
199	KWG1006311-20	Duplicate Client Sample	SOIL	1.32g	8.34g	7.31g	85.3	K1006615-006	
200	KWG1006311-21	Duplicate Client Sample	SOIL	1.31g	13.14g	6.59g	44.6	K1006621-001	
201	KWG1006311-22	Duplicate Client Sample	SEDIMENT	1.31g	8.74g	1.98g	9.02	K1006627-001	
202	KWG1006311-23	Duplicate Client Sample	SOIL	1.31g	21.16g	20.66g	97.5	K1006630-003	
203	KWG1006311-24	Duplicate Client Sample	SOIL	1.32g	20.97g	19.29g	91.5	K1006630-011	
204	KWG1006311-25	Duplicate Client Sample	SOIL	1.30g	14.15g	13.71g	96.6	K1006631-001	
205	KWG1006311-26	Duplicate Client Sample	SOIL	1.32g	16.37g	15.23g	92.4	K1006631-011	
206	KWG1006311-27	Duplicate Client Sample	SOIL	1.31g	10.42g	8.64g	80.5	K1006632-001	
207	KWG1006311-28	Duplicate Client Sample	SOIL	1.32g	9.82g	8.50g	84.5	K1006636-001	
208	KWG1006311-3	Duplicate Client Sample	SEDIMENT	1.31g	17.53g	7.98g	41.1	K1006485-001	
209	KWG1006311-4	Duplicate Client Sample	SOIL	1.31g	12.98g	11.74g	89.4	K1006519-002	
210	KWG1006311-5	Duplicate Client Sample	SOIL	1.32g	12.34g	12.00g	96.9	K1006519-008	

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Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
211	KWG1006311-6	Duplicate Client Sample	SOIL	1.32g	17.43g	15.72g	89.4	K1006520-002	
212	KWG1006311-7	Duplicate Client Sample	SOIL	1.31g	17.11g	15.79g	91.6	K1006520-010	
213	KWG1006311-8	Duplicate Client Sample	SOIL	1.32g	15.51g	14.66g	94.0	K1006522-003	
214	KWG1006311-9	Duplicate Client Sample	SOIL	1.30g	30.38g	28.94g	95.0	K1006522-011	

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General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006615
Date Collected : 06/22/10
Date Received : 06/25/10

Fluoride, Total

Prep Method : DI Extract
Analysis Method : 340.2 Modified
Test Notes :

Units : mg/Kg
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
BG-5 0-2 COMP	K1006615-001	1.2	0.1	1	7/26/2010	07/26/10	1.1	J
BG-5 2-12 COMP	K1006615-002	1.2	0.1	1	7/26/2010	07/26/10	1.2	
BG-5 2-18 COMP	K1006615-003	1.2	0.1	1	7/26/2010	07/26/10	1.4	
BG-9 0-2 COMP	K1006615-004	1.1	0.1	1	7/26/2010	07/26/10	1.3	
BG-9 2-12 COMP	K1006615-005	1.3	0.1	1	7/26/2010	07/26/10	1.1	J
BG-9 12-18 COMP	K1006615-006	1.2	0.1	1	7/26/2010	07/26/10	4.1	
BG-13 0-2 COMP	K1006615-007	1.2	0.1	1	7/26/2010	07/26/10	1.2	
BG-13 2-12 COMP	K1006615-008	1.1	0.1	1	7/26/2010	07/26/10	2.1	
BG-13 12-18 COMP	K1006615-009	1.2	0.1	1	7/26/2010	07/26/10	2.4	
Method Blank	K1006615-MB	1.0	0.1	1	7/26/2010	07/26/10	0.2	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006615
Date Collected : 6/22/2010
Date Received : 6/25/2010
Date Prepared : 07/26/10
Date Analyzed : 07/26/10

Duplicate Summary
Inorganic Parameters

Sample Name : BG-9 12-18 COMP
Lab Code : K1006615-006DUP
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	DI Extract	340.2 Modified	1.2	4.1	4.9	4.5	18	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006615
Date Collected : 6/22/2010
Date Received : 6/25/2010
Date Prepared : 07/26/10
Date Analyzed : 07/26/10

Matrix Spike Summary
Inorganic Parameters

Sample Name : BG-9 12-18 COMP
Lab Code : K1006615-006MS
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	DI Extract	340.2 Modified	1.2	116	4.1	101	84	75-125	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006615
Date Collected : 6/22/2010
Date Received : 6/25/2010
Date Prepared : 07/26/10
Date Analyzed : 07/26/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : BG-9 12-18 COMP
Lab Code : K1006615-006MS K1006615-006DMS
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Fluoride, Total	DI Extract	340.2 Modified	1.2	116	233	4.1	101	177	84	74	75-125	13	*

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006615
Project Name :	Rhodia Silver Bow Plant background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006615-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	NONE	340.2 Modified	11.0	11.3	103	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant background

Service Request : K1006615
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/26/2010	5.00	5.16	103
CCV2 Result	7/26/2010	5.00	5.06	101
CCV3 Result	7/26/2010	5.00	4.98	100
CCV4 Result	7/26/2010	5.00	4.92	98
CCV5 Result	7/26/2010	5.00	4.86	97

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant background

Service Request : K1006615
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/26/2010	0.20	0.05 J
CCB2 Result	7/26/2010	0.20	0.05 J
CCB3 Result	7/26/2010	0.20	0.07 J
CCB4 Result	7/26/2010	0.20	0.08 J
CCB5 Result	7/26/2010	0.20	0.08 J

Work Request # Original (K6015) K6777

Tier: III III

Date Analyzed: 7-26-10

209947

Analyst: A Chatlas

Analysis: Fluoride - 340.2 mod water extraction

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

5e) K6777-5ms/5msd failed Suspect matrix interference. K6015 msd failed by 1% RPD between spk + spk dup. Reanalysis

Final Approved by: [signature] Date: 7/28/10

DQREPORT

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209947 **Method/Testcode:** 340.2 Modified/F Dist

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
1006615-001	Fluoride, Total	N/A		Soil	0.18 mg/L	0.88	1.1 mg/Kg J	1	0.8	1.2			7/26/10 12:25:00	N	V
1006615-002	Fluoride, Total	N/A		Soil	0.21 mg/L	1.02	1.2 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006615-003	Fluoride, Total	N/A		Soil	0.24 mg/L	1.19	1.4 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006615-004	Fluoride, Total	N/A		Soil	0.23 mg/L	1.11	1.3 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006615-005	Fluoride, Total	N/A		Soil	0.18 mg/L	0.89	1.1 mg/Kg J	1	0.3	1.3			7/26/10 12:25:00	N	V
1006615-006	Fluoride, Total	N/A		Soil	0.76 mg/L	3.52	4.1 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	Y	V
1006615-007	Fluoride, Total	N/A		Soil	0.21 mg/L	1.00	1.2 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006615-008	Fluoride, Total	N/A		Soil	0.39 mg/L	1.88	2.1 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006615-009	Fluoride, Total	N/A		Soil	0.44 mg/L	2.05	2.4 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006777-001	Fluoride, Total	N/A		Soil	0.27 mg/L	1.31	1.5 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-002	Fluoride, Total	N/A		Soil	1.02 mg/L	4.90	5.4 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-003	Fluoride, Total	N/A		Soil	0.57 mg/L	2.70	3.2 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006777-004	Fluoride, Total	N/A		Soil	0.24 mg/L	1.20	1.5 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006777-005	Fluoride, Total	N/A		Soil	0.28 mg/L	1.38	1.8 mg/Kg	1	0.3	1.3			7/26/10 12:25:00	Y	V
1006777-006	Fluoride, Total	N/A		Soil	0.92 mg/L	4.42	5.1 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006777-007	Fluoride, Total	N/A		Soil	0.29 mg/L	1.39	1.5 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-009	Fluoride, Total	N/A		Soil	0.35 mg/L	1.74	1.9 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-010	Fluoride, Total	N/A		Soil	0.44 mg/L	2.18	2.5 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-011	Fluoride, Total	N/A		Soil	0.77 mg/L	3.82	4.3 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-012	Fluoride, Total	N/A		Soil	0.28 mg/L	1.39	1.6 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
1006777-013	Fluoride, Total	N/A		Soil	0.23 mg/L	1.10	1.3 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-014	Fluoride, Total	N/A		Soil	0.08 mg/L	0.38	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-015	Fluoride, Total	N/A		Soil	0.07 mg/L	0.31	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-016	Fluoride, Total	N/A		Soil	0.05 mg/L	0.25	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
1006777-017	Fluoride, Total	N/A		Soil	0.05 mg/L	0.25	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
Q1006962-03	Fluoride, Total	LCS		Soil				1					7/26/10 12:25:00	N	V
Q1006962-04	Fluoride, Total	MB		Soil				1					7/26/10 12:25:00	N	V
Q1006962-10	Fluoride, Total	DUP	K1006615-006	Soil	0.84 mg/L	4.17	4.9 mg/Kg	1	0.8	1.2		17	7/26/10 12:25:00	N	V
Q1006962-11	Fluoride, Total	MS	K1006615-006	Soil	17.30 mg/L	85.95	101 mg/Kg	1	0.8	1.2	83		7/26/10 12:25:00	N	V
Q1006962-12	Fluoride, Total	DMS	K1006615-006	Soil	30.40 mg/L	150.95	177 mg/Kg	1	0.8	1.2	74*	55*	7/26/10 12:25:00	N	V
Q1007040-01	Fluoride, Total	MS	K1006777-005	Soil	8.08 mg/L	39.75	51.3 mg/Kg	1	0.3	1.3	39*		7/26/10 12:25:00	N	V
Q1007040-02	Fluoride, Total	DMS	K1006777-005	Soil	18.20 mg/L	90.17	116 mg/Kg	1	0.3	1.3	45*	78*	7/26/10 12:25:00	N	V
Q1007040-03	Fluoride, Total	LCS		Soil	11.30 mg/L	11.30	11.3 mg/Kg	1	0.2	1.0	103		7/26/10 12:25:00	N	V
Q1007040-04	Fluoride, Total	MB		Soil	0.05 mg/L	0.05	1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V
Q1007040-05	Fluoride, Total	DUP	K1006777-005	Soil	0.25 mg/L	1.24	1.6 mg/Kg	1	0.3	1.3		11	7/26/10 12:25:00	N	V
Q1007395-01	Fluoride, Total	CCB		Soil				1					7/26/10 12:25:00	N	V
Q1007395-02	Fluoride, Total	CCB		Soil	0.05 mg/L		0.053 mg/Kg	1					7/26/10 12:25:00	N	V
Q1007395-03	Fluoride, Total	CCB		Soil	0.05 mg/L		0.052 mg/Kg	1					7/26/10 12:25:00	N	V
Q1007395-04	Fluoride, Total	CCB		Soil	0.07 mg/L		0.066 mg/Kg	1					7/26/10 12:25:00	N	V

Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209947 **Method/Testcode:** 340.2 Modified/F Dist

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
Q1007395-05	Fluoride, Total	CCB		Soil	0.08 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V
Q1007395-06	Fluoride, Total	CCB		Soil	0.08 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V
Q1007395-07	Fluoride, Total	CCV		Soil				1					7/26/10 12:25:00	N	V
Q1007395-08	Fluoride, Total	CCV		Soil	5.16 mg/L		5.16 mg/Kg	1	0.2	1.0	103 %		7/26/10 12:25:00	N	V
Q1007395-09	Fluoride, Total	CCV		Soil	5.06 mg/L		5.06 mg/Kg	1	0.2	1.0	101 %		7/26/10 12:25:00	N	V
Q1007395-10	Fluoride, Total	CCV		Soil	4.98 mg/L		4.98 mg/Kg	1	0.2	1.0	100 %		7/26/10 12:25:00	N	V
Q1007395-11	Fluoride, Total	CCV		Soil	4.92 mg/L		4.92 mg/Kg	1	0.2	1.0	98 %		7/26/10 12:25:00	N	V
Q1007395-12	Fluoride, Total	CCV		Soil	4.86 mg/L		4.86 mg/Kg	1	0.2	1.0	97 %		7/26/10 12:25:00	N	V
Q1007411-01	Fluoride, Total	LCS		Soil	10.90 mg/L	10.90	10.9 mg/Kg	1	0.2	1.0	99		7/26/10 12:25:00	N	V
Q1007411-02	Fluoride, Total	MB		Soil	0.07 mg/L	0.07	1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V

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Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.24	1.00	0.240	
CCV1	20	20	5.16	1.00	5.160	103.2
CCB1	20	20	0.0534	1.00	0.053	
MB	20	20	0.0464	1.00	0.046	
LCS	20	20	11.3	1.00	11.300	
K1006615-001	20	20	0.177	1.00	0.177	
K1006615-002	20	20	0.206	1.00	0.206	
K1006615-003	20	20	0.242	1.00	0.242	
K1006615-004	20	20	0.226	1.00	0.226	
K1006615-005	20	20	0.179	1.00	0.179	
K1006615-006	20	20	0.762	1.00	0.762	
K1006615-006d	20	20	0.844	1.00	0.844	
K1006615-006ms	20	20	17.3	1.00	17.300	
CCV2	20	20	5.06	1.00	5.060	101.2
CCB2	20	20	0.0516	1.00	0.052	
K1006615-006ms	20	20	30.4	1.00	30.400	
K1006615-007	20	20	0.212	1.00	0.212	
K1006615-008	20	20	0.392	1.00	0.392	
K1006615-009	20	20	0.444	1.00	0.444	
K1006777-001	20	20	0.274	1.00	0.274	
K1006777-002	20	20	1.024	1.00	1.024	
K1006777-003	20	20	0.570	1.00	0.570	
K1006777-004	20	20	0.242	1.00	0.242	
K1006777-005	20	20	0.276	1.00	0.276	
K1006777-005d	20	20	0.252	1.00	0.252	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L 3 STD 100 mg/L

1-100ppm SLOPE= -59.19,-57.21 EF%100,96.7

LCS APG4423 ID#F/2-84-L TV=11.0mg/L %REC=103,99

CCV TV=5ppm ID#F/2-53-T

6615-6MS = 1.0mL x 1000ppm / 10.0645g = 99.4 / 0.853 = 117

PROBE ID#A 6615-6MSD = 2.0mL x 1000ppm / 10.0694g = 199 / 0.853 = 233

	DATE	TIME
Analyzed By:AC	7/26/2010	12:25:00 PM
Reviewed By:	AE	7/28/10

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV3	20	20	4.98	1.00	4.980	100
CCB3	20	20	0.0662	1.00	0.066	
K1006777-05ms	20	20	8.08	1.00	8.080	
K1006777-05msd	20	20	18.2	1.00	18.200	
K1006777-006	20	20	0.922	1.00	0.922	
K1006777-007	20	20	0.294	1.00	0.294	
K1006777-009	20	20	0.354	1.00	0.354	
K1006777-010	20	20	0.442	1.00	0.442	
K1006777-011	20	20	0.768	1.00	0.768	
K1006777-012	20	20	0.282	1.00	0.282	
K1006777-013	20	20	0.226	1.00	0.226	
K1006777-014	20	20	0.240	1.00	0.240	
CCV4	20	20	4.92	1.00	4.920	98
CCB4	20	20	0.0804	1.00	0.080	
K1006777-015	20	20	0.208	1.00	0.208	
K1006777-016	20	20	0.310	1.00	0.310	
K1006777-017	20	20	1.53	1.00	1.530	
MB	20	20	0.07	1.00	0.070	
LCS	20	20	10.9	1.00	10.900	
0.2 STD	20	20	0.216	1.00	0.216	
CCV5	20	20	4.86	1.00	4.860	97
CCB5	20	20	0.076	1.00	0.076	EOP
		20		#DIV/0!	#DIV/0!	

	DATE	TIME
Analyzed By: AC	7/26/2010	12:25:00 PM
Reviewed By:	7/28/10	

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 115393
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist SFluor EPA
Prep Method: 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/26/2010 10:30
Due Date: 07/19/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006615-001	BG-5 0-2 COMP	.01	10.0904 g	50 mL			
K1006615-002	BG-5 2-12 COMP	.01	10.0986 g	50 mL			
K1006615-003	BG-5 2-18 COMP	.01	10.1519 g	50 mL			
K1006615-004	BG-9 0-2 COMP	.01	10.1405 g	50 mL			
K1006615-005	BG-9 2-12 COMP	.01	10.0004 g	50 mL			
K1006615-006	BG-9 12-18 COMP	.01	10.8283 g	50 mL			
K1006615-007	BG-13 0-2 COMP	.01	10.5604 g	50 mL			
K1006615-008	BG-13 2-12 COMP	.01	10.4415 g	50 mL			
K1006615-009	BG-13 12-18 COMP	.01	10.8549 g	50 mL			
KQ1006962-03	Lab Control Sample		50 mL	50 mL	50 mL	19431	
KQ1006962-04	Method Blank		50 mL	50 mL			
K1006615-006: KQ1006962-10	Duplicate	.01	10.1198 g	50 mL			
K1006615-006: KQ1006962-11	Matrix Spike	.01	10.0645 g	50 mL	1 mL	19258	
K1006615-006: KQ1006962-12	Duplicate Matrix Spike	.01	10.0694 g	50 mL	2 mL	19258	

14 Total Samples consisting of 9 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2-B F/2-B4-L

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	26-JUL-10 10:30	26-JUL-10 12:00	ac		N	

Comments

Review

Reviewed by: HS Date: 7/28/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115538
Team: GenChem
Analyst: AC

Prep Workflow: Gen Dist SFluor EPA
Prep Method: 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/26/2010 10:30
Due Date: 07/18/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006777-001	BG-1 0-2 COMP	.01	10.4531 g	50 mL			
K1006777-002	BG-1 2-12 COMP	.01	10.4585 g	50 mL			
K1006777-003	BG-1 12-18 COMP	.01	10.5651 g	50 mL			
K1006777-004	BG-2 0-2 COMP	.01	10.1116 g	50 mL			
K1006777-005	BG-2 2-12 COMP	.01	10.0186 g	50 mL			
K1006777-006	BG-2 12-18 COMP	.01	10.4392 g	50 mL			
K1006777-007	BG-100 0-2 COMP	.01	10.5490 g	50 mL			
K1006777-009	BG-3 0-2 COMP	.01	10.1649 g	50 mL			
K1006777-010	BG-3 2-12 COMP	.01	10.1202 g	50 mL			
K1006777-011	BG-3 12-18 COMP	.01	10.0614 g	50 mL			
K1006777-005: KQ1007040-01	Matrix Spike	.01	10.1646 g	50 mL	1 mL	19258	
K1006777-005: KQ1007040-02	Duplicate Matrix Spike	.01	10.0920 g	50 mL	2 mL	19258	
KQ1007040-03	Lab Control Sample		50 mL	50 mL	50 mL	19431	
KQ1007040-04	Method Blank		50 mL	50 mL			
K1006777-005: KQ1007040-05	Duplicate	.01	10.1844 g	50 mL			

15 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2-2-15 F/2 84-2

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	26-JUL-10 10:30	26-JUL-10 12:00	AC		N	

Comments

Review

Reviewed by: HG Date: 7/28/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 116142
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist SFluor
Prep Method: 340.1 Mod Prep,EPA 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/26/2010 12:25
Due Date: 07/18/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006777-012	BG-4 0-2 COMP	.01	10.1581 g	50 mL			
K1006777-013	BG-4 2-12 COMP	.01	10.3085 g	50 mL			
K1006777-014	BG-4 12-18 COMP	.01	10.5227 g	50 mL			
K1006777-015	BG-6 0-2 COMP	.01	10.6598 g	50 mL			
K1006777-016	BG-6 2-12 COMP	.01	10.5577 g	50 mL			
K1006777-017	BG-6 12-18 COMP	.01	10.7822 g	50 mL			
K1007774-001	1009811-01	.01	10.4531 g	50 mL			
K1007774-002	1009811-02	.01	10.4585 g	50 mL			
K1007774-003	1009811-03	.01	10.5651 g	50 mL			
K1007774-004	1009811-04	.01	10.1116 g	50 mL			
K1007774-005	1009811-05	.01	10.0186 g	50 mL			
K1007774-006	1009811-06	.01	10.4392 g	50 mL			
KQ1007411-01	Lab Control Sample		50 mL	50 mL	50 mL	19431	
KQ1007411-02	Method Blank		50 mL	50 mL			
K1007774-005: KQ1007411-03	Duplicate	.01	10.1844 g	50 mL	1 mL	19258	
K1007774-005: KQ1007411-04	Matrix Spike	.01	10.1646 g	50 mL			
K1007774-005: KQ1007411-05	Duplicate Matrix Spike	.01	10.0920 g	50 mL	2 mL	19258	

17 Total Samples consisting of 12 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/1-2-B F/2-84-L

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	26-JUL-10 12:25	26-JUL-10 14:30	ac		N	

Comments

Review

Reviewed by: _____ Date: 7/28/10

Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow Plant background
Project No.: 26-46-0006.13-2010-400

Service Request: K1006615

Sample Name:	Lab Code:
BG-5 0-2 COMP	K1006615-001
BG-5 2-12 COMP	K1006615-002
BG-5 2-18 COMP	K1006615-003
BG-9 0-2 COMP	K1006615-004
BG-9 2-12 COMP	K1006615-005
BG-9 12-18 COMP	K1006615-006
BG-9 12-18 COMPD	K1006615-006D
BG-9 12-18 COMPS	K1006615-006S
BG-13 0-2 COMP	K1006615-007
BG-13 2-12 COMP	K1006615-008
BG-13 12-18 COMP	K1006615-009
Method Blank	K1006615-MB

Comments:

Approved By: SC **Date:** 7/29/10

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-5 0-2 COMP **Lab Code:** K1006615-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.060	0.011	5.0	07/14/10	07/28/10	0.464		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	18.6		
Barium	6010B	2.4	0.4	2.0	07/19/10	07/20/10	148		
Beryllium	6010B	1.20	0.01	2.0	07/14/10	07/16/10	0.47	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.3	J	
Calcium	6010B	12.0	2.4	2.0	07/14/10	07/16/10	3630		
Chromium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	8.8		
Cobalt	6010B	2.4	0.4	2.0	07/14/10	07/16/10	5.9		
Copper	6010B	2.4	0.7	2.0	07/14/10	07/16/10	23.5		
Iron	6010B	4.8	0.4	2.0	07/14/10	07/16/10	17100		
Lead	6010B	23.6	3.5	2.0	07/19/10	07/20/10	8.5	J	
Magnesium	6010B	4.81	0.05	2.0	07/14/10	07/16/10	3190		
Manganese	6010B	2.36	0.05	2.0	07/19/10	07/20/10	595		
Mercury	7471A	0.019	0.002	1.0	07/02/10	07/07/10	0.016	J	
Nickel	6010B	4.8	0.6	2.0	07/14/10	07/16/10	4.0	J	
Potassium	6010B	236	5.9	2.0	07/19/10	07/20/10	2920		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.4	J	
Silver	6010B	2.4	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	24.1	4.8	2.0	07/14/10	07/16/10	92.3		
Thallium	6020	0.024	0.004	5.0	07/14/10	07/27/10	0.250		
Uranium	6020	0.024	0.007	5.0	07/14/10	07/27/10	1.320		*
Vanadium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	36.6		
Zinc	6010B	2.4	0.4	2.0	07/14/10	07/16/10	44.1		

% Solids: 83.1

Comments:

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-5 2-12 COMP **Lab Code:** K1006615-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.060	0.011	5.0	07/14/10	07/28/10	0.129		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	4.29		
Barium	6010B	2.4	0.4	2.0	07/19/10	07/20/10	140		
Beryllium	6010B	1.20	0.01	2.0	07/14/10	07/16/10	0.58	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	12.0	2.4	2.0	07/14/10	07/16/10	4930		
Chromium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	8.2		
Cobalt	6010B	2.4	0.4	2.0	07/14/10	07/16/10	7.2		
Copper	6010B	2.4	0.7	2.0	07/14/10	07/16/10	11.9		
Iron	6010B	4.8	0.4	2.0	07/14/10	07/16/10	20800		
Lead	6010B	23.5	3.5	2.0	07/19/10	07/20/10	7.7	J	
Magnesium	6010B	4.78	0.05	2.0	07/14/10	07/16/10	4790		
Manganese	6010B	2.35	0.05	2.0	07/19/10	07/20/10	459		
Mercury	7471A	0.019	0.002	1.0	07/02/10	07/07/10	0.011	J	
Nickel	6010B	4.8	0.6	2.0	07/14/10	07/16/10	4.8		
Potassium	6010B	235	5.9	2.0	07/19/10	07/20/10	3290		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.4	J	
Silver	6010B	2.4	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.9	4.8	2.0	07/14/10	07/16/10	99.2		
Thallium	6020	0.023	0.004	5.0	07/14/10	07/27/10	0.322		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	1.200		*
Vanadium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	41.4		
Zinc	6010B	2.4	0.4	2.0	07/14/10	07/16/10	37.8		

% Solids: 83.6

Comments:

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-5 2-18 COMP **Lab Code:** K1006615-003

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.057	0.010	5.0	07/14/10	07/28/10	0.091		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	1.50		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	127		
Beryllium	6010B	1.15	0.01	2.0	07/14/10	07/16/10	0.56	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.5	2.3	2.0	07/14/10	07/16/10	4940		
Chromium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	8.8		
Cobalt	6010B	2.3	0.3	2.0	07/14/10	07/16/10	9.5		
Copper	6010B	2.3	0.7	2.0	07/14/10	07/16/10	12.7		
Iron	6010B	4.6	0.3	2.0	07/14/10	07/16/10	21600		
Lead	6010B	23.0	3.4	2.0	07/19/10	07/20/10	3.4	U	
Magnesium	6010B	4.59	0.05	2.0	07/14/10	07/16/10	5200		
Manganese	6010B	2.30	0.05	2.0	07/19/10	07/20/10	380		
Mercury	7471A	0.018	0.002	1.0	07/02/10	07/07/10	0.014	J	
Nickel	6010B	4.6	0.6	2.0	07/14/10	07/16/10	5.2		
Potassium	6010B	230	5.7	2.0	07/19/10	07/20/10	2810		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.3	J	
Silver	6010B	2.3	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.0	4.6	2.0	07/14/10	07/16/10	77.8		
Thallium	6020	0.023	0.004	5.0	07/14/10	07/27/10	0.325		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	1.020		*
Vanadium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	47.4		
Zinc	6010B	2.3	0.3	2.0	07/14/10	07/16/10	33.3		

% Solids: 85.4

Comments:

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-9 0-2 COMP **Lab Code:** K1006615-004

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.057	0.010	5.0	07/14/10	07/28/10	0.420		
Arsenic	6020	0.58	0.06	5.0	07/14/10	07/27/10	28.1		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	105		
Beryllium	6010B	1.15	0.01	2.0	07/14/10	07/16/10	0.35	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.5	2.3	2.0	07/14/10	07/16/10	3410		
Chromium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	12.7		
Cobalt	6010B	2.3	0.3	2.0	07/14/10	07/16/10	9.4		
Copper	6010B	2.3	0.7	2.0	07/14/10	07/16/10	23.4		
Iron	6010B	4.6	0.3	2.0	07/14/10	07/16/10	27400		
Lead	6010B	22.8	3.4	2.0	07/19/10	07/20/10	10.3	J	
Magnesium	6010B	4.60	0.05	2.0	07/14/10	07/16/10	2810		
Manganese	6010B	2.28	0.05	2.0	07/19/10	07/20/10	525		
Mercury	7471A	0.018	0.002	1.0	07/02/10	07/07/10	0.016	J	
Nickel	6010B	4.6	0.6	2.0	07/14/10	07/16/10	3.1	J	
Potassium	6010B	228	5.7	2.0	07/19/10	07/20/10	2700		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.2	U	
Silver	6010B	2.3	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.0	4.6	2.0	07/14/10	07/16/10	77.1		
Thallium	6020	0.023	0.003	5.0	07/14/10	07/27/10	0.230		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	1.070		*
Vanadium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	69.1		
Zinc	6010B	2.3	0.3	2.0	07/14/10	07/16/10	38.2		

% Solids: 87.0

Comments:

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-9 2-12 COMP **Lab Code:** K1006615-005

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.063	0.011	5.0	07/14/10	07/28/10	0.155		
Arsenic	6020	0.62	0.06	5.0	07/14/10	07/27/10	3.46		
Barium	6010B	2.1	0.3	2.0	07/19/10	07/20/10	116		
Beryllium	6010B	1.26	0.01	2.0	07/14/10	07/16/10	0.83	J	
Cadmium	6010B	1.3	0.3	2.0	07/14/10	07/16/10	0.3	U	
Calcium	6010B	12.6	2.5	2.0	07/14/10	07/16/10	5760		
Chromium	6010B	2.5	0.5	2.0	07/14/10	07/16/10	8.1		
Cobalt	6010B	2.5	0.4	2.0	07/14/10	07/16/10	6.5		
Copper	6010B	2.5	0.8	2.0	07/14/10	07/16/10	14.9		
Iron	6010B	5.0	0.4	2.0	07/14/10	07/16/10	22200		
Lead	6010B	20.9	3.1	2.0	07/19/10	07/20/10	7.9	J	
Magnesium	6010B	5.03	0.05	2.0	07/14/10	07/16/10	5240		
Manganese	6010B	2.09	0.04	2.0	07/19/10	07/20/10	536		
Mercury	7471A	0.019	0.002	1.0	07/02/10	07/07/10	0.012	J	
Nickel	6010B	5.0	0.6	2.0	07/14/10	07/16/10	4.0	J	
Potassium	6010B	209	5.2	2.0	07/19/10	07/20/10	3360		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.4	J	
Silver	6010B	2.5	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	25.1	5.0	2.0	07/14/10	07/16/10	221		
Thallium	6020	0.025	0.004	5.0	07/14/10	07/27/10	0.332		
Uranium	6020	0.025	0.007	5.0	07/14/10	07/27/10	1.250		*
Vanadium	6010B	2.5	0.5	2.0	07/14/10	07/16/10	39.1		
Zinc	6010B	2.5	0.4	2.0	07/14/10	07/16/10	43.8		

% Solids: 79.6

Comments:

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-9 12-18 COMP **Lab Code:** K1006615-006

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/14/10	07/28/10	0.092		
Arsenic	6020	0.58	0.06	5.0	07/14/10	07/27/10	1.47		
Barium	6010B	2.3	0.4	2.0	07/19/10	07/20/10	104		
Beryllium	6010B	1.16	0.01	2.0	07/14/10	07/16/10	0.47	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/14/10	07/16/10	5380		
Chromium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	7.0		
Cobalt	6010B	2.3	0.3	2.0	07/14/10	07/16/10	5.0		
Copper	6010B	2.3	0.7	2.0	07/14/10	07/16/10	10.6		
Iron	6010B	4.6	0.3	2.0	07/14/10	07/16/10	17100		
Lead	6010B	23.4	3.5	2.0	07/19/10	07/20/10	6.1	J	
Magnesium	6010B	4.64	0.05	2.0	07/14/10	07/16/10	3660		
Manganese	6010B	2.34	0.05	2.0	07/19/10	07/20/10	400		
Mercury	7471A	0.020	0.002	1.0	07/02/10	07/07/10	0.010	J	
Nickel	6010B	4.6	0.6	2.0	07/14/10	07/16/10	2.9	J	
Potassium	6010B	234	5.9	2.0	07/19/10	07/20/10	2600		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.6	J	
Silver	6010B	2.3	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.2	4.6	2.0	07/14/10	07/16/10	244		
Thallium	6020	0.023	0.003	5.0	07/14/10	07/27/10	0.272		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	0.915		*
Vanadium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	39.9		
Zinc	6010B	2.3	0.3	2.0	07/14/10	07/16/10	27.8		

% Solids: 85.3

Comments:

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-13 0-2 COMP **Lab Code:** K1006615-007

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.059	0.011	5.0	07/14/10	07/28/10	0.335		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	19.3		
Barium	6010B	2.4	0.4	2.0	07/19/10	07/20/10	119		
Beryllium	6010B	1.18	0.01	2.0	07/14/10	07/16/10	0.49	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.8	2.4	2.0	07/14/10	07/16/10	3020		
Chromium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	11.1		
Cobalt	6010B	2.4	0.4	2.0	07/14/10	07/16/10	5.4		
Copper	6010B	2.4	0.7	2.0	07/14/10	07/16/10	19.7		
Iron	6010B	4.7	0.4	2.0	07/14/10	07/16/10	19000		
Lead	6010B	23.5	3.5	2.0	07/19/10	07/20/10	8.4	J	
Magnesium	6010B	4.74	0.05	2.0	07/14/10	07/16/10	2710		
Manganese	6010B	2.35	0.05	2.0	07/19/10	07/20/10	535		
Mercury	7471A	0.019	0.002	1.0	07/02/10	07/07/10	0.014	J	
Nickel	6010B	4.7	0.6	2.0	07/14/10	07/16/10	4.9		
Potassium	6010B	235	5.9	2.0	07/19/10	07/20/10	2040		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.4	J	
Silver	6010B	2.4	0.5	2.0	07/14/10	07/16/10	0.8	J	
Sodium	6010B	23.7	4.7	2.0	07/14/10	07/16/10	80.9		
Thallium	6020	0.024	0.004	5.0	07/14/10	07/27/10	0.224		
Uranium	6020	0.024	0.007	5.0	07/14/10	07/27/10	1.250		*
Vanadium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	41.9		
Zinc	6010B	2.4	0.4	2.0	07/14/10	07/16/10	39.2		

% Solids: 83.6

Comments:

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-13 2-12 COMP **Lab Code:** K1006615-008

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/14/10	07/28/10	0.125		
Arsenic	6020	0.55	0.06	5.0	07/14/10	07/27/10	3.66		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	92.2		
Beryllium	6010B	1.12	0.01	2.0	07/14/10	07/16/10	0.44	J	
Cadmium	6010B	1.1	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.2	2.2	2.0	07/14/10	07/16/10	3550		
Chromium	6010B	2.2	0.4	2.0	07/14/10	07/16/10	11.9		
Cobalt	6010B	2.2	0.3	2.0	07/14/10	07/16/10	5.2		
Copper	6010B	2.2	0.7	2.0	07/14/10	07/16/10	11.2		
Iron	6010B	4.5	0.3	2.0	07/14/10	07/16/10	20500		
Lead	6010B	22.6	3.4	2.0	07/19/10	07/20/10	4.7	J	
Magnesium	6010B	4.47	0.05	2.0	07/14/10	07/16/10	3540		
Manganese	6010B	2.26	0.05	2.0	07/19/10	07/20/10	371		
Mercury	7471A	0.019	0.002	1.0	07/02/10	07/07/10	0.007	J	
Nickel	6010B	4.5	0.6	2.0	07/14/10	07/16/10	5.2		
Potassium	6010B	226	5.6	2.0	07/19/10	07/20/10	1670		
Selenium	6020	1.1	0.2	5.0	07/14/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/14/10	07/16/10	0.4	U	
Sodium	6010B	22.3	4.5	2.0	07/14/10	07/16/10	203		
Thallium	6020	0.022	0.003	5.0	07/14/10	07/27/10	0.313		
Uranium	6020	0.022	0.007	5.0	07/14/10	07/27/10	1.410		*
Vanadium	6010B	2.2	0.4	2.0	07/14/10	07/16/10	47.3		
Zinc	6010B	2.2	0.3	2.0	07/14/10	07/16/10	30.1		

% Solids: 88.6

Comments:

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/22/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/25/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-13 12-18 COMP **Lab Code:** K1006615-009

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/14/10	07/28/10	0.199		
Arsenic	6020	0.58	0.06	5.0	07/14/10	07/27/10	2.72		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	218		
Beryllium	6010B	1.16	0.01	2.0	07/14/10	07/16/10	0.48	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/14/10	07/16/10	14300		
Chromium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	10.2		
Cobalt	6010B	2.3	0.3	2.0	07/14/10	07/16/10	4.5		
Copper	6010B	2.3	0.7	2.0	07/14/10	07/16/10	13.6		
Iron	6010B	4.7	0.3	2.0	07/14/10	07/16/10	17500		
Lead	6010B	23.2	3.5	2.0	07/19/10	07/20/10	3.5	U	
Magnesium	6010B	4.65	0.05	2.0	07/14/10	07/16/10	4360		
Manganese	6010B	2.32	0.05	2.0	07/19/10	07/20/10	833		
Mercury	7471A	0.018	0.002	1.0	07/02/10	07/07/10	0.010	J	
Nickel	6010B	4.7	0.6	2.0	07/14/10	07/16/10	6.6		
Potassium	6010B	232	5.8	2.0	07/19/10	07/20/10	1630		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.2	4.7	2.0	07/14/10	07/16/10	361		
Thallium	6020	0.023	0.003	5.0	07/14/10	07/27/10	0.207		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	0.839		*
Vanadium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	39.5		
Zinc	6010B	2.3	0.3	2.0	07/14/10	07/16/10	29.3		

% Solids: 86.1

Comments:

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Service Request: K1006615
Project No.: 26-46-0006.13-2010-400
Date Collected:
Project Name: Rhodia Silver Bow Plant backgrou
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1006615-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.050	0.009	5.0	07/14/10	07/28/10	0.009	U	
Arsenic	6020	0.50	0.05	5.0	07/14/10	07/27/10	0.05	U	
Barium	6010B	2.0	0.3	2.0	07/19/10	07/20/10	0.3	U	
Beryllium	6010B	1.00	0.01	2.0	07/14/10	07/16/10	0.02	J	
Cadmium	6010B	1.0	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	10.0	2.0	2.0	07/14/10	07/16/10	2.0	U	
Chromium	6010B	2.0	0.4	2.0	07/14/10	07/16/10	0.4	U	
Cobalt	6010B	2.0	0.3	2.0	07/14/10	07/16/10	0.3	U	
Copper	6010B	2.0	0.6	2.0	07/14/10	07/16/10	0.6	U	
Iron	6010B	4.0	0.3	2.0	07/14/10	07/16/10	1.3	J	
Lead	6010B	20.0	3.0	2.0	07/19/10	07/20/10	3.0	U	
Magnesium	6010B	4.00	0.04	2.0	07/14/10	07/16/10	0.09	J	
Manganese	6010B	2.00	0.04	2.0	07/19/10	07/20/10	0.04	U	
Mercury	7471A	0.020	0.002	1.0	07/02/10	07/07/10	0.002	U	
Nickel	6010B	4.0	0.5	2.0	07/14/10	07/16/10	0.5	U	
Potassium	6010B	200	5.0	2.0	07/19/10	07/20/10	5.0	U	
Selenium	6020	1.0	0.2	5.0	07/14/10	07/27/10	0.2	U	
Silver	6010B	2.0	0.4	2.0	07/14/10	07/16/10	0.4	U	
Sodium	6010B	20.0	4.0	2.0	07/14/10	07/16/10	4.0	U	
Thallium	6020	0.020	0.003	5.0	07/14/10	07/27/10	0.003	U	
Uranium	6020	0.020	0.006	5.0	07/14/10	07/27/10	0.006	U	*
Vanadium	6010B	2.0	0.4	2.0	07/14/10	07/16/10	0.4	U	
Zinc	6010B	2.0	0.3	2.0	07/14/10	07/16/10	0.5	J	

% Solids: 100.0

Comments:

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	24.5	98	25.0	25.3	101	25.4	102	6020
Arsenic	25.0	24.2	97	25.0	25.1	100	24.4	98	6020
Barium	5000	5052	101	2500	2437	97	2476	99	6010B
Beryllium	125	126	101	50	51	102	51	102	6010B
Cadmium	1250	1238	99	500	487	97	488	98	6010B
Calcium	5000	5173	103	2500	2490	100	2490	100	6010B
Calcium	12500	12607	101	25000	25202	101	25215	101	6010B
Chromium	500	506	101	500	488	98	489	98	6010B
Cobalt	1250	1241	99	500	489	98	490	98	6010B
Copper	625	624	100	500	495	99	496	99	6010B
Iron	2500	2533	101	500	489	98	506	101	6010B
Iron	10000	9902	99	25000	25446	102	24951	100	6010B
Lead	2500	2550	102	2500	2531	101	2588	104	6010B
Magnesium	5000	4942	99	2000	2051	103	2063	103	6010B
Magnesium	12500	12648	101	25000	25115	100	25464	102	6010B
Manganese	1250	1238	99	1000	999	100	1011	101	6010B
Manganese	10000	9906	99	5000	4976	100	5034	101	6010B
Mercury	5.00	5.00	100	5.00	5.00	100	5.20	104	7471A
Nickel	1250	1237	99	500	490	98	490	98	6010B
Potassium	12500	12685	101	10000	10024	100	10023	100	6010B
Selenium	25.0	24.3	97	25.0	25.4	102	24.8	99	6020
Silver	625	629	101	500	495	99	495	99	6010B
Sodium	12500	12535	100	10000	10042	100	9824	98	6010B
Thallium	25.0	25.8	103	25.0	25.1	100	25.6	102	6020
Uranium	25.0	24.2	97	25.0	25.1	100	25.2	101	6020
Vanadium	1250	1247	100	500	492	98	497	99	6010B
Zinc	1250	1244	100	500	488	98	491	98	6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.2	101	6020
Arsenic				25.0	24.4	98			6020
Barium				2500	2489	100	2515	101	6010B
Beryllium				50	51	102	50	100	6010B
Cadmium				500	494	99	497	99	6010B
Calcium				2500	2488	100	2453	98	6010B
Calcium				25000	25829	103	26704	107	6010B
Chromium				500	494	99	494	99	6010B
Cobalt				500	494	99	490	98	6010B
Copper				500	502	100	516	103	6010B
Iron				500	517	103	507	101	6010B
Iron				25000	25186	101	25754	103	6010B
Lead				2500	2486	99	2596	104	6010B
Magnesium				2000	2078	104	2071	104	6010B
Magnesium				25000	25454	102	25478	102	6010B
Manganese				1000	1014	101	1027	103	6010B
Manganese				5000	4974	99	5126	103	6010B
Mercury				5.00	5.10	102	5.10	102	7471A
Nickel				500	493	99	490	98	6010B
Potassium				10000	9917	99	10019	100	6010B
Selenium				25.0	24.6	98			6020
Silver				500	502	100	502	100	6010B
Sodium				10000	9873	99	9809	98	6010B
Thallium				25.0	25.6	102			6020
Uranium				25.0	25.2	101			6020
Vanadium				500	495	99	481	96	6010B
Zinc				500	489	98	493	99	6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.1	100	6020
Mercury				5.00	5.00	100			7471A

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.6	102	25.5	102	6020

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.5	102			6020

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.1	0.09	90		
Arsenic				1.00	1.06	106		
Barium				5.0	4.9	98		
Beryllium				5.0	4.8	96		
Cadmium				5.0	4.5	90		
Calcium				50.0	51.7	103		
Chromium				5.0	5.7	114		
Cobalt				10.0	8.6	86		
Copper				10.0	10.6	106		
Iron				20.0	24.4	122		
Lead				50.0	52.5	105		
Magnesium				20.0	19.3	96		
Manganese				5.0	5.0	100		
Mercury				0.20	0.18	90		
Nickel				20.0	19.6	98		
Potassium				400.0	434.0	108		
Selenium				2.0	2.11	106		
Silver				10.0	7.5	75		
Sodium				200.0	217.0	108		
Thallium				0.04	0.042	105		
Uranium				0.04	0.04	100		
Vanadium				10.0	10.6	106		
Zinc				10.0	10.9	109		

METALS

- 3 -

BLANKS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.018	U	0.018	U	-0.036	J	-0.036	J	6020
Arsenic	0.1	U	0.1	U	0.1	U	0.1	U	6020
Barium	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Beryllium	0.06	J	0.07	J	0.07	J	0.06	J	6010B
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	6010B
Calcium	10.0	U	10.0	U	10.0	U	10.0	U	6010B
Chromium	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Copper	3.0	U	3.0	U	3.0	U	3.0	U	6010B
Iron	3.6	J	1.5	U	2.8	J	4.0	J	6010B
Lead	15	U	15	U	15	U	15	U	6010B
Magnesium	0.2	U	0.2	U	0.4	J	1.4	J	6010B
Manganese	2.0	J	-0.3	J	0.2	U	0.2	U	6010B
Mercury	0.02	U	0.02	U	0.02	U	0.02	U	7471A
Nickel	2.5	U	2.5	U	2.5	U	2.5	U	6010B
Potassium	25.0	U	25.0	U	25.0	U	25.0	U	6010B
Selenium	0.4	U	0.4	U	0.4	U	0.4	U	6020
Silver	2.0	U	2.0	U	2.0	U	-3.3	J	6010B
Sodium	20	J	20	U	20	U	20	U	6010B
Thallium	0.006	U	0.006	U	0.006	U	0.006	U	6020
Uranium	0.012	U	0.012	U	0.012	U	0.012	U	6020
Vanadium	4	J	3	J	2	J	3	J	6010B
Zinc	1.5	J	2.0	J	1.5	U	1.5	U	6010B

METALS

BLANKS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.028	J	-0.043	J	6020
Barium			1.5	U					6010B
Beryllium			0.13	J					6010B
Cadmium			1.0	U					6010B
Calcium			10.0	U					6010B
Chromium			2.0	U					6010B
Cobalt			1.5	U					6010B
Copper			3.5	J					6010B
Iron			4.8	J					6010B
Lead			15	U					6010B
Magnesium			2.5	J					6010B
Manganese			-0.3	J					6010B
Mercury			0.02	U	0.02	U			7471A
Nickel			2.5	U					6010B
Potassium			25.0	U					6010B
Silver			2.0	U					6010B
Sodium			20	U					6010B
Vanadium			2	U					6010B
Zinc			1.5	U					6010B

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.044	J	-0.054	J	6020

METALS

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0		0.1	0.1				
Arsenic	0.0	25.0	0.0	26.3	105			
Selenium	0.0	25.0	0.1	25.9	104			
Thallium	0.0		0.0	0.0				
Uranium	0.0		0.0	0.0				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

METALS

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	-1	453.7	90.7			
Beryllium		500	0	527.6	105.5			
Cadmium		1000	9	929.8	93.0			
Calcium	500000	500000	495616	494832.6	99.0			
Chromium		500	0	471.2	94.2			
Cobalt		500	-1	464.8	93.0			
Copper		500	1	460.3	92.1			
Iron	200000	200000	197807	192916.5	96.5			
Lead		1000	1	1003.3	100.3			
Magnesium	500000	500000	516515	515041.8	103.0			
Manganese		500	4	464.1	92.8			
Nickel		1000	-3	908.6	90.9			
Potassium			8	-55.6				
Silver		1000	1	955.6	95.6			
Sodium			61	21.9				
Vanadium		500	3	488.6	97.7			
Zinc		1000	8	902.1	90.2			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

METALS

- 5A -

SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company
Service Request: K1006615

Project No.: 26-46-0006.13-2010-400
Units: MG/KG

Project Name: Rhodia Silver Bow Plant backgrou
Basis: DRY

Matrix: SOIL
% Solids: 85.3

Sample Name: BG-9 12-18 COMPS
Lab Code: K1006615-006S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	10 - 103	61.5		0.092		117.23	52.4		6020
Arsenic	57 - 133	123		1.47		117.23	103.7		6020
Barium	60 - 139	583		104		460.00	104.1		6010B
Beryllium	78 - 115	12.7		0.47	J	11.70	104.5		6010B
Cadmium	78 - 118	11.5		0.2	U	11.70	98.3		6010B
Chromium	32 - 170	55.1		7.0		46.90	102.6		6010B
Cobalt	67 - 129	124		5.0		117.00	101.7		6010B
Copper	24 - 173	70.4		10.6		58.60	102.0		6010B
Iron		18800		17100		234.00	726.5		6010B
Lead	46 - 151	120		6.1	J	115.00	99.0		6010B
Manganese	28 - 181	555		400		115.00	134.8		6010B
Mercury	60 - 135	0.509		0.010	J	0.48	104.0		7471A
Nickel	77 - 121	120		2.9	J	117.00	100.1		6010B
Selenium	65 - 125	129		0.6	J	117.23	109.5		6020
Silver	52 - 148	11.2		0.5	U	11.70	95.7		6010B
Thallium	70 - 128	126		0.272		117.23	107.2		6020
Uranium	75 - 125	25.0		0.915		23.45	102.7		6020
Vanadium	64 - 132	160		39.9		117.00	102.6		6010B
Zinc	13 - 172	155		27.8		117.00	108.7		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

METALS

- 5B -

POST SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	**Service Request:**	K1006615
Project No.:	26-46-0006.13-2010-400	**Units:**	UG/L
Project Name:	Rhodia Silver Bow Plant backgrou	**Basis:**	DRY
Matrix:	WATER		

Sample Name: BG-9 12-18 COMPA **Lab Code:** K1006615-006A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	50.70		0.16		50.0	101		6020
Arsenic	75 - 125	52.0		2.5		50.0	99		6020
Mercury	85 - 115	4.90		0.10	J	5.00	96		7471A
Selenium	75 - 125	50.0		1.0	J	50.0	98		6020
Thallium	75 - 125	53.110		0.468		50.0	105		6020
Uranium	75 - 125	55.18		1.58		50.0	107		6020

METALS

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DUPLICATES

Client:	Barr Engineering Company	Service Request:	K1006615
Project No.:	26-46-0006.13-2010-400	Units:	MG/KG
Project Name:	Rhodia Silver Bow Plant backgrou	Basis:	DRY
Matrix:	SOIL	% Solids:	85.3

Sample Name: BG-9 12-18 COMPD Lab Code: K1006615-006D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.092		0.091		1.1		6020
Arsenic		1.47		1.25		16.2		6020
Barium	30	104		112		7.4		6010B
Beryllium		0.47	J	0.49	J	4.2		6010B
Cadmium		0.2	U	0.2	U			6010B
Calcium	30	5380		4870		10.0		6010B
Chromium		7.0		8.2		15.8		6010B
Cobalt		5.0		5.3		5.8		6010B
Copper		10.6		11.2		5.5		6010B
Iron	30	17100		16700		2.4		6010B
Lead		6.1	J	6.9	J	12.3		6010B
Magnesium	30	3660		3760		2.7		6010B
Manganese	30	400		401		0.2		6010B
Mercury		0.010	J	0.008	J	22.2		7471A
Nickel		2.9	J	2.8	J	3.5		6010B
Potassium	30	2600		2430		6.8		6010B
Selenium		0.6	J	0.4	J	40.0		6020
Silver		0.5	U	0.5	U			6010B
Sodium	30	244		222		9.4		6010B
Thallium	20	0.272		0.239		12.9		6020
Uranium	20	0.915		1.290		34.0	*	6020
Vanadium	30	39.9		38.0		4.9		6010B
Zinc	30	27.8		28.6		2.8		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Aqueous LCS Source: CAS MIXED **Solid LCS Source:** ERA D065540

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony				105	92.8		50 150	88.4
Arsenic				88.3	84.8		78 122	96.0
Barium				432	456		81 119	105.6
Beryllium				58.2	66.4		83 117	114.1
Cadmium				91	89.9		81 119	98.8
Calcium				9630	9940		79 121	103.2
Chromium				144	149		80 119	103.5
Cobalt				190	195		82 118	102.6
Copper				237	239		83 116	100.8
Iron				18900	19200		50 149	101.6
Lead				104	109		79 121	104.8
Magnesium				4040	4000		73 127	99.0
Manganese				497	554		81 119	111.5
Mercury				6.8	7.06		71 128	103.8
Nickel				200	198		81 118	99.0
Potassium				4340	4070		73 126	93.8
Selenium				192	189		80 120	98.4
Silver				76.4	77.4		66 134	101.3
Sodium				735	675		74 126	91.8
Thallium				247	270		79 120	109.3
Uranium	200	204	102.0					
Vanadium				180	185		79 121	102.8
Zinc				292	287		73 121	98.3

METALS

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400 Units: UG/L

Project Name: Rhodia Silver Bow Plant backgrou

Sample Name: BG-9 12-18 COMPL Lab Code: K1006615-006L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.158		0.090	U	100.0		MS
Arsenic	2.5		2.5	J	0		MS
Barium	441.53		431.90		2.2		P
Beryllium	2.02	J	2.05	J	1.5		P
Cadmium	1.00	U	5.00	U			P
Calcium	23293.95		22737.80		2.4		P
Chromium	29.92		34.80	J	16.3		P
Cobalt	21.53		17.60	J	18.3		P
Copper	45.59		40.45	J	11.3		P
Iron	73670.64		70348.75		4.5		P
Lead	25.81	J	75.00	U	100.0		P
Magnesium	13804.45		15393.15		11.5	E	P
Manganese	1707.62		1596.40		6.5		P
Nickel	12.39	J	12.50	U	100.0		P
Potassium	11081.59		10880.00		1.8		P
Selenium	1.0	J	2.0	U	100.0		MS
Silver	2.00	U	10.45	J	100.0		P
Sodium	1051.63		1078.60		2.6		P
Thallium	0.468		0.440		6		MS
Uranium	1.577		1.530		3		MS
Vanadium	171.81		172.65		0.5		P
Zinc	119.56		115.45		3.4		P

METALS

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Barium	233.5		10.0	1.5	P
Beryllium	313.04		5.00	0.05	P
Cadmium	226.50		5.0	1.0	P
Calcium	211.2		50	10.0	P
Chromium	267.72		10.0	2.0	P
Cobalt	228.62		10.0	1.5	P
Copper	324.75		10.0	3.0	P
Iron	259.90		20.0	1.5	P
Lead	220.35		100	15.0	P
Magnesium	202.5		20	0.2	P
Manganese	257.61		10.00	0.20	P
Nickel	231.60		20.0	2.5	P
Potassium	766.49		1000	25.0	P
Silver	328.07		10.0	2.0	P
Sodium	330.23		100	20.0	P
Vanadium	310.2		10.0	2.0	P
Zinc	206.2		10.0	1.5	P

Comments:

METALS

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.100	0.018	MS
Arsenic	75		1.0	0.1	MS
Selenium	82		2.0	0.4	MS
Thallium	205		0.040	0.006	MS
Uranium	238		0.04	0.012	MS

Comments:

METALS

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP/ICP-MS ID #:

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury			0.10	.00	CV

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000

Comments:

METALS

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	259.94	0.0000000	0.0000000	0.0000000	-0.0003400	-0.0005200
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

Columbia Analytical Services

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
Aluminum	308.215					
Antimony	206.838					
Arsenic	189.042					
Barium	493.409					
Beryllium	313.042					
Boron	249.678					
Cadmium	228.802					
Calcium	317.933					
Calcium	211.2					
Chromium	267.716					
Cobalt	228.616					
Copper	324.754					
Iron	259.94					
Iron	271.4					
Lead	220.353					
Magnesium	279.5					
Magnesium	285.2					
Magnesium	202.5					
Manganese	257.61					
Manganese	293.9					
Molybdenum	202.03					
Nickel	231.604					
Phosphorus	214.9					
Potassium	766.491					
Selenium	196.026					
Silicon	228.158					
Silver	328.068					
Sodium	588.995					
Strontium	421.552					
Thallium	190.864					
Tin	189.989					

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941					
Vanadium	292.402					
Zinc	213.856					

Comments:

METALS
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Barium	5.000	45000	6010B
Beryllium	5.000	9000	6010B
Cadmium	5.000	90000	6010B
Calcium	5.000	1800000	6010B
Chromium	5.000	90000	6010B
Cobalt	5.000	90000	6010B
Copper	5.000	90000	6010B
Iron	5.000	900000	6010B
Lead	5.000	90000	6010B
Magnesium	5.000	900000	6010B
Manganese	5.000	180000	6010B
Nickel	5.000	90000	6010B
Potassium	5.000	450000	6010B
Silver	5.000	9000	6010B
Sodium	5.000	180000	6010B
Vanadium	5.000	90000	6010B
Zinc	5.000	90000	6010B

Comments:

METALS
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	900	6020
Arsenic	15.000	900	6020
Selenium	15.000	900	6020
Thallium	15.000	450	6020
Uranium	15.000	450	6020

Comments:

METALS
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PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: ~~MS~~ CV

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006615-001	7/2/2010	0.62	50.0
K1006615-002	7/2/2010	0.62	50.0
K1006615-003	7/2/2010	0.65	50.0
K1006615-004	7/2/2010	0.63	50.0
K1006615-005	7/2/2010	0.67	50.0
K1006615-006	7/2/2010	0.60	50.0
K1006615-006D	7/2/2010	0.61	50.0
K1006615-006S	7/2/2010	0.61	50.0
K1006615-007	7/2/2010	0.63	50.0
K1006615-008	7/2/2010	0.59	50.0
K1006615-009	7/2/2010	0.65	50.0
K1006615-MB	7/2/2010	0.50	50.0
LCSS	7/2/2010	0.25	50.0

METALS
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PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006615-001	7/14/2010	1.00	100.0
K1006615-002	7/14/2010	1.00	100.0
K1006615-003	7/14/2010	1.02	100.0
K1006615-004	7/14/2010	1.00	100.0
K1006615-005	7/14/2010	1.00	100.0
K1006615-006	7/14/2010	1.01	100.0
K1006615-006D	7/14/2010	1.01	100.0
K1006615-006S	7/14/2010	1.00	100.0
K1006615-007	7/14/2010	1.01	100.0
K1006615-008	7/14/2010	1.01	100.0
K1006615-009	7/14/2010	1.00	100.0
K1006615-MB	7/14/2010	1.00	100.0
LCSS	7/14/2010	1.02	100.0

METALS
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PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006615-001	7/19/2010	1.02	100.0
K1006615-002	7/19/2010	1.02	100.0
K1006615-003	7/19/2010	1.02	100.0
K1006615-004	7/19/2010	1.01	100.0
K1006615-005	7/19/2010	1.20	100.0
K1006615-006	7/19/2010	1.00	100.0
K1006615-006D	7/19/2010	1.00	100.0
K1006615-006S	7/19/2010	1.02	100.0
K1006615-007	7/19/2010	1.02	100.0
K1006615-008	7/19/2010	1.00	100.0
K1006615-009	7/19/2010	1.00	100.0
K1006615-MB	7/19/2010	1.00	100.0
LCSS	7/19/2010	1.00	100.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006615-001	7/14/2010	1.00	100.0
K1006615-002	7/14/2010	1.00	100.0
K1006615-003	7/14/2010	1.02	100.0
K1006615-004	7/14/2010	1.00	100.0
K1006615-005	7/14/2010	1.00	100.0
K1006615-006	7/14/2010	1.01	100.0
K1006615-006D	7/14/2010	1.01	100.0
K1006615-006S	7/14/2010	1.00	100.0
K1006615-007	7/14/2010	1.01	100.0
K1006615-008	7/14/2010	1.01	100.0
K1006615-009	7/14/2010	1.00	100.0
K1006615-MB	7/14/2010	1.00	100.0
LCSS	7/14/2010	1.02	100.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006615-001	7/14/2010	1.02	100.0
K1006615-002	7/14/2010	1.02	100.0
K1006615-003	7/14/2010	1.00	100.0
K1006615-004	7/14/2010	1.00	100.0
K1006615-005	7/14/2010	1.02	100.0
K1006615-006	7/14/2010	1.01	100.0
K1006615-006D	7/14/2010	1.02	100.0
K1006615-006S	7/14/2010	1.00	100.0
K1006615-007	7/14/2010	1.01	100.0
K1006615-008	7/14/2010	1.02	100.0
K1006615-009	7/14/2010	1.00	100.0
K1006615-MB	7/14/2010	1.00	100.0
LCSS	7/14/2010	1.01	100.0
LCSW	7/14/2010	50.0	50.0

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/16/2010 **End Date:** 7/16/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Blank	1	09:20						X	X	X	X	X	X	X		X			X			X	X		X	X				
STDB	1	09:23						X		X				X		X							X							
STDA	1	09:26							X	X	X	X	X	X		X			X			X			X	X				
ICV1	1	09:29						X	X	X	X	X	X	X		X			X			X	X		X	X				
ICV1	1	09:32								X				X		X														
ICB1	1	09:35						X	X	X	X	X	X	X		X			X			X	X		X	X				
CCV1	1	09:39						X		X				X		X							X							
CCV1	1	09:49							X	X	X	X	X	X		X			X			X			X	X				
CCB1	1	09:56						X	X	X	X	X	X	X		X			X			X	X		X	X				
CRDL1	1	09:59						X	X	X	X	X	X	X		X			X			X	X		X	X				
ICS-A1	1	10:02						X	X	X	X	X	X	X		X			X			X	X		X	X				
ICS-AB1	1	10:05						X	X	X	X	X	X	X		X			X			X	X		X	X				
ZZZZZZ	1	10:08																												
CCV2	1	10:11						X		X				X		X							X							
CCV2	1	10:14							X	X	X	X	X	X		X			X			X			X	X				
CCB2	1	10:17						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-MB	2	10:20						X	X	X	X	X	X	X		X			X			X	X		X	X				
LCSS	2	10:23						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-006	2	10:26						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-006D	2	10:29						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-006L	10	10:32						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-006S	2	10:35						X	X		X	X	X	X					X			X			X	X				
K1006615-001	2	10:38						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-002	2	10:41						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-003	2	10:44						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-004	2	10:47						X	X	X	X	X	X	X		X			X			X	X		X	X				
CCV3	1	10:50						X		X				X		X							X							
CCV3	1	10:53							X	X	X	X	X	X		X			X			X			X	X				
CCB3	1	10:56						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-005	2	10:59						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-007	2	11:02						X	X	X	X	X	X	X		X			X			X	X		X	X				
K1006615-008	2	11:05						X	X	X	X	X	X	X		X			X			X	X		X	X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/16/2010 **End Date:** 7/16/2010

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006615-009	2	11:08						X	X	X	X	X	X	X		X			X			X	X		X	X	
ZZZZZZ	2	11:10																									
ZZZZZZ	2	11:13																									
ZZZZZZ	2	11:16																									
ZZZZZZ	2	11:19																									
ZZZZZZ	2	11:22																									
ZZZZZZ	2	11:25																									
CCV4	1	11:28						X		X				X		X							X				
CCV4	1	11:31							X	X	X	X	X	X		X			X			X			X	X	
CCB4	1	11:34						X	X	X	X	X	X	X		X			X			X	X		X	X	
ZZZZZZ	1	11:37																									
ZZZZZZ	1	11:40																									
ZZZZZZ	1	11:43																									
ZZZZZZ	1	11:46																									
ZZZZZZ	1	11:49																									
ZZZZZZ	1	11:52																									
ZZZZZZ	1	11:55																									
ZZZZZZ	1	11:58																									
ZZZZZZ	1	12:01																									
ZZZZZZ	1	12:04																									
ZZZZZZ	1	12:07																									
ZZZZZZ	1	12:09																									
ZZZZZZ	1	12:12																									
ZZZZZZ	1	12:15																									
ZZZZZZ	1	12:18																									
ZZZZZZ	1	12:21																									
ZZZZZZ	1	12:24																									
ZZZZZZ	1	12:27																									
ZZZZZZ	1	12:30																									
ZZZZZZ	1	12:33																									
ZZZZZZ	1	12:36																									
ZZZZZZ	1	12:39																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/20/2010 **End Date:** 7/20/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Blank	1	09:46					X								X		X			X										
STDB	1	09:49					X										X			X										
STDA	1	09:52													X															
ICV1	1	09:56					X								X		X			X										
ICV1	1	09:59															X													
ICB1	1	10:02					X								X		X			X										
CCV1	1	10:05					X										X			X										
CCV1	1	10:08													X		X													
CCB1	1	10:11					X								X		X			X										
CRDL1	1	10:14					X								X		X			X										
ICS-A1	1	10:17					X								X		X			X										
ICS-AB1	1	10:20					X								X		X			X										
ZZZZZZ	1	10:23																												
CCV2	1	10:26					X										X			X										
CCV2	1	10:29													X		X													
CCB2	1	10:32					X								X		X			X										
K1006615-MB	2	10:35					X								X		X			X										
LCSS	2	10:38					X								X		X			X										
ZZZZZZ	1	10:41																												
K1006615-006	2	10:44					X								X		X			X										
K1006615-006D	2	10:47					X								X		X			X										
K1006615-006L	10	10:50					X								X		X			X										
K1006615-006S	2	10:53					X								X		X													
K1006615-001	2	10:56					X								X		X			X										
K1006615-002	2	10:59					X								X		X			X										
K1006615-003	2	11:01					X								X		X			X										
CCV3	1	11:04					X										X			X										
CCV3	1	11:07													X		X													
CCB3	1	11:10					X								X		X			X										
K1006615-004	2	11:13					X								X		X			X										
K1006615-005	2	11:16					X								X		X			X										
K1006615-007	2	11:19					X								X		X			X										

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/20/2010 **End Date:** 7/20/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006615-008	2	11:22					X								X		X			X							
K1006615-009	2	11:25					X								X		X			X							
ZZZZZZ	2	11:28																									
ZZZZZZ	2	11:31																									
ZZZZZZ	2	11:34																									
ZZZZZZ	2	11:37																									
ZZZZZZ	2	11:40																									
CCV4	1	11:43					X										X			X							
CCV4	1	11:46													X		X										
ZZZZZZ	1	11:54																									
CCB4	1	11:57					X								X		X			X							
ZZZZZZ	2	12:01																									
ZZZZZZ	1	12:04																									
ZZZZZZ	1	12:07																									
ZZZZZZ	1	12:10																									
ZZZZZZ	1	12:13																									
ZZZZZZ	1	12:16																									
ZZZZZZ	1	12:19																									
ZZZZZZ	1	12:22																									
ZZZZZZ	1	12:25																									
ZZZZZZ	1	12:28																									
ZZZZZZ	1	12:31																									
ZZZZZZ	1	12:34																									
ZZZZZZ	1	12:37																									
ZZZZZZ	1	12:46																									
ZZZZZZ	1	12:49																									
ZZZZZZ	1	12:51																									
ZZZZZZ	1	12:54																									
ZZZZZZ	1	12:58																									
ZZZZZZ	1	13:01																									
ZZZZZZ	1	13:04																									
ZZZZZZ	1	13:07																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	17:16				X															X			X				*
Cal. Blk	1	17:26				X															X			X				*
ICV1	1	17:28				X															X			X				*
CCV1	1	17:31				X															X			X				*
ICB1	1	17:36				X															X			X				*
CCB1	1	17:38				X															X			X				*
SOIL CRA	1	17:44				X															X			X				*
ICS-A1	1	17:47				X															X			X				*
ICS-AB1	1	17:50				X															X			X				*
K1006615-MB	5	17:53				X															X			X				*
LCSS	100	17:56				X															X			X				
LCSW	5	18:00																										*
K1006615-006	5	18:02				X															X			X				*
K1006615-006D	5	18:06				X															X			X				*
K1006615-006L	25	18:09				X															X			X				*
K1006615-006A	5	18:12				X															X			X				*
K1006615-006S	25	18:16				X															X			X				*
K1006615-001	5	18:20				X															X			X				*
K1006615-002	5	18:24				X															X			X				*
CCV2	1	18:27				X															X			X				*
CCB2	1	18:32				X															X			X				*
K1006615-003	5	18:34				X															X			X				*
K1006615-004	5	18:38				X															X			X				*
K1006615-005	5	18:41				X															X			X				*
K1006615-007	5	18:45				X															X			X				*
K1006615-008	5	18:49				X															X			X				*
K1006615-009	5	18:52				X															X			X				*
ZZZZZZ	1	18:56																										
ZZZZZZ	1	18:59																										
ZZZZZZ	1	19:03																										
ZZZZZZ	1	19:06																										
CCV3	1	19:10				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	Analytes																								
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U											
Cal. Blk	1.00	17:16																X										
Cal. Blk	1.00	17:26																X										
ICV1	1.00	17:28																X										
CCV1	1.00	17:31																X										
ICB1	1.00	17:36																X										
CCB1	1.00	17:38																X										
SOIL CRA	1.00	17:44																X										
ICS-A1	1.00	17:47																X										
ICS-AB1	1.00	17:50																X										
K1006615-MB	5.00	17:53																X										
LCSS	00.00	17:56																										
LCSW	5.00	18:00																X										
K1006615-006	5.00	18:02																X										
K1006615-006D	5.00	18:06																X										
K1006615-006L	25.00	18:09																X										
K1006615-006A	5.00	18:12																X										
K1006615-006S	25.00	18:16																X										
K1006615-001	5.00	18:20																X										
K1006615-002	5.00	18:24																X										
CCV2	1.00	18:27																X										
CCB2	1.00	18:32																X										
K1006615-003	5.00	18:34																X										
K1006615-004	5.00	18:38																X										
K1006615-005	5.00	18:41																X										
K1006615-007	5.00	18:45																X										
K1006615-008	5.00	18:49																X										
K1006615-009	5.00	18:52																X										
ZZZZZZ	1.00	18:56																										
ZZZZZZ	1.00	18:59																										
ZZZZZZ	1.00	19:03																										
ZZZZZZ	1.00	19:06																										
CCV3	1.00	19:10																X										
CCB3	1.00	19:14																X										
ZZZZZZ	1.00	19:17																										

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB3	1	19:14				X															X			X				*
ZZZZZZ	1	19:17																										
ZZZZZZ	1	19:20																										
ZZZZZZ	1	19:24																										
ZZZZZZ	1	19:26																										
ZZZZZZ	1	19:30																										
ZZZZZZ	1	19:33																										
ZZZZZZ	1	19:36																										
ZZZZZZ	5	19:40																										
ZZZZZZ	1	19:43																										
ZZZZZZ	1	19:47																										
ZZZZZZ	1	19:51																										
ZZZZZZ	1	19:55																										
ZZZZZZ	1	19:58																										
ZZZZZZ	1	20:01																										
ZZZZZZ	1	20:05																										
ZZZZZZ	1	20:08																										
ZZZZZZ	1	20:12																										
ZZZZZZ	1	20:16																										
ZZZZZZ	1	20:19																										
ZZZZZZ	1	20:23																										
ZZZZZZ	1	20:26																										
ZZZZZZ	1	20:30																										
ZZZZZZ	1	20:33																										
ZZZZZZ	1	20:38																										
ZZZZZZ	1	20:40																										
ZZZZZZ	1	20:44																										
ZZZZZZ	1	20:47																										
ZZZZZZ	1	20:51																										
ZZZZZZ	1	20:54																										
ZZZZZZ	1	20:58																										
ZZZZZZ	1	21:01																										

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal. Blk	1	15:50			X																									
Cal. Stn	1	15:52			X																									
ICV1	1	15:54			X																									
CCV1	1	15:56			X																									
ICB1	1	16:03			X																									
CCB1	1	16:06			X																									
SOIL CRA	1	16:08			X																									
ICS-A1	1	16:10			X																									
ICS-AB1	1	16:12			X																									
ZZZZZZ	1	16:16																												
ZZZZZZ	1	16:19																												
ZZZZZZ	1	16:25																												
ZZZZZZ	1	16:29																												
ZZZZZZ	5	16:32																												
ZZZZZZ	1	16:35																												
ZZZZZZ	1	16:39																												
ZZZZZZ	1	16:45																												
ZZZZZZ	1	16:48																												
ZZZZZZ	1	16:51																												
CCV2	1	16:54			X																									
CCB2	1	17:00			X																									
ZZZZZZ	1	17:02																												
ZZZZZZ	1	17:05																												
ZZZZZZ	1	17:08																												
ZZZZZZ	1	17:12																												
ZZZZZZ	1	17:17																												
ZZZZZZ	1	17:20																												
ZZZZZZ	1	17:23																												
ZZZZZZ	1	17:26																												
ZZZZZZ	1	17:29																												
ZZZZZZ	1	17:32																												
CCV3	1	17:35			X																									

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
CCB3	1	17:41			X																									
ZZZZZZ	1	17:43																												
ZZZZZZ	1	17:46																												
ZZZZZZ	1	17:50																												
ZZZZZZ	1	17:53																												
ZZZZZZ	1	17:56																												
ZZZZZZ	1	17:59																												
ZZZZZZ	1	18:02																												
ZZZZZZ	1	18:05																												
CCV4	1	18:08			X																									
CCB4	1	18:14			X																									
ZZZZZZ	1	18:16																												
ZZZZZZ	1	18:18																												
ZZZZZZ	1	18:23																												
ZZZZZZ	1	18:26																												
ZZZZZZ	1	18:29																												
ZZZZZZ	1	18:33																												
ZZZZZZ	1	18:36																												
ZZZZZZ	1	18:41																												
ZZZZZZ	1	18:44																												
ZZZZZZ	1	18:47																												
CCV5	1	18:51			X																									
CCB5	1	18:57			X																									
ZZZZZZ	1	18:59																												
ZZZZZZ	1	19:03																												
ZZZZZZ	1	19:08																												
ZZZZZZ	1	19:11																												
ZZZZZZ	1	19:14																												
ZZZZZZ	1	19:18																												
ZZZZZZ	1	19:21																												
ZZZZZZ	1	19:24																												
ZZZZZZ	1	19:27																												

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	19:31																												
CCV6	1	19:34			X																									
CCB6	1	19:40			X																									
ZZZZZZ	1	19:42																												
ZZZZZZ	1	19:45																												
ZZZZZZ	1	19:48																												
ZZZZZZ	1	19:52																												
ZZZZZZ	1	19:55																												
ZZZZZZ	1	19:58																												
ZZZZZZ	1	20:01																												
ZZZZZZ	1	20:04																												
ZZZZZZ	1	20:07																												
CCV7	1	20:10			X																									
CCB7	1	20:16			X																									
K1006615-MB	5	20:18			X																									
LCSS	100	20:20			X																									
K1006615-006	5	20:27			X																									
K1006615-006D	5	20:30			X																									
K1006615-006L	25	20:33			X																									
K1006615-006A	5	20:36			X																									
K1006615-006S	25	20:39			X																									
K1006615-001	5	20:44			X																									
K1006615-002	5	20:48			X																									
K1006615-003	5	20:51			X																									
CCV8	1	20:54			X																									
CCB8	1	21:00			X																									
K1006615-004	5	21:02			X																									
K1006615-005	5	21:05			X																									
K1006615-007	5	21:09			X																									
K1006615-008	5	21:12			X																									
K1006615-009	5	21:15			X																									
ZZZZZZ	5	21:18																												

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	5	21:21																										
ZZZZZZ	5	21:24																										
ZZZZZZ	5	21:27																										
ZZZZZZ	5	21:31																										
CCV9	1	21:34			X																							
CCB9	1	21:39			X																							
ZZZZZZ	5	21:42																										
ZZZZZZ	1	21:45																										
ZZZZZZ	1	21:47																										
ZZZZZZ	1	21:53																										
ZZZZZZ	1	21:56																										
ZZZZZZ	1	22:00																										
ZZZZZZ	1	22:03																										
ZZZZZZ	1	22:06																										
ZZZZZZ	1	22:11																										
ZZZZZZ	1	22:14																										
ZZZZZZ	1	22:17																										
ZZZZZZ	1	22:23																										
ZZZZZZ	1	22:25																										
ZZZZZZ	1	22:28																										
ZZZZZZ	1	22:31																										
ZZZZZZ	1	22:35																										
ZZZZZZ	1	22:38																										
ZZZZZZ	1	22:41																										
ZZZZZZ	1	22:44																										
ZZZZZZ	1	22:47																										
ZZZZZZ	1	22:50																										
ZZZZZZ	1	22:54																										
ZZZZZZ	1	22:57																										
ZZZZZZ	1	23:02																										
ZZZZZZ	1	23:05																										
ZZZZZZ	1	23:08																										

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/7/2010 **End Date:** 7/7/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CalibrationBlank	1	09:59																												
Standard#1	1	10:00																X												
Standard#2	1	10:02																X												
Standard#3	1	10:03																X												
Standard#4	1	10:05																X												
Standard#5	1	10:07																X												
ICV1	1	10:08																X												
ICB1	1	10:10																X												
CRDL1	1	10:12																X												
CCV1	1	10:13																X												
CCB1	1	10:15																X												
ZZZZZZ	1	10:16																												
ZZZZZZ	1	10:18																												
ZZZZZZ	1	10:20																												
ZZZZZZ	1	10:21																												
ZZZZZZ	1	10:23																												
ZZZZZZ	1	10:24																												
ZZZZZZ	1	10:26																												
ZZZZZZ	1	10:28																												
ZZZZZZ	1	10:29																												
ZZZZZZ	1	10:31																												
CCV2	1	10:33																X												
CCB2	1	10:34																X												
ZZZZZZ	1	10:36																												
ZZZZZZ	1	10:37																												
ZZZZZZ	1	10:39																												
ZZZZZZ	1	10:41																												
ZZZZZZ	1	10:42																												
ZZZZZZ	1	10:44																												
ZZZZZZ	1	10:45																												
ZZZZZZ	1	10:47																												
ZZZZZZ	1	10:49																												

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006615

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/7/2010 **End Date:** 7/7/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	10:50																												
CCV3	1	10:52																X												
CCB3	1	10:53																X												
ZZZZZZ	1	10:55																												
ZZZZZZ	1	10:57																												
ZZZZZZ	1	10:58																												
ZZZZZZ	1	11:00																												
ZZZZZZ	1	11:02																												
ZZZZZZ	1	11:03																												
K1006615-MB	1	11:05																X												
LCSS	10	11:06																X												
K1006615-001	1	11:08																X												
K1006615-002	1	11:10																X												
CCV4	1	11:11																X												
CCB4	1	11:13																X												
K1006615-003	1	11:14																X												
K1006615-004	1	11:16																X												
K1006615-005	1	11:18																X												
K1006615-006	1	11:19																X												
K1006615-006A	1	11:21																X												
K1006615-006D	1	11:23																X												
K1006615-006S	1	11:24																X												
K1006615-007	1	11:26																X												
K1006615-008	1	11:27																X												
K1006615-009	1	11:29																X												
CCV5	1	11:31																X												
CCB5	1	11:32																X												
ZZZZZZ	1	11:34																												
ZZZZZZ	1	11:35																												
ZZZZZZ	1	11:37																												
ZZZZZZ	1	11:39																												
ZZZZZZ	1	11:40																												

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Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115366 **Prep Workflow**: MetDigSICP **Status**: Prepped **Prep Date**: 07/14/2010 12:30
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
Analyst: WSchumann **Rush/NPDES**: N/A **Due Date**: 07/12/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006953-01	Method Blank		g	As Received	100 mL			10% HNO3 10% HCL
KQ1006953-02	Lab Control Sample		1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-001	BG-5 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-002	BG-5 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-003	BG-5 2-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-004	BG-9 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-005	BG-9 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-006	BG-9 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-006: KQ1006953-03	Duplicate	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-006: KQ1006953-04	Matrix Spike	.01	1.00 g	As Received	100 mL	2 mL 1 mL 1 mL 1 mL	17544 18003 18837 18980	10% HNO3 10% HCL
K1006615-007	BG-13 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-008	BG-13 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-009	BG-13 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-001	BG-10 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-002	BG-10 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-003	BG-10 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-005	BG-14 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-006	BG-14-2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-007	BG-14 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011
K-MET SS1	Spike	17544	9/11/2010
K-MET SS3	Spike	18837	12/1/2010

Name	Type	ID	Expires
K-MET SS4	Spike	18980	12/16/2010
K-MET SS5	Spike	18003	11/20/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HCL	18676

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/14/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-07	Temperature	96	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
	14-JUL-10	14-JUL-10				
Digestion	12:30	13:45	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min HCL Reflux: 15min

Review

Reviewed by: _____ Date: 7/14/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

ICP

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	1.00
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s) : K6615, 6636 - Redigest
Star Lims Run No.:
Method : EPA 3050B 115366R
Analysis for : ICP ICP-MS GFAA Flame AA Other

WS 7/19/10 Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
~~K6615~~ Blank			x		100	10% HNO_3 10% HCl
-LCS	1.00					
K6615-1	1.02					
-2	1.02					
-3	1.02					
-4	1.01					
-5	1.20					
-6	1.00					
-6D	1.00					
-6S	1.02					
-7	1.02					
-8	1.00					
-9	1.00					
6636-1	1.00					
-2	1.02					
-3	1.01					
-5	1.00					
-6	1.01					
-7	1.02					

WS 7/19/10

Balance I.D.: 2 **Date Balance Checked** 7/19/10
Lot # Acids Used: HNO3 J10038 **HCl** 201011001 **H_2O_2** 50095020 **HF**
Hot Block Temp: 96
LCSS (circle appropriate) ERA CLP Soil Lot # D065-540 **Other:**

GFAA LCSW = GFLCSW, ID#18987, mls. added Time Digestion Started: 1:00
ICP LCSW = QCP-CICV-1, ID#18109, mls. added Initial Reflux Time: 15 min.
QCP CICV-2, ID#12778, mls. added Secondary Reflux Time: 30 min.
QCP CICV-3, ID#14972, mls. added HCL Reflux Time (if needed): 15 min.
SS4, ID#16626, mls. Added

SPIKE INFO
K-METSS1 ID#17544 2.00 mls added K-METSS2 ID#16643 mls added K-METSS5 ID#18003 1.00 mls added
K-MET SS3 ID#15299 1.00 mls added 200.8 1000ppb Stock ID#17425 mls added
K-MET SS4 ID#16626 1.00 mls added Ag 1000ppb Stock ID#11605 mls added
Additional spikes:
Comments:

Analyst [signature] **Date** 7/19/10
Reviewer [signature] **Date** 7/19/10

metdig_3050B.xls

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	1.00
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115367 **Prep Workflow**: MetDigSMS **Status**: Prepped **Prep Date**: 07/14/2010 12:30
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
Analyst: WSchumann **Rush/NPDES**: N/A **Due Date**: 07/12/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006954-01	Method Blank		g	As Received	100 mL			10% HNO3
KQ1006954-02	Lab Control Sample		1.01 g	As Received	100 mL			10% HNO3
KQ1006954-03	Lab Control Sample		g	As Received	100 mL			10% HNO3
K1006615-001	BG-5 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-002	BG-5 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-003	BG-5 2-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006615-004	BG-9 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006615-005	BG-9 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-006	BG-9 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006615-006: KQ1006954-04	Duplicate	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-006: KQ1006954-05	Matrix Spike	.01	1.00 g	As Received	100 mL	2 mL 1 mL 1 mL	17544 18837 18980	10% HNO3
K1006615-007	BG-13 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006615-008	BG-13 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-009	BG-13 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-001	BG-10 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-002	BG-10 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-003	BG-10 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006636-005	BG-14 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-006	BG-14-2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-007	BG-14 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3

20 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011	K-MET SS3	Spike	18837	12/1/2010
K-MET SS1	Spike	17544	9/11/2010	K-MET SS4	Spike	18980	12/16/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HNO3	18888

Step	Name	ID
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/14/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-01	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	14-JUL-10 12:30	14-JUL-10 13:30	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min The Second LCS and spike are spiked with 2.00mls of 10ppm U MS13-67-C

Review

Reviewed by: _____ Date: 7/14/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

MS

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	~~1.00~~
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

5/7/14/10

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date
V	2.00	10	M513-67-C	11/13/10

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 207632

Cal. STD/CCV Source: HG1-93-M

Service Request Numbers:

K1006615 K1006636 K1006511 K1006532 K1006561

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: KOK 7/7/10 (initials)

Primary Reviewed By: KOK Date: 7/7/10

Secondary Reviewed By: JDS Date: 7/9/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K1006615 K1006636 K1006470 K1006511 K1006532 K1006561
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.00		100%
2	ICB1	~	~	~	-0.01		< 0.2
3	CRA1	~	~	~	0.18		90%
4	CCV1	~	~	~	5.00		100%
5	CCB1	~	~	~	-0.01		< 0.2
6	K1006470-MB	0.564	50	~	-0.01	-0.001	
7	~~LCSS K1006470 1/10~~	0.509	50	~	5.30		106%
8	K1006470-001 LCSW	0.535	50	~	0.00	0.000	
9	K1006470-001A		50	~	4.60		92%
10	K1006470-001D	0.517	50	~	0.01	0.001	
11	K1006470-001S	0.531	50	~	5.00	0.471	100%
12	K1006470-002	0.525	50	~	0.00	0.000	
13	K1006470-003	0.508	50	~	0.00	0.000	
14	K1006470-004	0.517	50	~	0.02	0.002	
15	K1006470-005	0.541	50	~	0.01	0.001	
16	CCV2	~	~	~	5.20		104%
17	CCB2	~	~	~	-0.01		< 0.2
18	K1006470-006	0.560	50	~	0.18	0.016	
19	K1006470-007	0.558	50	~	0.00	0.000	
20	K1006470-008	0.508	50	~	0.02	0.002	
21	K1006470-009	0.502	50	~	0.04	0.004	
22	K1006470-010	0.528	50	~	0.02	0.002	
23	K1006511-003	0.506	50	~	-0.01	-0.001	
24	K1006532-007	0.563	50	~	0.35	0.031	
25	K1006532-007D	0.561	50	~	0.41	0.037	

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1006470-001S=0.471mg/Kg

Post Spike Level: x @ 5 µg/L

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
	7/7/10	1

[Controlled - HgSoilRunForm 2-18-10] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K1006532-007S	0.557	50	~	5.20	0.467	97%
27	K1006561-001	0.524	50	~	-0.01	-0.001	
28	CCV3	~	~	~	5.10		102%
29	CCB3	~	~	~	0.00		< 0.2
30	K1006561-001D	0.513	50	~	0.01	0.001	
31	K1006561-001S	0.516	50	~	4.70	0.455	94%
32	K1006561-002	0.502	50	~	-0.01	-0.001	
33	K1006561-003	0.511	50	~	0.00	0.000	
34	K1006561-004	0.508	50	~	0.00	0.000	
35	K1006561-005	0.517	50	~	0.00	0.000	
36	K1006615-MB	0.561	50	~	0.01	0.001	
37	LCSS K1006615 1/10	0.255	50	10	3.6	7.059	104%
38	K1006615-001	0.518	50	~	0.17	0.016	
39	K1006615-002	0.521	50	~	0.11	0.011	
40	CCV4	~	~	~	5.10		102%
41	CCB4	~	~	~	-0.01		< 0.2
42	K1006615-003	0.554	50	~	0.15	0.014	
43	K1006615-004	0.545	50	~	0.18	0.017	
44	K1006615-005	0.537	50	~	0.13	0.012	
45	K1006615-006	0.509	50	~	0.10	0.010	
46	K1006615-006A		50	~	4.90		96%
47	K1006615-006D	0.524	50	~	0.08	0.008	
48	K1006615-006S	0.520	50	~	5.30	0.510	104%
49	K1006615-007	0.523	50	~	0.15	0.014	
50	K1006615-008	0.522	50	~	0.07	0.007	

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1006532-007S=0.449mg/Kg K1006561-001S=0.484mg/Kg

Soil/Tissue Spike Level: K1006615-006S=0.481mg/Kg

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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[Controlled - HgSoilRunForm 2-18-10] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	K1006615-009	0.556	50	~	0.11	0.010	
52	CCV5	~	~	~	5.00		100%
53	CCB5	~	~	~	-0.01		< 0.2
54	K1006636-001	0.501	50	~	0.23	0.023	
55	K1006636-002	0.503	50	~	0.13	0.013	
56	K1006636-003	0.565	50	~	0.14	0.012	
57	K1006636-005	0.567	50	~	0.18	0.016	
58	K1006636-006	0.567	50	~	0.15	0.013	
59	K1006636-007	0.501	50	~	0.35	0.035	
60	CCV6	~	~	~	5.10		102%
61	CCB6	~	~	~	-0.01		< 0.2
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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[Controlled - HgSoilRunForm 2-18-10] HG3.XLS

Columbia Analytical Services K-CVAA-02

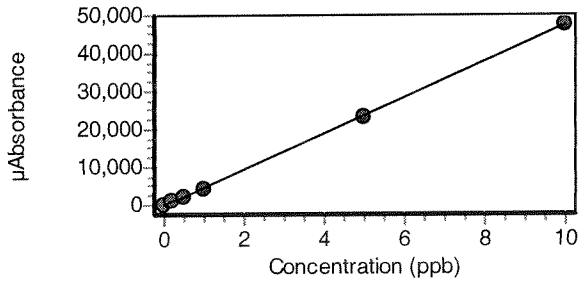
Report Generated By CETAC QuickTrace
Analyst: ACQMET18
Worksheet file: C:\Program Files\QuickTrace\Worksheets\070710A.wsz
Date Started: 7/7/2010 9:19:53 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	07/07/10 09:59:03 am	0.00	139	18.96	
Replicates	145.0	145.9	102.2	164.7					
Standard #1				STD	07/07/10 10:00:39 am	0.20	951	1.42	
Replicates	958.3	953.6	959.7	930.7					
Standard #2				STD	07/07/10 10:02:16 am	0.50	2225	0.86	
Replicates	2214.9	2215.2	2215.5	2253.6					
Standard #3				STD	07/07/10 10:03:54 am	1.00	4536	0.91	
Replicates	4492.9	4509.9	4572.8	4570.3					
Standard #4				STD	07/07/10 10:05:32 am	5.00	23503	0.48	
Replicates	23349.8	23492.6	23565.7	23605.2					
Standard #5				STD	07/07/10 10:07:10 am	10.00	47502	0.76	
Replicates	47043.9	47399.2	47703.1	47861.5					

Calibration

Equation: A = 139.447 + 4719.663C
R2: 0.99982
SEE: 305.2528
Flags:



ICV1				ICV	07/07/10 10:08:49 am	5.00	23646	0.46	
Replicates	23488.0	23673.4	23696.5	23726.7					
% Recovery	99.61								

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB1					ICB	07/07/10 10:10:25 am	-0.01	72	39.68	
	Replicates	106.1	40.4	58.9	83.2					
CRA1					CRDL	07/07/10 10:12:01 am	0.18	968	0.82	
	Replicates	974.8	960.9	960.9	974.5					
	% Recovery	87.75								
CCV1					CCV	07/07/10 10:13:39 am	5.00	23781	0.30	
	Replicates	23676.0	23789.4	23821.0	23836.5					
	% Recovery	100.18								
CCB1					CCB	07/07/10 10:15:15 am	-0.01	69	7.77	
	Replicates	75.0	64.3	65.2	73.0					
K1006470-MB					UNK	07/07/10 10:16:51 am	-0.01	114	14.67	
	Replicates	124.1	115.1	126.8	90.1					
LCSS K1006470 1/10					UNK	07/07/10 10:18:27 am	5.30	25383	0.31	
	Replicates	25281.8	25359.7	25434.8	25456.9					
K1006470-001					UNK	07/07/10 10:20:03 am	0.00	157	16.83	
	Replicates	122.0	160.2	159.7	186.2					
K1006470-001A					UNK	07/07/10 10:21:39 am	4.60	21981	0.41	
	Replicates	21847.4	21995.9	22042.0	22037.0					
K1006470-001D					UNK	07/07/10 10:23:16 am	0.01	163	7.27	
	Replicates	175.7	157.8	149.1	169.3					
K1006470-001S					UNK	07/07/10 10:24:53 am	5.00	23821	4.62	
	Replicates	22618.3	23199.6	24475.0	24991.3					
K1006470-002					UNK	07/07/10 10:26:30 am	0.00	146	12.18	
	Replicates	166.1	154.1	124.8	140.3					
K1006470-003					UNK	07/07/10 10:28:08 am	0.00	157	7.40	
	Replicates	150.3	144.2	162.6	169.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006470-004				UNK	07/07/10 10:29:46 am	0.02	242	6.39	
Replicates	251.3	218.7	250.5	246.0					
K1006470-005				UNK	07/07/10 10:31:24 am	0.01	172	7.53	
Replicates	176.8	184.8	154.2	172.2					
CCV2				CCV	07/07/10 10:33:02 am	5.20	24783	0.24	
Replicates	24860.5	24738.3	24737.4	24794.5					
% Recovery	104.43								
CCB2				CCB	07/07/10 10:34:38 am	-0.01	98	13.52	
Replicates	78.7	107.7	105.6	98.4					
K1006470-006				UNK	07/07/10 10:36:16 am	0.18	968	2.25	
Replicates	977.3	969.3	937.0	987.4					
K1006470-007				UNK	07/07/10 10:37:55 am	0.00	153	9.58	
Replicates	166.8	161.7	151.0	133.6					
K1006470-008				UNK	07/07/10 10:39:31 am	0.02	236	4.00	
Replicates	247.5	224.5	234.7	236.0					
K1006470-009				UNK	07/07/10 10:41:06 am	0.04	309	3.76	
Replicates	305.9	294.1	321.2	313.7					
K1006470-010				UNK	07/07/10 10:42:42 am	0.02	229	2.55	
Replicates	236.7	223.2	229.0	225.9					
K1006511-003				UNK	07/07/10 10:44:18 am	-0.01	97	20.33	
Replicates	96.4	76.1	91.1	123.2					
K1006532-007				UNK	07/07/10 10:45:55 am	0.35	1803	1.47	
Replicates	1767.6	1812.2	1800.8	1830.8					
K1006532-007D				UNK	07/07/10 10:47:31 am	0.41	2055	0.70	
Replicates	2065.2	2039.1	2047.3	2069.3					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006532-007S				UNK	07/07/10 10:49:08 am	5.20	24787	0.36	
Replicates	24922.8	24744.1	24738.2	24743.7					
K1006561-001				UNK	07/07/10 10:50:46 am	-0.01	102	11.29	
Replicates	100.7	107.3	114.3	87.1					
CCV3				CCV	07/07/10 10:52:24 am	5.10	24248	0.55	
Replicates	24434.2	24253.0	24161.5	24143.0					
% Recovery	102.16								
CCB3				CCB	07/07/10 10:53:59 am	0.00	119	12.63	
Replicates	132.1	130.8	102.7	109.2					
K1006561-001D				UNK	07/07/10 10:55:37 am	0.01	167	17.82	
Replicates	168.6	182.6	191.3	124.4					
K1006561-001S				UNK	07/07/10 10:57:15 am	4.70	22115	0.36	
Replicates	22216.6	22133.1	22032.6	22079.6					
K1006561-002				UNK	07/07/10 10:58:53 am	-0.01	114	10.37	
Replicates	112.7	121.6	125.1	98.4					
K1006561-003				UNK	07/07/10 11:00:31 am	0.00	138	7.21	
Replicates	143.9	126.9	132.7	148.5					
K1006561-004				UNK	07/07/10 11:02:07 am	0.00	156	15.98	
Replicates	166.2	180.0	157.5	121.5					
K1006561-005				UNK	07/07/10 11:03:42 am	0.00	144	13.27	
Replicates	136.0	164.5	154.0	121.3					
K1006615-MB				UNK	07/07/10 11:05:18 am	0.01	184	17.13	
Replicates	172.7	230.7	163.7	168.1					
LCSS K1006615 1/10				UNK	07/07/10 11:06:54 am	3.60	17248	0.54	
Replicates	17139.6	17216.3	17272.2	17362.0					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006615-001				UNK	07/07/10 11:08:31 am	0.17	943	2.04	
Replicates	934.9	923.0	968.4	943.8					
K1006615-002				UNK	07/07/10 11:10:07 am	0.11	643	2.37	
Replicates	656.3	652.6	641.7	622.3					
CCV4				CCV	07/07/10 11:11:45 am	5.10	24436	0.57	
Replicates	24596.9	24508.0	24316.7	24322.2					
% Recovery	102.96								
CCB4				CCB	07/07/10 11:13:21 am	-0.01	70	18.21	
Replicates	68.8	86.5	55.3	69.5					
K1006615-003				UNK	07/07/10 11:14:58 am	0.15	848	2.00	
Replicates	854.4	863.9	851.0	824.2					
K1006615-004				UNK	07/07/10 11:16:35 am	0.18	987	1.26	
Replicates	1003.5	984.7	973.7	984.3					
K1006615-005				UNK	07/07/10 11:18:13 am	0.13	759	2.24	
Replicates	738.3	769.8	776.0	753.1					
K1006615-006				UNK	07/07/10 11:19:51 am	0.10	633	3.77	
Replicates	644.2	605.9	660.3	622.6					
K1006615-006A				UNK	07/07/10 11:21:29 am	4.90	23079	0.13	
Replicates	23097.5	23099.7	23082.6	23034.7					
K1006615-006D				UNK	07/07/10 11:23:07 am	0.08	513	5.69	
Replicates	502.6	556.4	497.1	495.4					
K1006615-006S				UNK	07/07/10 11:24:43 am	5.30	25223	0.12	
Replicates	25215.5	25246.7	25246.5	25183.9					
K1006615-007				UNK	07/07/10 11:26:19 am	0.15	868	1.48	
Replicates	882.6	874.0	855.0	859.2					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006615-008				UNK	07/07/10 11:27:55 am	0.07	465	3.18	
Replicates	463.0	485.8	451.0	460.0					
K1006615-009				UNK	07/07/10 11:29:31 am	0.11	671	3.09	
Replicates	669.4	644.2	677.7	693.9					
CCV5				CCV	07/07/10 11:31:09 am	5.00	23558	6.48	
Replicates	21762.6	22858.1	24520.5	25092.3					
% Recovery	99.24								
CCB5				CCB	07/07/10 11:32:45 am	-0.01	95	17.39	
Replicates	85.4	103.2	112.9	76.7					
K1006636-001				UNK	07/07/10 11:34:21 am	0.23	1207	2.07	
Replicates	1206.8	1176.0	1237.1	1208.7					
K1006636-002				UNK	07/07/10 11:35:58 am	0.13	762	1.80	
Replicates	753.3	757.3	755.1	782.5					
K1006636-003				UNK	07/07/10 11:37:35 am	0.14	785	3.16	
Replicates	749.6	802.0	786.3	802.3					
K1006636-005				UNK	07/07/10 11:39:12 am	0.18	1002	1.97	
Replicates	990.0	1031.0	994.1	991.1					
K1006636-006				UNK	07/07/10 11:40:50 am	0.15	859	0.78	
Replicates	854.2	859.1	853.6	868.1					
K1006636-007				UNK	07/07/10 11:42:27 am	0.35	1791	0.40	
Replicates	1789.0	1797.3	1781.9	1796.1					
CCV6				CCV	07/07/10 01:10:48 pm	5.10	23989	0.47	
Replicates	23834.7	23982.4	24048.8	24090.0					
% Recovery	101.06								
CCB6				CCB	07/07/10 01:12:24 pm	-0.01	91	4.29	
Replicates	96.9	91.4	88.3	88.9					

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114740 **Prep Workflow**: HgDigS **Status**: Prepped **Prep Date**: 07/02/2010 12:00
Team: Metals **Prep Method**: Method, **Current Step**: Digestion **Due Date**: 07/05/2010
Analyst: KKLEIN **Rush/NPDES**: NPDES

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006529-01	Method Blank		0.564 g	wet weight	50 mL			
KQ1006529-03	Lab Control Sample		0.509 g	wet weight	50 mL	0.25 mL	19170	
K1006470-001	Sample #1	.01	0.535 g	wet weight	50 mL			
K1006470-001: KQ1006529-05	Duplicate	.01	0.517 g	wet weight	50 mL			
K1006470-001: KQ1006529-06	Matrix Spike	.01	0.531 g	wet weight	50 mL	0.25mL	19172	
K1006470-002	Sample #2	.01	0.525 g	wet weight	50 mL			
K1006470-003	Sample #3	.01	0.508 g	wet weight	50 mL			
K1006470-004	Sample #4	.01	0.517 g	wet weight	50 mL			
K1006470-005	Sample #5	.01	0.541 g	wet weight	50 mL			
K1006470-006	Sample #6	.01	0.560 g	wet weight	50 mL			
K1006470-007	Sample #7	.01	0.558 g	wet weight	50 mL			
K1006470-008	Sample #8	.01	0.508 g	wet weight	50 mL			
K1006470-009	Sample #9	.01	0.502 g	wet weight	50 mL			
K1006470-010	Sample #10	.01	0.528 g	wet weight	50 mL			
K1006511-003	2724	.01	0.506 g	wet weight	50 mL			
K1006532-007	Composite	.03	0.563 g	wet weight	50 mL			
K1006532-007: KQ1006529-09	Duplicate	.03	0.561 g	wet weight	50 mL			
K1006532-007: KQ1006529-10	Matrix Spike	.03	0.557 g	wet weight	50 mL	0.25mL	19172	
K1006561-001	10032	.01	0.524 g	wet weight	50 mL			
K1006561-001: KQ1006529-07	Duplicate	.01	0.513 g	wet weight	50 mL			
K1006561-001: KQ1006529-08	Matrix Spike	.01	0.516 g	wet weight	50 mL	0.25mL	19172	
K1006561-002	10027	.01	0.502 g	wet weight	50 mL			
K1006561-003	10064	.01	0.511 g	wet weight	50 mL			

K1006561-004	10065	.01	0.508 g	wet weight	50 mL			
K1006561-005	10040	.01	0.517 g	wet weight	50 mL			

25 Total Samples consisting of 17 Client Samples, 6 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Soil/TCLP 1000 ug/L		19172	8/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	15559	Digestion	K-MET HNO3	18888
Digestion	K-MET KMnO4 Hg	15563	Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	16760	Digestion	K-MET HCl Hg	19087
Digestion	K-MET SnCl Hg	18000			

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/1/2010		Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	02-JUL-10 12:00	02-JUL-10 12:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-M

Review

Reviewed by: JDB Date: 7/9/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114742 **Prep Workflow**: HgDigS **Status**: Prepped **Prep Date**: 07/02/2010 12:00
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 07/12/2010
Analyst: KKLEIN **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006531-03	Method Blank		0.561 g	wet weight	50 mL			
KQ1006531-04	Lab Control Sample		0.255 g	wet weight	50 mL	0.25 mL	19170	
K1006615-001	BG-5 0-2 COMP	.01	0.623 g	wet weight	50 mL			
K1006615-002	BG-5 2-12 COMP	.01	0.623 g	wet weight	50 mL			
K1006615-003	BG-5 2-18 COMP	.01	0.649 g	wet weight	50 mL			
K1006615-004	BG-9 0-2 COMP	.01	0.627 g	wet weight	50 mL			
K1006615-005	BG-9 2-12 COMP	.01	0.674 g	wet weight	50 mL			
K1006615-006	BG-9 12-18 COMP	.01	0.597 g	wet weight	50 mL			
K1006615-006: KQ1006531-05	Duplicate	.01	0.614 g	wet weight	50 mL			
K1006615-006: KQ1006531-06	Matrix Spike	.01	0.610 g	wet weight	50 mL	0.25mL	19172	
K1006615-007	BG-13 0-2 COMP	.01	0.625 g	wet weight	50 mL			
K1006615-008	BG-13 2-12 COMP	.01	0.589 g	wet weight	50 mL			
K1006615-009	BG-13 12-18 COMP	.01	0.646 g	wet weight	50 mL			
K1006636-001	BG-10 0-2 COMP	.01	0.594 g	wet weight	50 mL			
K1006636-002	BG-10 2-12 COMP	.01	0.596 g	wet weight	50 mL			
K1006636-003	BG-10 12-18 COMP	.01	0.676 g	wet weight	50 mL			
K1006636-005	BG-14 0-2 COMP	.01	0.648 g	wet weight	50 mL			
K1006636-006	BG-14-2-12 COMP	.01	0.645 g	wet weight	50 mL			
K1006636-007	BG-14 12-18 COMP	.01	0.583 g	wet weight	50 mL			

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires

K-MET Hg Source Soil/TCLP 1000 ug/L		19172	8/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET SnCl Hg	18000

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/1/2010	

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	02-JUL-10 12:00	02-JUL-10 12:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-M

Review

Reviewed by: JDB Date: 7/9/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114740 **Prep Workflow:** HgDigS **Status:** Draft **Prep Date:** 07/01/2010 12:54
Team: Metals **Prep Method:** Method, **Current Step:** Digestion **Due Date:** 07/05/2010
Analyst: BSHELDON **Rush/NPDES:** NPDES

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006529-01	Method Blank		0.5 g	0.564					
KQ1006529-02	Method Blank		0.5 g						
KQ1006529-03	Lab Control Sample		0.5 g	0609					
KQ1006529-04	Lab Control Sample		0.5 g						
K1006470-001	Sample #1	.01	0.5 g	.535					
K1006470-001: KQ1006529-05	Duplicate	.01	0.5 g	.517					
K1006470-001: KQ1006529-06	Matrix Spike	.01	0.5 g	.531					
K1006470-002	Sample #2	.01	0.5 g	.525					
K1006470-003	Sample #3	.01	0.5 g	.508					
K1006470-004	Sample #4	.01	0.5 g	.517					
K1006470-005	Sample #5	.01	0.5 g	.541					
K1006470-006	Sample #6	.01	0.5 g	.560					
K1006470-007	Sample #7	.01	0.5 g	.558					
K1006470-008	Sample #8	.01	0.5 g	.508					
K1006470-009	Sample #9	.01	0.5 g	.502					
K1006470-010	Sample #10	.01	0.5 g	.528					
K1006511-003	2724	.01	0.5 g	.506					
K1006532-007	Composite	.03	0.5 g	.563					
K1006532-007: KQ1006529-09	Duplicate	.03	0.5 g	.561					
K1006532-007: KQ1006529-10	Matrix Spike	.03	0.5 g	.557					
K1006561-001	10032	.01	0.5 g	.524					
K1006561-001: KQ1006529-07	Duplicate	.01	0.5 g	.513					
K1006561-001: KQ1006529-08	Matrix Spike	.01	0.5 g	.516					
K1006561-002	10027	.01	0.5 g	.502					

K1006561-003	10064	.01	0.5 g	.511					
K1006561-004	10065	.01	0.5 g	.504					
K1006561-005	10040	.01	0.5 g	.517					

27 Total Samples consisting of 17 Client Samples, 6 Client QC Samples, 4 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114742 **Prep Workflow:** HgDigS **Status:** Draft **Prep Date:** 07/01/2010 13:05
Team: Metals **Prep Method:** Method **Current Step:** Digestion **Due Date:** 07/12/2010
Analyst: BSHELDON **Rush/NPDES:** N/A

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006531-03	Method Blank		0.5 g	.561					
KQ1006531-04	Lab Control Sample		0.5 g	.255					
K1006615-001	BG-5 0-2 COMP	.01	0.60 g	.623					
K1006615-002	BG-5 2-12 COMP	.01	0.60 g	.623					
K1006615-003	BG-5 2-18 COMP	.01	0.59 g	.649					
K1006615-004	BG-9 0-2 COMP	.01	0.57 g	.627					
K1006615-005	BG-9 2-12 COMP	.01	0.63 g	.674					
K1006615-006	BG-9 12-18 COMP	.01	0.59 g	.597					
K1006615-006: KQ1006531-05	Duplicate	.01	0.5 g	.614					
K1006615-006: KQ1006531-06	Matrix Spike	.01	0.5 g	.610					
K1006615-007	BG-13 0-2 COMP	.01	0.60 g	.625					
K1006615-008	BG-13 2-12 COMP	.01	0.56 g	.589					
K1006615-009	BG-13 12-18 COMP	.01	0.58 g	.646					
K1006636-001	BG-10 0-2 COMP	.01	0.59 g	.594					
K1006636-002	BG-10 2-12 COMP	.01	0.59 g	.596					
K1006636-003	BG-10 12-18 COMP	.01	0.60 g	.626					
K1006636-005	BG-14 0-2 COMP	.01	0.57 g	.648					
K1006636-006	BG-14-2-12 COMP	.01	0.57 g	.645					
K1006636-007	BG-14 12-18 COMP	.01	0.58 g	.583					

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Service Request	Wet Weight	Solids	Dry Weight
K1006615-001	0.623	83.1	0.518
K1006615-002	0.623	83.6	0.521
K1006615-003	0.649	85.4	0.554
K1006615-004	0.627	87.0	0.545
K1006615-005	0.674	79.6	0.537
K1006615-006	0.597	85.3	0.509
K1006615-006D	0.614	85.3	0.524
K1006615-006S	0.610	85.3	0.520
K1006615-007	0.625	83.6	0.523
K1006615-008	0.589	88.6	0.522
K1006615-009	0.646	86.1	0.556
K1006636-001	0.594	84.3	0.501
K1006636-002	0.596	84.4	0.503
K1006636-003	0.676	83.6	0.565
K1006636-005	0.648	87.5	0.567
K1006636-006	0.645	87.9	0.567
K1006636-007	0.583	85.9	0.501
			0.000
			0.000
			0.000
			0.000
			0.000

Service Request # K1006615 (Soil)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits		✓
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 071610BICP02
Star Lims: 208725
244% Mn Spike Recovery
42% RPD Mn, High RPD Ba
LCSS: Pb out of control
(Ba, Pb, K, Mn being Rejected for)

Primary Review by 3C Date 7/16/10

Secondary Review by [signature] Date 7/20/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/16/10 09:20 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1511	.0097	.0069	.00005
Stddev	.0177	.0137	.0137	.00002
%RSD	11.73	141.4	198.0	46.512
#1	.1636	.0194	-.0028	.00006
#2	.1385	.0000	.0166	.00003

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00284	.3548	.0002	.3818
Stddev	.00024	.0159	.0000	.0223
%RSD	8.6038	4.476	2.434	5.847
#1	-.00266	.3660	.0002	.3660
#2	-.00301	.3435	.0002	.3976

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0663	-.0002	.0006	.0235
Stddev	.0587	.0001	.0002	.0020
%RSD	88.40	28.96	33.19	8.303
#1	-.1078	-.0001	.0007	.0221
#2	-.0249	-.0002	.0004	.0249

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0015	.0008	.0002	.0055
Stddev	.0000	.0007	.0000	.0157
%RSD	2.213	88.40	3.718	282.7
#1	.0015	.0013	.0002	.0166
#2	.0015	.0003	.0002	-.0055

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.01935	.00108	.0000	.0003
Stddev	.01564	.00029	.0000	.0001
%RSD	80.822	27.189	46.47	41.95
#1	.03041	.00129	.0000	.0004
#2	.00829	.00087	.0000	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.1770	-.0374	.0249
Stddev	.0002	.2307	.0098	.0039
%RSD	141.4	130.4	26.13	15.70
#1	-.0003	.3401	-.0305	.0221
#2	.0000	.0138	-.0443	.0276

Sample Name: Blank Run Time: 07/16/10 09:20

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0047	.0004	.0082	.0003
Stddev	.0005	.0000	.0001	.0001
%RSD	11.59	5.901	1.020	40.81
#1	.0051	.0004	.0082	.0002
#2	.0043	.0004	.0083	.0004

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0347	.1912	.00414	.0001
Stddev	.0373	.0040	.00026	.0000
%RSD	107.5	2.106	6.2425	16.41
#1	.0610	.1941	.00432	.0001
#2	.0083	.1884	.00396	.0002

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.06773	-.00171
Stddev	.05279	.00011
%RSD	77.939	6.6134
#1	.10506	-.00163
#2	.03040	-.00179

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	175.50
Stddev	1.34
%RSD	.76562
#1	176.45
#2	174.55

7/16/10

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Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/16/10 09:23 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.36	3.4423	.53175	40.47
Stddev	.06	.0324	.00177	.34
%RSD	.3186	.94075	.33377	.8315
#1	20.31	3.4194	.53300	40.23
#2	20.40	3.4652	.53049	40.70

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.8630	58.83	.7825	196.3
Stddev	.0043	.33	.0016	.0
%RSD	.4992	.5605	.2027	.0028
#1	.8599	58.60	.7814	196.3
#2	.8660	59.07	.7836	196.3

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.407	47.23	99.12	361.54
Stddev	.011	.18	.51	.94
%RSD	.2443	.3827	.5110	.25986
#1	4.414	47.10	98.77	362.20
#2	4.399	47.36	99.48	360.87

Elem	Sr4077
Line	407.771 { 82}
Avg	9.1932
Stddev	.0046
%RSD	.04960
#1	9.1900
#2	9.1964

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	173.17
Stddev	.15
%RSD	.08918
#1	173.06
#2	173.28

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/16/10 09:26 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	17.16	11.73	48.00	.3449
Stddev	.10	.07	.14	.0003
%RSD	.5706	.5591	.3017	.0980
#1	17.09	11.69	47.90	.3446
#2	17.23	11.78	48.10	.3451

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	35.08	.1378	.2247	18.00
Stddev	.21	.0000	.0004	.04
%RSD	.5968	.0092	.1613	.2058
#1	34.93	.1378	.2249	18.03
#2	35.23	.1378	.2244	17.97

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4871	.1101	1522.7	3.6195
Stddev	.0058	.0002	1.5	.0094
%RSD	1.182	.1960	.10129	.26031
#1	.4912	.1102	1521.6	3.6261
#2	.4830	.1099	1523.8	3.6128

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1790	.2055	11.14	19.23
Stddev	.0022	.0006	.02	.02
%RSD	1.211	.3147	.1580	.1225
#1	.1775	.2050	11.12	19.22
#2	.1805	.2059	11.15	19.25

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.1079	.1742	.1846	.19654
Stddev	.0002	.0005	.0013	.00100
%RSD	.2141	.2982	.6873	.50932
#1	.1081	.1745	.1855	.19725
#2	.1078	.1738	.1837	.19584

Elem	Tl1908
Line	190.864 {176}
Avg	.0916
Stddev	.0002
%RSD	.1731
#1	.0915
#2	.0918

Sample Name: STDA Run Time: 07/16/10 09:26

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	176.14
Stddev	.12
%RSD	.06932
#1	176.06
#2	176.23

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 07/16/10 09:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.135	2.480	2.513	5.1596	.12581	.0047
Stddev	.001	.007	.023	.0186	.00016	.0003
%RSD	.0235	.2828	.9182	.36050	.12861	6.611
#1	5.134	2.485	2.496	5.1464	.12570	.0044
#2	5.136	2.475	2.529	5.1727	.12593	.0049
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	5.000%	5.000%	5.000%	5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.238	12.61	.5062	1.241	.6242	2.533
Stddev	.006	.08	.0059	.004	.0074	.066
%RSD	.4546	.6250	1.173	.2810	1.186	2.619
#1	1.234	12.55	.5020	1.238	.6294	2.580
#2	1.242	12.66	.5104	1.243	.6189	2.486
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	12.65	1.1923	1.992	1.237	12.91
Stddev	.008	.02	.0026	.017	.007	.06
%RSD	.3106	.1228	.21554	.8494	.5418	.4969
#1	2.465	12.66	1.1905	1.980	1.232	12.96
#2	2.476	12.64	1.1942	2.004	1.242	12.87
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	5.000%	5.000%	5.0000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.487	.6290	12.53	.0094	1.247	1.244
Stddev	.006	.0140	.05	.0018	.002	.008
%RSD	.2512	2.232	.4008	19.45	.1795	.6704
#1	2.483	.6190	12.57	.0107	1.246	1.238
#2	2.492	.6389	12.50	.0081	1.249	1.250
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 07/16/10 09:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0402	-.1370	2.0084	2.510	.00054	.00671
Stddev	.0043	.0007	.0036	.006	.00022	.00005
%RSD	10.81	.5186	.17811	.2578	41.414	.75505
#1	-.0433	-.1365	2.0059	2.505	.00069	.00675
#2	-.0371	-.1375	2.0109	2.514	.00038	.00668
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	175.91
Stddev	.15
%RSD	.08428
#1	175.80
#2	176.01

Method: 2010A Sample Name: ICVB1 ICP7-56-C Operator:
Comment:
Run Time: 07/16/10 09:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.027	.0158	-.0005	.00501	.00018	1.987
Stddev	.008	.0217	.0021	.00074	.00002	.005
%RSD	.7583	137.7	389.0	14.824	8.4887	.2635
#1	1.021	.0311	-.0020	.00554	.00017	1.984
#2	1.032	.0004	.0009	.00449	.00019	1.991
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	5.173	.0037	.0012	.0023	9.902
Stddev	.0003	.037	.0001	.0006	.0002	.138
%RSD	20.47	.7185	3.044	54.06	9.768	1.394
#1	.0018	5.147	.0038	.0016	.0021	9.804
#2	.0014	5.199	.0036	.0007	.0024	10.000
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	4.9422	9.984	.0131	.0021	.0551
Stddev	.0015	.0016	.029	.0066	.0000	.0193
%RSD	155.1	.03300	.2878	50.84	.5569	35.08
#1	.0020	4.9433	9.964	.0178	.0021	.0414
#2	-.0001	4.9410	10.00	.0084	.0021	.0688
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		5.0000%	5.000%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	-.0001	.0781	4.867	.0043	.0054
Stddev	.0061	.0004	.0022	.041	.0003	.0005
%RSD	51.87	292.9	2.779	.8423	6.415	9.726
#1	.0161	.0002	.0766	4.838	.0041	.0051
#2	.0075	-.0004	.0797	4.896	.0045	.0058
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVB1 Run Time: 07/16/10 09:32

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.051	5.153	.00503	.0167	2.0736	2.0163
Stddev	.029	.017	.00019	.0156	.0051	.0056
%RSD	.5643	.3324	3.6840	93.48	.24384	.27883
#1	5.031	5.141	.00490	.0278	2.0701	2.0123
#2	5.071	5.165	.00516	.0057	2.0772	2.0202
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	176.97
Stddev	.47
%RSD	.26700
#1	177.30
#2	176.63

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/16/10 09:35 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0004	-.0012	.00010	.00006	.0020
Stddev	.0000	.0057	.0075	.00037	.00002	.0004
%RSD	.0539	1398.	637.2	372.55	36.659	21.83
#1	.0103	-.0036	-.0065	.00036	.00007	.0017
#2	.0103	.0044	.0041	-.00016	.00004	.0023
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0014	.0013	-.0006	.0017	.0036
Stddev	.0002	.0019	.0017	.0005	.0025	.0046
%RSD	173.9	141.6	133.3	79.47	147.7	127.4
#1	.0003	.0028	.0001	-.0009	-.0001	.0068
#2	.0000	.0000	.0025	-.0003	.0035	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.00016	.00079	.0008	.0004	.0168
Stddev	.0010	.00010	.00100	.0001	.0012	.0070
%RSD	76.96	59.756	126.96	9.517	288.5	41.56
#1	.0021	.00023	.00149	.0008	.0012	.0119
#2	.0006	.00009	.00008	.0007	-.0004	.0217
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0001	.0203	.0054	.0041	.0015
Stddev	.0044	.0004	.0029	.0077	.0036	.0011
%RSD	29.47	280.7	14.19	141.7	86.06	73.20
#1	.0118	-.0004	.0183	.0108	.0016	.0023
#2	.0180	.0001	.0223	.0000	.0066	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: ICB Run Time: 07/16/10 09:35

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0087	-.0009	.00253	-.0121	.00012	.00014
Stddev	.0039	.0006	.00063	.0074	.00053	.00002
%RSD	45.50	61.65	24.949	61.25	447.03	17.016
#1	-.0059	-.0005	.00298	-.0173	-.00026	.00015
#2	-.0115	-.0013	.00209	-.0068	.00049	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.84
Stddev	.32
%RSD	.18360
#1	173.61
#2	174.06

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 09:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.067	.0158	.0076	2.4872	.05101	.0087
Stddev	.029	.0079	.0094	.0076	.00046	.0005
%RSD	.5775	49.77	124.1	.30630	.90586	6.172
#1	5.045	.0148	.0198	2.4782	.05077	.0089
#2	5.041	.0132	-.0014	2.4836	.05063	.0094
#3	5.100	.0084	.0021	2.4927	.05099	.0083
#4	5.084	.0269	.0098	2.4943	.05167	.0083
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	5.000%			5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.20	.0027	-.0016	-.0006	25.45
Stddev	.0001	.25	.0012	.0006	.0017	.13
%RSD	8.541	.9869	46.03	34.43	288.3	.4943
#1	.0012	24.85	.0028	-.0014	.0015	25.29
#2	.0012	25.20	.0038	-.0019	-.0020	25.42
#3	.0010	25.42	.0031	-.0023	.0001	25.49
#4	.0010	25.33	.0009	-.0010	-.0020	25.59
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	25.11	5.077	-.0003	-.0017	10.10
Stddev	.0108	.19	.022	.0004	.0003	.02
%RSD	141.2	.7702	.4338	124.3	18.96	.1859
#1	-.0027	24.85	5.050	.0002	-.0019	10.10
#2	-.0045	25.25	5.071	-.0003	-.0020	10.11
#3	.0002	25.26	5.087	-.0005	-.0017	10.07
#4	-.0236	25.10	5.102	-.0007	-.0013	10.11
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		5.000%	5.000%			5.000%

Sample Name: CCVB Run Time: 07/16/10 09:39

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	.0001	10.04	.0041	.0045	.0024
Stddev	.0060	.0025	.04	.0047	.0016	.0015
%RSD	60.57	3689.	.3869	113.2	35.36	61.63
#1	.0148	-.0022	10.05	.0019	.0028	.0026
#2	.0012	.0001	10.08	-.0007	.0035	.0028
#3	.0124	-.0013	9.991	.0102	.0055	.0004
#4	.0111	.0036	10.04	.0050	.0061	.0040
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			5.000%			

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.979	2.511	.00427	.0276	.50464	.51185
Stddev	.030	.006	.00029	.0105	.00224	.00113
%RSD	.2967	.2362	6.7612	37.88	.44363	.22114
#1	9.975	2.502	.00400	.0249	.50466	.51095
#2	10.02	2.513	.00415	.0425	.50701	.51236
#3	9.947	2.514	.00467	.0180	.50163	.51088
#4	9.977	2.515	.00427	.0251	.50525	.51320
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	172.13
Stddev	.36
%RSD	.21149
#1	172.29
#2	172.41
#3	172.23
#4	171.60

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 09:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4741	2.453	2.408	.45815	.53409	.4977
Stddev	.0173	.013	.004	.00162	.00140	.0006
%RSD	3.654	.5456	.1713	.35265	.26130	.1129
#1	.4594	2.469	2.413	.45701	.53395	.4978
#2	.4923	2.446	2.409	.46014	.53510	.4982
#3	.4592	2.438	2.406	.45668	.53216	.4978
#4	.4856	2.459	2.404	.45879	.53514	.4969
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		5.000%	5.000%			5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4872	2.490	.4876	.4888	.4948	.4891
Stddev	.0023	.012	.0026	.0047	.0029	.0021
%RSD	.4751	.4943	.5434	.9527	.5767	.4199
#1	.4864	2.490	.4844	.4870	.4925	.4894
#2	.4906	2.491	.4909	.4958	.4990	.4915
#3	.4856	2.475	.4873	.4864	.4939	.4865
#4	.4861	2.505	.4879	.4861	.4939	.4892
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.430	2.0513	.95032	.9808	.4900	5.134
Stddev	.016	.0053	.00418	.0045	.0037	.027
%RSD	.6489	.25797	.43974	.4601	.7573	.5314
#1	2.427	2.0448	.94853	.9819	.4871	5.174
#2	2.445	2.0502	.95588	.9864	.4929	5.117
#3	2.439	2.0527	.94608	.9758	.4866	5.132
#4	2.409	2.0575	.95079	.9791	.4936	5.115
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	5.000%	5.0000%	5.0000%	5.000%	5.000%	

Sample Name: CCVA Run Time: 07/16/10 09:49

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4905	2.414	.4917	.4883
Stddev	.012	.0032	.0055	.022	.0044	.0013
%RSD	.4936	.6470	1.128	.9186	.8950	.2692
#1	2.423	.4956	.4935	2.416	.4867	.4867
#2	2.433	.4970	.4851	2.441	.4969	.4898
#3	2.418	.4907	.4968	2.387	.4899	.4887
#4	2.404	.4979	.4867	2.409	.4932	.4878
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	5.000%	5.000%		5.000%	5.000%	5.000%

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0381	.2905	.48907	4.850	.51560	.50227
Stddev	.0082	.0025	.00483	.012	.00227	.00103
%RSD	21.44	.8483	.98725	.2533	.43937	.20557
#1	-.0439	.2876	.48241	4.865	.51604	.50204
#2	-.0399	.2913	.48879	4.838	.51353	.50181
#3	-.0261	.2934	.49167	4.843	.51860	.50377
#4	-.0426	.2896	.49339	4.854	.51422	.50144
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.36
Stddev	.44
%RSD	.24721
#1	178.39
#2	177.79
#3	178.87
#4	178.37

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0075	.0093	-.0006	.00015	.00007
Stddev	.0117	.0057	.0084	.00002	.00001
%RSD	154.8	61.80	1417.	16.005	12.520
#1	.0007	.0133	-.0065	.00017	.00008
#2	-.0158	.0052	.0053	.00013	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0002	-.0055	.0008	-.0006
Stddev	.0003	.0001	.0011	.0002	.0010
%RSD	24.74	79.39	20.30	32.21	162.0
#1	.0014	-.0003	-.0063	.0009	.0001
#2	.0010	-.0001	-.0047	.0006	-.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0004	.0013	.00015	.00052
Stddev	.0008	.0001	.0013	.00002	.00000
%RSD	49.45	28.61	100.8	13.514	.45673
#1	.0010	.0005	.0004	.00017	.00053
#2	.0021	.0004	.0022	.00014	.00052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0008	.0028	.0068	.0003
Stddev	.0024	.0011	.0040	.0140	.0006
%RSD	155.9	127.7	141.1	205.9	211.9
#1	.0032	.0001	.0000	.0167	-.0001
#2	-.0002	.0016	.0056	-.0031	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 09:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0052	.0027	.0020	.0078
Stddev	.0009	.0061	.0008	.0013	.0026
%RSD	13.86	116.9	30.98	63.80	33.02
#1	.0059	.0096	.0021	.0029	.0059
#2	.0072	.0009	.0033	.0011	.0096
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.00175	-.0120	.00022	.00013
Stddev	.0012	.00041	.0000	.00003	.00011
%RSD	50.39	23.571	.0070	12.117	81.533
#1	-.0016	.00204	-.0120	.00020	.00021
#2	-.0033	.00145	-.0120	.00024	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	172.29
Stddev	.36
%RSD	.20910
#1	172.03
#2	172.54

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/16/10 09:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0454	.0475	.0766	.00502	.00475	.0503
Stddev	.0088	.0017	.0029	.00012	.00008	.0003
%RSD	19.29	3.616	3.804	2.3534	1.6790	.6351
#1	.0516	.0487	.0745	.00510	.00469	.0500
#2	.0392	.0463	.0786	.00494	.00481	.0505
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0517	.0057	.0086	.0106	.0244
Stddev	.0009	.0053	.0002	.0003	.0021	.0002
%RSD	19.56	10.25	3.523	3.841	19.51	.6377
#1	.0051	.0480	.0058	.0084	.0091	.0243
#2	.0038	.0555	.0055	.0088	.0121	.0245
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0432	.01931	.00484	.0092	.0196	.4180
Stddev	.0089	.00006	.00004	.0004	.0015	.0151
%RSD	20.68	.30475	.82107	4.002	7.572	3.619
#1	.0369	.01935	.00487	.0094	.0185	.4073
#2	.0495	.01926	.00482	.0089	.0206	.4287
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0788	.0075	.2170	.0387	.0106	.0108
Stddev	.0053	.0010	.0012	.0075	.0003	.0017
%RSD	6.693	13.64	.5425	19.40	3.229	15.99
#1	.0825	.0068	.2178	.0440	.0104	.0096
#2	.0750	.0082	.2161	.0334	.0109	.0121
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/16/10 09:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1826	.4003	.01126	.1461	.01011	.00955
Stddev	.0003	.0045	.00097	.0013	.00005	.00001
%RSD	.1540	1.128	8.5901	.9074	.49316	.10288
#1	.1828	.3971	.01058	.1452	.01015	.00956
#2	.1824	.4035	.01195	.1471	.01008	.00954
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.27
Stddev	.14
%RSD	.08174
#1	175.37
#2	175.17

Method: 2010A Sample Name: ICSA ICP464-B Operator:
Comment:
Run Time: 07/16/10 10:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	.0458	-.0015	-.00032	.00012	.0233
Stddev	1.5	.0006	.0232	.00020	.00008	.0019
%RSD	.2919	1.207	1553.	63.196	65.547	8.378
#1	503.2	.0455	.0149	-.00047	.00017	.0219
#2	505.2	.0462	-.0179	-.00018	.00006	.0246
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	495.6	-.0003	-.0011	.0013	197.8
Stddev	.0007	3.6	.0002	.0002	.0014	.0
%RSD	7.723	.7265	50.36	20.40	105.1	.0020
#1	.0086	493.1	-.0002	-.0009	.0003	197.8
#2	.0096	498.2	-.0005	-.0013	.0023	197.8
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	516.5	.00334	.0029	-.0032	-.0361
Stddev	.0125	2.3	.00009	.0008	.0023	.0108
%RSD	6417.	.4440	2.6661	29.47	71.64	29.81
#1	.0091	514.9	.00328	.0035	-.0048	-.0437
#2	-.0087	518.1	.00341	.0023	-.0016	-.0285
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254	.0007	.0611	-.0159	.0029	.0084
Stddev	.0124	.0004	.0011	.0156	.0008	.0011
%RSD	48.72	57.00	1.855	98.24	27.16	13.11
#1	.0166	.0010	.0619	-.0049	.0035	.0076
#2	.0341	.0004	.0603	-.0270	.0023	.0092
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/16/10 10:02

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	-.0186	.01410	.1130	.01358	.01489
Stddev	.0017	.0039	.00118	.0172	.00001	.00086
%RSD	6.897	20.79	8.3447	15.26	.11044	5.7891
#1	.0254	-.0159	.01493	.1252	.01359	.01550
#2	.0230	-.0213	.01327	.1008	.01357	.01428
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.23
Stddev	.23
%RSD	.14471
#1	160.07
#2	160.40

Method: 2010A Sample Name: ICSAB ICP761-B Operator:
Comment:
Run Time: 07/16/10 10:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	500.7	1.028	-.0059	.45165	.52762	.0269
Stddev	3.4	.015	.0088	.00281	.00080	.0017
%RSD	.6784	1.491	149.4	.62165	.15243	6.467
#1	498.3	1.018	.0003	.44966	.52706	.0281
#2	503.1	1.039	-.0121	.45364	.52819	.0256
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9298	494.8	.4712	.4648	.4603	192.9
Stddev	.0066	1.2	.0013	.0034	.0058	1.8
%RSD	.7068	.2526	.2859	.7259	1.252	.9585
#1	.9252	493.9	.4702	.4624	.4644	191.6
#2	.9345	495.7	.4721	.4672	.4562	194.2
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9477	515.0	.43614	.0013	.9086	-.0740
Stddev	.0230	2.0	.00328	.0015	.0058	.0273
%RSD	2.427	.3901	.75319	115.3	.6356	36.89
#1	.9314	513.6	.43382	.0002	.9045	-.0933
#2	.9640	516.5	.43846	.0023	.9127	-.0547
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0325	.9556	.0219	-.0112	.4886	.9021
Stddev	.0187	.0070	.0030	.0013	.0068	.0000
%RSD	57.59	.7362	13.56	11.81	1.388	.0034
#1	.0193	.9606	.0198	-.0103	.4838	.9021
#2	.0458	.9506	.0240	-.0121	.4934	.9021
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0196	.01449	.1134	.01330	.01509
Stddev	.0015	.0015	.00139	.0349	.00030	.00009
%RSD	120.0	7.646	9.6152	30.80	2.2760	.57856
#1	-.0023	-.0185	.01351	.1381	.01309	.01503
#2	-.0002	-.0206	.01548	.0887	.01352	.01515
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	162.65
Stddev	.48
%RSD	.29211
#1	162.98
#2	162.31

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/16/10 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	1.040	-.0113	.46135	.53582	.0233
Stddev	.3	.005	.0102	.00058	.00183	.0031
%RSD	.0628	.4386	90.77	.12540	.34084	13.29
#1	504.0	1.043	-.0040	.46094	.53712	.0255
#2	504.5	1.037	-.0185	.46176	.53453	.0211
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9469	497.0	.4814	.4713	.4693	197.3
Stddev	.0046	3.1	.0001	.0045	.0014	1.5
%RSD	.4908	.6307	.0202	.9557	.3029	.7546
#1	.9436	494.8	.4815	.4681	.4703	196.2
#2	.9502	499.2	.4814	.4745	.4683	198.3
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9623	515.9	.44586	-.0022	.9284	-.0468
Stddev	.0146	3.9	.00050	.0005	.0006	.0000
%RSD	1.518	.7597	.11256	21.26	.0667	.0112
#1	.9520	518.6	.44551	-.0019	.9279	-.0468
#2	.9727	513.1	.44622	-.0025	.9288	-.0468
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0361	.9571	.0192	-.0090	.4968	.9173
Stddev	.0019	.0028	.0002	.0020	.0082	.0088
%RSD	5.173	.2929	1.218	22.74	1.654	.9541
#1	.0348	.9551	.0191	-.0104	.5026	.9111
#2	.0374	.9591	.0194	-.0076	.4910	.9234
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

7/16/10

Sample Name: ICSAB Run Time: 07/16/10 10:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	-.0170	.01303	.1197	.01304	.01584
Stddev	.0271	.0060	.00397	.0109	.00022	.00045
%RSD	1182.	35.52	30.453	9.123	1.6844	2.8688
#1	-.0215	-.0213	.01023	.1274	.01319	.01616
#2	.0169	-.0127	.01584	.1120	.01288	.01552
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.52
Stddev	.41
%RSD	.25788
#1	160.23
#2	160.81

2C 7/16/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.082	.0087	.0044	2.4549	.05063	.0100
Stddev	.071	.0017	.0067	.0118	.00004	.0004
%RSD	1.392	19.11	150.4	.48018	.07161	3.560
#1	5.132	.0099	.0092	2.4465	.05066	.0103
#2	5.032	.0075	-.0003	2.4632	.05060	.0098
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.21	.0028	-.0015	-.0003	24.95
Stddev	.0008	.06	.0014	.0003	.0021	.12
%RSD	70.55	.2424	50.83	19.08	781.6	.4828
#1	.0017	25.17	.0038	-.0013	.0012	24.87
#2	.0006	25.26	.0018	-.0017	-.0017	25.04
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0030	25.46	4.997	-.0028	-.0014	10.06
Stddev	.0018	.19	.045	.0012	.0003	.01
%RSD	58.58	.7583	.9019	42.65	24.75	.1187
#1	-.0018	25.60	4.965	-.0036	-.0016	10.07
#2	-.0042	25.33	5.028	-.0019	-.0011	10.05
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0001	9.824	.0047	.0053	.0031
Stddev	.0018	.0004	.048	.0025	.0001	.0011
%RSD	15.77	293.1	.4901	53.24	1.115	34.16
#1	.0123	-.0001	9.790	.0029	.0053	.0039
#2	.0099	.0004	9.858	.0064	.0052	.0024
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.532	.00450	.0147	.50632	.50398
Stddev	.00	.010	.00016	.0157	.00026	.00350
%RSD	.0183	.3991	3.6208	106.5	.05213	.69421
#1	10.08	2.539	.00438	.0259	.50613	.50150
#2	10.08	2.525	.00461	.0036	.50650	.50645
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.61
Stddev	1.11
%RSD	.63334
#1	176.40
#2	174.82

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4894	2.406	2.426	.46016	.53833	.4951
Stddev	.0154	.002	.014	.00200	.00027	.0020
%RSD	3.148	.0969	.5713	.43467	.04999	.3964
#1	.5003	2.404	2.416	.45874	.53852	.4937
#2	.4785	2.408	2.435	.46157	.53814	.4965
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4883	2.490	.4889	.4904	.4958	.5058
Stddev	.0002	.014	.0029	.0013	.0009	.0089
%RSD	.0425	.5480	.5986	.2608	.1743	1.769
#1	.4881	2.499	.4868	.4913	.4952	.5121
#2	.4884	2.480	.4910	.4895	.4964	.4995
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.429	2.0626	.94991	.9708	.4898	5.067
Stddev	.001	.0034	.00680	.0091	.0010	.032
%RSD	.0451	.16291	.71607	.9346	.1972	.6366
#1	2.429	2.0602	.94510	.9644	.4892	5.045
#2	2.430	2.0650	.95472	.9773	.4905	5.090
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4809	2.429	.4971	.4911
Stddev	.015	.0041	.0061	.001	.0004	.0030
%RSD	.6359	.8217	1.260	.0549	.0904	.6157
#1	2.409	.4924	.4766	2.430	.4968	.4889
#2	2.431	.4982	.4852	2.428	.4975	.4932
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0327	.2902	.49291	4.788	.51238	.50477
Stddev	.0153	.0004	.00209	.015	.00070	.00076
%RSD	46.90	.1525	.42322	.3187	.13758	.15093
#1	-.0219	.2899	.49144	4.777	.51188	.50531
#2	-.0436	.2905	.49439	4.799	.51288	.50423
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	177.72
Stddev	.54
%RSD	.30510
#1	177.33
#2	178.10

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.0165	.0041	.00005	.00007	.0015
Stddev	.0019	.0046	.0067	.00031	.00006	.0003
%RSD	24.97	27.76	161.6	610.78	84.271	21.68
#1	.0062	.0197	-.0006	.00027	.00011	.0018
#2	.0089	.0132	.0089	-.00017	.00003	.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0002	.0010	-.0006	-.0008	.0027
Stddev	.0003	.0025	.0016	.0003	.0011	.0015
%RSD	453.6	1259.	155.8	51.53	129.1	53.07
#1	.0003	.0020	.0021	-.0004	-.0001	.0038
#2	-.0001	-.0016	-.0001	-.0008	-.0016	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.00044	.00079	.0009	.0007	.0128
Stddev	.0023	.00004	.00012	.0017	.0004	.0038
%RSD	474.4	9.3437	15.468	182.0	57.59	29.70
#1	-.0011	.00041	.00087	.0021	.0004	.0155
#2	.0021	.00046	.00070	-.0003	.0009	.0101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0009	-.0038	.0063	.0024	.0000
Stddev	.0000	.0006	.0043	.0077	.0013	.003
%RSD	.1319	70.37	114.0	123.0	54.92	6057.
#1	.0056	-.0013	-.0068	.0117	.0034	-.0019
#2	.0056	-.0004	-.0007	.0008	.0015	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 10:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	-.0012	.00189	.0063	.00050	.00025
Stddev	.0041	.0026	.00136	.0061	.00010	.00001
%RSD	52.74	214.9	71.771	96.95	20.766	3.4199
#1	-.0106	-.0030	.00093	.0020	.00057	.00025
#2	-.0048	.0006	.00285	.0107	.00042	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.02
Stddev	.26
%RSD	.15301
#1	172.83
#2	173.21

Method: 2010A Sample Name: K1006615-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	-.0053	.0044	-.00013	.00010	.0014
#1	-.0007	-.0037	-.0030	-.00020	.00016	.0011
#2	.0089	-.0068	.0118	-.00007	.00003	.0017

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0059	.0002	-.0013	.0012	.0064
#1	.0001	.0031	.0011	-.0016	.0005	.0069
#2	.0006	.0087	-.0007	-.0011	.0019	.0060

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.00045	.00009	-.0015	.0000	.0240
#1	.0024	.00021	.00000	-.0021	.0004	.0240
#2	.0143	.00069	.00018	-.0010	-.0004	.0240

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0010	-.0019	.0107	-.0001	.0026
#1	.0093	-.0007	-.0023	.0130	-.0003	.0009
#2	.0217	-.0013	-.0015	.0084	.0001	.0043

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	.0047	.00165	-.0016	.00018	.00012
#1	.0159	.0042	.00082	.0002	.00029	.00017
#2	.0190	.0053	.00248	-.0034	.00006	.00008

Int. Std.	Sc3572
Units	Cts/S
Avg	174.26
#1	173.70
#2	174.81

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 K1006615 (208725) (071610B)
Run Time: 07/16/10 10:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.48	.5328	.4510	2.2625	.33853	.5651
#1	46.36	.5320	.4554	2.2615	.33827	.5632
#2	46.60	.5336	.4465	2.2636	.33878	.5669

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4587	50.72	.7589	.9958	1.218	97.83
#1	.4583	50.36	.7562	.9908	1.219	97.35
#2	.4591	51.07	.7617	1.001	1.218	98.31

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029	20.39	2.5512	.3146	1.010	21.57
#1	1.021	20.35	2.5422	.3133	1.006	21.55
#2	1.037	20.42	2.5603	.3160	1.013	21.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9892	.3948	3.444	.7082	.9429	1.466
#1	.9837	.3959	3.440	.7080	.9427	1.459
#2	.9947	.3936	3.448	.7085	.9432	1.473

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.389	10.62	2.4679	1.288	.04772	.76087
#1	4.361	10.59	2.4659	1.274	.04752	.76102
#2	4.417	10.66	2.4699	1.303	.04793	.76072

Int. Std.	Sc3572
Units	Cts/S
Avg	175.92
#1	176.03
#2	175.82

Method: 2010A Sample Name: K1006615-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.34	.0277	.0066	.50064	.00202	.0312
#1	44.23	.0221	-.0023	.49852	.00203	.0314
#2	44.44	.0334	.0154	.50276	.00202	.0309

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029 *	23.18	.0299	.0215	.0456	73.67
#1	.0028	23.03	.0298	.0220	.0443	73.48
#2	.0031	23.32	.0300	.0211	.0469	73.86

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	15.77	1.6685	.0015	.0124	11.82
#1	.0141	15.75	1.6808	.0009	.0128	11.85
#2	.0200	15.80	1.6561	.0022	.0120	11.80

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0003	1.052	.0234	.1718	.1196
#1	.0076	.0009	1.057	.0262	.1714	.1184
#2	-.0085	-.0014	1.046	.0205	.1722	.1207

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.608	9.924	2.5512	.0317	.04235	.24879
#1	2.599	9.872	2.5538	.0429	.04267	.24961
#2	2.617	9.975	2.5487	.0206	.04203	.24797

Int. Std.	Sc3572
Units	Cts/S
Avg	178.07
#1	177.57
#2	178.57

$$* \; 0.0029\,Cd - 73.67\,Fe\left(\frac{0.0091\,Cd}{197.8\,Fe}\right) = -0.0005\,Cd$$

Method: 2010A Sample Name: K1006615-006D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:29 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.59	.0198	-.0021	.71640	.00209	.0314
#1	43.50	.0270	-.0001	.71378	.00209	.0309
#2	43.68	.0126	-.0042	.71901	.00208	.0320

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035 *	20.98	.0351	.0226	.0483	72.15
#1	.0033	20.81	.0354	.0233	.0501	72.23
#2	.0037	21.15	.0348	.0219	.0465	72.07

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0238	16.21	2.5676	.0011	.0121	12.06
#1	.0178	16.09	2.5667	.0021	.0118	12.07
#2	.0297	16.33	2.5685	.0001	.0125	12.05

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	-.0018	.9550	.0112	.1637	.1230
#1	.0261	-.0017	.9583	.0068	.1613	.1215
#2	.0112	-.0020	.9518	.0157	.1661	.1245

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.491	8.715	2.5083	.0262	.04372	.21948
#1	2.483	9.102	2.5160	.0169	.04392	.22062
#2	2.499	8.328	2.5007	.0355	.04352	.21833

Int. Std.	Sc3572
Units	Cts/S
Avg	178.39
#1	178.06
#2	178.72

* 0.00018 Cd

Method: 2010A Sample Name: K1006615-006L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 10:32 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.675	-.0049	-.0011	.09959	.00041	.0081
#1	8.635	.0020	-.0053	.09771	.00040	.0090
#2	8.716	-.0117	.0030	.10147	.00043	.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005 X	4.548	.0070	.0035	.0081	14.07
#1	.0001	4.521	.0062	.0041	.0084	13.85
#2	.0008	4.574	.0077	.0029	.0078	14.28

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	3.0786	.31221	-.0019	.0012	2.325
#1	.0054	3.0705	.30675	-.0017	.0014	2.318
#2	-.0042	3.0868	.31767	-.0022	.0010	2.332

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0021	.2157	-.0016	.0345	.0231
#1	.0094	.0027	.2090	-.0048	.0348	.0235
#2	.0069	.0015	.2224	.0016	.0342	.0227

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4848	1.784	.49346	.0007	.00850	.04709
#1	.4961	1.784	.48412	.0131	.00840	.04631
#2	.4735	1.784	.50280	-.0118	.00860	.04788

Int. Std.	Sc3572
Units	Cts/S
Avg	178.54
#1	181.47
#2	175.61

X -0.00015 Cd

Method: 2010A Sample Name: K1006615-006S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.16	.3127	.4871	2.6718	.05402	.5021
#1	58.95	.3094	.4877	2.6800	.05397	.5010
#2	59.37	.3160	.4865	2.6635	.05407	.5033

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0526	33.16	.2350	.5280	.3002	80.28
#1	.0524	33.05	.2357	.5260	.3021	80.25
#2	.0529	33.27	.2343	.5300	.2982	80.32

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5262	25.66	2.8918	.4704	.5112	19.99
#1	.5217	25.57	2.8811	.4663	.5109	20.03
#2	.5307	25.75	2.9025	.4744	.5116	19.94

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4879	.0476	6.335	.0128	.6815	.6627
#1	.4718	.0491	6.360	.0143	.6794	.6629
#2	.5040	.0460	6.309	.0113	.6835	.6626

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.837	5.300	2.5991	.4861	.05335	.26066
#1	2.815	5.289	2.6026	.4758	.05369	.26175
#2	2.860	5.311	2.5956	.4963	.05302	.25956

Int. Std.	Sc3572
Units	Cts/S
Avg	178.13
#1	177.84
#2	178.42

x 0.0489 Cd

Method: 2010A Sample Name: K1006615-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.98	.0246	.0849	.70489	.00197	.0312
#1	53.67	.0262	.0922	.69840	.00195	.0312
#2	54.29	.0229	.0776	.71139	.00198	.0312

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	15.08	.0365	.0246	.0976	70.88
#1	.0048	15.06	.0358	.0243	.0969	70.25
#2	.0040	15.11	.0372	.0249	.0982	71.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0431	13.26	2.3859	.0013	.0167	13.38
#1	.0397	13.19	2.3756	.0027	.0172	13.39
#2	.0464	13.33	2.3963	.0000	.0161	13.37

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	-.0001	.3834	.0148	.1522	.1834
#1	.0105	-.0019	.3805	.0170	.1512	.1819
#2	.0180	.0016	.3864	.0126	.1532	.1850

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.566	10.48	3.5491	.0356	.04815	.22587
#1	2.556	10.48	3.5395	.0430	.04814	.22479
#2	2.576	10.49	3.5586	.0282	.04816	.22696

Int. Std.	Sc3572
Units	Cts/S
Avg	179.47
#1	180.04
#2	178.90

* 0.0044d

Method: 2010A Sample Name: K1006615-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.73	.0254	.0182	.72261	.00243	.0345
#1	63.52	.0189	.0172	.71925	.00243	.0351
#2	63.94	.0318	.0191	.72597	.00242	.0338

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	20.59	.0341	.0300	.0495	87.11
#1	.0032	20.53	.0347	.0295	.0502	86.71
#2	.0035	20.66	.0334	.0305	.0489	87.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	20.03	2.1571	.0011	.0203	16.46
#1	.0220	19.95	2.1487	.0011	.0214	16.48
#2	.0210	20.11	2.1655	.0012	.0191	16.43

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183	-.0020	.4148	.0163	.1729	.1582
#1	.0046	-.0016	.4177	.0177	.1719	.1579
#2	.0320	-.0025	.4118	.0149	.1739	.1584

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.134	10.94	4.3713	.0468	.05614	.26015
#1	3.145	10.89	4.3646	.0492	.05668	.26068
#2	3.123	11.00	4.3780	.0444	.05560	.25962

Int. Std.	Sc3572
Units	Cts/S
Avg	181.86
#1	181.87
#2	181.86

* -0.00071 Cd

Method: 2010A Sample Name: K1006615-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.12	.0314	.0112	.72832	.00242	.0346
#1	59.95	.0374	.0153	.72724	.00243	.0350
#2	60.28	.0254	.0071	.72940	.00241	.0343

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048 *	21.52	.0384	.0415	.0553	94.24
#1	.0050	21.38	.0391	.0413	.0570	94.01
#2	.0047	21.66	.0376	.0418	.0536	94.48

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	22.66	2.5092	.0013	.0228	14.61
#1	.0167	22.62	2.5232	.0008	.0225	14.61
#2	.0208	22.70	2.4952	.0018	.0232	14.62

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	-.0005	.3390	.0184	.2064	.1452
#1	.0135	-.0017	.3412	.0212	.2085	.1447
#2	.0086	.0006	.3369	.0155	.2042	.1458

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.415	10.10	4.4449	.0367	.05498	.27201
#1	2.406	10.08	4.4562	.0325	.05515	.27321
#2	2.424	10.11	4.4336	.0408	.05480	.27081

Int. Std.	Sc3572
Units	Cts/S
Avg	182.47
#1	182.10
#2	182.84

* 0.0005Cd

Method: 2010A Sample Name: K1006615-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.91	.0259	.1046	.42565	.00154	.0366
#1	43.88	.0339	.1034	.42618	.00154	.0363
#2	43.94	.0179	.1058	.42512	.00154	.0368

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061 X	14.82	.0554	.0407	.1017	119.1
#1	.0052	14.80	.0554	.0405	.1057	118.8
#2	.0069	14.84	.0554	.0409	.0976	119.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0470	12.22	1.7540	-.0007	.0136	10.85
#1	.0439	12.22	1.7571	-.0014	.0139	10.86
#2	.0502	12.21	1.7510	.0000	.0134	10.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0020	.3354	.0217	.3004	.1660
#1	.0190	-.0020	.3370	.0221	.2986	.1658
#2	.0016	-.0020	.3338	.0213	.3022	.1663

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.461	9.635	2.6020	.0576	.03453	.17458
#1	2.462	9.596	2.6043	.0576	.03461	.17481
#2	2.459	9.674	2.5996	.0576	.03446	.17435

Int. Std.	Sc3572
Units	Cts/S
Avg	178.84
#1	178.67
#2	179.00

X 0.0006 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:50 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.142	.0087	-.0029	2.4625	.05066	.0086
Stddev	.006	.0040	.0121	.0017	.00063	.0008
%RSD	.1205	45.38	415.0	.06865	1.2357	9.607
#1	5.138	.0115	.0056	2.4614	.05022	.0080
#2	5.146	.0059	-.0115	2.4637	.05110	.0092
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	25.83	.0037	-.0026	-.0006	25.19
Stddev	.0007	.19	.0002	.0004	.0004	.12
%RSD	57.69	.7492	6.526	15.93	67.02	.4738
#1	.0007	25.69	.0035	-.0023	-.0003	25.10
#2	.0018	25.97	.0039	-.0029	-.0010	25.27
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	25.45	5.005	-.0013	-.0027	10.06
Stddev	.0018	.11	.029	.0008	.0006	.01
%RSD	52.66	.4407	.5857	62.75	21.41	.0757
#1	-.0046	25.37	4.984	-.0019	-.0022	10.05
#2	-.0021	25.53	5.026	-.0007	-.0031	10.07
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	-.0004	9.873	.0032	.0039	.0024
Stddev	.0210	.0037	.001	.0025	.0003	.0005
%RSD	154.6	840.8	.0078	78.62	6.517	20.75
#1	.0285	.0022	9.873	.0050	.0037	.0028
#2	-.0013	-.0030	9.874	.0014	.0041	.0021
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:50

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23	2.549	.00461	.0361	.51205	.50473
Stddev	.09	.001	.00006	.0026	.00050	.00449
%RSD	.8688	.0223	1.2888	7.075	.09754	.88984
#1	10.17	2.549	.00457	.0343	.51170	.50155
#2	10.30	2.549	.00466	.0379	.51241	.50790
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.00
Stddev	.43
%RSD	.24299
#1	177.31
#2	176.70

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:53 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4732	2.421	2.446	.46430	.54039	.5017
Stddev	.0117	.016	.011	.00498	.00224	.0032
%RSD	2.483	.6779	.4680	1.0722	.41436	.6326
#1	.4649	2.410	2.454	.46078	.53881	.4994
#2	.4815	2.433	2.438	.46782	.54197	.5039
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4938	2.488	.4937	.4939	.5015	.5168
Stddev	.0058	.015	.0059	.0050	.0010	.0071
%RSD	1.183	.6226	1.197	1.006	.1988	1.383
#1	.4897	2.477	.4895	.4904	.5022	.5219
#2	.4979	2.499	.4979	.4975	.5008	.5118
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404	2.0776	.95446	.9784	.4931	5.132
Stddev	.021	.0024	.00929	.0151	.0032	.011
%RSD	.8521	.11432	.97381	1.544	.6450	.2220
#1	2.390	2.0759	.94789	.9677	.4908	5.124
#2	2.419	2.0792	.96103	.9891	.4953	5.140
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.463	.5018	.4909	2.394	.4954	.4894
Stddev	.021	.0038	.0013	.011	.0028	.0044
%RSD	.8304	.7670	.2734	.4382	.5566	.8947
#1	2.449	.4991	.4918	2.387	.4934	.4863
#2	2.478	.5045	.4899	2.401	.4973	.4925
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:53

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0379	.2992	.49569	4.867	.52430	.50700
Stddev	.0032	.0008	.01203	.039	.00079	.00073
%RSD	8.402	.2608	2.4265	.7950	.14985	.14431
#1	-.0401	.2997	.48719	4.840	.52486	.50648
#2	-.0356	.2986	.50420	4.895	.52374	.50752
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.35
Stddev	.74
%RSD	.41224
#1	178.87
#2	177.83

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0121	.0044	.00027	.00006
Stddev	.0087	.0074	.0021	.00021	.00002
%RSD	638.3	61.30	47.04	78.411	32.353
#1	.0048	.0174	.0059	.00042	.00007
#2	-.0075	.0069	.0030	.00012	.00004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0001	.0033	-.0003	-.0005
Stddev	.0002	.0006	.0053	.0005	.0004
%RSD	10.00	420.1	158.1	189.8	82.09
#1	.0021	.0006	-.0004	-.0006	-.0002
#2	.0019	-.0003	.0071	.0001	-.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0040	.0025	.00141	.00097
Stddev	.0032	.0012	.0113	.00006	.00006
%RSD	128.1	29.84	460.5	4.3494	6.2405
#1	.0002	.0048	.0105	.00137	.00101
#2	.0047	.0031	-.0056	.00145	.00092
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0004	.0175	.0025	-.0033
Stddev	.0021	.0001	.0032	.0131	.0004
%RSD	70.90	16.14	18.20	530.9	12.32
#1	.0044	-.0003	.0152	-.0068	-.0036
#2	.0015	-.0004	.0197	.0118	-.0030
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 10:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0080	.0031	.0007	.0099
Stddev	.0018	.0035	.0005	.0007	.0068
%RSD	66.94	43.56	14.63	99.84	68.71
#1	.0014	.0056	.0034	.0011	.0147
#2	.0039	.0105	.0028	.0002	.0051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00207	-.0009	.00000	.00032
Stddev	.0017	.00187	.0109	.00017	.00009
%RSD	290.2	90.164	1177.	794400.	28.371
#1	.0018	.00339	.0068	.00012	.00039
#2	-.0006	.00075	-.0086	-.00012	.00026
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	175.96
Stddev	.77
%RSD	.43509
#1	176.50
#2	175.42

Method: 2010A Sample Name: K1006615-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.48	.0214	.0154	.52349	.00332	.0300
#1	73.44	.0198	.0109	.52276	.00334	.0300
#2	73.53	.0230	.0199	.52422	.00330	.0301

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	22.92	.0322	.0259	.0594	88.25
#1	.0041	22.86	.0314	.0255	.0584	87.57
#2	.0042	22.99	.0331	.0263	.0604	88.92

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	20.85	2.3946	.0023	.0157	14.78
#1	.0264	20.82	2.3918	.0035	.0151	14.78
#2	.0266	20.89	2.3973	.0011	.0163	14.78

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0171	-.0015	.8786	.0126	.1558	.1743
#1	.0152	-.0012	.8762	.0211	.1578	.1747
#2	.0190	-.0018	.8811	.0042	.1538	.1738

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	9.780	3.0236	.0109	.05177	.19679
#1	2.389	9.805	3.0279	.0141	.05199	.19771
#2	2.381	9.755	3.0194	.0077	.05155	.19587

Int. Std.	Sc3572
Units	Cts/S
Avg	183.07
#1	182.82
#2	183.32

* 0.00014 Cd

Method: 2010A Sample Name: K1006615-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.25	.0193	.0672	.61612	.00205	.0286
#1	49.06	.0214	.0648	.61333	.00207	.0282
#2	49.43	.0173	.0696	.61891	.00204	.0290

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	12.74	.0471	.0228	.0831	80.16
#1	.0037	12.71	.0457	.0221	.0821	79.74
#2	.0037	12.78	.0484	.0234	.0840	80.58

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0316	11.44	2.5266	.0022	.0205	9.252
#1	.0285	11.41	2.5174	.0033	.0203	9.302
#2	.0348	11.47	2.5358	.0011	.0208	9.202

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0032	.3416	.0114	.1769	.1654
#1	.0021	.0024	.3451	.0084	.1733	.1644
#2	-.0115	.0041	.3380	.0145	.1806	.1664

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.145	6.396	2.4644	.0469	.04187	.14439
#1	2.137	6.416	2.4650	.0493	.04225	.14469
#2	2.154	6.376	2.4637	.0445	.04150	.14409

Int. Std.	Sc3572
Units	Cts/S
Avg	181.52
#1	181.59
#2	181.44

* 0.000001 Cd

Method: 2010A Sample Name: K1006615-008 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.27	.0268	.0106	.44051	.00196	.0267
#1	47.40	.0220	.0062	.44253	.00193	.0273
#2	47.15	.0317	.0150	.43850	.00199	.0260

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	15.88	.0534	.0233	.0502	91.62
#1	.0031	15.98	.0539	.0238	.0512	91.55
#2	.0035	15.79	.0529	.0229	.0492	91.70

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169	15.84	1.9717	.0023	.0233	9.267
#1	.0171	15.92	1.9739	.0008	.0238	9.315
#2	.0167	15.76	1.9695	.0037	.0228	9.219

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0006	.9084	.0191	.2115	.1349
#1	.0015	-.0015	.9125	.0175	.2140	.1348
#2	.0039	.0003	.9043	.0207	.2089	.1349

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.521	8.127	2.5770	.0206	.04091	.14681
#1	2.549	8.155	2.5939	.0189	.04165	.14792
#2	2.493	8.100	2.5601	.0223	.04018	.14571

Int. Std.	Sc3572
Units	Cts/S
Avg	179.71
#1	179.84
#2	179.58

x -0.00092 Cd

Method: 2010A Sample Name: K1006615-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.37	.0263	.0200	.79884	.00207	.0308
#1	47.36	.0190	.0206	.79507	.00199	.0309
#2	47.39	.0335	.0194	.80261	.00215	.0308

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	61.45	.0438	.0193	.0585	75.27
#1	.0032	61.38	.0437	.0197	.0568	75.13
#2	.0031	61.52	.0438	.0190	.0603	75.41

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158	18.75	3.262	.0012	.0285	9.083
#1	.0109	18.79	3.245	.0009	.0279	9.156
#2	.0207	18.71	3.279	.0016	.0290	9.009

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0309	-.0002	1.553	.0127	.1699	.1260
#1	.0240	.0014	1.559	.0080	.1718	.1262
#2	.0377	-.0018	1.547	.0175	.1679	.1258

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.569	9.341	2.2714	.0307	.04697	.23280
#1	2.540	9.335	2.2650	.0340	.04694	.23349
#2	2.598	9.346	2.2779	.0274	.04699	.23211

Int. Std.	Sc3572
Units	Cts/S
Avg	180.20
#1	180.69
#2	179.70

x - 0.00026 Cd

Method: 2010A Sample Name: K1006636-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.14	.0113	.1450	.59000	.00202	.0409
#1	50.08	.0069	.1429	.59034	.00202	.0400
#2	50.20	.0157	.1470	.58965	.00202	.0418

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	9.371	.0506	.0259	.1373	112.7
#1	.0064	9.339	.0508	.0263	.1391	112.9
#2	.0070	9.403	.0505	.0254	.1356	112.5

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0512	12.09	2.8142	.0008	.0190	12.30
#1	.0494	12.04	2.8216	.0015	.0196	12.32
#2	.0530	12.13	2.8068	.0001	.0185	12.27

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0013	.1904	.0090	.2364	.2302
#1	-.0021	-.0028	.1908	.0079	.2386	.2299
#2	.0066	.0001	.1899	.0102	.2342	.2305

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.388	6.956	3.1709	.0529	.05027	.09025
#1	2.377	6.941	3.1827	.0539	.05010	.09047
#2	2.398	6.971	3.1590	.0519	.05043	.09003

Int. Std.	Sc3572
Units	Cts/S
Avg	179.97
#1	179.51
#2	180.44

$0.0067Cd - 112.7Fe\left(\frac{0.0091Cd}{197.8Fe}\right) = 0.0015Cd$

Method: 2010A Sample Name: K1006636-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.22	.0213	.0186	.61476	.00255	.0414
#1	57.36	.0294	.0142	.61371	.00255	.0415
#2	57.07	.0133	.0230	.61581	.00255	.0413

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042 X	11.42	.0418	.0256	.0523	101.1
#1	.0042	11.37	.0425	.0262	.0489	101.2
#2	.0043	11.47	.0410	.0251	.0557	101.1

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313	14.07	2.3335	.0017	.0207	13.36
#1	.0249	14.14	2.3356	.0020	.0210	13.41
#2	.0378	14.01	2.3314	.0014	.0204	13.31

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	.0001	.2498	.0073	.2061	.1631
#1	.0101	.0011	.2500	.0076	.2063	.1649
#2	.0138	-.0009	.2497	.0069	.2060	.1612

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.188	8.077	3.4186	.0343	.05075	.10967
#1	2.181	8.052	3.4305	.0285	.05068	.11008
#2	2.194	8.103	3.4067	.0401	.05082	.10925

Int. Std.	Sc3572
Units	Cts/S
Avg	180.99
#1	181.01
#2	180.98

X -0.00045Cd

Method: 2010A Sample Name: K1006636-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.37	.0206	.0114	.65393	.00318	.0422
#1	58.96	.0174	.0137	.64798	.00312	.0423
#2	59.78	.0238	.0092	.65987	.00324	.0420

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	14.94	.0356	.0316	.0537	97.01
#1	.0042	14.85	.0348	.0318	.0523	96.13
#2	.0040	15.03	.0364	.0314	.0551	97.89

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0405	21.68	2.6445	-.0009	.0236	17.59
#1	.0365	21.63	2.6351	-.0005	.0236	17.58
#2	.0445	21.74	2.6540	-.0013	.0236	17.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124	-.0013	.3395	.0134	.1839	.1819
#1	.0049	-.0012	.3384	.0107	.1849	.1814
#2	.0200	-.0015	.3406	.0160	.1828	.1824

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.185	5.844	3.7983	.0602	.05993	.13642
#1	2.174	5.801	3.7947	.0517	.05996	.13623
#2	2.196	5.887	3.8018	.0687	.05989	.13662

Int. Std.	Sc3572
Units	Cts/S
Avg	182.66
#1	182.66
#2	182.67

x 0.000360d

Method: 2010A Sample Name: K1006636-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.68	.0229	.1221	.53458	.00201	.0375
#1	44.88	.0253	.1275	.53702	.00200	.0365
#2	44.48	.0205	.1167	.53214	.00202	.0385

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067 X	10.26	.0413	.0223	.1707	90.21
#1	.0069	10.27	.0411	.0214	.1755	90.81
#2	.0064	10.25	.0415	.0232	.1660	89.61

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0965	11.88	2.0542	.0013	.0173	10.92
#1	.1033	11.99	2.0494	.0019	.0171	11.02
#2	.0897	11.77	2.0589	.0007	.0175	10.82

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0016	.2366	.0131	.1881	.2743
#1	.0248	-.0009	.2407	.0161	.1891	.2770
#2	.0061	-.0023	.2324	.0101	.1871	.2716

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.323	9.318	3.0358	.0450	.04505	.09704
#1	2.320	9.358	3.0671	.0394	.04583	.09808
#2	2.325	9.278	3.0046	.0506	.04427	.09600

Int. Std.	Sc3572
Units	Cts/S
Avg	180.23
#1	179.74
#2	180.71

X 0.0026 Cd

Method: 2010A Sample Name: K1006636-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.36	.0132	.0218	.43378	.00203	.0344
#1	46.52	.0092	.0230	.43467	.00203	.0337
#2	46.21	.0173	.0206	.43288	.00203	.0352

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	9.646	.0376	.0235	.0581	83.12
#1	.0044	9.647	.0388	.0248	.0578	83.45
#2	.0036	9.645	.0364	.0222	.0584	82.80

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0228	15.63	1.8617	.0011	.0195	12.91
#1	.0301	15.55	1.8660	.0001	.0204	12.97
#2	.0154	15.70	1.8573	.0021	.0185	12.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189	-.0011	.4816	.0117	.1576	.1568
#1	.0183	.0004	.4822	.0077	.1589	.1602
#2	.0195	-.0025	.4810	.0157	.1562	.1535

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.911	8.124	3.2195	.0357	.05250	.09920
#1	1.900	8.141	3.2394	.0417	.05320	.09991
#2	1.921	8.106	3.1995	.0297	.05180	.09849

Int. Std.	Sc3572
Units	Cts/S
Avg	181.35
#1	180.95
#2	181.74

x 0.0002 Cd

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.24	.0197	-.0075	.99659	.00256	.0454
#1	52.14	.0149	-.0152	.99145	.00252	.0447
#2	52.35	.0245	.0003	1.0017	.00259	.0460

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	16.63	.0341	.0218	.0544	92.51
#1	.0032	16.49	.0334	.0206	.0557	92.05
#2	.0036	16.76	.0348	.0229	.0531	92.96

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0202	20.87	2.0106	.0012	.0231	16.26
#1	.0168	20.87	2.0046	.0022	.0227	16.34
#2	.0236	20.86	2.0166	.0002	.0234	16.19

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	-.0015	1.028	.0181	.1707	.1575
#1	.0167	-.0038	1.030	.0179	.1700	.1543
#2	.0279	.0008	1.025	.0182	.1713	.1607

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.535	9.274	4.1630	.0398	.05509	.21326
#1	2.524	9.277	4.1677	.0463	.05475	.21403
#2	2.547	9.272	4.1582	.0332	.05543	.21249

Int. Std.	Sc3572
Units	Cts/S
Avg	184.37
#1	183.99
#2	184.76

x -0.0009 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 11:28 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.076	.0023	-.0023	2.5026	.05011	.0079
Stddev	.004	.0063	.0071	.0093	.00020	.0012
%RSD	.0787	275.7	313.2	.37032	.40191	15.10
#1	5.074	-.0022	.0027	2.4961	.04997	.0070
#2	5.079	.0067	-.0073	2.5092	.05025	.0087
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	26.70	.0036	-.0016	-.0013	25.75
Stddev	.0002	.08	.0011	.0004	.0000	.16
%RSD	23.61	.2939	30.52	27.24	.2374	.6401
#1	.0012	26.65	.0044	-.0019	-.0013	25.64
#2	.0009	26.76	.0029	-.0013	-.0012	25.87
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0032	25.48	4.957	-.0027	-.0015	9.904
Stddev	.0015	.08	.027	.0001	.0004	.009
%RSD	47.33	.3077	.5402	2.113	27.04	.0917
#1	-.0043	25.42	4.938	-.0027	-.0012	9.911
#2	-.0021	25.53	4.976	-.0027	-.0018	9.898
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0019	9.809	.0070	.0010	.0032
Stddev	.0035	.0008	.010	.0007	.0004	.0028
%RSD	94.81	43.62	.0988	9.689	36.01	86.46
#1	.0012	.0013	9.816	.0075	.0013	.0052
#2	.0062	.0024	9.802	.0065	.0008	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 11:28

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.530	.00558	.0190	.50014	.49379
Stddev	.02	.006	.00066	.0074	.00461	.00076
%RSD	.2186	.2446	11.860	38.84	.92110	.15478
#1	10.26	2.525	.00511	.0138	.50340	.49434
#2	10.29	2.534	.00605	.0242	.49688	.49325
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.61
Stddev	.60
%RSD	.33538
#1	178.03
#2	177.19

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 11:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4955	2.436	2.483	.46375	.52631	.4971
Stddev	.0263	.027	.000	.00207	.00127	.0033
%RSD	5.308	1.091	.0009	.44536	.24137	.6677
#1	.4769	2.417	2.483	.46229	.52542	.4947
#2	.5141	2.454	2.483	.46521	.52721	.4994
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4966	2.453	.4943	.4904	.5160	.5074
Stddev	.0017	.012	.0065	.0003	.0004	.0058
%RSD	.3350	.4850	1.312	.0701	.0815	1.136
#1	.4954	2.461	.4897	.4902	.5163	.5115
#2	.4978	2.444	.4989	.4907	.5157	.5033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.382	2.0714	.95313	.9671	.4903	5.050
Stddev	.032	.0056	.00223	.0048	.0009	.025
%RSD	1.334	.26935	.23431	.4972	.1840	.4998
#1	2.359	2.0753	.95155	.9637	.4909	5.033
#2	2.404	2.0674	.95471	.9705	.4896	5.068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.419	.5019	.4815	2.313	.4808	.4928
Stddev	.016	.0008	.0019	.011	.0034	.0009
%RSD	.6685	.1595	.4001	.4716	.7108	.1814
#1	2.408	.5025	.4829	2.305	.4784	.4922
#2	2.430	.5013	.4802	2.321	.4832	.4935
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 11:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0249	.2982	.49099	4.796	.50906	.49060
Stddev	.0232	.0021	.00180	.039	.00139	.00020
%RSD	93.11	.6918	.36717	.8097	.27337	.04114
#1	-.0413	.2967	.48972	4.769	.50808	.49046
#2	-.0085	.2996	.49227	4.824	.51005	.49074
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.23
Stddev	.08
%RSD	.04453
#1	181.17
#2	181.29

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 11:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144	.0097	-.0047	.00052	.00013	.0007
Stddev	.0078	.0086	.0017	.00004	.00008	.0003
%RSD	53.87	88.70	35.35	7.2979	60.118	41.17
#1	.0199	.0158	-.0035	.00049	.00007	.0005
#2	.0089	.0036	-.0059	.00055	.00018	.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0041	-.0003	-.0011	.0035	.0048
Stddev	.0004	.0058	.0012	.0003	.0024	.0002
%RSD	183.8	141.6	400.3	24.00	69.03	3.910
#1	.0005	.0000	-.0011	-.0009	.0018	.0047
#2	-.0001	.0083	.0005	-.0013	.0052	.0050
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.00248	.00123	.0018	.0008	-.0023
Stddev	.0018	.00010	.00010	.0028	.0010	.0128
%RSD	176.8	3.9162	7.9132	152.6	118.3	566.6
#1	-.0003	.00241	.00129	.0038	.0015	-.0113
#2	.0023	.00255	.00116	-.0001	.0001	.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0014	-.0038	.0046	.0020	.0012
Stddev	.0009	.0006	.0027	.0017	.0030	.0015
%RSD	70.86	42.33	71.23	37.18	150.7	124.6
#1	.0019	-.0019	-.0057	.0058	.0041	.0022
#2	.0006	-.0010	-.0019	.0034	-.0001	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 11:34

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0021	.00123	-.0087	-.00007	.00039
Stddev	.0093	.0012	.00009	.0218	.00035	.00001
%RSD	1077.	56.78	7.1726	249.8	477.00	3.4821
#1	-.0057	-.0012	.00117	.0067	.00017	.00038
#2	.0075	-.0029	.00129	-.0241	-.00032	.00040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	176.85
Stddev	.72
%RSD	.40503
#1	177.36
#2	176.34

Service Request # K1006615 (redigest) (Zn, Pb, K, mn)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 072010AICP02
Star Lims: 209074
Don't report 200.7

Primary Review by JC Date 7/20/10

Secondary Review by [signature] Date 7/20/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/20/10 09:46 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1275	.0610	.0153	.00015
Stddev	.0157	.0118	.0137	.00001
%RSD	12.29	19.28	90.00	7.1133
#1	.1165	.0527	.0250	.00015
#2	.1386	.0693	.0055	.00014

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00238	.4034	.0002	.3972
Stddev	.00027	.0196	.0000	.0167
%RSD	11.195	4.852	6.528	4.203
#1	-.00219	.3896	.0003	.4090
#2	-.00257	.4173	.0002	.3854

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0539	-.0007	.0004	.0235
Stddev	.0254	.0002	.0001	.0059
%RSD	47.09	20.76	34.76	25.01
#1	-.0718	-.0009	.0005	.0193
#2	-.0360	-.0006	.0003	.0277

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0024	.0009	.0000	.0846
Stddev	.0001	.0001	.0000	.0255
%RSD	5.043	6.078	47.48	30.15
#1	.0023	.0010	.0001	.1026
#2	.0024	.0009	.0000	.0665

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.30823	.00153	-.0001	.0002
Stddev	.00994	.00014	.0001	.0000
%RSD	3.2260	9.2201	47.42	16.09
#1	.30120	.00143	-.0002	.0002
#2	.31526	.00163	-.0001	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0002	.4160	.0069	.0746
Stddev	.0000	.2833	.0137	.0195
%RSD	.3803	68.09	198.0	26.14
#1	-.0002	.6164	.0166	.0884
#2	-.0002	.2157	-.0028	.0608

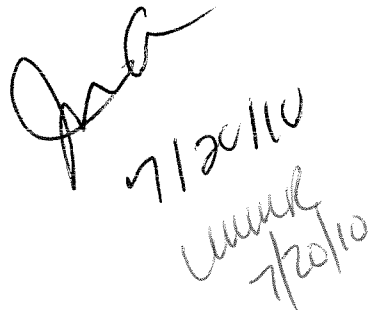
Sample Name: Blank Run Time: 07/20/10 09:46

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0044	.0006	.0072	.0009
Stddev	.0000	.0000	.0001	.0001
%RSD	.3177	6.453	1.039	8.192
#1	.0044	.0006	.0072	.0009
#2	.0044	.0005	.0073	.0010

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0652	.2038	.00336	.0001
Stddev	.0118	.0412	.00011	.0000
%RSD	18.05	20.21	3.2275	14.52
#1	.0568	.2329	.00344	.0002
#2	.0735	.1747	.00328	.0001

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.22946	.00454
Stddev	.02749	.00068
%RSD	11.979	14.969
#1	.21002	.00406
#2	.24889	.00502

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	199.94
Stddev	.75
%RSD	.37293
#1	199.41
#2	200.47



Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/20/10 09:49 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	19.78	2.9518	.45988	38.92
Stddev	.02	.0242	.00247	.26
%RSD	.1056	.81943	.53635	.6788
#1	19.77	2.9347	.45814	38.74
#2	19.80	2.9690	.46163	39.11

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.7373	57.75	.6636	195.9
Stddev	.0064	.42	.0034	.3
%RSD	.8706	.7228	.5162	.1387
#1	.7328	57.46	.6611	196.1
#2	.7419	58.05	.6660	195.7

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	3.926	46.38	96.12	370.68
Stddev	.003	.29	.53	1.09
%RSD	.0640	.6241	.5471	.29313
#1	3.924	46.18	95.75	369.91
#2	3.927	46.59	96.49	371.45

Elem	Sr4077
Line	407.771 { 82}
Avg	8.0498
Stddev	.0055
%RSD	.06858
#1	8.0459
#2	8.0537

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	197.23
Stddev	.26
%RSD	.13274
#1	197.41
#2	197.04

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/20/10 09:52 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	16.41	11.29	46.94	.2833
Stddev	.15	.03	.23	.0016
%RSD	.9019	.2966	.4801	.5533
#1	16.30	11.27	46.78	.2822
#2	16.51	11.32	47.10	.2844

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	32.95	.1132	.1842	17.90
Stddev	.13	.0003	.0005	.01
%RSD	.3839	.2962	.2752	.0698
#1	32.86	.1129	.1838	17.89
#2	33.04	.1134	.1845	17.91

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4004	.0882	1438.4	2.9604
Stddev	.0068	.0000	2.7	.0302
%RSD	1.708	.0252	.18472	1.0191
#1	.4052	.0881	1436.5	2.9391
#2	.3956	.0882	1440.2	2.9818

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1476	.1679	10.73	18.56
Stddev	.0012	.0001	.01	.09
%RSD	.8351	.0383	.0602	.5098
#1	.1467	.1679	10.74	18.50
#2	.1485	.1678	10.73	18.63

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0861	.1426	.1487	.16467
Stddev	.0003	.0004	.0008	.00034
%RSD	.3439	.3100	.5612	.20473
#1	.0859	.1423	.1481	.16491
#2	.0864	.1429	.1492	.16443

Elem	Tl1908
Line	190.864 {176}
Avg	.0755
Stddev	.0004
%RSD	.5680
#1	.0752
#2	.0758

Sample Name: STDA Run Time: 07/20/10 09:52

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	206.37
Stddev	.74
%RSD	.35853
#1	205.84
#2	206.89

Method: 2010A Sample Name: ICV1 ICP1-C4-C Operator:
Comment:
Run Time: 07/20/10 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.156	2.509	2.575	5.0516	.12282	.0036
Stddev	.010	.011	.026	.0002	.00004	.0004
%RSD	.1964	.4425	1.015	.00383	.03643	10.46
#1	5.149	2.517	2.556	5.0517	.12279	.0038
#2	5.163	2.501	2.593	5.0515	.12285	.0033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	10.00%	10.00%	10.00%	10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.265	12.77	.5159	1.267	.6267	2.518
Stddev	.000	.08	.0042	.001	.0026	.018
%RSD	.0305	.6301	.8178	.0443	.4213	.6973
#1	1.265	12.71	.5129	1.267	.6249	2.506
#2	1.265	12.82	.5189	1.268	.6286	2.530
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.550	12.60	1.2382	2.020	1.262	12.68
Stddev	.001	.03	.0006	.011	.001	.07
%RSD	.0363	.2304	.04525	.5228	.0825	.5399
#1	2.551	12.58	1.2386	2.012	1.262	12.73
#2	2.550	12.62	1.2378	2.027	1.263	12.64
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	10.00%	10.00%	10.000%	10.00%	10.00%	10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.505	.6335	12.09	.0064	1.268	1.272
Stddev	.004	.0095	.14	.0155	.003	.003
%RSD	.1484	1.505	1.133	241.3	.2515	.2498
#1	2.503	.6268	12.19	.0174	1.266	1.274
#2	2.508	.6403	11.99	-.0045	1.270	1.270
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	10.00%	10.00%	10.00%		10.00%	10.00%

Sample Name: ICV1 Run Time: 07/20/10 09:56

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0408	-.1416	2.0302	2.542	.00064	.00674
Stddev	.0057	.0030	.0003	.023	.00056	.00006
%RSD	13.91	2.151	.01711	.9113	87.135	.83458
#1	-.0448	-.1437	2.0300	2.526	.00104	.00670
#2	-.0367	-.1394	2.0305	2.558	.00025	.00678
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	204.70
Stddev	.69
%RSD	.33782
#1	204.21
#2	205.19

Method: 2010A Sample Name: ICVB1 ICP7-56-C Operator:
Comment:
Run Time: 07/20/10 09:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.024	.0142	.0074	.00582	.00012	2.003
Stddev	.003	.0085	.0004	.00031	.00002	.007
%RSD	.2948	59.59	5.928	5.3153	14.172	.3454
#1	1.022	.0202	.0071	.00604	.00011	1.998
#2	1.026	.0082	.0077	.00560	.00014	2.008
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	5.181	.0087	.0016	.0031	9.945
Stddev	.0001	.065	.0052	.0006	.0000	.012
%RSD	4.431	1.260	58.96	36.43	.0824	.1192
#1	.0025	5.135	.0051	.0020	.0031	9.937
#2	.0024	5.227	.0124	.0012	.0031	9.953
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107	4.9767	9.906	.0072	.0027	.0682
Stddev	.0014	.0083	.043	.0039	.0008	.0085
%RSD	12.58	.16576	.4298	54.91	30.20	12.46
#1	.0098	4.9709	9.876	.0099	.0021	.0622
#2	.0117	4.9826	9.936	.0044	.0032	.0743
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		10.000%	10.00%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123	.0021	.0643	4.991	.0003	.0041
Stddev	.0009	.0015	.0016	.034	.0001	.0014
%RSD	7.461	70.92	2.562	.6858	30.90	34.90
#1	.0116	.0032	.0655	4.967	.0004	.0051
#2	.0129	.0010	.0632	5.016	.0003	.0031
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				10.00%		

Sample Name: ICVB1 Run Time: 07/20/10 09:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.096	5.147	.00029	.0256	2.0414	1.9772
Stddev	.027	.029	.00139	.0026	.0066	.0155
%RSD	.5323	.5574	479.51	10.15	.32365	.78257
#1	5.076	5.127	-.00069	.0274	2.0367	1.9662
#2	5.115	5.167	.00127	.0238	2.0460	1.9881
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	203.01
Stddev	.21
%RSD	.10505
#1	202.86
#2	203.16

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/20/10 10:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	-.0093	.0058	-.00019	.00010
Stddev	.0030	.0048	.0065	.00001	.00000
%RSD	138.8	51.75	111.8	7.4664	4.0475
#1	-.0042	-.0059	.0105	-.00020	.00010
#2	.0000	-.0127	.0012	-.00018	.00010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0004	-.0063	.0016	-.0002
Stddev	.0010	.0000	.0015	.0007	.0008
%RSD	83.39	1.698	23.47	45.26	319.0
#1	.0019	.0004	-.0073	.0011	-.0008
#2	.0005	.0004	-.0052	.0021	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0055	.0086	.00216	.00195
Stddev	.0009	.0050	.0121	.00038	.00165
%RSD	49.21	90.69	141.5	17.595	84.612
#1	.0024	.0090	.0000	.00243	.00312
#2	.0012	.0020	.0171	.00189	.00078
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0010	.0208	.0000	-.0016
Stddev	.0013	.0003	.0060	.0027	.0030
%RSD	280.4	32.99	28.97	1120000.	180.1
#1	.0014	-.0008	.0165	.0019	.0004
#2	-.0004	-.0013	.0251	-.0019	-.0037
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: ICB Run Time: 07/20/10 10:02

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	.0023	-.0021	-.0004	-.0080
Stddev	.0025	.0056	.0013	.0006	.0030
%RSD	119.6	248.9	60.34	158.4	38.22
#1	-.0038	.0062	-.0012	.0000	-.0058
#2	-.0003	-.0017	-.0030	-.0008	-.0101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.00121	.0045	.00043	.00023
Stddev	.0020	.00034	.0040	.00011	.00008
%RSD	740.1	27.832	89.63	25.922	34.691
#1	.0012	-.00097	.0073	.00035	.00028
#2	-.0017	-.00145	.0016	.00051	.00017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	200.91
Stddev	1.05
%RSD	.52465
#1	200.17
#2	201.66

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 10:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.090	-.0023	.0127	2.4373	.04956	.0071
Stddev	.034	.0018	.0117	.0059	.00024	.0003
%RSD	.6687	79.11	92.07	.24082	.47860	4.826
#1	5.066	-.0010	.0210	2.4331	.04972	.0073
#2	5.114	-.0035	.0044	2.4414	.04939	.0069
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	25.60	.0043	-.0010	-.0010	25.19
Stddev	.0000	.23	.0006	.0005	.0011	.17
%RSD	.7282	.8854	14.68	50.99	113.0	.6648
#1	.0010	25.44	.0048	-.0014	-.0002	25.07
#2	.0010	25.77	.0039	-.0007	-.0017	25.31
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	25.28	4.976	-.0003	-.0028	10.02
Stddev	.0036	.00	.009	.0001	.0002	.03
%RSD	464.5	.0142	.1880	19.50	8.430	.2510
#1	-.0033	25.28	4.982	-.0004	-.0026	10.01
#2	.0018	25.28	4.969	-.0003	-.0029	10.04
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0118	-.0006	9.825	-.0030	.0028	.0005
Stddev	.0073	.0006	.003	.0046	.0036	.0009
%RSD	62.27	106.0	.0283	156.2	130.1	166.9
#1	-.0169	-.0010	9.827	.0003	.0002	-.0001
#2	-.0066	-.0001	9.823	-.0062	.0053	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 10:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.01	2.527	-.00025	.0125	.49922	.49564
Stddev	.03	.007	.00199	.0155	.00163	.00199
%RSD	.2956	.2693	797.10	124.5	.32594	.40193
#1	9.994	2.522	-.00166	.0015	.49806	.49423
#2	10.04	2.532	.00116	.0234	.50037	.49705
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	200.72
Stddev	.57
%RSD	.28596
#1	200.31
#2	201.12

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4934	2.491	2.475	.45736	.53068	.4993
Stddev	.0010	.020	.001	.00142	.00153	.0010
%RSD	.1927	.8036	.0298	.31066	.28746	.2060
#1	.4941	2.477	2.476	.45636	.52960	.4986
#2	.4927	2.505	2.475	.45837	.53176	.5001
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5118	2.508	.5089	.5096	.5038	.5236
Stddev	.0016	.003	.0043	.0004	.0001	.0079
%RSD	.3079	.1034	.8474	.0705	.0167	1.507
#1	.5107	2.506	.5059	.5094	.5039	.5292
#2	.5129	2.510	.5120	.5099	.5037	.5180
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.531	2.0612	.99946	1.010	.5094	5.030
Stddev	.010	.0890	.00748	.012	.0045	.026
%RSD	.3775	4.3164	.74795	1.204	.8772	.5105
#1	2.538	2.1241	.99417	1.001	.5062	5.011
#2	2.525	1.9983	1.0047	1.018	.5125	5.048
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.436	.4976	.4619	2.495	.5125	.5108
Stddev	.004	.0013	.0033	.022	.0031	.0043
%RSD	.1562	.2634	.7092	.8858	.6038	.8384
#1	2.433	.4967	.4596	2.480	.5103	.5078
#2	2.439	.4985	.4642	2.511	.5147	.5139
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 10:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0368	.2921	.50079	4.956	.50313	.49405
Stddev	.0034	.0022	.00363	.058	.00533	.00303
%RSD	9.331	.7471	.72472	1.167	1.0597	.61419
#1	-.0344	.2936	.49822	4.915	.49936	.49191
#2	-.0393	.2905	.50336	4.997	.50690	.49620
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	203.76
Stddev	.16
%RSD	.07906
#1	203.88
#2	203.65

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 10:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0205	.0081	-.0006	-.00026	.00006
Stddev	.0010	.0078	.0061	.00013	.00009
%RSD	4.907	97.48	983.9	47.545	164.02
#1	-.0212	.0136	-.0049	-.00017	.00012
#2	-.0198	.0025	.0037	-.00035	-.00001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0001	-.0054	-.0002	-.0001
Stddev	.0000	.0000	.0050	.0044	.0006
%RSD	3.502	64.62	92.46	2818.	692.6
#1	.0012	.0000	-.0090	-.0033	.0003
#2	.0012	.0001	-.0019	.0030	-.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0034	-.0023	.0012	-.00054	-.00028
Stddev	.0014	.0007	.0039	.00001	.00008
%RSD	41.83	31.67	335.1	1.0189	30.496
#1	.0024	-.0018	-.0016	-.00054	-.00022
#2	.0044	-.0028	.0039	-.00053	-.00034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0007	.0071	-.0090	-.0042
Stddev	.0033	.0005	.0014	.0046	.0036
%RSD	134.5	70.01	19.95	50.47	85.98
#1	.0048	.0011	.0061	-.0058	-.0016
#2	.0001	.0004	.0081	-.0123	-.0067
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/20/10 10:11

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.0008	.0007	-.0008	-.0006
Stddev	.0054	.0022	.0008	.0015	.0037
%RSD	218.1	297.0	108.9	189.9	577.4
#1	.0013	.0023	.0013	.0003	.0020
#2	-.0063	-.0008	.0002	-.0019	-.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.00211	.0008	-.00031	-.00002
Stddev	.0009	.00171	.0013	.00013	.00004
%RSD	114.4	81.043	171.9	40.358	168.14
#1	-.0015	-.00332	-.0002	-.00022	-.00005
#2	-.0002	-.00090	.0017	-.00040	.00000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	201.39
Stddev	.27
%RSD	.13462
#1	201.59
#2	201.20

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/20/10 10:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0438	.0482	.0842	.00486	.00458	.0505
Stddev	.0059	.0000	.0018	.00057	.00002	.0002
%RSD	13.50	.0607	2.140	11.672	.43948	.3351
#1	.0396	.0482	.0855	.00526	.00459	.0504
#2	.0479	.0481	.0829	.00445	.00456	.0507
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0503	.0050	.0097	.0106	.0250
Stddev	.0004	.0039	.0012	.0007	.0002	.0002
%RSD	8.409	7.679	25.03	7.546	2.084	.8262
#1	.0049	.0475	.0059	.0092	.0104	.0251
#2	.0055	.0530	.0041	.0102	.0108	.0248
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0525	.02119	.00495	.0090	.0216	.4340
Stddev	.0063	.00001	.00001	.0004	.0015	.0245
%RSD	12.04	.04852	.24752	4.613	7.008	5.649
#1	.0569	.02118	.00496	.0087	.0205	.4513
#2	.0480	.02120	.00495	.0093	.0227	.4166
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0833	.0100	.2297	.0360	.0088	.0103
Stddev	.0019	.0004	.0003	.0101	.0003	.0006
%RSD	2.263	4.229	.1100	28.07	3.377	5.929
#1	.0847	.0097	.2296	.0289	.0090	.0107
#2	.0820	.0103	.2299	.0432	.0086	.0099
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/20/10 10:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1660	.4040	.00893	.1692	.00994	.00931
Stddev	.0145	.0037	.00358	.0263	.00070	.00005
%RSD	8.738	.9222	40.106	15.52	7.0396	.56931
#1	.1762	.4013	.00640	.1506	.01044	.00928
#2	.1557	.4066	.01146	.1878	.00945	.00935
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	199.95
Stddev	.39
%RSD	.19714
#1	200.23
#2	199.67

Method: 2010A Sample Name: ICSA ICP7-64-B Operator:
Comment:
Run Time: 07/20/10 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	511.4	.0523	-.0093	-.00079	.00003	.0093
Stddev	.4	.0096	.0120	.00007	.00002	.0006
%RSD	.0756	18.36	129.3	9.2116	56.915	6.086
#1	511.1	.0591	-.0008	-.00074	.00004	.0089
#2	511.6	.0455	-.0178	-.00085	.00002	.0097
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	492.7	-.0006	-.0003	.0023	201.4
Stddev	.0005	3.9	.0023	.0005	.0016	.8
%RSD	5.364	.7818	362.0	189.5	69.93	.3814
#1	.0095	490.0	-.0022	-.0007	.0035	200.9
#2	.0103	495.5	.0010	.0001	.0012	202.0
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	517.8	.00446	.0016	-.0021	.0080
Stddev	.0171	.8	.00036	.0024	.0016	.0138
%RSD	1239.	.1534	7.9604	150.6	77.77	173.1
#1	.0134	517.3	.00421	.0033	-.0009	-.0018
#2	-.0107	518.4	.00472	-.0001	-.0033	.0178
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0176	-.0013	.1535	-.0149	-.0005	.0069
Stddev	.0036	.0008	.0176	.0049	.0010	.0009
%RSD	20.40	62.77	11.48	33.20	185.4	12.94
#1	.0201	-.0019	.1410	-.0114	.0002	.0075
#2	.0150	-.0007	.1659	-.0183	-.0012	.0063
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/20/10 10:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0246	-.0168	.01085	.1183	.01197	.01635
Stddev	.0139	.0002	.00014	.0058	.00001	.00003
%RSD	56.65	1.018	1.3099	4.915	.12188	.19588
#1	.0344	-.0167	.01095	.1141	.01196	.01637
#2	.0147	-.0169	.01075	.1224	.01198	.01633
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	184.73
Stddev	.12
%RSD	.06591
#1	184.64
#2	184.81

Method: 2010A Sample Name: ICSAB ICP7-61-B Operator:
Comment:
Run Time: 07/20/10 10:20 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.6	1.058	.0014	.45373	.52281	.0124
Stddev	2.8	.002	.0175	.00158	.00113	.0003
%RSD	.5486	.2254	1278.	.34882	.21656	2.229
#1	505.6	1.060	-.0110	.45261	.52201	.0126
#2	509.5	1.056	.0137	.45485	.52361	.0122
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9807	489.2	.4941	.4863	.4723	198.4
Stddev	.0088	.7	.0030	.0036	.0016	1.3
%RSD	.8989	.1480	.6059	.7350	.3488	.6438
#1	.9745	488.7	.4920	.4837	.4734	197.5
#2	.9870	489.7	.4962	.4888	.4711	199.3
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.003	519.2	.46405	-.0007	.9551	-.0556
Stddev	.016	.3	.00324	.0015	.0038	.0052
%RSD	1.559	.0636	.69878	212.6	.3952	9.358
#1	.9922	519.4	.46176	.0004	.9524	-.0593
#2	1.014	518.9	.46634	-.0017	.9578	-.0519
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096	.9754	.0258	-.0195	.5125	.9659
Stddev	.0061	.0004	.0013	.0034	.0032	.0088
%RSD	63.77	.0365	5.174	17.65	.6319	.9086
#1	.0140	.9751	.0268	-.0219	.5148	.9596
#2	.0053	.9757	.0249	-.0171	.5102	.9721
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/20/10 10:20

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0286	-.0148	.01162	.1029	.01221	.01690
Stddev	.0020	.0041	.00202	.0045	.00018	.00032
%RSD	6.875	27.76	17.402	4.342	1.5065	1.8808
#1	-.0300	-.0119	.01019	.0997	.01208	.01667
#2	-.0273	-.0177	.01304	.1060	.01234	.01712
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	186.49
Stddev	.42
%RSD	.22771
#1	186.79
#2	186.19

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/20/10 10:23 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.7	1.072	-.0011	.45801	.52784	.0090
Stddev	3.2	.008	.0022	.00071	.00035	.0026
%RSD	.6233	.7174	192.6	.15610	.06681	28.68
#1	505.5	1.077	.0004	.45751	.52760	.0072
#2	510.0	1.066	-.0026	.45852	.52809	.0108
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9890	488.0	.5029	.4900	.4695	200.7
Stddev	.0018	1.0	.0032	.0015	.0023	.3
%RSD	.1836	.1974	.6312	.2980	.4862	.1486
#1	.9877	487.3	.5051	.4889	.4712	200.5
#2	.9903	488.7	.5007	.4910	.4679	200.9
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.015	519.5	.46846	-.0013	.9629	-.0839
Stddev	.009	.2	.00041	.0000	.0010	.0124
%RSD	.8671	.0309	.08811	2.376	.1072	14.79
#1	1.021	519.6	.46817	-.0013	.9636	-.0926
#2	1.008	519.4	.46875	-.0013	.9622	-.0751
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.9763	.0256	-.0161	.5108	.9724
Stddev	.0157	.0059	.0021	.0031	.0064	.0071
%RSD	265.7	.6058	8.184	19.32	1.259	.7297
#1	-.0052	.9805	.0270	-.0183	.5062	.9673
#2	.0170	.9722	.0241	-.0139	.5153	.9774
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/20/10 10:23

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0178	.01280	.1486	.01218	.01803
Stddev	.0075	.0010	.00187	.0084	.00005	.00035
%RSD	592.0	5.521	14.580	5.666	.39024	1.9311
#1	-.0040	-.0171	.01412	.1426	.01215	.01828
#2	.0066	-.0185	.01148	.1546	.01222	.01779
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	184.51
Stddev	.15
%RSD	.08093
#1	184.40
#2	184.61

SC 7/20/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 10:26 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.211	.0058	.0029	2.4758	.05037	.0070
Stddev	.067	.0095	.0161	.0040	.00025	.0011
%RSD	1.278	165.3	546.2	.16369	.49535	16.22
#1	5.258	-.0010	.0143	2.4729	.05055	.0062
#2	5.164	.0125	-.0084	2.4787	.05019	.0078
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.66	.0043	-.0010	.0007	25.56
Stddev	.0002	.01	.0006	.0007	.0027	.00
%RSD	14.93	.0262	13.01	64.32	409.2	.0135
#1	.0014	25.66	.0039	-.0015	.0026	25.56
#2	.0017	25.65	.0047	-.0006	-.0013	25.55
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0053	25.44	5.034	.0001	-.0023	10.02
Stddev	.0000	.05	.008	.0001	.0009	.00
%RSD	.1023	.1844	.1549	80.35	36.99	.0428
#1	-.0053	25.48	5.029	.0000	-.0017	10.02
#2	-.0053	25.41	5.040	.0001	-.0029	10.03
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	.0004	9.868	-.0019	.0028	.0005
Stddev	.0100	.0025	.046	.0040	.0019	.0007
%RSD	74.63	566.5	.4673	215.1	68.41	130.6
#1	.0206	.0022	9.901	-.0047	.0041	.0010
#2	.0064	-.0013	9.835	.0010	.0014	.0000
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 10:26

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.10	2.543	.00106	.0257	.49908	.50340
Stddev	.05	.006	.00414	.0235	.00172	.00066
%RSD	.4912	.2531	390.84	91.48	.34379	.13182
#1	10.06	2.548	-.00187	.0091	.50029	.50387
#2	10.13	2.538	.00399	.0424	.49787	.50293
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	198.89
Stddev	.01
%RSD	.00399
#1	198.90
#2	198.88

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 10:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4844	2.486	2.479	.46378	.53883	.5008
Stddev	.0019	.041	.015	.00130	.00052	.0015
%RSD	.3880	1.644	.5918	.27934	.09597	.2998
#1	.4831	2.457	2.469	.46286	.53920	.4998
#2	.4858	2.515	2.490	.46470	.53847	.5019
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5143	2.531	.5177	.5163	.5034	.5358
Stddev	.0022	.013	.0010	.0019	.0012	.0103
%RSD	.4361	.5185	.2006	.3688	.2353	1.913
#1	.5127	2.522	.5185	.5150	.5043	.5431
#2	.5158	2.540	.5170	.5177	.5026	.5286
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.588	2.1282	1.0106	1.024	.5170	5.046
Stddev	.016	.0076	.0082	.014	.0036	.056
%RSD	.6146	.35858	.80786	1.343	.7043	1.114
#1	2.576	2.1228	1.0048	1.015	.5144	5.086
#2	2.599	2.1336	1.0163	1.034	.5196	5.006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.441	.5007	.4699	2.542	.5171	.5170
Stddev	.011	.0091	.0016	.004	.0042	.0011
%RSD	.4336	1.810	.3302	.1483	.8113	.2167
#1	2.449	.5071	.4710	2.544	.5141	.5162
#2	2.434	.4943	.4688	2.539	.5200	.5178
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 10:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0342	.2909	.51272	5.025	.50719	.50415
Stddev	.0082	.0022	.00168	.068	.00621	.00056
%RSD	23.86	.7555	.32712	1.345	1.2241	.11130
#1	-.0285	.2925	.51390	4.978	.51158	.50455
#2	-.0400	.2894	.51153	5.073	.50280	.50375
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	201.42
Stddev	.10
%RSD	.04733
#1	201.35
#2	201.48

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 10:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0064	.0127	.0024	-.00009	.00004
Stddev	.0089	.0084	.0017	.00012	.00007
%RSD	140.2	66.13	70.74	126.97	173.49
#1	-.0127	.0186	.0012	-.00018	.00009
#2	-.0001	.0067	.0037	-.00001	-.00001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0004	-.0054	.0037	.0003
Stddev	.0006	.0001	.0062	.0000	.0002
%RSD	73.34	20.34	114.3	.9505	90.34
#1	.0004	.0004	-.0010	.0036	.0004
#2	.0012	.0005	-.0098	.0037	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0003	.0044	-.00042	-.00012
Stddev	.0008	.0016	.0078	.00004	.00023
%RSD	248.2	474.2	178.9	9.2003	195.83
#1	.0008	.0008	-.0012	-.00044	.00004
#2	-.0002	-.0014	.0099	-.00039	-.00027
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0000	.0007	-.0174	-.0037
Stddev	.0004	.0003	.0168	.0000	.0030
%RSD	14.48	918.5	2400.	.0385	79.18
#1	.0031	.0002	.0126	-.0174	-.0058
#2	.0025	-.0002	-.0112	-.0174	-.0016
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/20/10 10:32

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.0069	-.0012	-.0006	-.0069
Stddev	.0045	.0054	.0029	.0007	.0081
%RSD	277.8	77.67	252.2	115.3	117.6
#1	-.0048	.0108	-.0032	-.0001	-.0012
#2	.0016	.0031	.0009	-.0011	-.0126
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.00049	-.0036	-.00051	-.00003
Stddev	.0005	.00149	.0077	.00020	.00004
%RSD	20.36	304.89	216.2	39.484	109.64
#1	-.0028	-.00056	-.0090	-.00037	-.00001
#2	-.0021	.00154	.0019	-.00065	-.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.64
Stddev	2.22
%RSD	1.1241
#1	196.07
#2	199.21

Method: 2010A Sample Name: K1006615-MB Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0025	.0021	.00011	.00000	.0009
#1	.0070	.0050	.0000	.00022	-.00001	.0018
#2	.0056	.0000	.0043	.00000	.00001	.0000

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0008	.0017	-.0006	-.0005	.0016
#1	-.0002	.0019	.0018	-.0007	-.0002	.0016
#2	.0001	-.0036	.0015	-.0004	-.0007	.0017

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	.00012	-.00030	.0005	.0003	.0083
#1	.0111	-.00019	-.00024	.0006	.0009	-.0143
#2	.0051	.00043	-.00035	.0004	-.0004	.0310

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-.0027	.0027	.0168	-.0007	.0005
#1	.0019	-.0043	.0024	.0151	-.0026	.0006
#2	.0032	-.0010	.0029	.0186	.0011	.0005

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0122	.0069	-.00083	.0037	-.00004	-.00005
#1	.0107	.0071	-.00116	.0020	.00005	-.00005
#2	.0137	.0067	-.00050	.0054	-.00013	-.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	199.63
#1	198.65
#2	200.61

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.22	.4291	.4560	2.2823	.35026	.5729
#1	40.16	.4316	.4326	2.2877	.35091	.5748
#2	40.29	.4266	.4794	2.2769	.34961	.5711

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5328	53.46	.8384	1.125	1.302	84.07
#1	.5311	53.15	.8359	1.125	1.306	83.55
#2	.5345	53.77	.8410	1.126	1.298	84.59

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5444	19.70	2.7698	.3642	1.187	20.34
#1	.5401	19.69	2.7785	.3613	1.184	20.36
#2	.5488	19.72	2.7611	.3670	1.189	20.32

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.023	.4167	3.414	.7320	.9883	1.626
#1	1.037	.4169	3.424	.7379	.9904	1.622
#2	1.009	.4164	3.405	.7260	.9861	1.629

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.194	8.006	2.2229	1.392	.04231	.69523
#1	4.160	8.018	2.2265	1.392	.04200	.69807
#2	4.228	7.994	2.2193	1.392	.04262	.69239

Int. Std.	Sc3572
Units	Cts/S
Avg	201.58
#1	201.02
#2	202.15

Method: 2010A Sample Name: 500 ppm Fe Operator: JC
Comment: (209074) (072010A)
Run Time: 07/20/10 10:41 Type: Unk Mode: CONC Corr Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4002	.0245	-.0093	.00342	.00005	.0615
#1	.4266	.0152	-.0064	.00352	.00011	.0627
#2	.3739	.0337	-.0122	.00332	-.00002	.0602

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0150	-.0348	.0000	-.0015	.0058	535.8
#1	.0158	-.0388	-.0032	-.0014	.0061	534.5
#2	.0141	-.0308	.0032	-.0016	.0056	537.1

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.00230	.00292	.0004	-.0005	-.1730
#1	.0052	.00239	.00313	.0008	-.0003	-.1830
#2	-.0035	.00220	.00271	.0000	-.0007	-.1631

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0130	-.0031	-.0008	.0016	-.0057	.0033
#1	.0043	-.0019	-.0018	.0046	-.0082	.0027
#2	-.0304	-.0043	.0002	-.0014	-.0032	.0039

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0335	-.0664	.01210	.0604	-.00052	-.00008
#1	.0366	-.0650	.01127	.0463	-.00040	-.00004
#2	.0304	-.0678	.01293	.0745	-.00063	-.00011

Int. Std.	Sc3572
Units	Cts/S
Avg	200.38
#1	199.79
#2	200.97

SC 7/20/10

Method: 2010A Sample Name: K1006615-006 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.12	.0051	.0209	.44153	.00196	.0178
#1	37.21	.0025	.0160	.44353	.00197	.0177
#2	37.03	.0076	.0258	.43953	.00195	.0178

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	30.75	.0276	.0190	.0410	54.77
#1	.0035	30.43	.0273	.0189	.0419	55.04
#2	.0026	31.07	.0280	.0191	.0401	54.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0258	15.43	1.7076	.0003	.0135	11.08
#1	.0216	15.47	1.7205	-.0003	.0141	11.08
#2	.0300	15.39	1.6947	.0009	.0129	11.09

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0022	1.272	.0149	.1123	.1152
#1	.0113	-.0033	1.272	.0109	.1124	.1153
#2	-.0055	-.0011	1.271	.0189	.1121	.1151

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.467	7.317	2.2043	.0336	.03694	.24792
#1	2.477	7.376	2.2235	.0250	.03701	.24962
#2	2.457	7.257	2.1851	.0421	.03687	.24622

Int. Std.	Sc3572
Units	Cts/S
Avg	208.89
#1	207.83
#2	209.96

Method: 2010A Sample Name: K1006615-006D Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.22	.0102	.0211	.47673	.00213	.0138
#1	38.17	.0052	.0294	.47589	.00209	.0135
#2	38.27	.0153	.0128	.47757	.00217	.0140

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	42.15	.0213	.0178	.0424	53.36
#1	.0027	41.98	.0207	.0173	.0434	53.29
#2	.0018	42.32	.0220	.0183	.0413	53.43

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0295	15.15	1.7098	.0012	.0126	10.36
#1	.0208	15.15	1.7153	.0009	.0127	10.42
#2	.0383	15.16	1.7044	.0016	.0124	10.30

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0055	-.0014	1.804	.0105	.1126	.1082
#1	.0035	-.0003	1.813	.0110	.1111	.1091
#2	-.0146	-.0024	1.794	.0100	.1141	.1073

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.542	6.526	1.8725	.0223	.03458	.34288
#1	2.529	6.559	1.8757	.0224	.03502	.34347
#2	2.556	6.492	1.8692	.0222	.03414	.34229

Int. Std.	Sc3572
Units	Cts/S
Avg	208.70
#1	208.24
#2	209.16

Method: 2010A Sample Name: K1006615-006L Operator: JC
Comment: 1/10 RD (209074) (072010A)
Run Time: 07/20/10 10:50 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.195	-.0017	-.0032	.08638	.00037	.0032
#1	7.199	-.0025	-.0028	.08652	.00035	.0032
#2	7.190	-.0008	-.0035	.08624	.00038	.0032

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	5.361	.0040	.0026	.0081	10.87
#1	.0004	5.361	.0035	.0023	.0076	10.90
#2	.0006	5.361	.0045	.0030	.0085	10.84

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	2.9304	.31928	.0003	.0013	2.176
#1	-.0016	2.9299	.31976	.0004	.0006	2.180
#2	.0056	2.9310	.31881	.0002	.0020	2.172

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0060	-.0006	.2661	.0000	.0144	.0212
#1	-.0099	.0002	.2654	-.0003	.0148	.0210
#2	-.0022	-.0013	.2668	.0004	.0140	.0214

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4369	1.406	.41887	.0111	.00735	.04614
#1	.4395	1.407	.41775	.0147	.00747	.04626
#2	.4343	1.405	.41999	.0075	.00722	.04602

Int. Std.	Sc3572
Units	Cts/S
Avg	207.90
#1	207.54
#2	208.26

Method: 2010A Sample Name: K1006615-006S Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.32	.2229	.4862	2.5365	.04819	.4314
#1	49.39	.2267	.4880	2.5401	.04849	.4317
#2	49.26	.2191	.4843	2.5329	.04790	.4311

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0528	52.76	.2280	.5091	.3011	57.54
#1	.0527	52.63	.2289	.5085	.3022	57.65
#2	.0528	52.89	.2272	.5098	.3000	57.43

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5205	23.16	2.4137	.4508	.4999	16.79
#1	.5164	23.16	2.4181	.4517	.5025	16.83
#2	.5246	23.16	2.4093	.4498	.4974	16.75

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4485	.0441	6.618	.0088	.5946	.6353
#1	.4401	.0423	6.648	.0147	.5950	.6375
#2	.4569	.0459	6.588	.0028	.5943	.6331

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.788	5.032	2.0224	.4924	.03931	.43962
#1	2.787	5.051	2.0344	.4973	.03962	.44149
#2	2.789	5.013	2.0104	.4876	.03900	.43775

Int. Std.	Sc3572
Units	Cts/S
Avg	208.08
#1	207.55
#2	208.62

Method: 2010A Sample Name: K1006615-001 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.63	.0048	.0833	.62917	.00182	.0137
#1	42.80	.0061	.0892	.63198	.00186	.0135
#2	42.46	.0035	.0774	.62635	.00178	.0138

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	14.55	.0312	.0257	.0916	62.14
#1	.0036	14.57	.0322	.0250	.0928	62.56
#2	.0034	14.53	.0301	.0263	.0903	61.72

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0360	13.18	2.5206	.0037	.0169	12.37
#1	.0333	13.25	2.5221	.0043	.0168	12.43
#2	.0387	13.11	2.5192	.0030	.0170	12.30

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.0023	.2250	.0039	.1155	.1719
#1	.0108	-.0023	.2274	.0013	.1150	.1739
#2	.0030	-.0022	.2225	.0065	.1160	.1699

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.649	7.444	3.2944	.0314	.04009	.15789
#1	2.676	7.563	3.3222	.0369	.04074	.15904
#2	2.622	7.325	3.2666	.0259	.03945	.15674

Int. Std.	Sc3572
Units	Cts/S
Avg	207.60
#1	207.16
#2	208.05

Method: 2010A Sample Name: K1006615-002 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.40	.0089	.0192	.59890	.00215	.0141
#1	49.10	.0144	.0145	.59539	.00217	.0151
#2	49.70	.0034	.0238	.60242	.00214	.0131

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	19.40	.0338	.0307	.0486	73.68
#1	.0024	19.30	.0327	.0304	.0485	73.56
#2	.0029	19.49	.0348	.0310	.0488	73.81

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0329	17.26	1.9580	.0013	.0198	14.02
#1	.0289	17.22	1.9530	.0019	.0195	13.99
#2	.0369	17.29	1.9630	.0006	.0202	14.06

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	-.0057	.2798	.0002	.1425	.1410
#1	.0054	-.0033	.2782	.0099	.1417	.1405
#2	-.0010	-.0081	.2815	-.0094	.1434	.1416

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.827	7.720	3.5410	.0278	.04440	.21025
#1	2.811	7.681	3.5344	.0321	.04453	.21013
#2	2.844	7.760	3.5477	.0235	.04427	.21036

Int. Std.	Sc3572
Units	Cts/S
Avg	209.58
#1	209.76
#2	209.39

Method: 2010A Sample Name: K1006615-003 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.81	.0021	.0031	.55437	.00182	.0132
#1	43.83	.0000	.0011	.54291	.00174	.0147
#2	43.79	.0043	.0051	.56583	.00189	.0117

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	20.88	.0288	.0253	.0400	69.08
#1	.0024	20.97	.0280	.0253	.0413	67.57
#2	.0022	20.80	.0296	.0252	.0387	70.60

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120	18.43	1.6559	.0008	.0172	12.22
#1	.0065	18.51	1.6210	-.0005	.0172	12.23
#2	.0175	18.36	1.6907	.0021	.0172	12.20

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0113	-.0038	.3119	.0066	.1370	.1182
#1	-.0185	-.0045	.3021	.0054	.1318	.1158
#2	-.0042	-.0031	.3217	.0077	.1423	.1206

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.148	7.020	3.5723	.0310	.04239	.20598
#1	2.143	7.048	3.4883	.0247	.04240	.20135
#2	2.152	6.992	3.6562	.0372	.04239	.21061

Int. Std.	Sc3572
Units	Cts/S
Avg	214.49
#1	219.47
#2	209.52

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 11:04 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.200	.0049	.0083	2.4886	.04914	.0033
Stddev	.018	.0060	.0113	.0123	.00005	.0003
%RSD	.3417	121.7	136.4	.49511	.10304	10.34
#1	5.187	.0091	.0163	2.4798	.04911	.0036
#2	5.212	.0007	.0003	2.4973	.04918	.0031
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	27.06	.0016	-.0012	-.0004	26.67
Stddev	.0004	.00	.0008	.0004	.0010	.01
%RSD	29.72	.0011	51.54	34.98	250.6	.0271
#1	.0011	27.06	.0010	-.0009	-.0011	26.67
#2	.0017	27.06	.0022	-.0015	.0003	26.68
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	25.35	4.974	-.0023	-.0033	9.917
Stddev	.0075	.07	.009	.0005	.0011	.120
%RSD	315.3	.2644	.1731	22.86	33.68	1.213
#1	.0077	25.39	4.968	-.0027	-.0025	10.00
#2	-.0029	25.30	4.980	-.0019	-.0040	9.832
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0022	9.863	-.0049	.0010	.0018
Stddev	.0055	.0034	.055	.0018	.0000	.0001
%RSD	434.3	150.7	.5613	37.22	4.107	5.885
#1	.0051	-.0046	9.903	-.0061	.0009	.0018
#2	-.0026	.0001	9.824	-.0036	.0010	.0017
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 11:04

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.527	.00237	.0174	.48063	.48480
Stddev	.01	.000	.00028	.0012	.00348	.00067
%RSD	.0686	.0019	12.005	6.917	.72471	.13816
#1	10.08	2.528	.00257	.0183	.48309	.48433
#2	10.09	2.527	.00217	.0166	.47816	.48528
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	200.20
Stddev	.68
%RSD	.33999
#1	200.68
#2	199.71

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 11:07 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5048	2.478	2.497	.45841	.51772	.4972
Stddev	.0448	.021	.009	.00101	.00044	.0017
%RSD	8.869	.8296	.3455	.22127	.08413	.3509
#1	.4732	2.463	2.491	.45770	.51803	.4960
#2	.5365	2.492	2.503	.45913	.51742	.4985
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5143	2.485	.5166	.5073	.5201	.5367
Stddev	.0001	.010	.0011	.0007	.0063	.0117
%RSD	.0222	.3956	.2188	.1378	1.204	2.179
#1	.5143	2.478	.5174	.5078	.5245	.5450
#2	.5144	2.492	.5158	.5068	.5156	.5284
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.486	1.9871	1.0135	1.007	.5096	5.031
Stddev	.011	.0060	.0020	.009	.0026	.012
%RSD	.4472	.30308	.19457	.8880	.5111	.2371
#1	2.478	1.9828	1.0121	1.001	.5077	5.039
#2	2.494	1.9913	1.0149	1.014	.5114	5.022
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404	.4966	.4680	2.417	.5095	.5126
Stddev	.047	.0019	.0022	.003	.0028	.0032
%RSD	1.957	.3808	.4707	.1292	.5581	.6307
#1	2.371	.4952	.4695	2.415	.5115	.5104
#2	2.437	.4979	.4664	2.420	.5075	.5149
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 11:07

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0176	.2880	.50013	5.008	.49174	.48184
Stddev	.0107	.0011	.00064	.063	.00304	.00093
%RSD	60.84	.3860	.12736	1.249	.61915	.19249
#1	-.0100	.2888	.49968	4.964	.49389	.48249
#2	-.0251	.2872	.50058	5.053	.48959	.48118
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	204.07
Stddev	.68
%RSD	.33379
#1	203.58
#2	204.55

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 11:10 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134	.0089	-.0009	.00017	.00002	.0010
Stddev	.0149	.0030	.0004	.00036	.00001	.0003
%RSD	111.5	33.93	46.69	204.20	51.013	34.00
#1	.0028	.0110	-.0012	-.00008	.00002	.0007
#2	.0239	.0067	-.0006	.00043	.00001	.0012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0061	.0015	-.0003	-.0009	.0008
Stddev	.0001	.0071	.0004	.0001	.0011	.0006
%RSD	25.27	116.9	29.74	49.50	128.2	69.43
#1	.0002	-.0111	.0012	-.0002	-.0016	.0012
#2	.0003	-.0011	.0018	-.0004	-.0001	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00195	.00000	.0023	.0004	-.0033
Stddev	.0031	.00003	.00012	.0009	.0013	.0200
%RSD	488.7	1.5369	2553.0	37.96	299.2	613.3
#1	.0028	.00192	.00009	.0030	.0013	.0109
#2	-.0016	.00197	-.00008	.0017	-.0005	-.0174
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0049	-.0027	.0033	-.0007	-.0006
Stddev	.0201	.0000	.0033	.0090	.0031	.0004
%RSD	3137.	.0229	120.2	272.8	424.5	70.82
#1	.0136	-.0049	-.0051	.0097	.0014	-.0003
#2	-.0149	-.0049	-.0004	-.0031	-.0029	-.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/20/10 11:10

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0094	-.0040	-.00006	.0096	-.00015	.00003
Stddev	.0039	.0006	.00037	.0264	.00011	.00003
%RSD	41.53	16.16	566.80	275.5	76.486	93.896
#1	-.0121	-.0044	.00019	.0283	-.00022	.00001
#2	-.0066	-.0035	-.00032	-.0091	-.00007	.00005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.25
Stddev	.18
%RSD	.08931
#1	197.13
#2	197.38

Method: 2010A Sample Name: K1006615-004 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.68	.0162	.1423	.45984	.00186	.0167
#1	40.82	.0153	.1424	.46121	.00190	.0163
#2	40.53	.0170	.1421	.45848	.00182	.0171

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	13.70	.0322	.0246	.1125	69.97
#1	.0047	13.60	.0319	.0248	.1140	70.32
#2	.0039	13.80	.0325	.0244	.1109	69.62

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0453	12.76	2.3054	.0025	.0129	11.86
#1	.0436	12.79	2.3134	.0014	.0125	11.97
#2	.0470	12.73	2.2974	.0035	.0133	11.76

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0076	.0001	.3471	.0125	.1515	.1819
#1	-.0199	.0015	.3514	.0086	.1548	.1819
#2	.0046	-.0012	.3429	.0165	.1481	.1819

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.398	9.767	2.6777	.0495	.03613	.13474
#1	2.368	9.863	2.7001	.0573	.03648	.13600
#2	2.428	9.670	2.6552	.0418	.03578	.13348

Int. Std.	Sc3572
Units	Cts/S
Avg	200.78
#1	199.68
#2	201.88

Method: 2010A Sample Name: K1006615-005 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	66.31	.0098	.0195	.55288	.00328	.0195
#1	66.06	.0027	.0198	.55238	.00325	.0193
#2	66.57	.0170	.0192	.55339	.00330	.0196

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	25.34	.0317	.0297	.0600	79.45
#1	.0038	25.25	.0302	.0296	.0576	79.38
#2	.0033	25.43	.0331	.0297	.0624	79.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0379	20.91	2.5599	.0024	.0181	16.04
#1	.0452	20.89	2.5492	.0015	.0176	15.98
#2	.0305	20.94	2.5706	.0033	.0186	16.10

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0061	-.0022	.8996	.0107	.1465	.1793
#1	-.0023	-.0012	.9029	.0230	.1453	.1776
#2	-.0100	-.0033	.8963	-.0017	.1477	.1810

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.729	7.402	3.0566	.0481	.05340	.21198
#1	2.733	7.388	3.0668	.0464	.05292	.21217
#2	2.726	7.416	3.0465	.0498	.05388	.21178

Int. Std.	Sc3572
Units	Cts/S
Avg	204.29
#1	203.88
#2	204.71

Method: 2010A Sample Name: K1006615-007 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.45	.0139	.0902	.50713	.00178	.0184
#1	41.29	.0118	.0794	.50516	.00176	.0187
#2	41.61	.0161	.1010	.50910	.00180	.0181

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	11.49	.0446	.0237	.0831	65.80
#1	.0038	11.42	.0465	.0239	.0846	65.65
#2	.0042	11.57	.0427	.0235	.0815	65.95

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0358	10.61	2.2829	.0027	.0187	8.716
#1	.0453	10.64	2.2768	.0024	.0187	8.738
#2	.0262	10.57	2.2891	.0030	.0187	8.693

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0110	-.0009	.3591	.0141	.1436	.1615
#1	-.0175	-.0051	.3643	.0158	.1450	.1598
#2	-.0046	.0033	.3540	.0125	.1423	.1633

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.883	9.199	2.2324	.0467	.03449	.12638
#1	1.871	9.820	2.2366	.0695	.03488	.12645
#2	1.894	8.579	2.2283	.0239	.03410	.12631

Int. Std.	Sc3572
Units	Cts/S
Avg	201.53
#1	201.35
#2	201.72

Method: 2010A Sample Name: K1006615-008 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.15	.0066	.0260	.40861	.00163	.0173
#1	34.99	.0100	.0245	.40830	.00168	.0174
#2	35.31	.0033	.0276	.40892	.00158	.0172

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	13.85	.0494	.0213	.0414	62.22
#1	.0031	13.76	.0502	.0198	.0409	62.05
#2	.0030	13.93	.0487	.0228	.0420	62.39

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207	12.05	1.6432	.0030	.0225	7.378
#1	.0197	11.99	1.6448	.0037	.0215	7.378
#2	.0216	12.10	1.6415	.0023	.0236	7.377

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0097	-.0020	.8122	.0126	.1514	.1115
#1	-.0220	-.0022	.8154	.0109	.1541	.1111
#2	.0026	-.0019	.8090	.0143	.1487	.1119

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.917	7.079	1.9856	.0255	.03083	.17572
#1	1.920	7.072	1.9923	.0355	.03103	.17682
#2	1.913	7.086	1.9790	.0155	.03064	.17462

Int. Std.	Sc3572
Units	Cts/S
Avg	203.36
#1	202.87
#2	203.85

Method: 2010A Sample Name: K1006615-009 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.49	.0171	.0161	.93923	.00175	.0181
#1	31.38	.0079	.0241	.93752	.00165	.0167
#2	31.60	.0264	.0082	.94095	.00185	.0194

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	70.55	.0330	.0160	.0384	51.14
#1	.0030	70.03	.0319	.0157	.0391	50.98
#2	.0030	71.07	.0341	.0164	.0377	51.29

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	14.59	3.586	.0006	.0213	6.997
#1	.0138	14.55	3.582	.0007	.0218	6.999
#2	.0161	14.63	3.591	.0005	.0209	6.995

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	-.0003	1.406	.0138	.1251	.0974
#1	.0004	-.0003	1.409	.0119	.1253	.0969
#2	.0069	-.0003	1.403	.0158	.1248	.0979

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.036	9.828	1.8106	.0153	.03355	.22579
#1	2.034	9.800	1.8078	.0225	.03359	.22654
#2	2.037	9.856	1.8134	.0080	.03351	.22504

Int. Std.	Sc3572
Units	Cts/S
Avg	202.74
#1	202.43
#2	203.05

Method: 2010A Sample Name: K1006636-001 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.65	.0237	.1528	.50545	.00175	.0193
#1	37.57	.0152	.1498	.50710	.00176	.0192
#2	37.73	.0321	.1559	.50380	.00174	.0194

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	9.282	8.827	.0457	.0248	.1362
#1	.0054	9.307	8.828	.0469	.0250	.1381
#2	.0053	9.257	8.827	.0445	.0247	.1343

Elem	Fe2714	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	95.52	.0537	10.99	2.7612	.0033	.0175
#1	95.73	.0509	10.93	2.7634	.0028	.0188
#2	95.32	.0566	11.04	2.7589	.0038	.0162

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.65	.0041	-.0027	.1571	.0088	.1957
#1	10.65	.0099	-.0024	.1580	.0098	.1982
#2	10.66	-.0018	-.0030	.1562	.0079	.1931

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2095	2.285	7.047	2.7064	.0386	.03733
#1	.2106	2.310	7.060	2.7143	.0477	.03722
#2	.2083	2.260	7.035	2.6986	.0296	.03744

Elem	Sr4077
Units	ppm
Avg	.07660
#1	.07670
#2	.07651

Int. Std.	Sc3572
Units	Cts/S
Avg	206.21
#1	205.50
#2	206.92

Method: 2010A Sample Name: K1006636-002 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.18	.0178	.0307	.66544	.00275	.0225
#1	53.05	.0170	.0310	.66509	.00274	.0241
#2	53.30	.0186	.0305	.66578	.00277	.0208

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	13.04	.0480	.0285	.0551	97.76
#1	.0043	13.05	.0463	.0276	.0539	97.11
#2	.0043	13.02	.0497	.0294	.0562	98.41

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0345	13.83	2.8880	.0041	.0231	12.93
#1	.0294	13.83	2.8852	.0036	.0216	12.97
#2	.0396	13.82	2.8909	.0046	.0246	12.90

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0036	.2496	.0074	.1977	.1716
#1	.0096	-.0048	.2513	.0089	.1968	.1701
#2	-.0071	-.0024	.2478	.0059	.1986	.1732

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.287	7.406	3.1256	.0423	.04655	.10727
#1	2.263	7.456	3.1282	.0360	.04609	.10753
#2	2.311	7.356	3.1231	.0486	.04702	.10701

Int. Std.	Sc3572
Units	Cts/S
Avg	207.69
#1	207.69
#2	207.69

Method: 2010A Sample Name: K1006636-003 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	62.62	.0125	.0092	.64858	.00364	.0253
#1	62.69	.0079	.0086	.64781	.00370	.0236
#2	62.55	.0171	.0098	.64935	.00357	.0271

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	16.73	.0369	.0412	.0678	101.2
#1	.0045	16.73	.0377	.0413	.0699	101.4
#2	.0045	16.73	.0361	.0411	.0657	101.0

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0432	26.89	3.636	.0020	.0347	22.18
#1	.0419	26.87	3.640	.0027	.0342	22.22
#2	.0446	26.91	3.632	.0013	.0352	22.14

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0056	.3539	.0064	.1773	.2330
#1	.0040	-.0044	.3543	.0097	.1779	.2335
#2	-.0038	-.0067	.3535	.0030	.1766	.2324

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.684	6.485	4.1354	.0324	.07505	.12458
#1	2.707	6.505	4.1500	.0414	.07528	.12503
#2	2.662	6.465	4.1208	.0235	.07482	.12413

Int. Std.	Sc3572
Units	Cts/S
Avg	206.68
#1	206.66
#2	206.70

Method: 2010A Sample Name: K1006636-005 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.83	.0106	.1116	.47165	.00167	.0172
#1	32.74	.0169	.1091	.47126	.00166	.0170
#2	32.91	.0043	.1141	.47203	.00168	.0175

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	9.096	8.783	.0328	.0190	.1175
#1	.0054	9.123	8.775	.0331	.0198	.1159
#2	.0054	9.069	8.790	.0325	.0183	.1190

Elem	Fe2714	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	67.52	.0675	10.47	2.1662	.0028	.0142
#1	67.36	.0710	10.43	2.1592	.0022	.0143
#2	67.67	.0641	10.50	2.1733	.0034	.0140

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.761	.0105	-.0023	.2037	.0136	.1363
#1	9.753	.0118	-.0032	.2029	.0181	.1341
#2	9.769	.0092	-.0014	.2045	.0090	.1385

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2221	1.962	6.955	2.5008	.0252	.03576
#1	.2240	1.946	6.981	2.5001	.0243	.03538
#2	.2202	1.978	6.928	2.5015	.0262	.03614

Elem	Sr4077
Units	ppm
Avg	.08038
#1	.08038
#2	.08037

Int. Std.	Sc3572
Units	Cts/S
Avg	203.75
#1	203.69
#2	203.80

Method: 2010A Sample Name: K1006636-006 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.33	.0131	.0345	.48326	.00213	.0205
#1	40.40	.0177	.0414	.48556	.00217	.0204
#2	40.26	.0085	.0277	.48097	.00210	.0206

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	10.84	.0335	.0236	.0543	73.38
#1	.0037	10.83	.0356	.0240	.0552	73.82
#2	.0042	10.86	.0314	.0233	.0533	72.94

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0382	14.42	1.9559	.0010	.0172	12.30
#1	.0375	14.43	1.9665	.0017	.0175	12.25
#2	.0388	14.41	1.9454	.0003	.0170	12.35

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0035	-.0046	.4842	.0160	.1394	.1510
#1	-.0003	-.0046	.4868	.0134	.1423	.1521
#2	-.0068	-.0046	.4816	.0186	.1365	.1500

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.937	6.842	3.1731	.0365	.04353	.10616
#1	1.928	6.863	3.1815	.0323	.04331	.10636
#2	1.947	6.820	3.1646	.0408	.04376	.10595

Int. Std.	Sc3572
Units	Cts/S
Avg	204.86
#1	204.23
#2	205.49

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 11:43 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.243	.0054	.0015	2.5152	.05066	.0050
Stddev	.012	.0065	.0061	.0024	.00029	.0005
%RSD	.2298	121.3	395.8	.09626	.57251	9.229
#1	5.235	.0008	-.0028	2.5135	.05046	.0053
#2	5.252	.0100	.0058	2.5169	.05087	.0047
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	26.70	.0041	-.0015	-.0010	26.72
Stddev	.0006	.02	.0001	.0004	.0027	.00
%RSD	29.44	.0841	2.136	23.15	271.2	.0084
#1	.0025	26.71	.0040	-.0013	.0009	26.72
#2	.0016	26.68	.0041	-.0018	-.0029	26.72
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.45	5.126	.0004	-.0024	10.02
Stddev	.0017	.02	.005	.0024	.0016	.00
%RSD	158.1	.0847	.0915	658.2	66.98	.0043
#1	.0023	25.47	5.123	.0021	-.0013	10.02
#2	-.0001	25.44	5.129	-.0014	-.0035	10.02
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	-.0004	10.04	-.0084	.0049	.0011
Stddev	.0009	.0051	.00	.0018	.0012	.0001
%RSD	46.61	1130.	.0169	20.77	24.03	9.126
#1	-.0013	.0031	10.04	-.0072	.0040	.0010
#2	-.0026	-.0040	10.04	-.0097	.0057	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 11:43

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.13	2.547	.00250	.0199	.48991	.50265
Stddev	.00	.001	.00111	.0040	.00136	.00069
%RSD	.0046	.0237	44.448	19.98	.27674	.13717
#1	10.13	2.547	.00171	.0227	.48895	.50313
#2	10.13	2.548	.00328	.0171	.49087	.50216
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	196.21
Stddev	.02
%RSD	.00871
#1	196.20
#2	196.22

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 11:46 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4935	2.471	2.477	.47020	.53884	.5001
Stddev	.0210	.024	.013	.00210	.00011	.0009
%RSD	4.249	.9732	.5262	.44559	.02040	.1748
#1	.4787	2.454	2.486	.46872	.53876	.4995
#2	.5083	2.488	2.468	.47169	.53892	.5007
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5241	2.518	.5273	.5236	.5106	Q .5553
Stddev	.0016	.002	.0020	.0029	.0032	.0076
%RSD	.3037	.0916	.3805	.5626	.6176	1.370
#1	.5229	2.516	.5259	.5216	.5083	.5607
#2	.5252	2.519	.5288	.5257	.5128	.5500
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Per SE 7/23/10

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.596	2.1295	1.0269	1.041	.5241	5.106
Stddev	.011	.0043	.0026	.011	.0053	.001
%RSD	.4383	.19969	.25122	1.060	1.016	.0209
#1	2.588	2.1265	1.0251	1.033	.5203	5.106
#2	2.604	2.1326	1.0287	1.048	.5279	5.107
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.434	.5043	.4817	2.558	.5248	.5255
Stddev	.008	.0015	.0004	.001	.0011	.0037
%RSD	.3388	.2952	.0824	.0219	.2021	.7133
#1	2.428	.5053	.4819	2.559	.5256	.5228
#2	2.440	.5032	.4814	2.558	.5241	.5281
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 11:46

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0271	.2973	.51655	5.100	.50320	.50630
Stddev	.0100	.0015	.00232	.025	.00279	.00086
%RSD	36.69	.5018	.44937	.4858	.55435	.17067
#1	-.0342	.2983	.51490	5.082	.50123	.50569
#2	-.0201	.2962	.51819	5.117	.50518	.50691
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	198.65
Stddev	.31
%RSD	.15589
#1	198.43
#2	198.87

Method: 2010A Sample Name: CCVA Rerun Operator:
Comment:
Run Time: 07/20/10 11:54 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4845	2.471	2.505	.46836	.53450	.4984
Stddev	.0120	.006	.058	.00126	.00211	.0002
%RSD	2.478	.2561	2.315	.26966	.39414	.0441
#1	.4760	2.475	2.464	.46747	.53599	.4982
#2	.4930	2.466	2.546	.46925	.53301	.4985
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5249	2.443	.5254	.5200	.5140	.5125
Stddev	.0000	.002	.0010	.0014	.0075	.0009
%RSD	.0058	.0872	.1970	.2629	1.465	.1693
#1	.5249	2.444	.5262	.5190	.5087	.5131
#2	.5249	2.441	.5247	.5209	.5193	.5119
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.563	1.9655	1.0272	1.033	.5201	5.010
Stddev	.004	.0110	.0065	.004	.0018	.018
%RSD	.1585	.55806	.62972	.4364	.3541	.3538
#1	2.566	1.9577	1.0318	1.030	.5188	5.022
#2	2.560	1.9733	1.0226	1.036	.5214	4.997
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.417	.4962	.4778	2.504	.5203	.5208
Stddev	.006	.0040	.0081	.012	.0002	.0003
%RSD	.2328	.8077	1.692	.4902	.0472	.0609
#1	2.413	.4934	.4835	2.495	.5204	.5206
#2	2.421	.4990	.4721	2.512	.5201	.5211
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 11:54 Drum

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0190	.2847	.51836	5.086	.50058	.49814
Stddev	.0010	.0033	.00016	.043	.00195	.00188
%RSD	5.349	1.167	.03150	.8460	.38931	.37646
#1	-.0198	.2823	.51825	5.056	.50196	.49946
#2	-.0183	.2870	.51848	5.117	.49921	.49681
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	199.09
Stddev	1.24
%RSD	.62216
#1	198.22
#2	199.97

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 11:57 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0063	.0068	-.00033	-.00007	.0004
Stddev	.0020	.0042	.0026	.00006	.00004	.0001
%RSD	71.14	65.96	38.58	19.327	61.125	28.06
#1	.0042	.0093	.0086	-.00029	-.00004	.0004
#2	.0014	.0034	.0049	-.00038	-.00009	.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0090	.0031	-.0004	.0003	-.0030
Stddev	.0003	.0065	.0014	.0007	.0005	.0008
%RSD	143.9	72.24	45.14	155.0	176.6	25.97
#1	.0000	-.0136	.0040	.0000	.0007	-.0036
#2	.0004	-.0044	.0021	-.0009	-.0001	-.0025
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.00055	-.00032	.0010	.0003	-.0069
Stddev	.0006	.00005	.00006	.0001	.0012	.0044
%RSD	146.1	8.9987	19.310	14.34	347.6	63.31
#1	-.0008	-.00058	-.00028	.0011	.0012	-.0038
#2	.0000	-.00051	-.00037	.0009	-.0005	-.0100
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0026	-.0013	-.0005	.0043	-.0011	.0003
Stddev	.0046	.0055	.0016	.0004	.0019	.0007
%RSD	176.9	408.8	326.9	9.194	172.3	218.2
#1	.0006	.0025	.0006	.0046	-.0025	-.0002
#2	-.0058	-.0052	-.0016	.0040	.0002	.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/20/10 11:57

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	-.0015	-.00225	.0011	-.00011	-.00006
Stddev	.0033	.0010	.00032	.0092	.00026	.00000
%RSD	140.5	69.46	14.356	856.3	236.27	5.5076
#1	-.0047	-.0008	-.00248	.0076	-.00030	-.00005
#2	.0000	-.0022	-.00202	-.0055	.00007	-.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	198.36
Stddev	.58
%RSD	.29444
#1	197.95
#2	198.77

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 12:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 42.38	k .0164	k .0087	k 1.0300	k .00258	.0251
#1	k 42.26	k .0168	k .0000	k 1.0242	k .00255	.0250
#2	k 42.51	k .0160	k .0174	k 1.0359	k .00262	.0252

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	15.82	k .0336	k .0337	k .0498	79.05
#1	.0035	15.69	k .0348	k .0330	k .0513	78.53
#2	.0034	15.95	k .0324	k .0344	k .0484	79.58

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0307	k 19.56	2.915	k .0019	k .0273	15.49
#1	k .0264	k 19.53	2.927	k .0007	k .0266	15.45
#2	k .0349	k 19.60	2.903	k .0032	k .0280	15.53

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k -.0011	k -.0047	.9112	k .0146	k .1526	k .1508
#1	k .0002	k -.0059	.9128	k .0168	k .1534	k .1482
#2	k -.0023	k -.0035	.9096	k .0124	k .1518	k .1535

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.527	k 6.306	3.7174	k .0203	.05278	.18019
#1	k 2.515	k 6.300	3.7268	k .0148	.05247	.18042
#2	k 2.539	k 6.312	3.7080	k .0258	.05308	.17997

Int. Std.	Sc3572
Units	Cts/S
Avg	204.69
#1	204.64
#2	204.74

Sc mm Line Switch Pt Change SC 7/20/10

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 12:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.38	.0166	.0104	1.0303	.00233	.0251
#1	42.26	.0170	.0018	1.0244	.00230	.0250
#2	42.51	.0163	.0191	1.0362	.00236	.0252

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	15.82	.0328	.0337	.0500	79.05
#1	.0035	15.69	.0340	.0330	.0514	78.53
#2	.0034	15.95	.0317	.0344	.0485	79.58

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0357	19.55	2.915	.0028	.0273	15.49
#1	.0315	19.52	2.927	.0016	.0266	15.45
#2	.0400	19.59	2.903	.0040	.0280	15.53

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0047	.9112	.0146	.1526	.1513
#1	.0027	-.0059	.9128	.0168	.1534	.1487
#2	.0002	-.0035	.9096	.0124	.1518	.1539

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.540	6.313	3.7174	.0218	.05278	.18019
#1	2.528	6.307	3.7268	.0163	.05247	.18042
#2	2.552	6.319	3.7080	.0273	.05308	.17997

Int. Std.	Sc3572
Units	Cts/S
Avg	204.69
#1	204.64
#2	204.74

Method: 2010A Sample Name: RB Operator: JC
Comment: (209074) (072010A)
Run Time: 07/20/10 12:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	-.0160	.0055	-.00030	-.00003	-.0006
#1	.0282	-.0152	.0148	-.00036	.00001	-.0008
#2	-.0169	-.0169	-.0037	-.00025	-.00007	-.0004

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0098	.0023	-.0008	-.0005	.0264
#1	-.0001	-.0132	.0024	-.0005	.0005	.0480
#2	.0002	-.0065	.0022	-.0011	-.0016	.0049

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.00015	-.00005	-.0003	.0006	-.0208
#1	.0052	.00013	.00018	-.0009	.0005	-.0160
#2	.0048	-.00042	-.00028	.0003	.0007	-.0256

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	-.0046	-.0086	-.0036	-.0031	-.0002
#1	-.0084	-.0040	-.0063	-.0085	-.0044	-.0002
#2	-.0019	-.0052	-.0109	.0012	-.0018	-.0003

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0087	-.0039	-.00006	.0039	-.00006	-.00009
#1	-.0054	-.0007	.00044	.0113	-.00037	-.00012
#2	-.0121	-.0071	-.00057	-.0034	.00024	-.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	197.32
#1	198.23
#2	196.42

Method: 2010A Sample Name: K1007375-MB Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:07 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0078	-.0093	-.0012	-.00029	-.00008
#1	-.0127	-.0177	-.0080	-.00035	-.00005
#2	-.0028	-.0008	.0055	-.00024	-.00010

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0000	-.0029	-.0015	.0003
#1	.0009	-.0002	-.0057	-.0006	.0007
#2	.0006	.0001	-.0002	-.0023	-.0002

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0028	.0077	-.00052	-.00043
#1	.0013	.0033	.0075	-.00060	-.00043
#2	.0008	.0023	.0079	-.00043	-.00042

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0007	.0059	-.0013	-.0003
#1	-.0007	.0008	-.0024	-.0019	-.0031
#2	.0000	.0005	.0143	-.0006	.0025

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0046	.0095	-.0031	.0001	.0102
#1	.0067	.0137	-.0049	-.0006	.0091
#2	.0026	.0052	-.0013	.0009	.0114

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.00034	.0010	.00030	-.00005
#1	.0062	-.00088	.0000	.00048	-.00005
#2	.0076	.00156	.0019	.00012	-.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	199.13
#1	199.29
#2	198.98

Method: 2010A Sample Name: LCSW Operator: JC
Comment: 1/2 K1007375 (209074) (072010A)
Run Time: 07/20/10 12:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.074	.4641	.4719	2.1476	.05142	.5093
#1	2.070	.4633	.4578	2.1412	.05163	.5079
#2	2.078	.4649	.4860	2.1541	.05121	.5106

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0539	-.0048	.2270	.5527	.2547	1.092
#1	.0536	.0007	.2252	.5535	.2541	1.091
#2	.0543	-.0102	.2287	.5519	.2553	1.093

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5223	-.00029	.51766	.5292	.5524	.0007
#1	.5259	-.00035	.51706	.5295	.5533	-.0049
#2	.5188	-.00022	.51826	.5290	.5515	.0064

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4750	.0486	.0011	.0051	.5521	.5528
#1	.4705	.0486	.0002	.0082	.5536	.5507
#2	.4794	.0486	.0020	.0020	.5506	.5548

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0111	.0332	-.00016	.4553	-.00041	-.00004
#1	-.0093	.0335	-.00138	.4614	-.00068	-.00001
#2	-.0128	.0329	.00106	.4493	-.00013	-.00007

Int. Std.	Sc3572
Units	Cts/S
Avg	196.51
#1	195.58
#2	197.45

Method: 2010A Sample Name: K1007375-001 Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.02	.0046	.0153	.05107	.00010	.0085
#1	24.06	.0042	.0073	.05163	.00011	.0082
#2	23.98	.0050	.0233	.05052	.00010	.0087

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257	3.389	.0454	.0065	.0645	26.95
#1	.0254	3.389	.0455	.0053	.0656	27.02
#2	.0259	3.389	.0453	.0076	.0635	26.87

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3991	.61227	.18492	.0173	.0272	.8036
#1	.4081	.61275	.18535	.0180	.0273	.8024
#2	.3901	.61180	.18449	.0166	.0271	.8048

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121	-.0023	1.010	.0284	.0054	13.74
#1	.0076	-.0020	1.019	.0236	.0052	13.77
#2	.0166	-.0026	1.001	.0333	.0055	13.72

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1321	1.384	.47838	.0434	.00328	.01669
#1	.1345	1.387	.48244	.0672	.00349	.01666
#2	.1296	1.382	.47431	.0196	.00307	.01672

Int. Std.	Sc3572
Units	Cts/S
Avg	194.16
#1	193.73
#2	194.60

Method: 2010A Sample Name: K1007375-001D Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.82	.0075	.0123	.05879	.00014	.0092
#1	24.75	-.0001	.0132	.05869	.00010	.0100
#2	24.89	.0151	.0114	.05888	.00017	.0084

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0246	3.394	.0638	.0058	.0682	25.09
#1	.0245	3.412	.0632	.0060	.0714	24.98
#2	.0247	3.377	.0645	.0056	.0649	25.21

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.070	.65166	.19669	.0212	.0321	.8910
#1	1.068	.65193	.19580	.0206	.0309	.8856
#2	1.071	.65140	.19759	.0217	.0333	.8964

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0138	-.0014	1.154	.0367	.0048	17.85
#1	-.0196	-.0011	1.160	.0377	.0049	17.79
#2	-.0079	-.0017	1.148	.0358	.0047	17.91

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1578	1.533	.55847	.0260	.00380	.01668
#1	.1599	1.543	.55404	.0327	.00413	.01669
#2	.1557	1.524	.56291	.0194	.00347	.01667

Int. Std.	Sc3572
Units	Cts/S
Avg	194.44
#1	194.12
#2	194.75

Method: 2010A Sample Name: K1007375-001S Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.72	.3683	.4936	2.1694	.05028	.5045
#1	26.73	.3576	.4825	2.1618	.05020	.5028
#2	26.71	.3789	.5047	2.1769	.05035	.5061

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0793	3.970	.2563	.5460	.3420	32.18
#1	.0793	3.937	.2534	.5424	.3403	32.04
#2	.0793	4.003	.2592	.5496	.3438	32.31

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.025	.72885	.75547	.5448	.5702	.8703
#1	1.040	.72965	.75526	.5404	.5694	.8549
#2	1.010	.72805	.75568	.5492	.5710	.8856

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4658	.0467	1.148	.0441	.5364	17.30
#1	.4580	.0421	1.149	.0461	.5370	17.18
#2	.4736	.0514	1.146	.0420	.5358	17.43

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1394	1.585	.63093	.5040	.00445	.01824
#1	.1432	1.590	.62966	.4945	.00442	.01837
#2	.1356	1.580	.63220	.5135	.00448	.01812

Int. Std.	Sc3572
Units	Cts/S
Avg	196.21
#1	196.23
#2	196.18

Method: 2010A Sample Name: K1007375-002 Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.868	k .0177	k .0084	2.5931	k .00001	k 1.851
#1	k 2.893	k .0160	k .0057	2.5851	k .00003	k 1.857
#2	k 2.843	k .0194	k .0112	2.6010	k .00000	k 1.846

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0169	102.0	k .0574	k .0028	k .6048	8.791
#1	k .0172	101.2	k .0575	k .0037	k .6040	8.756
#2	k .0166	102.8	k .0573	k .0019	k .6057	8.827

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.415	1.4047	k .10059	k .0011	k .0255	9.802
#1	k 2.398	1.4157	k .10029	k .0028	k .0261	9.839
#2	k 2.432	1.3937	k .10089	k -.0007	k .0249	9.765

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k -.0019	k -.0005	41.08	k .0414	k .0055	k 45.54
#1	k -.0071	k .0009	41.09	k .0363	k .0051	k 45.33
#2	k .0032	k -.0018	41.07	k .0465	k .0059	k 45.75

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .8728	k 2.273	.63363	k .3145	.01340	.12513
#1	k .8555	k 2.285	.63852	k .3098	.01381	.12587
#2	k .8902	k 2.261	.62874	k .3192	.01300	.12440

Int. Std.	Sc3572
Units	Cts/S
Avg	198.98
#1	199.03
#2	198.94

See Fe line
switch point
change
JC 7/20/10

Method: 2010A Sample Name: K1007375-002 Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.872	.0173	.0094	2.5931	.00000	1.843
#1	2.897	.0156	.0066	2.5851	.00002	1.849
#2	2.846	.0189	.0121	2.6010	-.00001	1.838

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0161	102.0	.0575	.0026	.6050	8.791
#1	.0164	101.2	.0576	.0035	.6042	8.756
#2	.0158	102.8	.0575	.0018	.6058	8.827

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.415	1.4047	.10050	.0012	.0261	9.802
#1	2.398	1.4157	.10020	.0029	.0267	9.839
#2	2.433	1.3937	.10080	-.0006	.0256	9.765

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0005	41.08	.0418	.0055	45.54
#1	-.0064	.0009	41.09	.0367	.0051	45.33
#2	.0040	-.0018	41.07	.0469	.0059	45.75

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9185	2.273	.63363	.3161	.01340	.12513
#1	.9011	2.285	.63852	.3114	.01381	.12587
#2	.9360	2.261	.62874	.3208	.01300	.12440

Int. Std.	Sc3572
Units	Cts/S
Avg	198.98
#1	199.03
#2	198.94

Method: 2010A Sample Name: RB Operator: JC
Comment: (209074) (072010A)
Run Time: 07/20/10 12:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	-.0080	.0080	-.00018	-.00016
#1	-.0085	-.0110	.0111	-.00005	-.00016
#2	.0042	-.0051	.0049	-.00032	-.00015

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0002	-.0027	.0035	-.0012
#1	.0001	.0000	-.0031	.0050	-.0008
#2	.0007	.0003	-.0023	.0021	-.0016

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0017	-.0012	-.00053	-.00040
#1	-.0002	-.0003	.0004	-.00050	-.00049
#2	.0004	-.0031	-.0028	-.00056	-.00031

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0010	.0021	-.0084	-.0009
#1	-.0017	-.0009	.0123	-.0110	.0013
#2	.0012	-.0010	-.0081	-.0058	-.0031

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0086	-.0040	-.0014	.0034	-.0042
#1	-.0111	-.0034	-.0020	.0059	.0000
#2	-.0062	-.0046	-.0009	.0008	-.0084

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	-.00333	.0059	-.00048	-.00006
#1	-.0024	-.00290	-.0016	-.00024	-.00009
#2	-.0023	-.00375	.0134	-.00073	-.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	196.84
#1	197.04
#2	196.64

Method: 2010A Sample Name: K1007297-MB Operator: JC
Comment: Millipore (209074) (072010A)
Run Time: 07/20/10 12:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	-.0127	.0025	-.00037	-.00008	.0022
#1	.0057	-.0194	.0025	-.00049	-.00005	.0027
#2	.0028	-.0060	.0025	-.00025	-.00011	.0018

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0048	.0029	-.0005	-.0015	.0114
#1	-.0006	.0040	.0024	.0002	.0001	.0117
#2	.0003	.0057	.0034	-.0011	-.0032	.0110

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.00018	-.00026	-.0012	.0012	.0158
#1	.0157	-.00030	-.00038	-.0010	.0012	.0191
#2	-.0020	-.00007	-.00013	-.0014	.0012	.0126

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0123	-.0036	.0155	.0274	-.0024	.0002
#1	-.0136	-.0064	.0144	.0271	-.0018	.0004
#2	-.0110	-.0007	.0165	.0278	-.0030	.0000

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0226	.0222	.00014	-.0035	-.00020	-.00007
#1	.0233	.0229	-.00032	-.0052	.00002	-.00005
#2	.0219	.0214	.00059	-.0017	-.00043	-.00009

Int. Std.	Sc3572
Units	Cts/S
Avg	196.96
#1	195.41
#2	198.52

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 12:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.145	-.0043	.0050	2.5881	.05081	.0038
Stddev	.022	.0012	.0039	.0035	.00013	.0008
%RSD	.4268	28.27	78.62	.13632	.24628	19.70
#1	5.129	-.0052	.0078	2.5906	.05072	.0044
#2	5.160	-.0035	.0022	2.5856	.05090	.0033
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	27.40	.0030	-.0020	-.0035	27.24
Stddev	.0002	.02	.0008	.0002	.0000	.05
%RSD	9.157	.0612	28.02	8.161	.0601	.1810
#1	.0023	27.38	.0024	-.0019	-.0035	27.27
#2	.0026	27.41	.0036	-.0021	-.0036	27.20
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	25.52	5.169	.0000	-.0034	9.948
Stddev	.0042	.02	.021	.002	.0004	.081
%RSD	97.64	.0676	.3982	73920.	11.02	.8110
#1	-.0013	25.51	5.183	-.0014	-.0031	9.891
#2	-.0073	25.53	5.154	.0014	-.0036	10.01
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0018	10.09	-.0022	.0034	.0003
Stddev	.0064	.0006	.07	.0075	.0011	.0001
%RSD	989.1	35.38	.6967	337.4	31.94	46.32
#1	-.0052	-.0013	10.04	.0031	.0042	.0004
#2	.0039	-.0022	10.14	-.0076	.0026	.0002
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 12:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.20	2.553	.00197	.0078	.48388	.50098
Stddev	.01	.005	.00214	.0185	.00389	.00083
%RSD	.0778	.1964	108.54	237.3	.80420	.16526
#1	10.21	2.556	.00046	.0209	.48113	.50039
#2	10.20	2.549	.00348	-.0053	.48663	.50156
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	196.24
Stddev	.33
%RSD	.16879
#1	196.48
#2	196.01

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 12:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4852	2.502	2.534	.47885	.53897	.5019
Stddev	.0129	.032	.014	.00423	.00299	.0000
%RSD	2.653	1.277	.5560	.88239	.55441	.0058
#1	.4761	2.480	2.544	.47586	.53686	.5020
#2	.4943	2.525	2.524	.48184	.54109	.5019
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5389	2.513	.5370	.5295	.5218	.5318
Stddev	.0050	.018	.0018	.0057	.0012	.0070
%RSD	.9325	.7050	.3322	1.078	.2324	1.310
#1	.5353	2.501	.5358	.5254	.5227	.5368
#2	.5425	2.526	.5383	.5335	.5210	.5269
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.631	1.9911	1.0551	1.057	.5306	5.081
Stddev	.028	.0032	.0082	.019	.0043	.017
%RSD	1.067	.16257	.77414	1.791	.8172	.3367
#1	2.611	1.9934	1.0493	1.043	.5275	5.093
#2	2.651	1.9888	1.0609	1.070	.5337	5.069
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.431	.4990	.4915	2.562	.5289	.5364
Stddev	.037	.0034	.0039	.036	.0064	.0050
%RSD	1.518	.6777	.8023	1.395	1.207	.9241
#1	2.405	.5014	.4942	2.536	.5244	.5329
#2	2.457	.4966	.4887	2.587	.5334	.5399
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 12:34

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0236	.2876	.52207	5.227	.49816	.49975
Stddev	.0035	.0019	.00056	.081	.00193	.00280
%RSD	14.98	.6695	.10782	1.557	.38657	.56052
#1	-.0211	.2889	.52247	5.169	.49952	.49777
#2	-.0261	.2862	.52167	5.284	.49679	.50173
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	197.90
Stddev	1.18
%RSD	.59767
#1	198.74
#2	197.07

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 12:37 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	.0153	.0083	-.00017	.00001	.0001
Stddev	.0020	.0096	.0030	.00059	.00002	.0008
%RSD	35.30	62.88	36.71	349.52	196.52	938.1
#1	.0070	.0220	.0061	.00025	.00002	-.0005
#2	.0042	.0085	.0104	-.00059	.00000	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0069	-.0006	.0005	.0015	-.0020
Stddev	.0004	.0000	.0001	.0004	.0009	.0009
%RSD	468.3	.0003	10.03	72.78	59.47	43.72
#1	.0004	-.0069	-.0007	.0003	.0008	-.0014
#2	-.0002	-.0069	-.0006	.0008	.0021	-.0027
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.00043	-.00022	.0040	.0002	.0018
Stddev	.0071	.00001	.00004	.0028	.0004	.0032
%RSD	4705.	2.5041	17.246	71.49	183.6	174.4
#1	.0049	-.00043	-.00019	.0060	-.0001	-.0004
#2	-.0052	-.00044	-.00025	.0020	.0005	.0041
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	-.0007	.0032	-.0007	-.0001	-.0008
Stddev	.0064	.0000	.0013	.0052	.0034	.0005
%RSD	123.8	.3143	39.73	780.2	4186.	67.31
#1	-.0097	-.0007	.0023	.0030	.0023	-.0012
#2	-.0006	-.0007	.0041	-.0043	-.0025	-.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/20/10 12:37

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0086	-.0018	.00103	.0042	-.00045	.00000
Stddev	.0003	.0005	.00094	.0081	.00044	.00003
%RSD	4.051	25.19	91.641	191.2	98.946	549.85
#1	-.0083	-.0022	.00036	-.0015	-.00013	-.00001
#2	-.0088	-.0015	.00170	.0099	-.00076	.00002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	195.17
Stddev	.67
%RSD	.34427
#1	195.65
#2	194.70

Service Request # K1006615 (HCl)_____
Calibration _____072810D_____
QC in calibration__072810D_____
QC Service Request K1006615_____
STARLIMS Batch # 210314_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Report Ag-109.

Primary Review by _____ Date 7/29/10
Secondary Review by _____ Date 7/29/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	4	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006285-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006285 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	K1006285-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006285-001 1/5D	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006285-001 1/25L	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006285-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006285-001 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006285-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006285-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006285-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006285-005 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006285-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006285-006 1/5D	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006285-006 1/25S	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006285-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006285-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006285-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006285-010 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006285-011 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006285-012 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006285-013 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006285-014 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006285-015 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	K1006285-016 1/5	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	K1006285-017 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006285-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006285-019 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006285-020 1/5	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
43	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
44	K105734-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	145
45	LCSW K1005734 1/25	Unknown	0 kg	0 ml	1.00	1	3	6	145
46	K1005734-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1005734-001 1/5D	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1005734-001 1/25S	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006453-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	LCSS K1006453 1/100	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006453-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006453-001 1/5D	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006453-001 1/25L	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
55	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
56	K1006453-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	4	3	145
57	K1006453-001 1/25S	Unknown	0 kg	0 ml	1.00	1	4	4	145
58	K1006453-002 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006453-003 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006453-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006453-005 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006453-006 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006453-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006453-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006453-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
67	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
68	K1006453-010 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
69	K1006453-011 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	K1006453-012 1/5	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	K1006453-013 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006453-014 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006453-015 1/5	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006804-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006804-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006804-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
78	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
79	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
80	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	5	11	145
81	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006615-006 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
90	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
91	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
92	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
93	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	2	2	1	145
97	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	2	2	2	145
98	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	2	2	3	145
99	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	2	2	4	145

100	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	2	2	5	145
101	CCV9	Unknown	0 kg	0 ml	1.00	0	1	7	145
102	CCB9	Unknown	0 kg	0 ml	1.00	0	1	8	145
103	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	2	2	6	145
104	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	2	2	7	145
105	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	2	2	8	145
106	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	2	2	9	145
107	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	2	2	10	145
108	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	2	2	11	145
109	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	2	2	12	145
110	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	2	3	1	145
111	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	2	3	2	145
112	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	2	3	3	145
113	CCV10	Unknown	0 kg	0 ml	1.00	0	1	7	145
114	CCB10	Unknown	0 kg	0 ml	1.00	0	1	8	145
115	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	2	3	4	145
116	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	2	3	5	145
117	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	2	3	6	145
118	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	2	3	7	145
119	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	2	3	8	145
120	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	2	3	9	145
121	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	2	3	10	145
122	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	2	3	11	145
123	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	2	3	12	145
124	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	2	4	1	145
125	CCV11	Unknown	0 kg	0 ml	1.00	0	1	7	145
126	CCB11	Unknown	0 kg	0 ml	1.00	0	1	8	145
127	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	2	4	2	145
128	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	2	4	3	145
129	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	2	4	4	145
130	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	2	4	5	145
131	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	2	4	6	145
132	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	2	4	7	145
133	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	2	4	8	145
134	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	2	4	9	145
135	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	2	4	10	145
136	CCV12	Unknown	0 kg	0 ml	1.00	0	1	7	145
137	CCB12	Unknown	0 kg	0 ml	1.00	0	1	8	145
138	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	2	4	11	145
139	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	2	4	12	145
140	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	2	5	1	145
141	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	2	5	2	145
142	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	2	5	3	145
143	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	2	5	4	145
144	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	2	5	5	145
145	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	2	5	6	145
146	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	5	7	145
147	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	5	8	145
148	CCV13	Unknown	0 kg	0 ml	1.00	0	1	7	145
149	CCB13	Unknown	0 kg	0 ml	1.00	0	1	8	145
150	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	5	9	145

151	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	5	10	145
152	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	5	11	145
153	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	5	12	145
154	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	3	1	1	145
155	K1006777-0131/5	Unknown	0 kg	0 ml	1.00	3	1	2	145
156	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	3	1	3	145
157	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	3	1	4	145
158	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	3	1	5	145
159	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	3	1	6	145
160	CCV14	Unknown	0 kg	0 ml	1.00	0	1	7	145
161	CCB14	Unknown	0 kg	0 ml	1.00	0	1	8	145

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	acqmet11	7:45:18 7/28/10

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 7:45:18 7/28/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-500.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

ExCell Mass Calibration

Date: 7/28/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1298	0.715	0.003	TRUE	
7.016	1558	0.715	-0.018	TRUE	Li-7
9.012	2058	0.766	0.012	TRUE	Be-9
23.985	5872	0.715	-0.007	TRUE	Mg-24
24.986	6132	0.715	-0.028	TRUE	Co-59
25.983	6379	0.715	-0.002	TRUE	In-115
26.982	6632	0.766	0.002	TRUE	Ce-140
43.956	10955	0.766	-0.012	TRUE	Pb-208
45.953	11456	0.715	0.017	TRUE	Bi-209
50.944	12730	0.715	0.003	TRUE	U-238
51.94	12983	0.766	0.005	TRUE	
53.949	13497	0.817	-0.005	TRUE	
55.935	13997	0.766	0.016	TRUE	
56.935	14257	0.766	-0.005	TRUE	
57.934	14511	0.817	-0.004	TRUE	
58.933	14764	0.766	0.001	TRUE	
69.925	17559	0.766	0.014	TRUE	
75.92	19080	0.766	0.036	TRUE	
112.904	28508	0.765	0.005	TRUE	
114.904	29015	0.765	0.014	TRUE	
118.903	30068	0.765	-0.119	FALSE	
139.905	35392	0.714	-0.008	TRUE	
141.908	35905	0.663	-0.018	TRUE	
155.923	39480	0.663	-0.027	TRUE	
205.974	52240	0.612	-0.006	TRUE	
206.976	52493	0.663	0.004	TRUE	
207.977	52753	0.663	-0.015	TRUE	
208.98	53007	0.612	-0.006	TRUE	
238.051	60417	0.611	0.029	TRUE	

Excluded In Calib | Excluded In Results | Peak Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)0.000	(P)24428.035	(P)6899.499	(P)45309.250	(P)50755.843	(P)21934.332
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)0.000	(P)24748.921	(P)6993.212	(P)45460.390	(P)51236.885	(P)22352.481
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)0.167	(P)24481.798	(P)6897.665	(P)45473.095	(P)51369.028	(P)22254.657
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)0.333	(P)24662.608	(P)7024.727	(P)45043.069	(P)51126.994	(P)22314.086
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)0.167	(P)24508.006	(P)6833.467	(P)44691.469	(P)51035.002	(P)22241.303
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)0.133	(P)24565.873	(P)6929.714	(P)45195.455	(P)51104.751	(P)22219.372
	SD of Stability 07-28-20		(P)0.139	(P)134.425	(P)77.883	(P)330.699	(P)231.516	(P)165.577
	%RSD of Stability 07		(P)104.583	(P)0.547	(P)1.124	(P)0.732	(P)0.453	(P)0.745

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)33849.903	(P)0.000	(P)37051.522
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)34233.310	(P)0.000	(P)37714.241
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)34624.094	(P)0.000	(P)38361.799
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)34381.159	(P)0.000	(P)38348.598
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)34239.158	(P)0.000	(P)38481.961
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)34265.525	(P)0.000	(P)37991.624
	SD of Stability 07-28-20		(P)281.255	(P)0.000	(P)605.315
	%RSD of Stability 07		(P)0.821	(P)0.000	(P)1.593

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/28/10 15:50					
Antimony	121	0.0054	-0.0035	-0.0019	**0**	0.0047	0
Antimony	123	0.0049	-0.0042	-0.0006	**0**	0.0046	0
Silver	107	0	-0.0002	0.0002	**0**	0.0002	0
Silver	109	-0.0001	0.0007	-0.0006	**0**	0.0007	0

Internal Standard Factors:

Rhodium	103	1.012	1.002	0.986	**1.012**	n/a	n/a
Indium	115	1.018	0.991	0.991	**1.018**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		Cal. Stn 7/28/10 15:52			Mean	SD	%RSD
Antimony	121	25.11	24.84	25.05	**25**	0.1438	0.5751
Antimony	123	25.36	24.35	25.29	**25**	0.5612	2.245
Silver	107	25.05	24.91	25.04	**25**	0.0796	0.3183
Silver	109	25.16	24.86	24.99	**25**	0.1502	0.6009

Internal Standard Factors:

Rhodium	103	0.974	0.966	0.971	**0.974**	n/a	n/a
Indium	115	0.973	0.948	0.96	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:54					
Antimony	121	24.6	24.61	24.59	**24.6**	0.0078	0.0318
Antimony	123	24.56	24.63	24.35	**24.51**	0.1477	0.6024
Silver	107	12.8	12.71	12.9	**12.8**	0.0943	0.7367
Silver	109	12.78	12.75	12.76	**12.76**	0.0176	0.1381

Internal Standard Factors:

Rhodium	103	0.997	0.986	0.98	**0.997**	n/a	n/a
Indium	115	0.977	0.968	0.969	**0.977**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:56					
Antimony	121	25.28	25.19	26.06	**25.51**	0.4765	1.868
Antimony	123	25.28	24.73	25.75	**25.25**	0.5124	2.029
Silver	107	24.97	24.75	24.77	**24.83**	0.1205	0.4852
Silver	109	24.83	25.17	24.99	**25**	0.1689	0.6755

Internal Standard Factors:							
Rhodium	103	0.987	0.987	0.988	**0.987** n/a		n/a
Indium	115	0.982	0.968	0.982	**0.982** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:03					
Antimony	121	-0.0014	-0.0061	-0.0135	**-0.007**	0.0061	86.42
Antimony	123	-0.0083	0.0029	-0.0114	**-0.0056**	0.0075	134.7
Silver	107	0.0145	0.0136	0.0112	**0.0131**	0.0017	12.99
Silver	109	0.0148	0.0107	0.0121	**0.0126**	0.0021	16.49

Internal Standard Factors:							
Rhodium	103	1.024	1.015	1.018	**1.024**	n/a	n/a
Indium	115	1.027	1.015	1.006	**1.027**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:06					
Antimony	121	-0.0125	-0.0127	-0.0096	**-0.0116**	0.0017	14.87
Antimony	123	-0.0071	-0.011	-0.0099	**-0.0093**	0.0021	22.04
Silver	107	0.0104	0.0097	0.0073	**0.0091**	0.0016	17.91
Silver	109	0.0083	0.0074	0.0079	**0.0079**	0.0005	5.836

Internal Standard Factors:							
Rhodium	103	1.026	1.016	1.01	**1.026**	n/a	n/a
Indium	115	1.021	1.004	1.013	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/28/10 16:08					
Antimony	121	0.0981	0.101	0.098	**0.099**	0.0017	1.755
Antimony	123	0.0884	0.0943	0.0797	**0.0875**	0.0073	8.401
Silver	107	0.0536	0.0513	0.0564	**0.0538**	0.0026	4.765
Silver	109	0.0523	0.0544	0.0561	**0.0542**	0.0019	3.445

Internal Standard Factors:

Rhodium	103	1.024	1.009	1.01	**1.024**	n/a	n/a
Indium	115	1.005	1.001	1.01	**1.005**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/28/10 16:10					
Antimony	121	0.0927	0.0885	0.0833	**0.0882**	0.0047	5.341
Antimony	123	0.0783	0.0901	0.0854	**0.0846**	0.0059	7.024
Silver	107	0.0884	0.0829	0.0832	**0.0848**	0.0031	3.617
Silver	109	0.0801	0.0759	0.0815	**0.0792**	0.0029	3.656

Internal Standard Factors:

Rhodium	103	1.262	1.256	1.245	**1.262**	n/a	n/a
Indium	115	1.185	1.194	1.191	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/28/10 16:12					
Antimony	121	0.1155	0.1123	0.115	**0.1143**	0.0017	1.492
Antimony	123	0.0993	0.1083	0.0959	**0.1011**	0.0064	6.338
Silver	107	12.48	12.61	12.55	**12.55**	0.0652	0.5197
Silver	109	12.42	12.53	12.5	**12.49**	0.0566	0.4532

Internal Standard Factors:

Rhodium	103	1.25	1.245	1.251	**1.25**	n/a	n/a
Indium	115	1.171	1.176	1.169	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:16					
Antimony	121	-0.0271	-0.0258	-0.0251	**-0.026**	0.001	4.036
Antimony	123	-0.0253	-0.02	-0.0277	**-0.0243**	0.0039	16.14
Silver	107	0.0265	0.0252	0.0259	**0.0259**	0.0006	2.415
Silver	109	0.0247	0.0252	0.0239	**0.0246**	0.0006	2.526

Internal Standard Factors:

Rhodium	103	1.128	1.106	1.114	**1.128**	n/a	n/a
Indium	115	1.099	1.099	1.086	**1.099**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		LCSS K1006285 1/100 7/28/10 16:19			Mean	SD	%RSD
Antimony	121	8.715	8.741	8.759	**8.738**	0.0224	0.2558
Antimony	123	8.697	8.546	8.567	**8.603**	0.0817	0.9499
Silver	107	7.833	7.852	7.831	**7.839**	0.0116	0.1478
Silver	109	7.89	7.797	7.869	**7.852**	0.0486	0.6184

Internal Standard Factors:

Rhodium	103	1.055	1.057	1.05	**1.055**	n/a	n/a
Indium	115	1.041	1.032	1.035	**1.041**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:25					
Antimony	121	1.097	1.107	1.119	**1.108**	0.0111	0.9973
Antimony	123	1.091	1.111	1.111	**1.104**	0.0112	1.012
Silver	107	0.3393	0.3354	0.3315	**0.3354**	0.0039	1.167
Silver	109	0.2519	0.2478	0.2402	**0.2467**	0.0059	2.408

Internal Standard Factors:

Rhodium	103	1.16	1.157	1.156	**1.16**	n/a	n/a
Indium	115	1.109	1.112	1.111	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 16:29					
Antimony	121	2.22	2.223	2.309	**2.251**	0.0505	2.244
Antimony	123	2.276	2.249	2.276	**2.267**	0.0154	0.6804
Silver	107	0.34	0.3332	0.3312	**0.3348**	0.0046	1.374
Silver	109	0.2387	0.24	0.2409	**0.2399**	0.0011	0.4543

Internal Standard Factors:							
Rhodium	103	1.178	1.172	1.168	**1.178** n/a		n/a
Indium	115	1.122	1.118	1.126	**1.122** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 16:32					
Antimony	121	0.1786	0.1822	0.1786	**0.1798**	0.0021	1.177
Antimony	123	0.1846	0.1756	0.19	**0.1834**	0.0073	3.979
Silver	107	0.0598	0.0642	0.0628	**0.0623**	0.0022	3.589
Silver	109	0.0435	0.0434	0.0478	**0.0449**	0.0025	5.62

Internal Standard Factors:

Rhodium	103	1.096	1.089	1.1	**1.096**	n/a	n/a
Indium	115	1.063	1.071	1.065	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 16:35					
Antimony	121	51.82	51.77	50.92	**51.5**	0.5044	0.9794
Antimony	123	51.09	51.53	50.04	**50.89**	0.7693	1.512
Silver	107	9.961	9.917	9.956	**9.945**	0.024	0.241
Silver	109	9.716	9.741	9.822	**9.76**	0.0555	0.5687

Internal Standard Factors:

Rhodium	103	1.164	1.144	1.159	**1.164**	n/a	n/a
Indium	115	1.089	1.092	1.083	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 16:39					
Antimony	121	20.86	20.57	20.88	**20.77**	0.1759	0.8469
Antimony	123	20.47	20.32	20.69	**20.49**	0.1901	0.9278
Silver	107	4.159	4.159	4.174	**4.164**	0.0087	0.2079
Silver	109	4.165	4.082	4.116	**4.121**	0.0414	1.004

Internal Standard Factors:

Rhodium	103	1.1	1.088	1.091	**1.1**	n/a	n/a
Indium	115	1.071	1.064	1.077	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-002 1/5 7/28/10 16:45			Mean	SD	%RSD
Antimony	121	1.065	1.05	1.053	**1.056**	0.0078	0.7423
Antimony	123	1.06	1.058	1.027	**1.048**	0.0186	1.77
Silver	107	0.3849	0.3649	0.3756	**0.3752**	0.01	2.67
Silver	109	0.0864	0.0832	0.0848	**0.0848**	0.0016	1.895

Internal Standard Factors:

Rhodium	103	1.202	1.194	1.192	**1.202**	n/a	n/a
Indium	115	1.14	1.137	1.136	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-003 1/5 7/28/10 16:48			Mean	SD	%RSD
Antimony	121	0.2803	0.2865	0.2729	**0.2799**	0.0068	2.44
Antimony	123	0.2591	0.289	0.269	**0.2723**	0.0152	5.591
Silver	107	0.1235	0.1213	0.1162	**0.1204**	0.0037	3.115
Silver	109	0.0652	0.0662	0.0652	**0.0655**	0.0006	0.8399

Internal Standard Factors:

Rhodium	103	1.191	1.18	1.197	**1.191**	n/a	n/a
Indium	115	1.134	1.136	1.13	**1.134**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-004 1/5 7/28/10 16:51			Mean	SD	%RSD
Antimony	121	1.586	1.595	1.632	**1.604**	0.0248	1.546
Antimony	123	1.533	1.545	1.537	**1.539**	0.0062	0.4019
Silver	107	0.3254	0.3286	0.3099	**0.3213**	0.01	3.122
Silver	109	0.0893	0.0874	0.0957	**0.0908**	0.0044	4.811

Internal Standard Factors:							
Rhodium	103	1.186	1.186	1.191	**1.186**	n/a	n/a
Indium	115	1.137	1.139	1.13	**1.137**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/28/10 16:54					
Antimony	121	25.79	25.48	25.19	**25.48**	0.2988	1.172
Antimony	123	25.65	25.42	25.21	**25.42**	0.2187	0.8601
Silver	107	24.58	25.01	25.05	**24.88**	0.2619	1.052
Silver	109	24.89	25.17	25.14	**25.07**	0.1542	0.6149

Internal Standard Factors:							
Rhodium	103	1.037	1.029	1.037	**1.037**	n/a	n/a
Indium	115	1.027	1.019	1.012	**1.027**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/28/10 17:00					
Antimony	121	-0.0344	-0.0349	-0.0317	**-0.0337**	0.0017	5.093
Antimony	123	-0.0326	-0.0394	-0.0347	**-0.0356**	0.0035	9.719
Silver	107	0.0101	0.0093	0.0084	**0.0092**	0.0009	9.583
Silver	109	0.0104	0.0095	0.0119	**0.0106**	0.0012	11.62

Internal Standard Factors:							
Rhodium	103	1.022	1.028	1.026	**1.022** n/a		n/a
Indium	115	1.033	1.018	1.017	**1.033** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-005 1/5 7/28/10 17:02			Mean	SD	%RSD
Antimony	121	0.139	0.1335	0.146	**0.1395**	0.0063	4.504
Antimony	123	0.149	0.1529	0.1543	**0.1521**	0.0028	1.827
Silver	107	0.0986	0.092	0.0881	**0.0929**	0.0053	5.73
Silver	109	0.0448	0.0476	0.0434	**0.0453**	0.0021	4.701

Internal Standard Factors:

Rhodium	103	1.188	1.198	1.186	**1.188**	n/a	n/a
Indium	115	1.141	1.112	1.131	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/5 7/28/10 17:05			Mean	SD	%RSD
Antimony	121	4.583	4.504	4.377	**4.488**	0.1037	2.31
Antimony	123	4.572	4.458	4.42	**4.484**	0.079	1.763
Silver	107	0.2809	0.277	0.2657	**0.2745**	0.0079	2.87
Silver	109	0.1218	0.116	0.117	**0.1183**	0.0031	2.602

Internal Standard Factors:

Rhodium	103	1.173	1.154	1.162	**1.173**	n/a	n/a
Indium	115	1.128	1.125	1.113	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/5D 7/28/10 17:08			Mean	SD	%RSD
Antimony	121	8.676	8.813	8.85	**8.779**	0.0918	1.045
Antimony	123	8.404	8.557	8.581	**8.514**	0.0958	1.125
Silver	107	0.2635	0.2607	0.2417	**0.2553**	0.0119	4.654
Silver	109	0.0993	0.0945	0.1029	**0.0989**	0.0042	4.254

Internal Standard Factors:

Rhodium	103	1.151	1.151	1.15	**1.151** n/a		n/a
Indium	115	1.102	1.103	1.11	**1.102** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/25S 7/28/10 17:12			Mean	SD	%RSD
Antimony	121	32.05	32.44	32.11	**32.2**	0.2113	0.6562
Antimony	123	31.48	32.34	31.59	**31.8**	0.4708	1.481
Silver	107	4.161	4.134	4.188	**4.161**	0.0269	0.6461
Silver	109	4.132	4.127	4.172	**4.144**	0.0245	0.5923

Internal Standard Factors:

Rhodium	103	1.094	1.073	1.075	**1.094**	n/a	n/a
Indium	115	1.065	1.07	1.061	**1.065**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-007 1/5 7/28/10 17:17			Mean	SD	%RSD
Antimony	121	13.04	13.19	13.03	**13.09**	0.0913	0.6974
Antimony	123	12.91	12.79	13.03	**12.91**	0.118	0.9139
Silver	107	0.198	0.1904	0.1899	**0.1928**	0.0046	2.366
Silver	109	0.1207	0.1125	0.1072	**0.1134**	0.0068	5.997

Internal Standard Factors:							
Rhodium	103	1.203	1.196	1.203	**1.203** n/a		n/a
Indium	115	1.152	1.15	1.161	**1.152** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-008 1/5 7/28/10 17:20			Mean	SD	%RSD
Antimony	121	0.1263	0.1032	0.1124	**0.114**	0.0116	10.22
Antimony	123	0.1127	0.113	0.1044	**0.11**	0.0049	4.475
Silver	107	0.106	0.105	0.0993	**0.1035**	0.0036	3.482
Silver	109	0.0407	0.0483	0.0391	**0.0427**	0.0049	11.54

Internal Standard Factors:							
Rhodium	103	1.238	1.205	1.215	**1.238**	n/a	n/a
Indium	115	1.151	1.161	1.157	**1.151**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:23					
Antimony	121	0.0877	0.0784	0.0873	**0.0845**	0.0052	6.205
Antimony	123	0.0973	0.1048	0.106	**0.1027**	0.0047	4.602
Silver	107	0.082	0.0836	0.0829	**0.0829**	0.0008	0.9431
Silver	109	0.038	0.0356	0.0361	**0.0366**	0.0013	3.451

Internal Standard Factors:

Rhodium	103	1.226	1.217	1.205	**1.226**	n/a	n/a
Indium	115	1.159	1.146	1.15	**1.159**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:26					
Antimony	121	0.0646	0.0629	0.0703	**0.0659**	0.0039	5.846
Antimony	123	0.0889	0.0761	0.073	**0.0793**	0.0084	10.62
Silver	107	0.128	0.1236	0.1135	**0.1217**	0.0074	6.115
Silver	109	0.0768	0.0767	0.0717	**0.0751**	0.0029	3.9

Internal Standard Factors:

Rhodium	103	1.205	1.202	1.198	**1.205**	n/a	n/a
Indium	115	1.15	1.15	1.159	**1.15**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:29					
Antimony	121	0.2351	0.2499	0.2314	**0.2388**	0.0098	4.115
Antimony	123	0.229	0.25	0.2268	**0.2353**	0.0128	5.444
Silver	107	0.1524	0.1626	0.1676	**0.1609**	0.0078	4.831
Silver	109	0.0778	0.0788	0.0845	**0.0804**	0.0036	4.496

Internal Standard Factors:							
Rhodium	103	1.237	1.224	1.233	**1.237**	n/a	n/a
Indium	115	1.167	1.176	1.165	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-012 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:32					
Antimony	121	0.717	0.7121	0.735	**0.7214**	0.0121	1.674
Antimony	123	0.707	0.6963	0.6516	**0.685**	0.0294	4.284
Silver	107	0.2411	0.2515	0.2422	**0.2449**	0.0057	2.342
Silver	109	0.035	0.0413	0.0389	**0.0384**	0.0032	8.304

Internal Standard Factors:

Rhodium	103	1.218	1.211	1.214	**1.218**	n/a	n/a
Indium	115	1.163	1.159	1.145	**1.163**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/28/10 17:35					
Antimony	121	25.83	25.48	26.02	**25.77**	0.2734	1.061
Antimony	123	25.3	25	25.83	**25.38**	0.4181	1.648
Silver	107	25.29	24.97	25.08	**25.11**	0.1644	0.6548
Silver	109	25.28	25.08	25.06	**25.14**	0.1218	0.4846

Internal Standard Factors:

Rhodium	103	1.062	1.055	1.047	**1.062**	n/a	n/a
Indium	115	1.062	1.038	1.037	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/28/10 17:41					
Antimony	121	-0.0357	-0.0362	-0.0338	**-0.0353**	0.0013	3.572
Antimony	123	-0.0312	-0.0369	-0.0408	**-0.0363**	0.0048	13.35
Silver	107	0.0088	0.0087	0.0079	**0.0084**	0.0005	5.837
Silver	109	0.0101	0.0088	0.0072	**0.0087**	0.0014	16.13

Internal Standard Factors:

Rhodium	103	1.053	1.044	1.04	**1.053** n/a		n/a
Indium	115	1.033	1.037	1.034	**1.033** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-013 1/5 7/28/10 17:43			Mean	SD	%RSD
Antimony	121	0.3565	0.357	0.3831	**0.3655**	0.0152	4.167
Antimony	123	0.3744	0.3734	0.3451	**0.3643**	0.0166	4.555
Silver	107	0.1647	0.1527	0.1511	**0.1562**	0.0074	4.749
Silver	109	0.0417	0.0418	0.0392	**0.0409**	0.0015	3.648

Internal Standard Factors:

Rhodium	103	1.169	1.178	1.168	**1.169**	n/a	n/a
Indium	115	1.133	1.129	1.133	**1.133**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-014 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:46					
Antimony	121	1.062	1.01	0.9777	**1.017**	0.0426	4.195
Antimony	123	1.031	1.002	0.9829	**1.005**	0.0243	2.416
Silver	107	0.454	0.5066	0.4807	**0.4804**	0.0263	5.467
Silver	109	0.037	0.0362	0.0343	**0.0359**	0.0014	3.842

Internal Standard Factors:							
Rhodium	103	1.181	1.181	1.187	**1.181** n/a		n/a
Indium	115	1.14	1.129	1.124	**1.14** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		**K1006285-015 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/28/10 17:50**					
Antimony	121	0.5675	0.5865	0.6019	**0.5853**	0.0172	2.944
Antimony	123	0.5897	0.5596	0.5632	**0.5708**	0.0165	2.882
Silver	107	0.5162	0.5277	0.5335	**0.5258**	0.0088	1.674
Silver	109	0.0341	0.034	0.0347	**0.0343**	0.0004	1.147

Internal Standard Factors:

Rhodium	103	1.159	1.171	1.162	**1.159**	n/a	n/a
Indium	115	1.116	1.106	1.112	**1.116**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-016 1/5 7/28/10 17:53			Mean	SD	%RSD
Antimony	121	0.9052	0.8857	0.8943	**0.8951**	0.0098	1.095
Antimony	123	0.8855	0.8969	0.8361	**0.8728**	0.0323	3.702
Silver	107	0.3826	0.3794	0.35	**0.3707**	0.018	4.841
Silver	109	0.0637	0.0623	0.0672	**0.0644**	0.0025	3.896

Internal Standard Factors:

Rhodium	103	1.196	1.17	1.187	**1.196**	n/a	n/a
Indium	115	1.126	1.134	1.113	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-017 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:56					
Antimony	121	0.7407	0.7663	0.759	**0.7553**	0.0132	1.746
Antimony	123	0.7242	0.7885	0.7628	**0.7585**	0.0324	4.27
Silver	107	0.2087	0.2313	0.2173	**0.2191**	0.0114	5.202
Silver	109	0.0196	0.0192	0.02	**0.0196**	0.0004	2.127

Internal Standard Factors:

Rhodium	103	1.16	1.16	1.154	**1.16**	n/a	n/a
Indium	115	1.097	1.116	1.12	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-018 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:59					
Antimony	121	0.9514	0.9345	0.9302	**0.9387**	0.0112	1.193
Antimony	123	0.9733	0.901	0.9251	**0.9331**	0.0368	3.946
Silver	107	0.3126	0.2952	0.3213	**0.3097**	0.0133	4.296
Silver	109	0.0348	0.034	0.0331	**0.034**	0.0008	2.462

Internal Standard Factors:

Rhodium	103	1.171	1.166	1.168	**1.171**	n/a	n/a
Indium	115	1.135	1.108	1.125	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-019 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:02					
Antimony	121	4.027	3.997	3.946	**3.99**	0.041	1.028
Antimony	123	4.016	3.93	3.923	**3.956**	0.0518	1.31
Silver	107	0.3871	0.3596	0.3523	**0.3664**	0.0184	5.01
Silver	109	0.0523	0.0569	0.0563	**0.0552**	0.0025	4.544

Internal Standard Factors:

Rhodium	103	1.25	1.24	1.245	**1.25**	n/a	n/a
Indium	115	1.187	1.17	1.176	**1.187**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-020 1/5 7/28/10 18:05			Mean	SD	%RSD
Antimony	121	1.361	1.362	1.412	**1.378**	0.0292	2.12
Antimony	123	1.349	1.377	1.343	**1.356**	0.0182	1.34
Silver	107	0.4161	0.386	0.4004	**0.4008**	0.015	3.751
Silver	109	0.0479	0.0413	0.0471	**0.0454**	0.0036	7.94

Internal Standard Factors:

Rhodium	103	1.246	1.225	1.236	**1.246**	n/a	n/a
Indium	115	1.167	1.173	1.155	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/28/10 18:08					
Antimony	121	25.62	25.24	25.63	**25.5**	0.2204	0.8645
Antimony	123	25.17	25.25	25.02	**25.15**	0.116	0.4612
Silver	107	24.95	24.84	25.17	**24.98**	0.1672	0.6694
Silver	109	24.61	24.98	25.1	**24.9**	0.2522	1.013

Internal Standard Factors:

Rhodium	103	1.082	1.066	1.072	**1.082**	n/a	n/a
Indium	115	1.054	1.053	1.039	**1.054**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/28/10 18:14					
Antimony	121	-0.0403	-0.0415	-0.0396	**-0.0405**	0.001	2.411
Antimony	123	-0.0319	-0.0429	-0.0475	**-0.0408**	0.0081	19.78
Silver	107	0.0087	0.009	0.0086	**0.0088**	0.0002	2.829
Silver	109	0.0087	0.0089	0.0094	**0.009**	0.0003	3.541

Internal Standard Factors:							
Rhodium	103	1.071	1.05	1.057	**1.071**	n/a	n/a
Indium	115	1.06	1.047	1.031	**1.06**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K105734-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:16					
Antimony	121	-0.0571	-0.05	-0.0574	**-0.0548**	0.0042	7.68
Antimony	123	-0.0543	-0.0589	-0.0548	**-0.056**	0.0025	4.508
Silver	107	0.0114	0.0099	0.0073	**0.0096**	0.002	21.4
Silver	109	0.0084	0.0078	0.0079	**0.008**	0.0004	4.377

Internal Standard Factors:

Rhodium	103	1.039	1.017	1.029	**1.039**	n/a	n/a
Indium	115	1.016	1.016	1.012	**1.016**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSW K1005734 1/25			Mean	SD	%RSD
TimeStamp		7/28/10 18:18					
Antimony	121	42.05	42.05	40.88	**41.66**	0.6731	1.616
Antimony	123	41.04	41.67	40.63	**41.11**	0.5235	1.273
Silver	107	4.004	4.04	4.039	**4.028**	0.0202	0.5017
Silver	109	3.933	4.043	4.057	**4.011**	0.0682	1.7

Internal Standard Factors:

Rhodium	103	0.987	0.99	0.997	**0.987**	n/a	n/a
Indium	115	0.989	0.996	0.977	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1005734-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:23					
Antimony	121	0.0549	0.0518	0.0693	**0.0586**	0.0094	15.96
Antimony	123	0.0601	0.0539	0.0591	**0.0577**	0.0033	5.699
Silver	107	0.0576	0.0564	0.0569	**0.057**	0.0006	1.091
Silver	109	0.0427	0.0418	0.0406	**0.0417**	0.0011	2.583

Internal Standard Factors:							
Rhodium	103	1.12	1.119	1.107	**1.12**	n/a	n/a
Indium	115	1.111	1.088	1.088	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1005734-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 18:26					
Antimony	121	0.0739	0.0719	0.0822	**0.076**	0.0054	7.161
Antimony	123	0.0654	0.0745	0.0905	**0.0768**	0.0127	16.5
Silver	107	0.0418	0.0493	0.0425	**0.0446**	0.0041	9.266
Silver	109	0.0332	0.0314	0.0331	**0.0326**	0.001	3.126

Internal Standard Factors:							
Rhodium	103	1.088	1.082	1.087	**1.088**	n/a	n/a
Indium	115	1.071	1.061	1.068	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1005734-001 1/25S 7/28/10 18:29			Mean	SD	%RSD
Antimony	121	39.37	38.13	39.21	**38.9**	0.677	1.74
Antimony	123	38.7	37.15	38.45	**38.1**	0.8349	2.191
Silver	107	4.064	3.937	4.049	**4.017**	0.0696	1.733
Silver	109	4.087	3.897	4.108	**4.031**	0.1164	2.888

Internal Standard Factors:							
Rhodium	103	1.048	1.02	1.045	**1.048** n/a		n/a
Indium	115	1.037	1.013	1.027	**1.037** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:33					
Antimony	121	0.0675	0.0502	0.0432	**0.0536**	0.0126	23.4
Antimony	123	0.053	0.0546	0.0444	**0.0507**	0.0055	10.87
Silver	107	0.0117	0.0102	0.011	**0.011**	0.0007	6.829
Silver	109	0.0127	0.0113	0.0084	**0.0108**	0.0022	20.4

Internal Standard Factors:

Rhodium	103	1.072	1.052	1.06	**1.072**	n/a	n/a
Indium	115	1.048	1.057	1.032	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006453 1/100			Mean	SD	%RSD
TimeStamp		7/28/10 18:36					
Antimony	121	8.672	8.82	8.626	**8.706**	0.1016	1.167
Antimony	123	8.629	8.635	8.393	**8.553**	0.138	1.613
Silver	107	7.713	7.743	7.692	**7.716**	0.0255	0.331
Silver	109	7.683	7.816	7.748	**7.749**	0.0661	0.8535

Internal Standard Factors:							
Rhodium	103	1.044	1.046	1.051	**1.044**	n/a	n/a
Indium	115	1.034	1.033	1.012	**1.034**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:41					
Antimony	121	0.6511	0.6318	0.6277	**0.6369**	0.0125	1.963
Antimony	123	0.6353	0.5939	0.6324	**0.6205**	0.0231	3.721
Silver	107	0.2921	0.3078	0.2834	**0.2944**	0.0124	4.197
Silver	109	0.171	0.1711	0.1653	**0.1691**	0.0034	1.985

Internal Standard Factors:							
Rhodium	103	1.139	1.13	1.138	**1.139**	n/a	n/a
Indium	115	1.105	1.088	1.094	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 18:44					
Antimony	121	0.5303	0.5203	0.5322	**0.5276**	0.0064	1.215
Antimony	123	0.5456	0.5309	0.5379	**0.5381**	0.0074	1.368
Silver	107	0.2506	0.2645	0.251	**0.2554**	0.0079	3.088
Silver	109	0.1317	0.1316	0.1281	**0.1305**	0.002	1.561
Internal Standard							
Factors:							
Rhodium	103	1.13	1.141	1.135	**1.13**	n/a	n/a
Indium	115	1.113	1.093	1.089	**1.113**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 18:47					
Antimony	121	0.0634	0.0652	0.0744	**0.0676**	0.0059	8.716
Antimony	123	0.058	0.0534	0.0657	**0.059**	0.0062	10.48
Silver	107	0.0503	0.0511	0.0516	**0.051**	0.0007	1.295
Silver	109	0.0287	0.0292	0.0322	**0.03**	0.0019	6.311

Internal Standard Factors:

Rhodium	103	1.095	1.091	1.09	**1.095**	n/a	n/a
Indium	115	1.062	1.06	1.074	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/28/10 18:51					
Antimony	121	25.45	25.65	26.13	**25.74**	0.3492	1.357
Antimony	123	25.21	25.19	25.66	**25.35**	0.2642	1.042
Silver	107	25.13	25.05	25.13	**25.1**	0.0443	0.1764
Silver	109	24.92	25.01	24.98	**24.97**	0.0434	0.1738

Internal Standard Factors:							
Rhodium	103	1.029	1.029	1.015	**1.029**	n/a	n/a
Indium	115	1.01	1.006	1.014	**1.01**	n/a	n/a

Instrument ID: X-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/28/10 18:57					
Antimony	121	-0.0259	-0.0236	-0.0231	**-0.0242**	0.0014	5.986
Antimony	123	-0.0292	-0.0265	-0.0275	**-0.0277**	0.0013	4.78
Silver	107	0.0113	0.0111	0.0114	**0.0113**	0.0002	1.605
Silver	109	0.0114	0.0095	0.0078	**0.0096**	0.0018	18.99

Internal Standard Factors:							
Rhodium	103	1.028	1.022	1.018	**1.028** n/a		n/a
Indium	115	1.013	1.014	1.004	**1.013** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 18:59					
Antimony	121	52.05	50.51	51.74	**51.44**	0.8128	1.58
Antimony	123	51.65	50.56	50.71	**50.97**	0.5931	1.164
Silver	107	10.12	10.01	10.09	**10.08**	0.0588	0.5832
Silver	109	9.951	9.795	9.89	**9.879**	0.0788	0.7973

Internal Standard Factors:							
Rhodium	103	1.094	1.09	1.092	**1.094** n/a		n/a
Indium	115	1.045	1.033	1.05	**1.045** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 19:03					
Antimony	121	21	21	20.92	**20.98**	0.0476	0.2271
Antimony	123	20.4	21	20.72	**20.71**	0.2998	1.448
Silver	107	4.244	4.179	4.177	**4.2**	0.0379	0.9023
Silver	109	4.234	4.128	4.221	**4.195**	0.0577	1.376

Internal Standard Factors:

Rhodium	103	1.083	1.07	1.065	**1.083**	n/a	n/a
Indium	115	1.054	1.053	1.046	**1.054**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:08					
Antimony	121	2.698	2.725	2.746	**2.723**	0.0241	0.8841
Antimony	123	2.699	2.692	2.64	**2.677**	0.0321	1.2
Silver	107	0.4406	0.4282	0.4381	**0.4356**	0.0065	1.501
Silver	109	0.3521	0.3476	0.3647	**0.3548**	0.0089	2.496

Internal Standard Factors:

Rhodium	103	1.134	1.129	1.134	**1.134**	n/a	n/a
Indium	115	1.066	1.074	1.072	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:11					
Antimony	121	2.044	1.986	1.998	**2.01**	0.0306	1.524
Antimony	123	2.063	1.959	1.98	**2**	0.0552	2.757
Silver	107	0.47	0.4767	0.4678	**0.4715**	0.0046	0.9792
Silver	109	0.3048	0.2945	0.2984	**0.2993**	0.0052	1.736

Internal Standard Factors:							
Rhodium	103	1.159	1.144	1.159	**1.159**	n/a	n/a
Indium	115	1.103	1.103	1.099	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-004 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:14					
Antimony	121	2.829	2.809	2.837	**2.825**	0.0147	0.5212
Antimony	123	2.774	2.674	2.845	**2.764**	0.0855	3.094
Silver	107	1.833	1.801	1.794	**1.809**	0.0205	1.131
Silver	109	1.685	1.677	1.689	**1.684**	0.0065	0.3886

Internal Standard Factors:

Rhodium	103	1.169	1.161	1.148	**1.169** n/a		n/a
Indium	115	1.092	1.068	1.1	**1.092** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-005 1/5 7/28/10 19:18			Mean	SD	%RSD
Antimony	121	0.115	0.0996	0.0928	**0.1025**	0.0114	11.13
Antimony	123	0.1111	0.122	0.1073	**0.1134**	0.0076	6.727
Silver	107	0.2964	0.2939	0.2741	**0.2881**	0.0122	4.248
Silver	109	0.0938	0.0895	0.084	**0.0891**	0.0049	5.519

Internal Standard Factors:

Rhodium	103	1.162	1.147	1.148	**1.162**	n/a	n/a
Indium	115	1.097	1.091	1.088	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-006 1/5 7/28/10 19:21			Mean	SD	%RSD
Antimony	121	0.4525	0.4536	0.4557	**0.4539**	0.0016	0.362
Antimony	123	0.4439	0.4577	0.442	**0.4479**	0.0085	1.906
Silver	107	0.2507	0.2339	0.2434	**0.2427**	0.0084	3.479
Silver	109	0.0849	0.0786	0.0801	**0.0812**	0.0033	4.112

Internal Standard Factors:

Rhodium	103	1.166	1.144	1.155	**1.166**	n/a	n/a
Indium	115	1.097	1.105	1.098	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:24					
Antimony	121	51.86	51.02	50.59	**51.16**	0.6434	1.258
Antimony	123	51.53	51.28	49.85	**50.89**	0.9091	1.787
Silver	107	0.2001	0.1846	0.195	**0.1932**	0.0079	4.097
Silver	109	0.1087	0.1083	0.1068	**0.1079**	0.001	0.8916

Internal Standard Factors:

Rhodium	103	1.187	1.182	1.181	**1.187**	n/a	n/a
Indium	115	1.096	1.093	1.072	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006453-008 1/5 7/28/10 19:27			Mean	SD	%RSD
Antimony	121	3.211	3.175	3.098	**3.161**	0.0576	1.821
Antimony	123	3.124	3.171	3.067	**3.12**	0.052	1.668
Silver	107	0.4981	0.5029	0.4943	**0.4984**	0.0043	0.869
Silver	109	0.3065	0.3051	0.2999	**0.3039**	0.0035	1.138

Internal Standard Factors:

Rhodium	103	1.211	1.176	1.192	**1.211**	n/a	n/a
Indium	115	1.126	1.123	1.107	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:31					
Antimony	121	6.295	6.296	6.053	**6.215**	0.14	2.252
Antimony	123	6.176	6.153	5.993	**6.108**	0.0995	1.63
Silver	107	0.6276	0.6318	0.6209	**0.6268**	0.0055	0.8768
Silver	109	0.4761	0.4599	0.464	**0.4667**	0.0084	1.799

Internal Standard Factors:

Rhodium	103	1.185	1.17	1.188	**1.185**	n/a	n/a
Indium	115	1.115	1.126	1.112	**1.115**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		7/28/10 19:34					
Antimony	121	25.52	25.4	25.52	**25.48**	0.0728	0.2856
Antimony	123	25.5	24.77	25.11	**25.13**	0.3641	1.449
Silver	107	24.89	25.12	24.8	**24.94**	0.1663	0.6667
Silver	109	24.88	25.17	24.9	**24.98**	0.1664	0.6659

Internal Standard Factors:

Rhodium	103	1.032	1.038	1.026	**1.032**	n/a	n/a
Indium	115	1.026	1.007	1.009	**1.026**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		7/28/10 19:40					
Antimony	121	-0.032	-0.0342	-0.0364	**-0.0342**	0.0022	6.41
Antimony	123	-0.0388	-0.0457	-0.045	**-0.0432**	0.0038	8.837
Silver	107	0.0138	0.0099	0.0103	**0.0113**	0.0021	18.68
Silver	109	0.0131	0.0125	0.0096	**0.0117**	0.0018	15.74

Internal Standard Factors:

Rhodium	103	1.013	1.008	1.005	**1.013**	n/a	n/a
Indium	115	1.015	1.002	0.996	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:42					
Antimony	121	0.4643	0.4904	0.499	**0.4845**	0.0181	3.729
Antimony	123	0.4398	0.4419	0.4849	**0.4555**	0.0255	5.589
Silver	107	0.1764	0.1897	0.183	**0.183**	0.0066	3.615
Silver	109	0.0775	0.0766	0.0795	**0.0778**	0.0015	1.929

Internal Standard Factors:							
Rhodium	103	1.1	1.115	1.127	**1.1**	n/a	n/a
Indium	115	1.05	1.082	1.088	**1.05**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:45					
Antimony	121	13.5	13.45	13.38	**13.44**	0.0604	0.449
Antimony	123	13.58	13.06	13.39	**13.34**	0.2628	1.97
Silver	107	0.4706	0.4678	0.4682	**0.4689**	0.0015	0.3175
Silver	109	0.3588	0.3766	0.3725	**0.3693**	0.0093	2.531

Internal Standard Factors:

Rhodium	103	1.139	1.154	1.147	**1.139**	n/a	n/a
Indium	115	1.029	1.01	1.026	**1.029**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: pg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-012 1/5 7/28/10 19:48			Mean	SD	%RSD
Antimony	121	0.5581	0.5704	0.5808	**0.5698**	0.0114	1.995
Antimony	123	0.5592	0.5638	0.5558	**0.5596**	0.004	0.7203
Silver	107	0.309	0.293	0.2971	**0.2997**	0.0083	2.771
Silver	109	0.193	0.1963	0.1972	**0.1955**	0.0022	1.123

Internal Standard Factors:							
Rhodium	103	1.168	1.167	1.16	**1.168**	n/a	n/a
Indium	115	1.11	1.098	1.11	**1.11**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-013 1/5 7/28/10 19:52			Mean	SD	%RSD
Antimony	121	0.6264	0.6336	0.6075	**0.6225**	0.0135	2.165
Antimony	123	0.6332	0.5911	0.6074	**0.6106**	0.0212	3.476
Silver	107	0.3977	0.3886	0.3869	**0.3911**	0.0058	1.493
Silver	109	0.2298	0.2353	0.2337	**0.2329**	0.0028	1.205

Internal Standard Factors:

Rhodium	103	1.165	1.174	1.17	**1.165**	n/a	n/a
Indium	115	1.123	1.11	1.11	**1.123**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-014 1/5 7/28/10 19:55			Mean	SD	%RSD
Antimony	121	0.1451	0.1263	0.1299	**0.1338**	0.01	7.464
Antimony	123	0.1293	0.1329	0.1236	**0.1286**	0.0047	3.64
Silver	107	0.1231	0.1208	0.1143	**0.1194**	0.0045	3.805
Silver	109	0.037	0.0367	0.0352	**0.0363**	0.001	2.654

Internal Standard Factors:							
Rhodium	103	1.156	1.14	1.154	**1.156**	n/a	n/a
Indium	115	1.108	1.105	1.101	**1.108**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:58					
Antimony	121	0.8102	0.8245	0.8203	**0.8183**	0.0073	0.896
Antimony	123	0.818	0.7715	0.785	**0.7915**	0.0239	3.022
Silver	107	0.2763	0.2598	0.2722	**0.2694**	0.0086	3.179
Silver	109	0.0992	0.0939	0.0982	**0.0971**	0.0028	2.894

Internal Standard							
Factors:							
Rhodium	103	1.174	1.145	1.149	**1.174**	n/a	n/a
Indium	115	1.103	1.107	1.092	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:01					
Antimony	121	0.0088	0.0074	0.0199	**0.012**	0.0068	56.59
Antimony	123	0.0175	0.0085	0.0157	**0.0139**	0.0047	34.16
Silver	107	0.1462	0.1469	0.1418	**0.145**	0.0028	1.937
Silver	109	0.0675	0.0677	0.0674	**0.0675**	0.0002	0.2383

Internal Standard Factors:							
Rhodium	103	1.26	1.255	1.25	**1.26** n/a		n/a
Indium	115	1.205	1.192	1.18	**1.205** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:04					
Antimony	121	0.2534	0.2525	0.2322	**0.246**	0.012	4.869
Antimony	123	0.2602	0.2692	0.2456	**0.2584**	0.0119	4.607
Silver	107	0.2558	0.2438	0.2523	**0.2507**	0.0062	2.46
Silver	109	0.1845	0.181	0.1898	**0.1851**	0.0044	2.383

Internal Standard Factor :							
Rhodium	103	1.249	1.219	1.232	**1.249** n/a		n/a
Indium	115	1.178	1.187	1.166	**1.178** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:07					
Antimony	121	0.032	0.025	0.0319	**0.0296**	0.0041	13.68
Antimony	123	0.0348	0.032	0.0341	**0.0336**	0.0015	4.423
Silver	107	0.1921	0.1831	0.1884	**0.1879**	0.0045	2.405
Silver	109	0.1197	0.1226	0.1191	**0.1205**	0.0019	1.563

Internal Standard							
Factor:							
Rhodium	103	1.234	1.217	1.213	**1.234**	n/a	n/a
Indium	115	1.156	1.156	1.159	**1.156**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV7			Mean	SD	%RSD
TimeStamp		7/28/10 20:10					
Antimony	121	25.52	25.59	25.96	**25.69**	0.2398	0.9333
Antimony	123	25.72	25.46	25.46	**25.55**	0.1491	0.5836
Silver	107	24.97	25	25	**24.99**	0.0189	0.0758
Silver	109	24.99	25.12	24.85	**24.99**	0.134	0.5365

Internal Standard							
Factor							
Rhodium	103	1.093	1.095	1.09	**1.093**	n/a	n/a
Indium	115	1.073	1.066	1.058	**1.073**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB7			Mean	SD	%RSD
TimeStamp		7/28/10 20:16					
Antimony	121	-0.0395	-0.0453	-0.0403	**-0.0417**	0.0032	7.571
Antimony	123	-0.0425	-0.0391	-0.0418	**-0.0411**	0.0018	4.427
Silver	107	0.0137	0.0132	0.0142	**0.0137**	0.0005	3.705
Silver	109	0.0132	0.0122	0.0111	**0.0121**	0.001	8.53

Internal Standard							
Factor:							
Rhodium	103	1.099	1.095	1.09	**1.099**	n/a	n/a
Indium	115	1.073	1.067	1.065	**1.073**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:18					
Antimony	121	-0.054	-0.057	-0.0538	**-0.0549**	0.0018	3.229
Antimony	123	-0.0545	-0.0563	-0.0559	**-0.0556**	0.001	1.71
Silver	107	0.0094	0.0081	0.0067	**0.0081**	0.0014	17.13
Silver	109	0.009	0.0072	0.0043	**0.0069**	0.0024	34.77

Internal Standard							
Factors:							
Rhenium	103	1.088	1.066	1.074	**1.088**	n/a	n/a
Indium	115	1.063	1.048	1.044	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/28/10 20:20					
Antimony	121	9.607	9.595	9.622	**9.608**	0.0132	0.1378
Antimony	123	9.469	9.461	9.479	**9.47**	0.0092	0.0972
Silver	107	8.386	8.104	8.259	**8.25**	0.1413	1.713
Silver	109	8.389	8.191	8.235	**8.272**	0.1039	1.257

Internal Standard							
Factor:							
Rhodium	103	1.038	1.028	1.02	**1.038** n/a		n/a
Indium	115	1.01	0.987	1.004	**1.01** n/a		n/a

Instrument ID: K-ICP-MS-02
Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:27					
Antimony	121	0.1454	0.1532	0.1486	**0.1491**	0.0039	2.599
Antimony	123	0.1656	0.1669	0.141	**0.1578**	0.0146	9.261
Silver	107	0.1825	0.186	0.1765	**0.1817**	0.0048	2.659
Silver	109	0.0906	0.087	0.0819	**0.0865**	0.0044	5.091
Internal Standard							
Factor:							
Rhodium	103	1.154	1.137	1.152	**1.154** n/a		n/a
Indium	115	1.098	1.101	1.089	**1.098** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 20:30					
Antimony	121	0.1617	0.1494	0.1598	**0.157**	0.0066	4.205
Antimony	123	0.152	0.1595	0.1601	**0.1572**	0.0045	2.881
Silver	107	0.1714	0.1671	0.1736	**0.1707**	0.0033	1.955
Silver	109	0.0652	0.0701	0.0678	**0.0677**	0.0024	3.59

Internal Standard							
Factor:							
Rhodium	103	1.163	1.167	1.159	**1.163**	n/a	n/a
Indium	115	1.128	1.107	1.114	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 20:33					
Antimony	121	-0.0295	-0.0331	-0.0257	**-0.0294**	0.0037	12.61
Antimony	123	-0.0283	-0.0325	-0.0328	**-0.0312**	0.0025	8.104
Silver	107	0.0253	0.0291	0.0299	**0.0281**	0.0025	8.844
Silver	109	0.012	0.0131	0.0132	**0.0128**	0.0007	5.31

Internal Standard							
Factor:							
Rhodium	103	1.101	1.11	1.114	**1.101**	n/a	n/a
Indium	115	1.089	1.072	1.077	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-006 1/5 +10/50A 7/28/10 20:36			Mean	SD	%RSD
Antimony	121	51.57	51.24	51.82	**51.54**	0.2882	0.5591
Antimony	123	51.43	50.41	50.26	**50.7**	0.6369	1.256
Silver	107	9.857	9.942	9.894	**9.897**	0.0427	0.4318
Silver	109	9.663	9.842	9.75	**9.752**	0.0897	0.9195

Internal Standard Factors:							
Rhodium	103	1.131	1.145	1.145	**1.131**	n/a	n/a
Indium	115	1.075	1.065	1.063	**1.075**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 20:39					
Antimony	121	21.14	21.48	21.5	**21.37**	0.2005	0.9383
Antimony	123	21.21	20.93	20.86	**21**	0.1886	0.8979
Silver	107	4.038	4.154	4.094	**4.096**	0.0582	1.422
Silver	109	3.996	4.099	4.115	**4.07**	0.0646	1.588

Internal Standard							
Factor:							
Rhodium	103	1.117	1.11	1.119	**1.117** n/a		n/a
Indium	115	1.075	1.08	1.078	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:44					
Antimony	121	0.7826	0.7803	0.7377	**0.7669**	0.0253	3.298
Antimony	123	0.7709	0.7817	0.7607	**0.7711**	0.0105	1.36
Silver	107	0.3584	0.3395	0.3431	**0.347**	0.0101	2.903
Silver	109	0.248	0.2273	0.226	**0.2338**	0.0124	5.287

Internal Standard
Factor:

Rhodium	103	1.173	1.153	1.153	**1.173** n/a		n/a
Indium	115	1.107	1.101	1.094	**1.107** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:48					
Antimony	121	0.2075	0.219	0.2136	**0.2134**	0.0058	2.705
Antimony	123	0.2137	0.2133	0.2179	**0.215**	0.0026	1.191
Silver	107	0.2167	0.2197	0.2155	**0.2173**	0.0022	1.001
Silver	109	0.1089	0.1061	0.1071	**0.1074**	0.0014	1.324

Internal Standard							
Factor:							
Rhodium	103	1.166	1.17	1.166	**1.166**	n/a	n/a
Indium	115	1.106	1.101	1.109	**1.106**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:51					
Antimony	121	0.1622	0.1721	0.1557	**0.1633**	0.0082	5.049
Antimony	123	0.1827	0.148	0.1473	**0.1593**	0.0203	12.71
Silver	107	0.2114	0.1983	0.2002	**0.2033**	0.0071	3.474
Silver	109	0.0594	0.0626	0.0604	**0.0608**	0.0017	2.771

Internal Standard							
Factor:							
Rhodium	103	1.18	1.174	1.178	**1.18**	n/a	n/a
Indium	115	1.14	1.115	1.116	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV8			Mean	SD	%RSD
TimeStamp		7/28/10 20:54					
Antimony	121	25.55	25.86	25.64	**25.68**	0.1588	0.6185
Antimony	123	25.3	25.92	25.36	**25.53**	0.3446	1.35
Silver	107	24.68	24.8	25.14	**24.87**	0.2399	0.9644
Silver	109	24.76	24.73	25.02	**24.84**	0.1625	0.6542

Internal Standard							
Factor							
Rhodium	103	1.051	1.031	1.029	**1.051**	n/a	n/a
Indium	115	1.011	1.013	1.01	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB8			Mean	SD	%RSD
TimeStamp		7/28/10 21:00					
Antimony	121	-0.0435	-0.0411	-0.0421	**-0.0423**	0.0012	2.864
Antimony	123	-0.0416	-0.0453	-0.0459	**-0.0443**	0.0023	5.287
Silver	107	0.014	0.0132	0.0131	**0.0134**	0.0005	3.677
Silver	109	0.0148	0.0125	0.0144	**0.0139**	0.0012	8.96

Internal Standard
Factor:

Rhodium	103	1.05	1.034	1.024	**1.05**	n/a	n/a
Indium	115	1.026	1.013	1.017	**1.026**	n/a	n/a

Instrument ID: X-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-004 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:02					
Antimony	121	0.7282	0.7291	0.737	**0.7314**	0.0048	0.6628
Antimony	123	0.7119	0.7536	0.727	**0.7308**	0.0211	2.888
Silver	107	0.2744	0.2777	0.2694	**0.2738**	0.0042	1.536
Silver	109	0.1829	0.176	0.1722	**0.177**	0.0054	3.066

Internal Standard							
Factor:							
Rhodium	103	1.121	1.116	1.111	**1.121** n/a		n/a
Indium	115	1.075	1.069	1.075	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:05					
Antimony	121	0.2534	0.2584	0.2549	**0.2556**	0.0025	0.9952
Antimony	123	0.2492	0.2438	0.2452	**0.2461**	0.0028	1.149
Silver	107	0.2681	0.2552	0.2594	**0.2609**	0.0066	2.527
Silver	109	0.0696	0.0749	0.0782	**0.0742**	0.0043	5.813

Internal Standard
Factor:

Rhodium	103	1.155	1.16	1.152	**1.155**	n/a	n/a
Indium	115	1.108	1.101	1.095	**1.108**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:09					
Antimony	121	0.6036	0.5814	0.5765	**0.5872**	0.0145	2.462
Antimony	123	0.5799	0.5582	0.5576	**0.5653**	0.0127	2.248
Silver	107	0.2573	0.2691	0.2684	**0.265**	0.0067	2.51
Silver	109	0.1351	0.1512	0.1442	**0.1435**	0.0081	5.639

Internal Standard
Factor:

Rhodium	103	1.138	1.146	1.146	**1.138**	n/a	n/a
Indium	115	1.095	1.08	1.09	**1.095**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-008 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:12					
Antimony	121	0.2453	0.2365	0.2344	**0.2387**	0.0058	2.433
Antimony	123	0.2218	0.2244	0.2261	**0.2241**	0.0022	0.9601
Silver	107	0.1792	0.1667	0.1602	**0.1687**	0.0096	5.715
Silver	109	0.0857	0.088	0.0877	**0.0871**	0.0013	1.441

Internal Standard							
Factor:							
Rhodium	103	1.141	1.142	1.135	**1.141** n/a		n/a
Indium	115	1.09	1.075	1.081	**1.09** n/a		n/a

I ument ID: K-ICP-MS-02
E ment: 07-28-10D
U : pg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-009 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:15					
Antimony	121	0.3505	0.338	0.3422	**0.3436**	0.0064	1.853
Antimony	123	0.34	0.3688	0.3171	**0.342**	0.0259	7.571
Silver	107	0.2693	0.2716	0.2614	**0.2675**	0.0054	2.001
Silver	109	0.1658	0.166	0.1714	**0.1677**	0.0032	1.907

Internal Standard
Fa :

Rhodium	103	1.215	1.199	1.2	**1.215** n/a		n/a
Indium	115	1.135	1.145	1.126	**1.135** n/a		n/a

ment ID: K-ICP-MS-02
iment: 07-28-10D
: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-001 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:18					
Antimony	121	0.9161	0.9397	0.9415	**0.9324**	0.0142	1.523
Antimony	123	0.912	0.9326	0.8968	**0.9138**	0.0179	1.964
Silver	107	0.3393	0.3326	0.3597	**0.3438**	0.0141	4.097
Silver	109	0.2174	0.2162	0.2269	**0.2201**	0.0059	2.667

Internal Standard							
Factor:							
Rhodium	103	1.154	1.145	1.15	**1.154** n/a		n/a
Indium	115	1.09	1.093	1.09	**1.09** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:21					
Antimony	121	0.2132	0.2321	0.2279	**0.2244**	0.0099	4.414
Antimony	123	0.2467	0.2274	0.2234	**0.2325**	0.0125	5.363
Silver	107	0.3089	0.308	0.3035	**0.3068**	0.0029	0.9423
Silver	109	0.1226	0.115	0.1168	**0.1181**	0.004	3.367

Internal Standard
Factor:

Rhodium	103	1.159	1.162	1.142	**1.159**	n/a	n/a
Indium	115	1.112	1.102	1.1	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-003 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:24					
Antimony	121	0.188	0.1821	0.1824	**0.1842**	0.0034	1.819
Antimony	123	0.1867	0.1777	0.1862	**0.1835**	0.0051	2.759
Silver	107	0.335	0.3172	0.3214	**0.3246**	0.0093	2.876
Silver	109	0.1197	0.1248	0.122	**0.1222**	0.0026	2.1

Internal Standard							
Rhodium	103	1.17	1.175	1.171	**1.17**	n/a	n/a
Indium	115	1.121	1.106	1.099	**1.121**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:27					
Antimony	121	1.136	1.125	1.114	**1.125**	0.0107	0.9534
Antimony	123	1.103	1.117	1.131	**1.117**	0.0138	1.234
Silver	107	0.4152	0.4121	0.4	**0.4091**	0.008	1.965
Silver	109	0.295	0.2785	0.2825	**0.2853**	0.0086	3.016

Internal Standard
Factor:

Rhodium	103	1.163	1.158	1.142	**1.163**	n/a	n/a
Indium	115	1.098	1.081	1.079	**1.098**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: pg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-006 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:31					
Antimony	121	0.3177	0.3059	0.2932	**0.3056**	0.0122	4.001
Antimony	123	0.3106	0.2919	0.3055	**0.3027**	0.0097	3.195
Silver	107	0.2768	0.2588	0.2707	**0.2688**	0.0091	3.403
Silver	109	0.1208	0.1193	0.1179	**0.1193**	0.0015	1.223

Internal Standard
Factor:

Rhodium	103	1.16	1.148	1.163	**1.16**	n/a	n/a
Indium	115	1.109	1.099	1.084	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV9			Mean	SD	%RSD
Time Stamp		7/28/10 21:34					
Antimony	121	25.88	26.25	25.56	**25.9**	0.3454	1.333
Antimony	123	25.39	25.63	25.56	**25.53**	0.125	0.4898
Silver	107	24.87	24.99	24.96	**24.94**	0.0615	0.2467
Silver	109	24.85	25.07	25.06	**24.99**	0.1221	0.4887

Internal Standard
Factor:

Rhodium	103	1.054	1.046	1.032	**1.054**	n/a	n/a
Indium	115	1.03	1.022	1.019	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB9			Mean	SD	%RSD
Time Stamp		7/28/10 21:39					
Antimony	121	-0.0537	-0.0534	-0.0539	**-0.0536**	0.0002	0.4556
Antimony	123	-0.0527	-0.0544	-0.0545	**-0.0538**	0.001	1.809
Silver	107	0.0064	0.0068	0.0036	**0.0056**	0.0017	30.66
Silver	109	0.0062	0.0048	0.0053	**0.0054**	0.0007	12.73

Internal Standard
Element

Rhodium	103	1.063	1.05	1.042	**1.063**	n/a	n/a
Indium	115	1.048	1.022	1.009	**1.048**	n/a	n/a

Service Request # K1006615 (HNO3)_____
Calibration _____072710D_____
QC in calibration__072710D_____
QC Service Request K1006615_____
STARLIMS Batch # 210137_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments:

Primary Review by _____ Date 7/27/10
Secondary Review by JDS Date 7/28/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Blk	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	7	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	LCSW K1006615 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006615-006 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	LCSW K1006676 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	K1006676-018 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	3	5	145
43	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	1	3	6	145
44	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
45	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
46	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	3	145
55	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	1	4	4	145
56	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
57	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
58	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
67	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
68	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
69	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	LCSW K1006777 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006777-005 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
78	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	11	145
79	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
80	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
81	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	K1006777-013 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
90	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
91	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
92	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
93	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	CCV9	Unknown	0 kg	0 ml	1.00	0	1	2	145
97	CCB9	Unknown	0 kg	0 ml	1.00	0	1	1	145

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80

ExCell Mass Calibration Date: 7/27/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1297	0.715	-0.001	TRUE	
7.016	1550	0.766	0.005	TRUE	Li-7
9.012	2051	0.715	0.032	TRUE	Be-9
23.985	5871	0.715	-0.012	TRUE	Mg-24
24.986	6131	0.715	-0.033	TRUE	Co-59
25.983	6378	0.715	-0.007	TRUE	In-115
26.982	6638	0.715	-0.03	TRUE	Ce-140
43.956	10953	0.766	-0.013	TRUE	Pb-208
45.953	11460	0.766	-0.008	TRUE	Bi-209
51.94	12981	0.766	0.004	TRUE	U-238
53.949	13488	0.766	0.02	TRUE	
55.935	13950	0.409	0.191	FALSE	
56.935	14255	0.766	-0.007	TRUE	
57.934	14502	0.766	0.022	TRUE	
58.933	14762	0.766	-0.001	TRUE	
59.931	15009	0.766	0.027	TRUE	
65.926	16537	0.817	0.019	TRUE	
69.925	17557	0.766	0.012	TRUE	
75.92	19091	0.766	-0.018	TRUE	
112.904	28504	0.765	0.006	TRUE	
114.904	29011	0.765	0.015	TRUE	
118.903	30064	0.765	-0.119	FALSE	
139.905	35388	0.714	-0.011	TRUE	
141.908	35901	0.765	-0.021	TRUE	
155.923	39470	0.714	-0.008	TRUE	
205.974	52229	0.663	0.007	TRUE	
206.976	52489	0.663	-0.01	TRUE	
207.977	52743	0.713	-0.005	TRUE	
208.98	52996	0.663	0.007	TRUE	
238.051	60413	0.611	0.009	TRUE	

Excluded In Calib | Excluded In Results | Peak Fun Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	5Bkg	7Li	9Be	59Co	115In	208Pb
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)0.833	(P)39327.559	(P)9811.035	(P)67039.274	(P)76502.298	(P)33178.985
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)0.167	(P)39103.111	(P)9514.667	(P)66322.439	(P)76624.967	(P)33653.428
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)0.667	(P)38334.197	(P)9542.019	(P)65835.204	(P)76336.600	(P)33757.674
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)0.500	(P)37799.945	(P)9229.314	(P)65155.255	(P)76773.425	(P)34351.085
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)0.167	(P)38073.342	(P)9374.242	(P)64549.011	(P)76572.176	(P)33980.700
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)0.467	(P)38527.631	(P)9494.255	(P)65780.237	(P)76561.893	(P)33784.374
	SD of Stability 07-27-20		(P)0.298	(P)660.376	(P)216.590	(P)973.229	(P)160.576	(P)431.295
	%RSD of Stability 07		(P)63.888	(P)1.714	(P)2.281	(P)1.480	(P)0.210	(P)1.277

Run	Label	TimeStamp	209Bi	220Bkg	238U
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)51754.918	(P)0.000	(P)56579.869
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)51684.833	(P)0.167	(P)57396.617
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)52516.523	(P)0.167	(P)58113.671
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)52575.914	(P)0.167	(P)58425.955
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)52335.358	(P)0.333	(P)58743.726
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)52173.509	(P)0.167	(P)57851.968
	SD of Stability 07-27-20		(P)424.207	(P)0.118	(P)868.729
	%RSD of Stability 07		(P)0.813	(P)70.711	(P)1.502

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:16					
Arsenic	75	0.0043	0.0083	-0.0126	**0**	0.0111	0
Selenium	77	-0.0264	-0.0253	0.0517	**0**	0.0447	0
Selenium	78	-0.0267	-0.0503	0.077	**0**	0.0677	0
Selenium	82	-0.0399	0.0576	-0.0177	**0**	0.0511	0
Thallium	203	-0.0003	-0.0036	0.0038	**0**	0.0037	0
Thallium	205	-0.0003	-0.0011	0.0014	**0**	0.0013	0
Uranium	238	-0.0021	-0.0015	0.0036	**0**	0.0031	0

Internal Standard Factors:

Rhodium	103	1.016	0.992	0.992	**1.016**	n/a	n/a
Lutetium	175	1.017	0.99	0.994	**1.017**	n/a	n/a
Gold	197	1.011	1.007	0.982	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:26					
Arsenic	75	24.94	25.17	24.89	**25**	0.1484	0.5935
Selenium	77	24.6	25	25.39	**25**	0.3967	1.587
Selenium	78	24.9	25.09	25.02	**25**	0.0968	0.387
Selenium	82	25.34	25.15	24.51	**25**	0.4382	1.753
Thallium	203	24.81	24.75	25.45	**25**	0.3889	1.556
Thallium	205	24.79	24.84	25.37	**25**	0.3243	1.297
Uranium	238	25.09	24.67	25.24	**25**	0.2963	1.185

Internal Standard Factors:

Rhodium	103	0.966	0.964	0.957	**0.966**	n/a	n/a
Lutetium	175	0.976	0.963	0.972	**0.976**	n/a	n/a
Gold	197	0.973	0.97	0.968	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:28					
Arsenic	75	24.32	23.95	24.32	**24.2**	0.2139	0.884
Selenium	77	24.77	24.51	24.46	**24.58**	0.165	0.6714
Selenium	78	24.51	24.14	24.6	**24.41**	0.2432	0.9963
Selenium	82	24.21	24.21	24.55	**24.32**	0.194	0.7977
Thallium	203	25.82	25.7	25.53	**25.68**	0.1463	0.5695
Thallium	205	25.95	25.99	25.47	**25.8**	0.29	1.124
Uranium	238	24.27	24.17	24.28	**24.24**	0.0611	0.2519

Internal Standard Factors:							
Rhodium	103	0.995	0.972	0.981	**0.995**	n/a	n/a
Lutetium	175	0.986	0.981	0.981	**0.986**	n/a	n/a
Gold	197	0.964	0.976	0.969	**0.964**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		**CCV1**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 17:31**					
Arsenic	75	25.14	25.06	24.96	**25.06**	0.0902	0.3599
Selenium	77	25.34	25.44	25.59	**25.46**	0.1279	0.5023
Selenium	78	25.76	25.06	25.15	**25.32**	0.38	1.501
Selenium	82	25.62	25.42	25.07	**25.37**	0.2761	1.088
Thallium	203	24.37	24.86	26	**25.08**	0.8399	3.349
Thallium	205	24.45	24.67	26.12	**25.08**	0.9071	3.617
Uranium	238	25.75	24.63	25.03	**25.14**	0.5679	2.259

Internal Standard Factors:

Rhodium	103	0.976	0.964	0.961	**0.976**	n/a	n/a
Lutetium	175	1.001	0.97	0.969	**1.001**	n/a	n/a
Gold	197	0.976	0.966	0.975	**0.976**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**ICB1**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 17:36**					
Arsenic	75	0.0572	0.0112	0.0028	**0.0238**	0.0293	123.2
Selenium	77	-0.0437	-0.0148	-0.0973	**-0.0519**	0.0419	80.68
Selenium	78	0.0599	0.0219	0.1312	**0.071**	0.0555	78.15
Selenium	82	0.101	0.0188	-0.0547	**0.0217**	0.0779	358.9
Thallium	203	0.0023	0.001	-0.0007	**0.0009**	0.0015	175.1
Thallium	205	0.0032	0.0018	0.0007	**0.0019**	0.0012	65.54
Uranium	238	0.0009	-0.0006	-0.0011	**-0.0002**	0.0011	436.2

Internal Standard Factors:

Rhodium	103	0.989	0.973	0.97	**0.989**	n/a	n/a
Lutetium	175	1.004	1.007	0.994	**1.004**	n/a	n/a
Gold	197	1.01	0.986	0.987	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:38					
Arsenic	75	0.0584	0.0304	-0.0052	**0.0279**	0.0319	114.3
Selenium	77	-0.2539	-0.1072	-0.0985	**-0.1532**	0.0874	57.01
Selenium	78	0.2177	0.2093	0.1286	**0.1852**	0.0492	26.57
Selenium	82	0.03	0.0576	-0.0661	**0.0072**	0.0649	902.5
Thallium	203	-0.0019	-0.0023	-0.0036	**-0.0026**	0.0009	33.62
Thallium	205	-0.0026	-0.0003	-0.0011	**-0.0014**	0.0012	84.61
Uranium	238	-0.0024	-0.0004	-0.0008	**-0.0012**	0.0011	90.58

Internal Standard Factors:

Rhodium	103	0.986	0.965	0.969	**0.986**	n/a	n/a
Lutetium	175	1.004	0.98	0.973	**1.004**	n/a	n/a
Gold	197	0.998	0.993	0.979	**0.998**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/27/10 17:44					
Arsenic	75	1.105	1.082	1.005	**1.064**	0.0522	4.905
Selenium	77	1.952	2.043	1.832	**1.942**	0.1057	5.441
Selenium	78	2.48	2.082	2.146	**2.236**	0.2136	9.552
Selenium	82	2.081	2.123	2.114	**2.106**	0.0224	1.064
Thallium	203	0.0394	0.042	0.0427	**0.0413**	0.0018	4.246
Thallium	205	0.0435	0.041	0.0406	**0.0417**	0.0016	3.763
Uranium	238	0.0397	0.0397	0.0405	**0.04**	0.0005	1.171

Internal Standard Factors:

Rhodium	103	0.974	0.954	0.94	**0.974**	n/a	n/a
Lutetium	175	0.993	0.965	0.972	**0.993**	n/a	n/a
Gold	197	0.983	0.98	0.971	**0.983**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/27/10 17:47					
Arsenic	75	-0.0246	0.0604	0.071	**0.0356**	0.0524	147
Selenium	77	2.831	2.798	2.591	**2.74**	0.13	4.744
Selenium	78	1.416	1.3	1.13	**1.282**	0.1438	11.22
Selenium	82	-0.0735	0.179	0.0907	**0.0654**	0.1281	195.9
Thallium	203	0.0215	0.0242	0.0192	**0.0216**	0.0025	11.69
Thallium	205	0.0232	0.0217	0.0208	**0.0219**	0.0012	5.537
Uranium	238	-0.0065	-0.0037	-0.0065	**-0.0056**	0.0016	29.29

Internal Standard Factors:

Rhodium	103	1.171	1.174	1.189	**1.171**	n/a	n/a
Lutetium	175	1.093	1.108	1.113	**1.093**	n/a	n/a
Gold	197	1.117	1.111	1.146	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**ICSAB**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 17:50**					
Arsenic	75	26.33	26.08	26.48	**26.3**	0.1986	0.7554
Selenium	77	28.83	28.11	28.6	**28.52**	0.3672	1.288
Selenium	78	26.7	26.2	27.37	**26.76**	0.5914	2.21
Selenium	82	25.72	25.35	26.71	**25.93**	0.7072	2.728
Thallium	203	0.0259	0.031	0.0305	**0.0291**	0.0028	9.631
Thallium	205	0.0322	0.0312	0.0305	**0.0313**	0.0009	2.756
Uranium	238	0.0247	0.0245	0.0237	**0.0243**	0.0005	2.181

Internal Standard Factors:

Rhodium	103	1.194	1.202	1.22	**1.194**	n/a	n/a
Lutetium	175	1.11	1.135	1.138	**1.11**	n/a	n/a
Gold	197	1.141	1.156	1.167	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 17:53					
Arsenic	75	0.0073	-0.0133	0.0059	**0**	0.0115	38330
Selenium	77	-0.196	-0.1605	-0.0747	**-0.1437**	0.0623	43.38
Selenium	78	0.6472	0.5157	0.6149	**0.5926**	0.0685	11.57
Selenium	82	0.0027	-0.0084	0.1441	**0.0462**	0.085	184.2
Thallium	203	-0.0092	-0.0091	-0.0094	**-0.0092**	0.0001	1.375
Thallium	205	-0.008	-0.0084	-0.0085	**-0.0083**	0.0003	3.122
Uranium	238	-0.008	-0.0075	-0.0079	**-0.0078**	0.0003	3.324

Internal Standard Factors:

Rhodium	103	1.06	1.037	1.032	**1.06**	n/a	n/a
Lutetium	175	1.04	1.024	1.027	**1.04**	n/a	n/a
Gold	197	1.16	1.128	1.107	**1.16**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/27/10 17:56					
Arsenic	75	8.659	8.519	8.529	**8.569**	0.0778	0.9078
Selenium	77	19.58	19.12	19.35	**19.35**	0.2309	1.193
Selenium	78	18.81	19.19	19	**19**	0.1872	0.9853
Selenium	82	19.42	18.72	19.09	**19.08**	0.3482	1.825
Thallium	203	27.26	26.8	27.42	**27.16**	0.3243	1.194
Thallium	205	27.06	26.91	27.69	**27.22**	0.4172	1.533
Uranium	238	0.1566	0.1592	0.1626	**0.1595**	0.003	1.888

Internal Standard Factors:

Rhodium	103	1.023	0.999	1.001	**1.023**	n/a	n/a
Lutetium	175	0.996	0.997	1.008	**0.996**	n/a	n/a
Gold	197	1.08	1.061	1.053	**1.08**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		LCSW K1006615 1/5 7/27/10 18:00			Mean	SD	%RSD
Arsenic	75	0.021	0.0095	0.0578	**0.0294**	0.0252	85.72
Selenium	77	-0.1221	-0.1885	-0.2303	**-0.1803**	0.0546	30.27
Selenium	78	0.4252	0.3059	0.2807	**0.3373**	0.0772	22.89
Selenium	82	0.1606	0.0461	0.2282	**0.145**	0.0921	63.53
Thallium	203	0.0111	0.0041	0.0058	**0.007**	0.0036	51.88
Thallium	205	0.01	0.0109	0.0086	**0.0098**	0.0011	11.7
Uranium	238	41.46	40.14	40.6	**40.73**	0.6724	1.651

Internal Standard Factors:

Rhodium	103	0.992	0.974	0.971	**0.992**	n/a	n/a
Lutetium	175	1.018	0.987	0.995	**1.018**	n/a	n/a
Gold	197	1.089	1.08	1.067	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:02					
Arsenic	75	2.577	2.609	2.409	**2.532**	0.1078	4.256
Selenium	77	3.104	2.889	3.349	**3.114**	0.2301	7.389
Selenium	78	1.13	1.381	1.204	**1.238**	0.1291	10.43
Selenium	82	0.9723	1.096	0.9064	**0.9917**	0.0964	9.722
Thallium	203	0.4696	0.4714	0.4609	**0.4673**	0.0056	1.2
Thallium	205	0.4649	0.4748	0.4654	**0.4684**	0.0056	1.187
Uranium	238	1.593	1.602	1.536	**1.577**	0.0355	2.25

Internal Standard Factors:

Rhodium	103	1.073	1.073	1.071	**1.073**	n/a	n/a
Lutetium	175	1.017	1.016	1.019	**1.017**	n/a	n/a
Gold	197	1.139	1.139	1.123	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/27/10 18:06					
Arsenic	75	2.141	2.183	2.179	**2.167**	0.023	1.062
Selenium	77	2.67	2.54	2.451	**2.553**	0.11	4.309
Selenium	78	1.295	0.8338	0.7712	**0.9667**	0.2862	29.61
Selenium	82	0.5902	0.655	0.6242	**0.6231**	0.0324	5.204
Thallium	203	0.42	0.4203	0.4029	**0.4144**	0.01	2.404
Thallium	205	0.4129	0.4219	0.415	**0.4166**	0.0047	1.124
Uranium	238	2.273	2.265	2.178	**2.239**	0.0525	2.344

Internal Standard Factors:

Rhodium	103	1.088	1.064	1.062	**1.088**	n/a	n/a
Lutetium	175	1.038	1.031	1.015	**1.038**	n/a	n/a
Gold	197	1.135	1.139	1.132	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25L			Mean	SD	%RSD
TimeStamp		7/27/10 18:09					
Arsenic	75	0.4774	0.5267	0.4786	**0.4943**	0.0281	5.692
Selenium	77	0.5106	0.6208	0.5786	**0.57**	0.0556	9.753
Selenium	78	0.0168	0.3718	0.2728	**0.2205**	0.1832	83.08
Selenium	82	0.1112	0.2545	0.1516	**0.1724**	0.0739	42.85
Thallium	203	0.0854	0.0854	0.0842	**0.085**	0.0007	0.8289
Thallium	205	0.0876	0.0902	0.0864	**0.088**	0.002	2.227
Uranium	238	0.3152	0.2998	0.3025	**0.3059**	0.0082	2.685

Internal Standard Factors:

Rhodium	103	1.037	1.029	1.026	**1.037**	n/a	n/a
Lutetium	175	1.023	1.006	1.007	**1.023**	n/a	n/a
Gold	197	1.028	0.998	1.012	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**K1006615-006 1/5 +50A**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:12**					
Arsenic	75	51.84	52.65	51.63	**52.04**	0.5426	1.043
Selenium	77	51.97	51.45	51.09	**51.5**	0.4429	0.86
Selenium	78	49.29	49.65	49.45	**49.46**	0.1826	0.3692
Selenium	82	49.92	50.03	50.16	**50.04**	0.1196	0.2391
Thallium	203	53.5	51.95	52.09	**52.51**	0.8559	1.63
Thallium	205	53.4	53.3	52.64	**53.11**	0.412	0.7757
Uranium	238	56.53	54.38	54.64	**55.18**	1.171	2.122

Internal Standard Factors:

Rhodium	103	1.045	1.06	1.058	**1.045**	n/a	n/a
Lutetium	175	1.01	0.988	0.997	**1.01**	n/a	n/a
Gold	197	1.087	1.099	1.076	**1.087**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 18:16					
Arsenic	75	41.95	41.82	42.27	**42.01**	0.2318	0.5518
Selenium	77	43.14	44.87	45.02	**44.34**	1.047	2.36
Selenium	78	43.59	43.52	44.57	**43.89**	0.5882	1.34
Selenium	82	43.1	44.66	44.67	**44.14**	0.9064	2.053
Thallium	203	42.94	42.15	42.82	**42.64**	0.4269	1.001
Thallium	205	43.37	42.96	42.95	**43.09**	0.2386	0.5536
Uranium	238	8.654	8.497	8.438	**8.53**	0.1113	1.305

Internal Standard Factors:							
Rhodium	103	1.036	1.03	1.034	**1.036**	n/a	n/a
Lutetium	175	1.013	0.998	1.007	**1.013**	n/a	n/a
Gold	197	1.015	1.018	1.004	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**K1006615-001 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:20**					
Arsenic	75	31.79	31.82	31.23	**31.61**	0.3333	1.054
Selenium	77	2.595	2.472	2.572	**2.546**	0.0652	2.56
Selenium	78	0.7473	0.4873	0.437	**0.5572**	0.1665	29.89
Selenium	82	0.3766	0.8106	0.9342	**0.7071**	0.2929	41.42
Thallium	203	0.4155	0.4468	0.4107	**0.4243**	0.0196	4.619
Thallium	205	0.4293	0.4269	0.415	**0.4237**	0.0077	1.813
Uranium	238	2.215	2.288	2.226	**2.243**	0.0394	1.758

Internal Standard Factors:

Rhodium	103	1.099	1.093	1.084	**1.099**	n/a	n/a
Lutetium	175	1.034	1.058	1.036	**1.034**	n/a	n/a
Gold	197	1.215	1.159	1.187	**1.215**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:24					
Arsenic	75	7.383	7.314	7.252	**7.316**	0.0653	0.8922
Selenium	77	2.906	2.752	2.717	**2.792**	0.1006	3.605
Selenium	78	0.6212	0.5264	0.5861	**0.5779**	0.0479	8.294
Selenium	82	0.6507	0.83	0.6773	**0.7193**	0.0967	13.45
Thallium	203	0.5732	0.5344	0.5414	**0.5497**	0.0207	3.762
Thallium	205	0.5552	0.5586	0.5357	**0.5498**	0.0124	2.254
Uranium	238	2.074	2.058	2.018	**2.05**	0.0288	1.404

Internal Standard Factors:

Rhodium	103	1.129	1.121	1.136	**1.129**	n/a	n/a
Lutetium	175	1.073	1.061	1.046	**1.073**	n/a	n/a
Gold	197	1.24	1.216	1.222	**1.24**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**CCV2**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:27**					
Arsenic	75	24.5	24.57	24.11	**24.39**	0.2479	1.016
Selenium	77	24.63	24.72	24.62	**24.66**	0.054	0.2191
Selenium	78	24.7	24.66	23.9	**24.42**	0.449	1.838
Selenium	82	25.05	24.89	24.32	**24.76**	0.3823	1.544
Thallium	203	25.06	25.51	26.04	**25.54**	0.4903	1.92
Thallium	205	24.91	25.85	25.89	**25.55**	0.5579	2.184
Uranium	238	25.46	25.29	24.92	**25.22**	0.2766	1.097

Internal Standard Factors:

Rhodium	103	1.065	1.055	1.041	**1.065**	n/a	n/a
Lutetium	175	1.051	1.04	1.031	**1.051**	n/a	n/a
Gold	197	1.066	1.049	1.051	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**CCB2**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:32**					
Arsenic	75	0.0601	-0.04	0.0313	**0.0171**	0.0515	300.4
Selenium	77	-0.1632	-0.0593	-0.0527	**-0.0917**	0.062	67.56
Selenium	78	-0.1479	-0.0872	0.0936	**-0.0471**	0.1256	266.5
Selenium	82	0.1605	-0.1221	0.1332	**0.0572**	0.1559	272.7
Thallium	203	0.0018	-0.001	-0.0019	**-0.0004**	0.0019	543.7
Thallium	205	0.001	-0.0002	-0.0001	**0.0002**	0.0007	303.4
Uranium	238	-0.0001	0.0002	-0.0012	**-0.0004**	0.0007	204.9

Internal Standard Factors:

Rhodium	103	1.073	1.049	1.05	**1.073**	n/a	n/a
Lutetium	175	1.046	1.043	1.038	**1.046**	n/a	n/a
Gold	197	1.096	1.051	1.062	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-003 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:34					
Arsenic	75	2.583	2.497	2.582	**2.554**	0.0493	1.931
Selenium	77	2.448	2.542	2.177	**2.389**	0.1896	7.935
Selenium	78	0.5322	0.5897	0.2585	**0.4601**	0.177	38.46
Selenium	82	0.5444	0.5114	0.4028	**0.4862**	0.0741	15.23
Thallium	203	0.5607	0.5648	0.5726	**0.566**	0.0061	1.072
Thallium	205	0.5508	0.5513	0.5623	**0.5548**	0.0065	1.176
Uranium	238	1.74	1.728	1.749	**1.739**	0.0103	0.5908

Internal Standard Factors:							
Rhodium	103	1.132	1.129	1.127	**1.132**	n/a	n/a
Lutetium	175	1.066	1.063	1.075	**1.066**	n/a	n/a
Gold	197	1.185	1.202	1.188	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**K1006615-004 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:38**					
Arsenic	75	48.8	49.17	48.47	**48.81**	0.3508	0.7187
Selenium	77	2.075	1.914	2.048	**2.012**	0.0866	4.302
Selenium	78	0.5384	0.2598	0.4247	**0.4076**	0.1401	34.37
Selenium	82	0.2159	0.6316	0.3395	**0.3957**	0.2135	53.96
Thallium	203	0.3922	0.3881	0.3822	**0.3875**	0.005	1.3
Thallium	205	0.4046	0.3995	0.3963	**0.4001**	0.0042	1.042
Uranium	238	1.871	1.849	1.881	**1.867**	0.0164	0.8759

Internal Standard Factors:

Rhodium	103	1.138	1.126	1.124	**1.138**	n/a	n/a
Lutetium	175	1.082	1.068	1.063	**1.082**	n/a	n/a
Gold	197	1.25	1.219	1.225	**1.25**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**K1006615-005 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:41**					
Arsenic	75	5.626	5.502	5.724	**5.617**	0.1114	1.983
Selenium	77	3.275	3.054	2.813	**3.047**	0.2313	7.589
Selenium	78	0.733	0.7773	0.4452	**0.6518**	0.1803	27.66
Selenium	82	0.5661	0.5243	0.6969	**0.5957**	0.09	15.11
Thallium	203	0.5497	0.535	0.5524	**0.5457**	0.0093	1.71
Thallium	205	0.5391	0.5243	0.5518	**0.5384**	0.0137	2.551
Uranium	238	2.042	2.014	2.023	**2.026**	0.0144	0.7103

Internal Standard Factors:

Rhodium	103	1.151	1.139	1.139	**1.151**	n/a	n/a
Lutetium	175	1.08	1.064	1.089	**1.08**	n/a	n/a
Gold	197	1.244	1.217	1.212	**1.244**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:45					
Arsenic	75	32.72	32.74	32.41	**32.62**	0.1852	0.5679
Selenium	77	2.415	2.246	2.158	**2.273**	0.131	5.763
Selenium	78	0.4436	0.3429	0.3665	**0.3843**	0.0526	13.69
Selenium	82	0.557	0.8241	0.6935	**0.6915**	0.1336	19.31
Thallium	203	0.3939	0.3783	0.3833	**0.3852**	0.008	2.071
Thallium	205	0.3811	0.3727	0.3795	**0.3777**	0.0044	1.176
Uranium	238	2.12	2.105	2.092	**2.106**	0.0143	0.6804

Internal Standard Factors:							
Rhodium	103	1.15	1.139	1.132	**1.15**	n/a	n/a
Lutetium	175	1.081	1.06	1.068	**1.081**	n/a	n/a
Gold	197	1.317	1.304	1.288	**1.317**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-008 1/5 7/27/10 18:49			Mean	SD	%RSD
Arsenic	75	6.639	6.585	6.633	**6.619**	0.0297	0.4483
Selenium	77	2.792	2.541	2.599	**2.644**	0.1317	4.981
Selenium	78	0.4443	0.415	0.3836	**0.4143**	0.0303	7.32
Selenium	82	0.8092	0.6889	0.6666	**0.7216**	0.0767	10.63
Thallium	203	0.5657	0.5765	0.5554	**0.5658**	0.0106	1.866
Thallium	205	0.5692	0.5728	0.5564	**0.5661**	0.0086	1.522
Uranium	238	2.605	2.525	2.536	**2.555**	0.0435	1.703

Internal Standard Factors:

Rhodium	103	1.179	1.157	1.168	**1.179**	n/a	n/a
Lutetium	175	1.101	1.098	1.08	**1.101**	n/a	n/a
Gold	197	1.247	1.257	1.249	**1.247**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-009 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:52					
Arsenic	75	4.769	4.618	4.649	**4.679**	0.0801	1.712
Selenium	77	2.315	2.434	2.25	**2.333**	0.0932	3.995
Selenium	78	0.4477	0.3993	0.3088	**0.3853**	0.0705	18.29
Selenium	82	0.7473	0.6611	0.7572	**0.7219**	0.0528	7.316
Thallium	203	0.3484	0.3537	0.3441	**0.3488**	0.0048	1.383
Thallium	205	0.3593	0.3558	0.3556	**0.3569**	0.002	0.5739
Uranium	238	1.445	1.434	1.454	**1.444**	0.0101	0.7021

Internal Standard Factors:

Rhodium	103	1.177	1.157	1.163	**1.177**	n/a	n/a
Lutetium	175	1.097	1.084	1.086	**1.097**	n/a	n/a
Gold	197	1.227	1.205	1.191	**1.227**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**K1006636-001 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 18:56**					
Arsenic	75	64.73	65.03	63.48	**64.41**	0.8236	1.279
Selenium	77	2.781	2.405	2.634	**2.607**	0.1893	7.261
Selenium	78	0.4298	0.3365	0.0915	**0.2859**	0.1747	61.1
Selenium	82	0.9812	0.7909	0.7042	**0.8254**	0.1417	17.16
Thallium	203	0.4726	0.4735	0.4635	**0.4698**	0.0055	1.179
Thallium	205	0.4557	0.474	0.4618	**0.4638**	0.0093	2.004
Uranium	238	4.464	4.59	4.465	**4.507**	0.0725	1.608

Internal Standard Factors:

Rhodium	103	1.165	1.165	1.143	**1.165**	n/a	n/a
Lutetium	175	1.076	1.093	1.063	**1.076**	n/a	n/a
Gold	197	1.379	1.329	1.314	**1.379**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:59					
Arsenic	75	8.674	8.896	8.453	**8.674**	0.2215	2.554
Selenium	77	3.138	2.703	3.346	**3.063**	0.3283	10.72
Selenium	78	0.3035	0.4251	0.461	**0.3966**	0.0825	20.81
Selenium	82	0.7923	1.063	0.6151	**0.8234**	0.2254	27.38
Thallium	203	0.4945	0.5021	0.503	**0.4999**	0.0047	0.9381
Thallium	205	0.4934	0.4845	0.4986	**0.4922**	0.0072	1.453
Uranium	238	3.847	3.841	3.823	**3.837**	0.0126	0.3287

Internal Standard Factors:

Rhodium	103	1.168	1.168	1.177	**1.168**	n/a	n/a
Lutetium	175	1.073	1.075	1.073	**1.073**	n/a	n/a
Gold	197	1.316	1.288	1.268	**1.316**	n/a	n/a

Instrument ID: K-ICP-MS-02 | **Method: EPA 6020**
Experiment: 07-27-10D | **Analyst: Greg Jasper**
Units: µg/L (ppb) | **STARLIMS #210137**

Sample Name:		**K1006636-003 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/27/10 19:03**					
Arsenic	75	4.122	3.907	3.791	**3.94**	0.1678	4.26
Selenium	77	3.433	3.203	3.723	**3.453**	0.2607	7.549
Selenium	78	0.685	0.458	0.6241	**0.589**	0.1175	19.95
Selenium	82	0.8465	0.6373	0.8426	**0.7755**	0.1197	15.44
Thallium	203	0.591	0.5791	0.5841	**0.5847**	0.006	1.02
Thallium	205	0.6005	0.5803	0.5825	**0.5878**	0.0111	1.888
Uranium	238	5.989	5.647	5.712	**5.783**	0.1817	3.142

Internal Standard Factors:

Rhodium	103	1.194	1.184	1.18	**1.194**	n/a	n/a
Lutetium	175	1.12	1.079	1.085	**1.12**	n/a	n/a
Gold	197	1.311	1.286	1.303	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-005 1/5 7/27/10 19:06			Mean	SD	%RSD
Arsenic	75	45.11	43.82	44.35	**44.43**	0.6496	1.462
Selenium	77	2.549	2.401	2.397	**2.449**	0.0865	3.532
Selenium	78	0.4661	0.261	0.2849	**0.3373**	0.1121	33.23
Selenium	82	0.534	0.5841	0.5871	**0.5684**	0.0299	5.251
Thallium	203	0.4829	0.477	0.4729	**0.4776**	0.005	1.056
Thallium	205	0.4675	0.4815	0.489	**0.4793**	0.0109	2.269
Uranium	238	2.73	2.8	2.71	**2.747**	0.0473	1.721

Internal Standard Factors:							
Rhodium	103	1.185	1.16	1.166	**1.185**	n/a	n/a
Lutetium	175	1.081	1.1	1.085	**1.081**	n/a	n/a
Gold	197	1.422	1.387	1.366	**1.422**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/27/10 19:10					
Arsenic	75	24.48	24.32	24.32	**24.38**	0.0914	0.375
Selenium	77	24.52	24.65	24.61	**24.59**	0.0701	0.2852
Selenium	78	24.5	23.74	24.63	**24.29**	0.4799	1.975
Selenium	82	24.6	24.19	24.92	**24.57**	0.3667	1.492
Thallium	203	25.05	25.67	25.92	**25.55**	0.446	1.746
Thallium	205	25.12	25.91	25.74	**25.59**	0.4143	1.619
Uranium	238	24.85	25.84	24.86	**25.18**	0.5716	2.27

Internal Standard Factors:

Rhodium	103	1.125	1.096	1.1	**1.125**	n/a	n/a
Lutetium	175	1.069	1.059	1.048	**1.069**	n/a	n/a
Gold	197	1.117	1.083	1.085	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/27/10 19:14					
Arsenic	75	0.0328	0.0294	0.0126	**0.0249**	0.0108	43.48
Selenium	77	-0.1703	-0.2089	-0.1632	**-0.1808**	0.0246	13.62
Selenium	78	-0.3883	-0.146	-0.1547	**-0.2296**	0.1375	59.85
Selenium	82	0.0351	-0.0037	0.0093	**0.0135**	0.0197	145.7
Thallium	203	-0.001	0.0024	0.0006	**0.0007**	0.0017	251.3
Thallium	205	0.0011	0.002	0.0003	**0.0011**	0.0008	72.54
Uranium	238	-0.001	-0.0004	0.0021	**0.0002**	0.0017	730.2

Internal Standard Factors:

Rhodium	103	1.129	1.101	1.101	**1.129**	n/a	n/a
Lutetium	175	1.082	1.057	1.066	**1.082**	n/a	n/a
Gold	197	1.126	1.113	1.086	**1.126**	n/a	n/a

Subcontract Laboratory Results

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

July 28, 2010

Report to:
Lynda Huckestein
Columbia Analytical Services
1317 S. 13th Ave.
Kelso, WA 98626

Bill to:
Accounts Payable
Columbia Analytical Services
1317 South 13th Ave.
Kelso, WA 98626

cc: Columbia Analytical Services, Inc.

Project ID: K1006615
ACZ Project ID: L82975

Lynda Huckestein:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 29, 2010. This project has been assigned to ACZ's project number, L82975. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L82975. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 28, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-5 0-2 COMP

ACZ Sample ID: ***L82975-01***
Date Sampled: *06/22/10 19:10*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:37	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:25	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-5 2-12 COMP

ACZ Sample ID: ***L82975-02***
Date Sampled: *06/22/10 19:15*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:42	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:29	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-5 12-18 COMP

ACZ Sample ID: ***L82975-03***
Date Sampled: *06/22/10 19:20*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:47	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:34	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-9 0-2 COMP

ACZ Sample ID: ***L82975-04***
Date Sampled: *06/22/10 16:00*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:53	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:38	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-9 2-12 COMP

ACZ Sample ID: ***L82975-05***
Date Sampled: *06/22/10 16:05*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:58	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:42	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-9 12-18 COMP

ACZ Sample ID: ***L82975-06***
Date Sampled: *06/22/10 16:10*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 14:03	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:47	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-13 0-2 COMP

ACZ Sample ID: ***L82975-07***
Date Sampled: *06/22/10 12:20*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 14:08	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:51	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-13 2-12 COMP

ACZ Sample ID: ***L82975-08***
Date Sampled: *06/22/10 12:30*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 14:14	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:55	meg/brd

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-13 12-18 COMP

ACZ Sample ID: ***L82975-09***
Date Sampled: *06/22/10 12:40*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 14:19	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:59	meg/brd

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

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Inorganic Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L82975***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-5 0-2 COMP
Locator:

ACZ Sample ID: ***L82975-01***
Date Sampled: *06/22/10 19:10*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		0.0	1.4	5.5	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:13		8.4	1.3	1.7	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:58		-0.44	0.8	1.6	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:50		1.5	0.66	0.33	pCi/g	*	mwm
Uranium 235	07/26/10 15:50		-0.11	0.3	0.33	pCi/g	*	mwm
Uranium 238	07/26/10 15:50		0.8	0.46	0.33	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-5 2-12 COMP
Locator:

ACZ Sample ID: ***L82975-02***
Date Sampled: *06/22/10 19:15*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		2.6	1.5	5.7	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:14		2.9	0.91	1.4	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:59		0.41	0.44	0.61	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:51		0.2	0.39	0.22	pCi/g	*	mwm
Uranium 235	07/26/10 15:51		0.05	0.15	0.22	pCi/g	*	mwm
Uranium 238	07/26/10 15:51		0.3	0.23	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-5 12-18 COMP
Locator:

ACZ Sample ID: ***L82975-03***
Date Sampled: *06/22/10 19:20*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		0.0	1.4	5.5	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:16		8.3	1.4	1.9	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:01		0.55	0.37	0.6	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:53		2.7	0.83	0.3	pCi/g	*	mwm
Uranium 235	07/26/10 15:53		0.28	0.23	0.3	pCi/g	*	mwm
Uranium 238	07/26/10 15:53		2.45	0.68	0.3	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-9 0-2 COMP
Locator:

ACZ Sample ID: ***L82975-04***
Date Sampled: *06/22/10 16:00*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		0.0	1.5	5.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:17		8.1	1.3	1.7	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:02		0.42	0.39	0.61	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:54		0.29	0.42	0.23	pCi/g	*	mwm
Uranium 235	07/26/10 15:54		0.03	0.16	0.23	pCi/g	*	mwm
Uranium 238	07/26/10 15:54		0.67	0.35	0.23	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-9 2-12 COMP
Locator:

ACZ Sample ID: ***L82975-05***
Date Sampled: *06/22/10 16:05*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		0.0	1.4	5.5	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:19		5.5	1	1.7	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:04		1	0.44	0.63	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:56		0.13	0.4	0.2	pCi/g	*	mwm
Uranium 235	07/26/10 15:56		-0.12	0.21	0.2	pCi/g	*	mwm
Uranium 238	07/26/10 15:56		0.57	0.31	0.2	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-9 12-18 COMP
Locator:

ACZ Sample ID: ***L82975-06***
Date Sampled: *06/22/10 16:10*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		0.95	1.4	5.4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:20		6	1.1	1.7	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:05		0.9	0.44	0.61	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:57		0.24	0.53	0.26	pCi/g	*	mwm
Uranium 235	07/26/10 15:57		-0.06	0.32	0.26	pCi/g	*	mwm
Uranium 238	07/26/10 15:57		0.47	0.31	0.26	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-13 0-2 COMP
Locator:

ACZ Sample ID: ***L82975-07***
Date Sampled: *06/22/10 12:20*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		4.6	1.5	5.4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:22		4.2	0.96	1.8	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:07		0.93	0.46	0.63	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:59		0.48	0.51	0.26	pCi/g	*	mwm
Uranium 235	07/26/10 15:59		-0.21	0.24	0.26	pCi/g	*	mwm
Uranium 238	07/26/10 15:59		0.26	0.3	0.26	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-13 2-12 COMP
Locator:

ACZ Sample ID: ***L82975-08***
Date Sampled: *06/22/10 12:30*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		1.3	1.4	5.2	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:23		4.3	0.85	1.4	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:08		0.75	0.39	0.62	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 16:00		0.65	0.49	0.22	pCi/g	*	mwm
Uranium 235	07/26/10 16:00		0.18	0.21	0.22	pCi/g	*	mwm
Uranium 238	07/26/10 16:00		0.36	0.33	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006615
Sample ID: BG-13 12-18 COMP
Locator:

ACZ Sample ID: ***L82975-09***
Date Sampled: *06/22/10 12:40*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 14:53		2.3	1.3	4.7	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:25		3.4	0.79	1.5	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 10:10		1.3	0.49	0.6	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 16:02		0.77	0.65	0.34	pCi/g	*	mwm
Uranium 235	07/26/10 16:02		0.04	0.25	0.34	pCi/g	*	mwm
Uranium 238	07/26/10 16:02		0.43	0.38	0.34	pCi/g	*	mwm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services ACZ Project ID: ***L82975***

Project ID: K1006615

Lead 210 (3050) Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286634																
WG286254LCSS	LCSS	07/23/10	RC100623-1	77.23				57	2.4	5.7	73.8	47	102			
WG286254PBS	PBS	07/23/10						.93	1.5	5.7			11.4			
L82974-02MS	MS	07/23/10	RC100623-1	77.23	0	1.4	5.4	66	2.5	5.6	85.5	47	102			
L82974-03DUP	DUP-RER	07/23/10			2.2	1.7	6.6	1.8	1.4	5.2				0.18	2	
L82974-01DUP	DUP-RER	07/23/10			0	1.4	5.6	.06	1.2	4.8				0.03	2	

Radium 226 + Alpha Emitting Radium M9315 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286455																
WG286266PBS	PBS	07/20/10						.51	0.35	1.6			3.2			
WG286266LCSS	LCSS	07/20/10	RC100624-2	47.83				43	2.7	1.4	89.9	71	121			
L82974-01DUP	DUP-RER	07/20/10			5.5	1.1	1.9	5.4	1.1	1.7				0.06	2	
L82974-02DUP	DUP-RER	07/20/10			7.6	1.3	1.8	4.7	0.95	1.6				1.8	2	
L82974-03MS	MS	07/20/10	RC100624-2	47.83	5.9	1.2	1.9	51	3.2	1.7	94.3	71	121			

Thorium 230 (3050) ESM 4506 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286554																
WG286328PBS	PBS	07/21/10						-.2	0.33	0.66			1.32			
WG286328LCSS	LCSS	07/21/10	RC091215-1	162.12				170	4.5	0.6	104.9	90	120			
L82974-01DUP	DUP-RER	07/21/10			1.2	0.5	0.56	1	0.47	0.54				0.29	2	
L82974-03DUP	DUP-RER	07/21/10			1.6	0.53	0.59	.74	0.45	0.57				1.24	2	
L82974-02MS	MS	07/21/10	RC091215-1	162.12	0.5	0.4	0.55	170	4.6	0.64	104.6	90	120			

Uranium 234 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286781																
WG286325PBS	PBS	07/26/10						.38	0.41	0.2			0.4			
WG286325LCSS	LCSS	07/26/10	RC100223-2	33.13				37	2.6	0.36	111.7	89	132			
L82974-02DUP	DUP-RER	07/26/10			0.88	0.43	0.21	.74	0.35	0.2				0.25	2	
L82974-03DUP	DUP-RER	07/26/10			0.67	0.42	0.22	.8	0.41	0.2				0.22	2	
L82974-01MS	MS	07/26/10	RC100223-2	33.13	0.78	0.36	0.21	37	2.8	0.39	109.3	89	132			

Uranium 235 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286781																
WG286325PBS	PBS	07/26/10						.02	0.14	0.2			0.4			
WG286325LCSS	LCSS	07/26/10	RC100223-2	1.58				1.5	0.58	0.36	94.9	45	150			
L82974-02DUP	DUP-RER	07/26/10			0	0.14	0.21	.09	0.15	0.2				0.44	2	
L82974-03DUP	DUP-RER	07/26/10			0.18	0.22	0.22	.07	0.16	0.2				0.4	2	
L82974-01MS	MS	07/26/10	RC100223-2	1.58	0.02	0.13	0.21	1.7	0.65	0.39	106.3	45	150			

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Radiochemistry QC Summary

Columbia Analytical Services
Project ID: K1006615

ACZ Project ID: ***L82975***

Uranium 238 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286781																
WG286325PBS	PBS	07/26/10						-.09	0.21	0.2			0.4			
WG286325LCSS	LCSS	07/26/10	RC100223-2	34.39				36.8	2.6	0.36	107	87	132			
L82974-02DUP	DUP-RER	07/26/10			1.11	0.39	0.21	.62	0.3	0.2				1	2	
L82974-03DUP	DUP-RER	07/26/10			0.89	0.4	0.22	.92	0.36	0.2				0.06	2	
L82974-01MS	MS	07/26/10	RC100223-2	34.39	0.92	0.36	0.21	40.5	2.9	0.39	115.1	87	132			

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadChem Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L82975***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lead 210 (3050)	Eichrom
Thorium 230 (3050)	ESM 4506
Uranium 234	Eichrom
Uranium 235	Eichrom
Uranium 238	Eichrom

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006615

ACZ Project ID: L82975
Date Received: 06/29/2010 10:31
Received By: gac
Date Printed: 6/30/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA11117		2	10

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006615

ACZ Project ID: L82975
Date Received: 06/29/2010 10:31
Received By: gac
Date Printed: 6/30/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L82975-01	BG-5 0-2 COMP									X		
L82975-02	BG-5 2-12 COMP									X		
L82975-03	BG-5 12-18 COMP									X		
L82975-04	BG-9 0-2 COMP									X		
L82975-05	BG-9 2-12 COMP									X		
L82975-06	BG-9 12-18 COMP									X		
L82975-07	BG-13 0-2 COMP									X		
L82975-08	BG-13 2-12 COMP									X		
L82975-09	BG-13 12-18 COMP									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

Project Number: K1006615
Project Manager: Lynda Huckestein

L82975

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006615-001	BG-5 0-2 COMP	1	Soil	6/22/10	1910	ACZ	✓	✓	✓	✓
K1006615-002	BG-5 2-12 COMP	1	Soil	6/22/10	1915	ACZ	✓	✓	✓	✓
K1006615-003	BG-5 2-18 COMP	1	Soil	6/22/10	1920	ACZ	✓	✓	✓	✓
K1006615-004	BG-9 0-2 COMP	1	Soil	6/22/10	1600	ACZ	✓	✓	✓	✓
K1006615-005	BG-9 2-12 COMP	1	Soil	6/22/10	1605	ACZ	✓	✓	✓	✓
K1006615-006	BG-9 12-18 COMP	3	Soil	6/22/10	1610	ACZ	✓	✓	✓	✓
K1006615-007	BG-13 0-2 COMP	1	Soil	6/22/10	1220	ACZ	✓	✓	✓	✓
K1006615-008	BG-13 2-12 COMP	1	Soil	6/22/10	1230	ACZ	✓	✓	✓	✓
K1006615-009	BG-13 12-18 COMP	1	Soil	6/22/10	1240	ACZ	✓	✓	✓	✓

Test Comments

MISC_OUT_1 - None	K1006615-001,2,3,4,5,6,7,8,9	Lead 210/Eichrom to ACZ
MISC_OUT_2 - None	K1006615-001,2,3,4,5,6,7,8,9	Uranium-isotopic/Eichrom
MISC_OUT_3 - None	K1006615-001,2,3,4,5,6,7,8,9	Thorium-isotopic/ESM 4506
MISC_OUT_4 - None	K1006615-001,2,3,4,5,6,7,8,9	Radium 226 ~~and 228~~/M9315 and ~~M9320~~

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Filter Rhodia / Barr QAPP

Turnaround Requirements

____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

✓ **STANDARD**

Requested FAX Date: _____

Requested Report Date: 07/19/10

Report Requirements

____ I. Results Only

____ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

X IV. Data Validation Report with Raw Data

POL/MDL/J Y

EDD

Invoice Information

PO# K1006615

Bill to

Relinquished By: _____ 6/28/10 0930 Received By: _____ 6-29-10 Airbill Number: _____

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

Folder Comments:
QC ON -006/Extra bottles rec'd

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com	____RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ____ STANDARD Requested FAX Date: _____ Requested Report Date: 07/19/10	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD	PO# K1006615 Bill to

Relinquished By: 6/28/10 0930 Received By: 6-29-10 Airbill Number: _____

COPY

Table 1-3
ACZ Labratories Inc. - Steamboat Springs, Colorado
Analytical Parameters, Method and Quantitation Limits for Groundwater and Surface Water Samples
Rhodia Silver Bow Plant
Butte, Montana

Parameter	Matrix	Method	Unit	PQL	Tap Water Screening Level (2)
Groundwater					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	1.5
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	0.12
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	0.046
Surface Water					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	1.5
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	0.12
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	0.046
Field Blank Parameters Associated with Aqueous Matrix Project Samples					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	--
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	--
Field Blank Parameters Associated with Solid Matrix Project Samples					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	--
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	--
Lead 210	Water	Eichrom OTW01	pCi/L	4	--
Thorium 230	Water	ESM 4506	pCi/L	0.6	--
Uranium 234	Water	Eichrom Mod	pCi/L	1.0	--
Uranium 238	Water	Eichrom Mod	pCi/L	1.0	--
Parameter	**Matrix**	**Method**	**Unit**	**PQL**	**Residential Soil Screening Level (3)**
Sediment Associated with Surface Water Locations, Native Soil and Tailings Basin Solids					
Radiological Parameters					
Gross Alpha	Soil	EPA9310 Mod	pCi/g	1 to 2	--
Gross Beta	Soil	EPA9310 Mod	pCi/g	1 to 2	--
Radium 226	Soil	EPA9315 Mod	pCi/g	1.0	0.013
Radium 228	Soil	EPA9320 Mod	pCi/g	1.5	0.046
Solid					
Radiological Parameters					
Radium 226	Soil	EPA9315 Mod	pCi/g	1.0	0.013
Lead 210	Soil	EICHROM	pCi/g	10.0	0.45
Thorium 230	Soil	ESM4506	pCi/g	0.60	3.8
Uranium 234	Soil	EICHROM Mod	pCi/g	0.40	5
Uranium 238	Soil	EICHROM Mod	pCi/g	0.4	0.78

Notes:

(1) PQL may vary based on level of moisture present (dry weight correction), initial volume and possible matrix interferences.
(2) Tap Water Screening Level (EPA Region 9 PRG, HQ = 0.1)
(3) Residential Soil Screening Level (RAIS Residential PRGs)

P:\Mpls\26 MT\46\2646006\WorkFiles\QAPP Silver Bow\Silver Bow Plant QAPP 3.0\Table 1-3 rev_022609

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: zsh
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time: 07/12/2010 13:00
End Date/Time: 07/12/2010 14:30

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L82935-01	CRP-1-SEDIMENT	as-rec		SAVE SX	07/12/10 13:00	7/12/2010	
2	L82974-01	BG-10 0-2 COMP	as-rec			07/12/10 13:05	7/12/2010	
3	L82974-02	BG-10 2-12 COMP	as-rec			07/12/10 13:10	7/12/2010	
4	L82974-03	BG-10 12-18 COMP	as-rec			07/12/10 13:15	7/12/2010	
5	L82974-04	BG-14 0-2 COMP	as-rec			07/12/10 13:21	7/12/2010	
6	L82974-05	BG-14-2-12 COMP	as-rec			07/12/10 13:26	7/12/2010	
7	L82974-06	BG-14 12-18 COMP	as-rec			07/12/10 13:31	7/12/2010	
8	L82975-01	BG-5 0-2 COMP	as-rec			07/12/10 13:37	7/12/2010	
9	L82975-02	BG-5 2-12 COMP	as-rec			07/12/10 13:42	7/12/2010	
10	L82975-03	BG-5 12-18 COMP	as-rec			07/12/10 13:47	7/12/2010	
11	L82975-04	BG-9 0-2 COMP	as-rec			07/12/10 13:53	7/12/2010	
12	L82975-05	BG-9 2-12 COMP	as-rec			07/12/10 13:58	7/12/2010	
13	L82975-06	BG-9 12-18 COMP	as-rec			07/12/10 14:03	7/12/2010	
14	L82975-07	BG-13 0-2 COMP	as-rec			07/12/10 14:08	7/12/2010	
15	L82975-08	BG-13 2-12 COMP	as-rec			07/12/10 14:14	7/12/2010	
16	L82975-09	BG-13 12-18 COMP	as-rec			07/12/10 14:19	7/12/2010	
17	**L83116-01**	LOWERSEDPOND-4	as-rec	30		07/12/10 14:24	7/12/2010	
18	**L83156-01**	10-041	as-rec	30		07/12/10 14:30	7/12/2010	

Report Comments: _____

Internal Comments _____

AREV: ZSH 7-12-10
Initials, Date

SREV: BRD 7-12-10
Initials, Date

7/12/2010 2:31:40 PM 71010 HB
7/14/10

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: zsh
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time: 07/12/2010 13:00
End Date/Time: 07/12/2010 14:30

Sample	Login Comments
L82935-01	SJ || in inorganic walk-in
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in
L83116-01	ZIPLOCK ||
L83156-01	SJ(3) || In Inorganic cooler.

Report Comments: _____

Internal Comments _____

AREV: ZSH 7.12.10
Initials, Date

SREV: _____
Initials, Date

7/12/2010 2:31:40 PM 71010

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: ZSH
Date: 7-12-10

Approved: BRD
Date: 7.12.10

Analyst: ZACH HOLLADAY

Workgroup: 285851

Analysis Date: 7-12-10

Sample type used: AS-REC, SOIL

Extraction / Digestion / Analysis / Prep / Calc:

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?			✓
3. Were proper volumes of reagents used per final volume?			✓
4. Was the proper sub-sample used (as received, <2000, <500, <250, dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?			✓
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?			✓
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments:

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: ZSH
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time: 7/12/10 1p
End Date/Time:

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L82935-01	CRP-1-SEDIMENT	AS-REC		SAVE SX	7-12-10	7-12-10	
2	L82974-01	BG-10 0-2 COMP						
3	L82974-02	BG-10 2-12 COMP						
4	L82974-03	BG-10 12-18 COMP						
5	L82974-04	BG-14 0-2 COMP						
6	L82974-05	BG-14-2-12 COMP						
7	L82974-06	BG-14 12-18 COMP						
8	L82975-01	BG-5 0-2 COMP						
9	L82975-02	BG-5 2-12 COMP						
10	L82975-03	BG-5 12-18 COMP						
11	L82975-04	BG-9 0-2 COMP						
12	L82975-05	BG-9 2-12 COMP						
13	L82975-06	BG-9 12-18 COMP						
14	L82975-07	BG-13 0-2 COMP						
15	L82975-08	BG-13 2-12 COMP						
16	L82975-09	BG-13 12-18 COMP						
17	**L83116-01**	LOWERSEDPOND-4		30				
18	**L83156-01**	10-041		30				

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/12/2010 12:55:31 PM 71010

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time:
End Date/Time:

Sample	Login Comments
L82935-01	SJ || in inorganic walk-in
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in
L83116-01	ZIPLOCK ||
L83156-01	SJ(3) || In Inorganic cooler.

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/12/2010 12:55:31 PM 71010

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG285851

Date Reported: 12-Jul-10
Run ID: R732887
Date Analyzed: 12-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L82935-01

Tag: Measured: 7/12/2010 1:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-01

Tag: Measured: 7/12/2010 1:05:18 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-02

Tag: Measured: 7/12/2010 1:10:36 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-03

Tag: Measured: 7/12/2010 1:15:54 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-04

Tag: Measured: 7/12/2010 1:21:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-05

Tag: Measured: 7/12/2010 1:26:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-06

Tag: Measured: 7/12/2010 1:31:48 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-01

Tag: Measured: 7/12/2010 1:37:06 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-02

Tag: Measured: 7/12/2010 1:42:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-03

Tag: Measured: 7/12/2010 1:47:42 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-04 Tag: Measured: 7/12/2010 1:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-05 Tag: Measured: 7/12/2010 1:58:18 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-06 Tag: Measured: 7/12/2010 2:03:36 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-07 Tag: Measured: 7/12/2010 2:08:54 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-08 Tag: Measured: 7/12/2010 2:14:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-09 Tag: Measured: 7/12/2010 2:19:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83116-01 Tag: Measured: 7/12/2010 2:24:48 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83156-01 Tag: Measured: 7/12/2010 2:30:06 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: MEG/BRD 7/16/2010
Initials, Date

SREV: AS 7-16-10
Initials, Date

7/16/2010 10:04:41 AM 71610

KSJ 7/16/10

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: MEG
Date: 7/16/2010

Approved:
Date: 7-16-10

Analyst: MEG

Workgroup: 286012

Analysis Date: 7/15/2010

Sample type used: <2000

Extraction / Digestion / Analysis / Prep / Calc: 3050

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?	✓		
3. Were proper volumes of reagents used per final volume?	✓		
4. Was the proper sub-sample used (as received, <2000, <500, <250, dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?	✓		
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?			

Standard/Reagent	PCN/SCN	Expiration Date

Comments: _____

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# : 286012

Analyst: MEG
Date: 7/15/2010
Time In: 18:00
Time Out:

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	#DIV/0!			#DIV/0!
82974-1	1.221	4.279	4.265	#DIV/0!			#DIV/0!
82974-1 DUP	1.237	4.163	4.151	#DIV/0!			#DIV/0!
-2	1.244	3.219	3.208	#DIV/0!			#DIV/0!
-3	1.243	3.299	3.288	#DIV/0!			#DIV/0!
-4	1.225	4.512	4.500	#DIV/0!			#DIV/0!
-5	1.223	4.873	4.868	#DIV/0!			#DIV/0!
-6	1.229	3.615	3.606	#DIV/0!			#DIV/0!
82975-1	1.223	4.909	4.882	#DIV/0!			#DIV/0!
-2	1.220	4.623	4.600	#DIV/0!			#DIV/0!
-3	1.234	4.915	4.875	#DIV/0!			#DIV/0!
-4	1.237	3.646	3.634	#DIV/0!			#DIV/0!
-5	1.241	5.706	5.659	#DIV/0!			#DIV/0!
-6	1.245	5.756	5.701	#DIV/0!			#DIV/0!
-7	1.245	5.725	5.699	#DIV/0!			#DIV/0!
-8	1.248	4.705	4.689	#DIV/0!			#DIV/0!
-9	1.250	5.608	5.575	#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#VALUE!
				#DIV/0!			#VALUE!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 7/14/10 11 am
End Date/Time: 7/15/10

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE					7.5	5	5	50	0			
2	WG286012PBS2	NONE												
3	L82974-01	BG-10 0-2 COMP	₹2000			0.5								
4	L82974-01DUP	NONE												
5	L82974-02	BG-10 2-12 COMP												
6	L82974-02DUP	NONE												
7	L82974-03	BG-10 12-18 COMP												
8	L82974-03DUP	NONE												
9	L82974-04	BG-14 0-2 COMP												
10	L82974-05	BG-14-2-12 COMP												
11	L82974-06	BG-14 12-18 COMP												
12	L82975-01	BG-5 0-2 COMP												
13	L82975-02	BG-5 2-12 COMP												
14	L82975-03	BG-5 12-18 COMP												
15	L82975-04	BG-9 0-2 COMP												
16	L82975-05	BG-9 2-12 COMP												
17	L82975-06	BG-9 12-18 COMP												
18	L82975-07	BG-13 0-2 COMP												
19	L82975-08	BG-13 2-12 COMP												
20	L82975-09	BG-13 12-18 COMP												

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 11:33:08 AM 71610

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time:
End Date/Time:

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 11:33:08 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286012

Date Reported: 16-Jul-10
Run ID: R733812
Date Analyzed: 14-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

WG286012PBS1

Tag:

Measured: 7/14/2010 11:00:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	0	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

WG286012PBS2

Tag:

Measured: 7/14/2010 12:34:44 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	0	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

L82974-01

Tag:

Measured: 7/14/2010 2:09:28 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.54	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-01DUP

Tag:

Measured: 7/14/2010 3:44:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.54	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L82974-02

Tag:

Measured: 7/14/2010 5:18:56 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.44	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-02DUP

Tag:

Measured: 7/14/2010 6:53:40 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.44	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L82974-03

Tag:

Measured: 7/14/2010 8:28:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.46	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-03DUP

Tag:

Measured: 7/14/2010 10:03:08 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.46	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L82974-04

Tag:

Measured: 7/14/2010 11:37:52 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.63	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-05

Tag:

Measured: 7/15/2010 1:12:36 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.86	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-06

Tag:

Measured: 7/15/2010 2:47:20 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.62	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-01

Tag:

Measured: 7/15/2010 4:22:04 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.27	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-02

Tag:

Measured: 7/15/2010 5:56:48 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.32	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-03

Tag:

Measured: 7/15/2010 7:31:32 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.91	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-04

Tag:

Measured: 7/15/2010 9:06:16 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.5	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-05

Tag:

Measured: 7/15/2010 10:41:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.95	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-06

Tag:

Measured: 7/15/2010 12:15:44 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.78	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-07

Tag:

Measured: 7/15/2010 1:50:28 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.42	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-08

Tag:

Measured: 7/15/2010 3:25:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.54	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-09

Tag:

Measured: 7/15/2010 4:59:56 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.24	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG/BRD
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time: 07/14/2010 13:00
End Date/Time: 07/14/2010 14:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L82974-01	BG-10 0-2 COMP	Dry		07/14/10 13:00	7/14/2010	
2	L82974-02	BG-10 2-12 COMP	Dry		07/14/10 13:04	7/14/2010	
3	L82974-03	BG-10 12-18 COMP	Dry		07/14/10 13:08	7/14/2010	
4	L82974-04	BG-14 0-2 COMP	Dry		07/14/10 13:12	7/14/2010	
5	L82974-05	BG-14-2-12 COMP	Dry		07/14/10 13:17	7/14/2010	
6	L82974-06	BG-14 12-18 COMP	Dry		07/14/10 13:21	7/14/2010	
7	L82975-01	BG-5 0-2 COMP	Dry		07/14/10 13:25	7/14/2010	
8	L82975-02	BG-5 2-12 COMP	Dry		07/14/10 13:29	7/14/2010	
9	L82975-03	BG-5 12-18 COMP	Dry		07/14/10 13:34	7/14/2010	
10	L82975-04	BG-9 0-2 COMP	Dry		07/14/10 13:38	7/14/2010	
11	L82975-05	BG-9 2-12 COMP	Dry		07/14/10 13:42	7/14/2010	
12	L82975-06	BG-9 12-18 COMP	Dry		07/14/10 13:47	7/14/2010	
13	L82975-07	BG-13 0-2 COMP	Dry		07/14/10 13:51	7/14/2010	
14	L82975-08	BG-13 2-12 COMP	Dry		07/14/10 13:55	7/14/2010	
15	L82975-09	BG-13 12-18 COMP	Dry		07/14/10 13:59	7/14/2010	

Report Comments: _____

Internal Comments _____

AREV: MEG 7/14/2010
Initials, Date

SREV: BRD 7/16/10
Initials, Date

7/14/2010 7:46:22 PM 71610

KBS 7/19/10

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG/BRD
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time: 07/14/2010 13:00
End Date/Time: 07/14/2010 14:00

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 7:46:22 PM 71610

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: MEG
Date: 7/14/2010

Approved: BRD
Date: 7/16/10

Analyst: MEG

Workgroup: 286023

Analysis Date: 7/14/2010

Sample type used: DRY

Extraction / Digestion / Analysis / ~~Prep~~ Calc: SP- CP

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?			✓
3. Were proper volumes of reagents used per final volume?			✓
4. Was the proper sub-sample used (as received, <2000, <500, <250, (dry))?	✓		
5. Were the dilution factor calculation checked (final volume, weight, %solid)?			✓
6. Did the RPD pass? BRD 7/16/10	✓		✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments: _____

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time: 7/14/2010 13:00
End Date/Time: 7/14/2010 14:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L82974-01	BG-10 0-2 COMP	DRY		7/14/2010	7/14/2010	
2	L82974-02	BG-10 2-12 COMP					
3	L82974-03	BG-10 12-18 COMP					
4	L82974-04	BG-14 0-2 COMP					
5	L82974-05	BG-14-2-12 COMP					
6	L82974-06	BG-14 12-18 COMP					
7	L82975-01	BG-5 0-2 COMP					
8	L82975-02	BG-5 2-12 COMP					
9	L82975-03	BG-5 12-18 COMP					
10	L82975-04	BG-9 0-2 COMP					
11	L82975-05	BG-9 2-12 COMP					
12	L82975-06	BG-9 12-18 COMP					
13	L82975-07	BG-13 0-2 COMP					
14	L82975-08	BG-13 2-12 COMP					
15	L82975-09	BG-13 12-18 COMP					

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 12:48:15 PM 71610

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time:
End Date/Time:

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 12:48:15 PM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286023

Date Reported: 16-Jul-10
Run ID: R733455
Date Analyzed: 14-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L82974-01

Tag:

Measured: 7/14/2010 1:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-02

Tag:

Measured: 7/14/2010 1:04:17 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-03

Tag:

Measured: 7/14/2010 1:08:34 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-04

Tag:

Measured: 7/14/2010 1:12:51 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-05

Tag:

Measured: 7/14/2010 1:17:08 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-06

Tag:

Measured: 7/14/2010 1:21:25 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-01

Tag:

Measured: 7/14/2010 1:25:42 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-02

Tag:

Measured: 7/14/2010 1:29:59 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-03

Tag:

Measured: 7/14/2010 1:34:16 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-04

Tag:

Measured: 7/14/2010 1:38:33 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-05

Tag: Measured: 7/14/2010 1:42:50 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-06

Tag: Measured: 7/14/2010 1:47:07 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-07

Tag: Measured: 7/14/2010 1:51:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-08

Tag: Measured: 7/14/2010 1:55:41 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-09

Tag: Measured: 7/14/2010 1:59:58 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG286455

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 7/19/2010
Analysis Date: 7/20/2010
Start Time:
End Time:
Approved: MWM 7-26-10
Approved: MTB 7-26-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	WG286266PBS		0.5	9.0058	9.0548	0.0490	2.4500		21.95	0.51	0.35	1.55
2	WG286266LCSS	RC100624-2	0.5	9.0732	9.1256	0.0524	2.6200		21.95	42.67	2.65	1.44
3	L82974-01	BG-10 0-2 COM	0.49771	9.0528	9.0931	0.0403	2.0150		21.95	5.51	1.11	1.89
4	L82974-02	BG-10 2-12 CON	0.49722	9.0413	9.0849	0.0436	2.1800		21.95	7.62	1.25	1.75
5	L82974-03	BG-10 12-18 CO	0.49732	8.9539	8.9935	0.0396	1.9800		21.95	5.87	1.16	1.92
6	L82974-04	BG-14 0-2 COM	0.49817	9.0027	9.0459	0.0432	2.1600		21.95	5.42	1.06	1.76
7	L82974-05	BG-14-2-12 CON	0.49932	9.0671	9.123	0.0559	2.7950		21.95	5.64	0.95	1.36
8	L82974-06	BG-14 12-18 CO	0.49811	9.0476	9.097	0.0494	2.4700		21.95	5.63	1.01	1.54
9	L82975-01	BG-5 0-2 COMP	0.49634	9.0565	9.1004	0.0439	2.1950		21.95	8.36	1.32	1.74
10	L82975-02	BG-5 2-12 COM	0.49662	9.0593	9.1138	0.0545	2.7250		21.95	2.93	0.91	1.40
11	L82975-03	BG-5 12-18 CON	0.49457	9.023	9.0622	0.0392	1.9600		23.68	8.25	1.36	1.91
12	L82975-04	BG-9 0-2 COMP	0.49751	9.071	9.1157	0.0447	2.2350		23.68	8.11	1.26	1.66
13	L82975-05	BG-9 2-12 COM	0.49474	9.0836	9.1288	0.0452	2.2600		23.68	5.52	1.04	1.66
14	L82975-06	BG-9 12-18 CON	0.4939	9.105	9.1485	0.0435	2.1750		23.68	5.99	1.10	1.72
15	L82975-07	BG-13 0-2 COM	0.4971	9.0751	9.1163	0.0412	2.0600		23.68	4.24	0.96	1.81
16	L82975-08	BG-13 2-12 CON	0.49769	9.0832	9.1357	0.0525	2.6250		23.68	4.28	0.85	1.42
17	L82975-09	BG-13 12-18 CO	0.49621	9.1344	9.1851	0.0507	2.5350		23.68	3.42	0.79	1.47
18	L82974-01DUP		0.49771	9.057	9.101	0.0440	2.2000		23.68	5.44	1.05	1.69
19	L82974-02DUP		0.49722	9.0849	9.1329	0.0480	2.4000		23.68	4.67	0.95	1.55
20	L82974-03MS	RC100624-2	0.49732	9.0882	9.1322	0.0440	2.2000		23.68	50.85	3.21	1.69

Ra226 Decay Date:
Time:
Ba Correction Factor 0.05500
Counting Efficiency: 0.1700
Alpha BG Count @90min 0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

KBJ 7/29/10

ACZ Sample No.	GR CPM Alpha	Detector Alpha	BG CPM Alpha	NET CPM Alpha	Ingrow date & time	Count date & time	Ingrow Factor	Counting Efficiency	Fractional Yield	Detector #	BG alpha
WG286266PBS	0.1670	1	0.0422	0.1248	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.8909	1	0.0422
WG286266LCSS	11.1600	2	0.0556	11.1044	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.9527	2	0.0556
L82974-01	1.1440	3	0.0464	1.0976	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7327	3	0.0464
L82974-02	1.6890	4	0.0486	1.6404	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7927	4	0.0486
L82974-03	1.2000	5	0.0514	1.1486	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7200	5	0.0514
L82974-04	1.2000	6	0.0422	1.1578	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7855	6	0.0422
L82974-05	1.6330	7	0.0694	1.5636	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	1.0164	7	0.0694
L82974-06	1.4330	8	0.0569	1.3761	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.8982	8	0.0569
L82975-01	1.9110	9	0.1014	1.8096	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7982	9	0.1014
L82975-02	1.3440	10	0.5560	0.7880	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.9909	10	0.556
L82975-03	1.6670	1	0.0422	1.6248	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.7127		
L82975-04	1.8890	2	0.0556	1.8334	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8127		
L82975-05	1.3000	3	0.0464	1.2536	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8218		
L82975-06	1.3560	4	0.0486	1.3074	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.7909		
L82975-07	0.9330	5	0.0514	0.8816	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.7491		
L82975-08	1.1780	6	0.0422	1.1358	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.9545		
L82975-09	0.9440	7	0.0694	0.8746	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.9218		
L82974-01DUP	1.2670	8	0.0569	1.2101	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8000		
L82974-02DUP	1.2330	9	0.1014	1.1316	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8727		
L82974-03MS	11.8600	10	0.5560	11.3040	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8000		
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-26-10

Approved: MWB
Date: 7-26-10

Work Group: WG286455
Sample Type: Soil
Analysis Date: 7-20-10
Analyst: TCD
Prep Date: 7-19-10

Weekly background file: Back612
Daily background file: Back614

Alpha performance file: Perf412
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV**: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓✓		
8) Are samples flagged for INSX, if applicable?			✓✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓✓
10) Are all calculations based on the correct matrix?	✓✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓✓		
13) Are all associated WG benchsheets locked for editing?	✓✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286455

Date Reported: 26-Jul-10
Run ID: R735452
Date Analyzed: 20-Jul-10
ICAL Workgroup:
Instrument ID: LB770

WG286266PBS

Tag: Measured: 7/20/2010 12:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.51	1		pCi/g	++	1.6	0.35		

WG286266LCSS

Tag: Measured: 7/20/2010 12:03:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	43	1		pCi/g	++	1.4	2.7	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	89.9	1		%	++	1.4	2.7	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	1.4	2.7	RC100624-2	

L82974-01

Tag: Measured: 7/20/2010 12:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.5	1		pCi/g	++	1.9	1.1		

L82974-02

Tag: Measured: 7/20/2010 12:06:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	7.6	1		pCi/g	++	1.8	1.3		

L82974-03

Tag: Measured: 7/20/2010 12:07:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.9	1		pCi/g	++	1.9	1.2		

L82974-04

Tag: Measured: 7/20/2010 12:09:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.4	1		pCi/g	++	1.8	1.1		

L82974-05

Tag: Measured: 7/20/2010 12:10:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.6	1		pCi/g	++	1.4	0.95		

L82974-06

Tag: Measured: 7/20/2010 12:12:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.6	1		pCi/g	++	1.5	1		

L82975-01

Tag: Measured: 7/20/2010 12:13:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	8.4	1		pCi/g	++	1.7	1.3		

L82975-02

Tag: Measured: 7/20/2010 12:14:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.9	1		pCi/g	++	1.4	0.91		

L82975-03

Tag: Measured: 7/20/2010 12:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	8.3	1		pCi/g	++	1.9	1.4		

L82975-04

Tag: Measured: 7/20/2010 12:17:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	8.1	1		pCi/g	++	1.7	1.3		

L82975-05

Tag: Measured: 7/20/2010 12:19:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.5	1		pCi/g	++	1.7	1		

L82975-06

Tag: Measured: 7/20/2010 12:20:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	6	1		pCi/g	++	1.7	1.1		

L82975-07

Tag: Measured: 7/20/2010 12:22:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	4.2	1		pCi/g	++	1.8	0.96		

L82975-08

Tag: Measured: 7/20/2010 12:23:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	4.3	1		pCi/g	++	1.4	0.85		

L82975-09

Tag: Measured: 7/20/2010 12:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	3.4	1		pCi/g	++	1.5	0.79		

L82974-01DUP

Tag: Measured: 7/20/2010 12:26:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	5.4	1		pCi/g	++	1.7	1.1		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	0.06	1		%	++	2	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	1.8	1		pCi/g	++	1.7	1.1		

L82974-02DUP

Tag: Measured: 7/20/2010 12:27:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	4.7	1		pCi/g	++	1.6	0.95		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	1.8	1		%	++	2	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	47.2	1		pCi/g	ALRT	1.6	0.95		

L82974-03MS

Tag: Measured: 7/20/2010 12:29:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	51	1		pCi/g	++	1.7	3.2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	94.3	1		%	++	1.7	3.2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	1.7	3.2	RC100624-2	

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG286266

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: PREP

Analyst: tcd
Dept: 50
Prep Date: 7-19-10 10:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50									
2	LCSS											
3	L82974-01	BG-10 0-2 COMP										
4	L82974-02	BG-10 2-12 COMP										
5	L82974-03	BG-10 12-18 COMP										
6	L82974-04	BG-14 0-2 COMP										
7	L82974-05	BG-14-2-12 COMP										
8	L82974-06	BG-14 12-18 COMP										
9	L82975-01	BG-5 0-2 COMP										
10	L82975-02	BG-5 2-12 COMP										
11	L82975-03	BG-5 12-18 COMP										
12	L82975-04	BG-9 0-2 COMP										
13	L82975-05	BG-9 2-12 COMP										
14	L82975-06	BG-9 12-18 COMP										
15	L82975-07	BG-13 0-2 COMP										
16	L82975-08	BG-13 2-12 COMP										
17	L82975-09	BG-13 12-18 COMP										
18	DUP	74-01										
19	DUP	74-02										
20	MS	74-03										

Ra226 Decay Date:
Time:

Ba Correction Factor 0.05500
Counting Efficiency: 0.1700
Alpha BG Count @90min 0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

ingrowth
7-19-10
14:50

ACZ LABORATORIES, INC.
Standards/Reagents Information
wg286266
Water 9/19/2010 10:02 AM

ANALYST: _____

Second analyst: _____

DATE TIME of prep start: _____

PROJECT/WG: _____
Method Ra-226 9315 INSTR: LB770

Radioactive Standards

LCS & MS rc100624-2

Reagents

Barium Carrier:	rc100204-1	EDTA	rc100712-1
Sulfuric Acid	34642	Sulfuric Acid 0.1N	34642
Nitric Acid	35035	Ammonium sulfate	rc100616-1
lead carrier	rc100713-1	Acetic Acid	34657
Sodium hydroxide 10 N		Citric acid	rc100511-1

COMMENTS:

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
			0.00000			#DIV/0!
82974-01	0.995421844	0.5	0.49771	50	50	0.497711
82974-02	0.99443038	0.5	0.49722	50	50	0.497215
82974-03	0.994649805	0.5	0.49732	50	50	0.497325
82974-04	0.996349255	0.5	0.49817	50	50	0.498175
82974-05	0.998630137	0.5	0.49932	50	50	0.499315
82974-06	0.996227997	0.5	0.49811	50	50	0.498114
82975-01	0.992674986	0.5	0.49634	50	50	0.496337
82975-02	0.993241258	0.5	0.49662	50	50	0.496621
82975-03	0.989133388	0.5	0.49457	50	50	0.494567
82975-04	0.99501868	0.5	0.49751	50	50	0.497509
82975-05	0.989473684	0.5	0.49474	50	50	0.494737
82975-06	0.987807581	0.5	0.49390	50	50	0.493904
82975-07	0.994196429	0.5	0.49710	50	50	0.497098
82975-08	0.99537171	0.5	0.49769	50	50	0.497686
82975-09	0.992427719	0.5	0.49621	50	50	0.496214
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

Sample Measurement Parameters:
Comment: WG286266
User: tcd
Instrument Name: LB770-2
Preset Time: 90:00
Cycles: 1
Outlier warning disabled
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "1.5 hour"
Protocol ID: 6
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 90:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0422 (±0.0077)	0.0167	60
2	21.63	0.0556 (±0.0088)	0.0167	60.0
3	22.23	0.0464 (±0.0081)	0.0167	60.0
4	22.39	0.0486 (±0.0082)	0.0167	60.0
5	20.50	0.0514 (±0.0084)	0.0167	60.0
6	21.48	0.0422 (±0.0077)	0.0167	60.0
7	21.84	0.0694 (±0.0098)	0.0167	60.0
8	21.74	0.0569 (±0.0089)	0.0167	60.0
9	21.77	0.1014 (±0.0119)	0.0167	60.0
10	23.74	0.0556 (±0.0088)	0.0167	60.0

	Beta		
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	3.6006 (±0.0712)	0.0167	60
2	1.2639 (±0.0419)	0.0167	60.0
3	1.2792 (±0.0422)	0.0167	60.0
4	1.2250 (±0.0412)	0.0167	60.0
5	1.6167 (±0.0474)	0.0167	60.0
6	1.7112 (±0.0488)	0.0167	60.0
7	1.3000 (±0.0425)	0.0167	60.0
8	1.3653 (±0.0435)	0.0167	60.0
9	1.3559 (±0.0437)	0.0167	60.0
10	1.6833 (±0.0484)	0.0167	60.0

Cycle 1 of 1
Start Time: 7/20/2010 12:02:10

Elapsed Time: 90:00
Guard: 1173 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7291	pbs	0.167 (±25.8%)	0.0018	0.0007	10.31 (±3.46%)	0.0123	0.0059
2	7292	lcs	11.16 (±3.16%)	0.0020	0.0008	8.011 (±3.72%)	0.0087	0.0035
3	7293	L82974-01	1.144 (±9.85%)	0.0019	0.0007	3.189 (±5.90%)	0.0077	0.0035
4	7294	L82974-02	1.689 (±8.11%)	0.0019	0.0007	3.744 (±5.45%)	0.0076	0.0034
5	7295	L82974-03	1.200 (±9.62%)	0.0020	0.0007	3.256 (±5.84%)	0.0085	0.0039
6	7296	L82974-04	1.200 (±9.62%)	0.0018	0.0007	3.056 (±6.03%)	0.0087	0.0041
7	7297	L82974-05	1.633 (±8.25%)	0.0022	0.0008	4.033 (±5.25%)	0.0078	0.0035
8	7298	L82974-06	1.433 (±8.80%)	0.0020	0.0008	3.722 (±5.46%)	0.0079	0.0036
9	7299	L82975-01	1.911 (±7.62%)	0.0025	0.0010	3.456 (±5.67%)	0.0079	0.0036
10	7300	L82975-02	1.344 (±9.09%)	0.0020	0.0008	4.089 (±5.21%)	0.0087	0.0040

Sample Measurement Parameters:
Comment: WG286266
User: tcd
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 7/20/2010 13:46:29

Elapsed Time: 90:00
Guard: 1179 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7301	L82975-03	1.667 (±8.16%)	0.0018	0.0007	12.69 (±3.12%)	0.0123	0.0059
2	7302	L82975-04	1.889 (±7.67%)	0.0020	0.0008	4.056 (±5.23%)	0.0077	0.0035
3	7303	L82975-05	1.300 (±9.25%)	0.0019	0.0007	3.189 (±5.90%)	0.0077	0.0035
4	7304	L82975-06	1.356 (±9.05%)	0.0019	0.0007	3.700 (±5.48%)	0.0075	0.0034
5	7305	L82975-07	0.933 (±10.9%)	0.0020	0.0007	2.978 (±6.11%)	0.0085	0.0039
6	7306	L82975-08	1.178 (±9.71%)	0.0018	0.0007	3.456 (±5.67%)	0.0087	0.0041
7	7307	L82975-09	0.944 (±10.8%)	0.0022	0.0008	3.056 (±6.03%)	0.0077	0.0035
8	7308	L82974-01DUP	1.267 (±9.37%)	0.0020	0.0008	3.567 (±5.58%)	0.0079	0.0036
9	7309	L82974-02DUP	1.233 (±9.49%)	0.0025	0.0010	3.200 (±5.89%)	0.0079	0.0036
10	7310	L82974-03MS	11.86 (±3.06%)	0.0020	0.0008	9.378 (±3.44%)	0.0098	0.0040

ACZ Laboratories, Inc.
Thorium in Soil
ESM 4506

WG286554

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/20/2010
Analysis Date: 7/21/2010
Start Time:
End Time:
Approved: MWM 7-26-10
Approved: MCB 7-26-10

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g	Th232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
1	WG286328PBS		0.5	1.0000	9.52	662	0.696			0			0.25	13.5891	16.5900	3	-0.20	0.33	0.66			0	0.00	0.00	0.25
2	WG286328LC	RC091215-1	0.5	1.0000	9.52	718	0.755			0	0.00	0.00	0.23	9.5891	6542.5200	6533	172.98	4.51	0.60			0	0.00	0.00	0.23
3	L82974-01	BG-10 0-2 C	0.497718	1.0000	9.52	774	0.814			0	0.00	0.00	0.22	17.0000	74.5800	58	1.18	0.50	0.56			0	0.00	0.00	0.22
4	L82974-02	BG-10 2-12 (	0.497215	1.0000	9.52	799	0.840			0	0.00	0.00	0.21	16.4175	46.9900	31	0.50	0.40	0.55			0	0.00	0.00	0.21
5	L82974-03	BG-10 12-18	0.497325	1.0000	9.52	738	0.776			0	0.00	0.00	0.23	12.0000	84.2600	72	1.62	0.53	0.59			0	0.00	0.00	0.23
6	L82974-04	BG-14 0-2 C	0.496175	1.0000	9.52	734	0.772			0	0.00	0.00	0.23	7.4042	42.0900	35	0.65	0.38	0.59			0	0.00	0.00	0.23
7	L82974-05	BG-14-2-12 (	0.496315	1.0000	9.52	721	0.758			0	0.00	0.00	0.23	7.1716	44.1600	37	0.72	0.40	0.60			0	0.00	0.00	0.23
8	L82974-06	BG-14 12-18	0.496114	1.0000	9.52	721	0.758			0	0.00	0.00	0.23	8.4175	48.0000	40	0.79	0.42	0.60			0	0.00	0.00	0.23
9	L82975-01	BG-5 0-2 CC	0.496337	1.0000	9.52	280	0.294			0	0.00	0.00	0.60	13.5891	17.0000	3	-0.44	0.80	1.56			0	0.00	0.00	0.60
10	L82975-02	BG-5 2-12 C	0.496621	1.0000	9.52	713	0.750			0	0.00	0.00	0.23	18.1716	43.4200	25	0.41	0.44	0.61			0	0.00	0.00	0.23
11	L82975-03	BG-5 12-18 (	0.494567	1.0000	9.52	729	0.767			0	0.00	0.00	0.23	7.0000	37.5900	31	0.55	0.37	0.60			0	0.00	0.00	0.23
12	L82975-04	BG-9 0-2 CC	0.497509	1.0000	9.52	713	0.750			0	0.00	0.00	0.23	11.4109	37.0000	26	0.42	0.39	0.61			0	0.00	0.00	0.23
13	L82975-05	BG-9 2-12 C	0.494737	1.0000	9.52	695	0.731			0	0.00	0.00	0.24	6.0000	51.8200	46	1.00	0.44	0.63			0	0.00	0.00	0.24
14	L82975-06	BG-9 12-18 (	0.493904	1.0000	9.52	724	0.761			0	0.00	0.00	0.23	9.0000	52.5800	44	0.90	0.44	0.61			0	0.00	0.00	0.23
15	L82975-07	BG-13 0-2 C	0.497098	1.0000	9.52	698	0.734			0	0.00	0.00	0.24	10.0000	53.5900	44	0.93	0.46	0.63			0	0.00	0.00	0.24
16	L82975-08	BG-13 2-12 (	0.497686	1.0000	9.52	702	0.738			0	0.00	0.00	0.24	4.0000	41.4100	37	0.75	0.39	0.62			0	0.00	0.00	0.24
17	L82975-09	BG-13 12-18	0.496214	1.0000	9.52	727	0.764			0	0.00	0.00	0.23	9.5891	68.5900	59	1.30	0.49	0.60			0	0.00	0.00	0.23
18	L82974-01DUP		0.497711	1.0000	9.52	804	0.845			0	0.00	0.00	0.21	17.0000	70.4200	53	1.04	0.47	0.54			0	0.00	0.00	0.21
19	L82974-03DUP		0.497325	1.0000	9.52	767	0.806			0	0.00	0.00	0.22	16.4175	56.0000	40	0.74	0.45	0.57			0	0.00	0.00	0.22
20	L82974-02MS	RC091215-1	0.497215	1.0000	9.52	681	0.716			0	0.00	0.00	0.25	12.0000	5988.0700	5976	167.74	4.57	0.64			0	0.00	0.00	0.25
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC021.01.09.ver02

KSJ 7/26/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-26-10

Work Group: WG286554
Sample Type: Sol. d
Analysis Date: 7-21-10
Analyst: MWM
Prep Date: 7-20-10

Approved: MTB
Date: 7-26-10

Weekly background file: 7-15-10
Daily background file: 7-15-10

Alpha performance file: 7-15-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?			
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286554

Date Reported: 26-Jul-10
Run ID: R735535
Date Analyzed: 21-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286328PBS

Tag: Measured: 7/21/2010 9:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	-0.2	1		pCi/g	++	0.66	0.33		
SREV	THORIUM 232	FOUND	0	1		pCi/g	++	0.25	0		

WG286328LCSS

Tag: Measured: 7/21/2010 9:48:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	0.6	4.5	RC091215-1	
SREV	THORIUM 230	REC	104.9	1		%	++	0.6	4.5	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	0.6	4.5	RC091215-1	

L82974-01

Tag: Measured: 7/21/2010 9:49:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.22	0		TB
SREV	THORIUM 230	ESM-3050	1.2	1		pCi/g	++	0.56	0.5		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.22	0		TB

L82974-02

Tag: Measured: 7/21/2010 9:51:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.21	0		TB
SREV	THORIUM 230	ESM-3050	0.5	1		pCi/g	++	0.55	0.4		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.21	0		TB

L82974-03

Tag: Measured: 7/21/2010 9:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	1.6	1		pCi/g	++	0.59	0.53		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-04

Tag: Measured: 7/21/2010 9:54:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.65	1		pCi/g	++	0.59	0.38		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-05

Tag: Measured: 7/21/2010 9:55:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.72	1		pCi/g	++	0.6	0.4		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-06 Tag: **Measured: 7/21/2010 9:57:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.79	1		pCi/g	++	0.6	0.42		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-01 Tag: **Measured: 7/21/2010 9:58:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.6	0		TB
SREV	THORIUM 230	ESM-3050	-0.44	1		pCi/g	++	1.6	0.8		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.6	0		TB

L82975-02 Tag: **Measured: 7/21/2010 9:59:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.41	1		pCi/g	++	0.61	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-03 Tag: **Measured: 7/21/2010 10:01:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.55	1		pCi/g	++	0.6	0.37		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-04 Tag: **Measured: 7/21/2010 10:02:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.42	1		pCi/g	++	0.61	0.39		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-05 Tag: **Measured: 7/21/2010 10:04:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	1	1		pCi/g	++	0.63	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L82975-06 Tag: **Measured: 7/21/2010 10:05:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.9	1		pCi/g	++	0.61	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-07 Tag: **Measured: 7/21/2010 10:07:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.93	1		pCi/g	++	0.63	0.46		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L82975-08 Tag: Measured: 7/21/2010 10:08:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.75	1		pCi/g	++	0.62	0.39		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L82975-09 Tag: Measured: 7/21/2010 10:10:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	1.3	1		pCi/g	++	0.6	0.49		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-01DUP Tag: Measured: 7/21/2010 10:11:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0.21	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0.21	0		
SREV	THORIUM 230	FOUND	1	1		pCi/g	++	0.54	0.47		
SREV	THORIUM 230	RER	0.29	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	18.2	1		pCi/g	++	0.54	0.47		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0.21	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0.21	0		

L82974-03DUP Tag: Measured: 7/21/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0.22	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0.22	0		
SREV	THORIUM 230	FOUND	0.74	1		pCi/g	++	0.57	0.45		
SREV	THORIUM 230	RER	1.24	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	73.5	1		pCi/g	ALRT	0.57	0.45		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0.22	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0.22	0		

L82974-02MS Tag: Measured: 7/21/2010 10:14:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	0.64	4.6	RC091215-1	
SREV	THORIUM 230	REC	104.6	1		%	++	0.64	4.6	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	0.64	4.6	RC091215-1	

ACZ Laboratories, Inc.
Thorium in Soil
ESM 4506

WG286328

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-20-10 9:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g	Th232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50mL	1	0.00					0						0						0			
2	LCSS				0.00					0						0						0			
3	L82974-01	BG-10 0-2 COMP			0.00					0						0						0			
4	L82974-02	BG-10 2-12 C			0.00					0						0						0			
5	L82974-03	BG-10 12-18 COMP			0.00					0						0						0			
6	L82974-04	BG-14 0-2 COMP			0.00					0						0						0			
7	L82974-05	BG-14-2-12 COMP			0.00					0						0						0			
8	L82974-06	BG-14 12-18 COMP			0.00					0						0						0			
9	L82975-01	BG-5 0-2 COMP			0.00					0						0						0			
10	L82975-02	BG-5 2-12 COMP			0.00					0						0						0			
11	L82975-03	BG-5 12-18 COMP			0.00					0						0						0			
12	L82975-04	BG-9 0-2 COMP			0.00					0						0						0			
13	L82975-05	BG-9 2-12 COMP			0.00					0						0						0			
14	L82975-06	BG-9 12-18 COMP			0.00					0						0						0			
15	L82975-07	BG-13 0-2 COMP			0.00					0						0						0			
16	L82975-08	BG-13 2-12 COMP			0.00					0						0						0			
17	L82975-09	BG-13 12-18 COMP			0.00					0						0						0			
18	DUP 4-01				0.00					0						0						0			
19	DUP 4-03				0.00					0						0						0			
20	MS 4-02				0.00					0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC021.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Radium 226 903.1
Water

wg286328 7/20/2010 8:03 AM

ANALYST:
Second analyst:
DATE TIME of prep start:

PROJECT/WG:
Method

INSTR: Octete

Approved:

Radioactive Standards

LCS & MS 091215-1

Tracer 100322-1

Reagents

Iron chloride 100701-1	Nitric Acid —	Ammonium Hydroxide. 34092/34804
HCl 35120	Nitric Acid (2N) 33035	Cerous Flouride substrate 100527-3
TOPO 100708-1	Sulfuric Acid 0.3N 33273	Ethanol 33789
Cerium solution 100720-1	HF 33549	

COMMENTS:
Filter broke @ step 11.21 for Sx #9

RCTHOR-S.xls

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
			0.00000			#DIV/0!
82974-01	0.995421844	0.5	0.49771	50	50	0.497711
82974-02	0.99443038	0.5	0.49722	50	50	0.497215
82974-03	0.994649805	0.5	0.49732	50	50	0.497325
82974-04	0.996349255	0.5	0.49817	50	50	0.498175
82974-05	0.998630137	0.5	0.49932	50	50	0.499315
82974-06	0.996227997	0.5	0.49811	50	50	0.498114
82975-01	0.992674986	0.5	0.49634	50	50	0.496337
82975-02	0.993241258	0.5	0.49662	50	50	0.496621
82975-03	0.989133388	0.5	0.49457	50	50	0.494567
82975-04	0.99501868	0.5	0.49751	50	50	0.497509
82975-05	0.989473684	0.5	0.49474	50	50	0.494737
82975-06	0.987807581	0.5	0.49390	50	50	0.493904
82975-07	0.994196429	0.5	0.49710	50	50	0.497098
82975-08	0.99537171	0.5	0.49769	50	50	0.497686
82975-09	0.992427719	0.5	0.49621	50	50	0.496214
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:50PM 7/21/2010

Analyst: ORTEC

Sample

Sample: WG286328 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

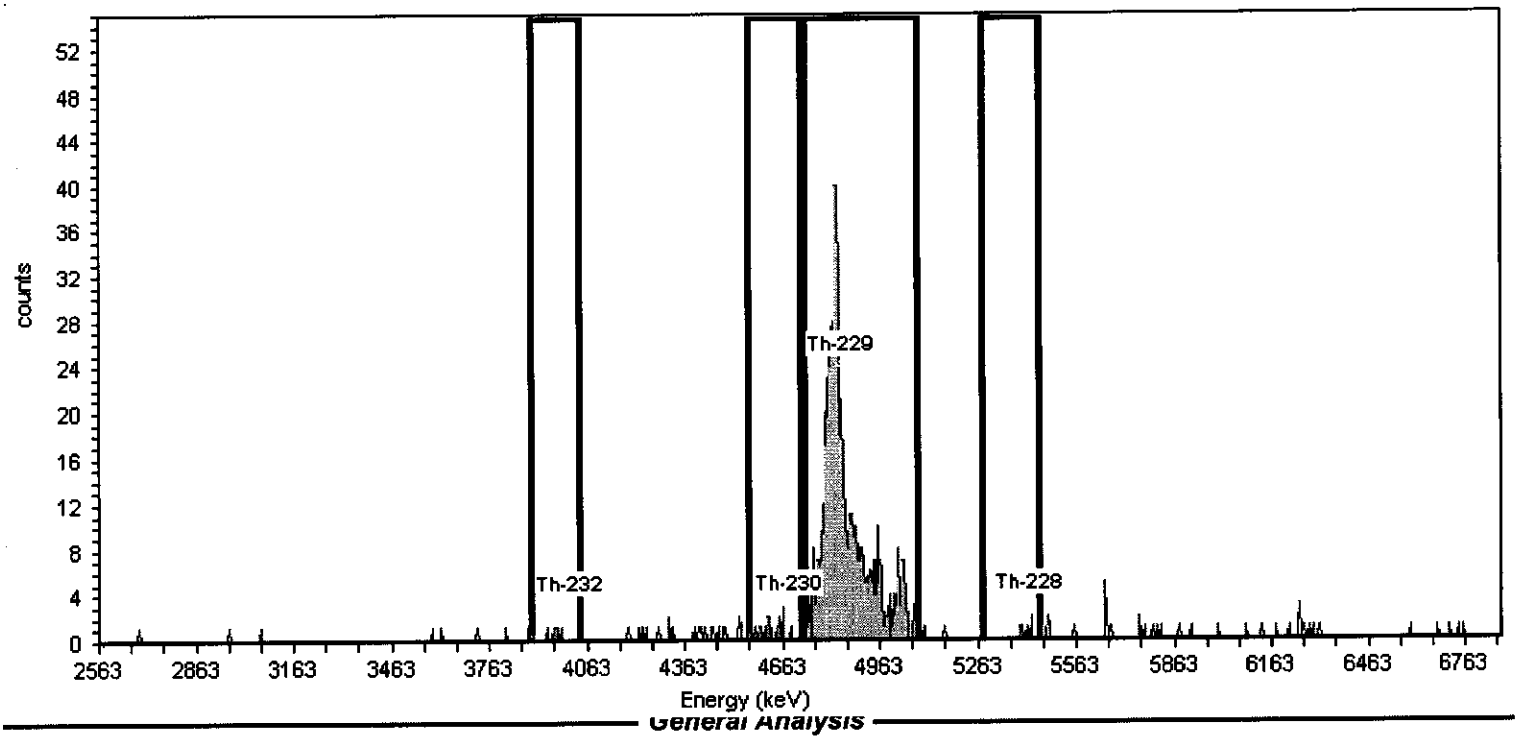
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 130.72%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/21/2010 9:47:40AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	.000	100.0	5.82	2.0000	4	5.466E-002	1.207E-001	4.710E-002	1.329E-001
Th-230	4687.000	4561.000	4717.000	64.223	99.7	16.59	13.5891	3	4.308E-002	2.368E-001	1.231E-001	2.851E-001
Th-229	4845.000	4737.000	5080.000	47.675	99.6	675.33	13.0000	662	1.244E+001	1.556E+000	1.206E-001	2.800E-001
Th-228	5423.000	5280.000	5453.000	48.925	99.4	5.12	14.0000	-9	0.000E+000	1.910E-001	1.254E-001	2.897E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:53PM 7/21/2010

Analyst: ORTEC

Sample

Sample: WG286328 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

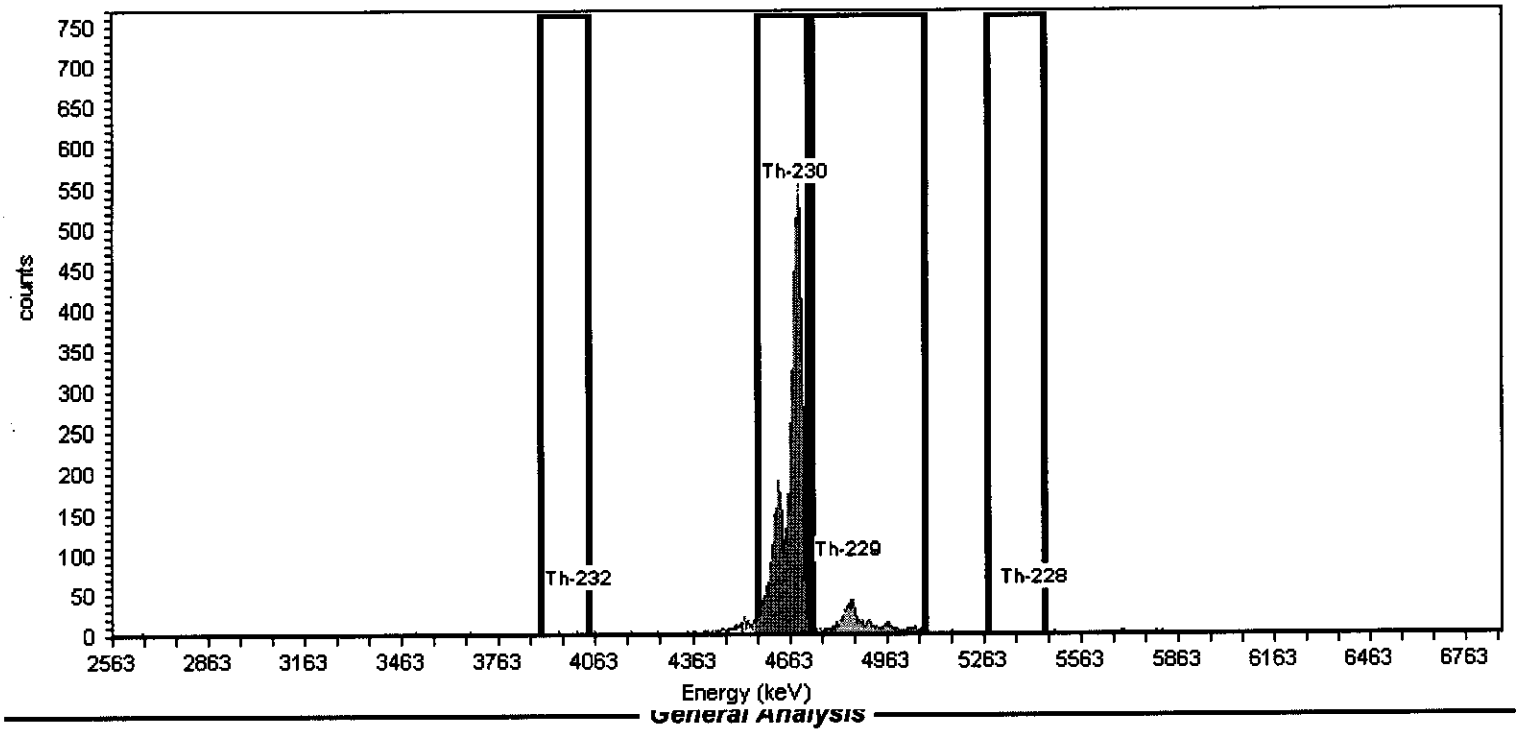
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.66%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/21/2010 9:47:42AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	46.696	100.0	11.96	6.0409	6	7.815E-002	1.689E-001	7.551E-002	1.867E-001
Th-230	4687.000	4561.000	4717.000	17.946	99.7	6,542.52	9.5891	6,533	8.653E+001	1.895E+001	9.542E-002	2.267E-001
Th-229	4845.000	4737.000	5080.000	51.371	99.6	729.01	11.0000	718	1.358E+001	1.632E+000	1.023E-001	2.405E-001
Th-228	5423.000	5280.000	5453.000	5.763	99.4	5.00	4.0000	1	1.328E-002	1.196E-001	6.181E-002	1.596E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:57PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

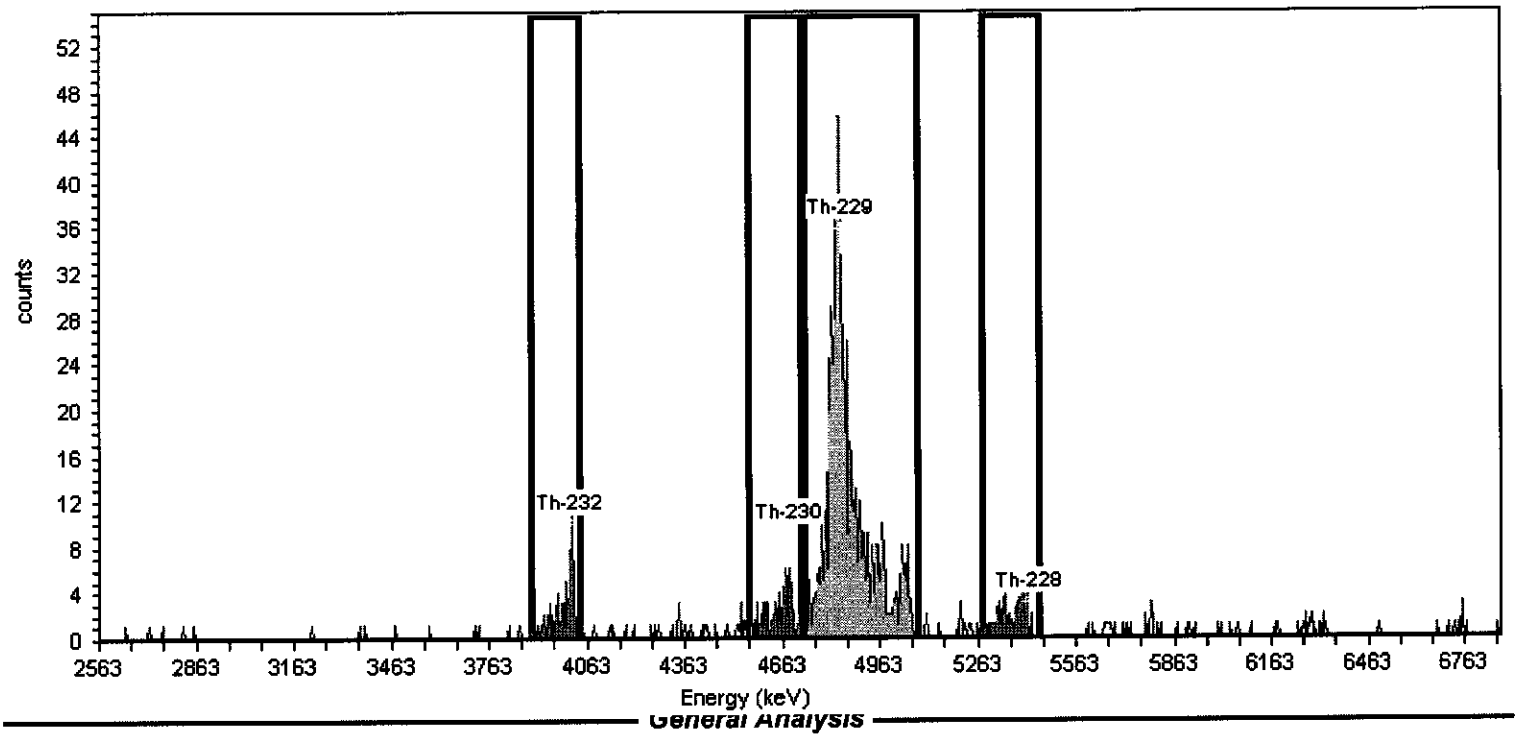
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.38%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/21/2010 9:47:27AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	24.016	99.7	74.58	17.0000	58	7.071E-001	3.835E-001	1.178E-001	2.688E-001
Th-229	4845.000	4737.000	5080.000	48.645	99.6	784.33	10.0000	774	1.403E+001	1.623E+000	9.045E-002	2.142E-001
Th-228	5423.000	5280.000	5453.000	94.035	99.4	67.09	9.0000	58	7.156E-001	3.566E-001	8.597E-002	2.053E-001
Th-232	4010.000	3893.000	4040.000	6.818	100.0	66.82	6.8182	60	7.347E-001	3.520E-001	7.438E-002	1.819E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:49:01PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

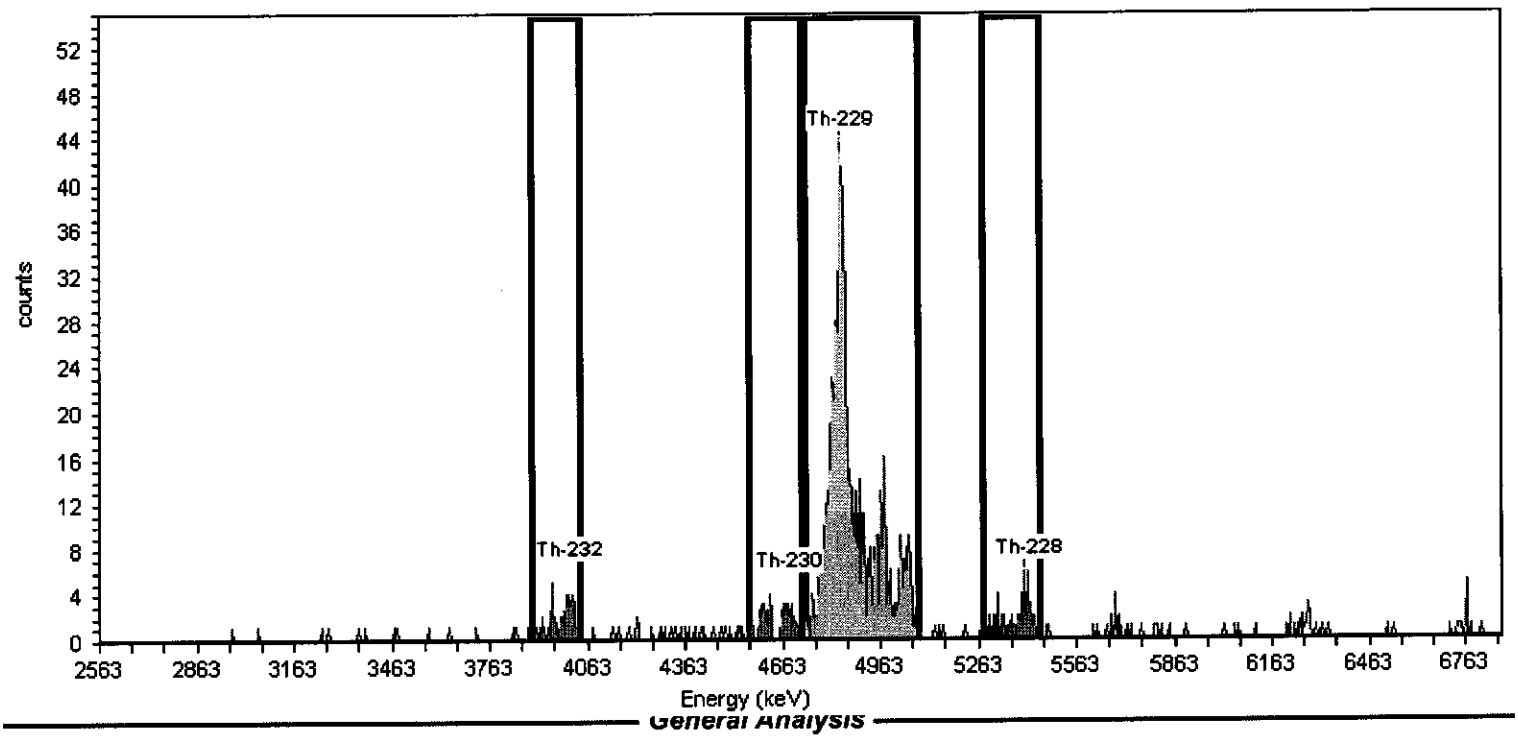
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 158.20%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/21/2010 9:47:28AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	19.208	100.0	48.00	3.0000	45	5.338E-001	2.784E-001	4.780E-002	1.277E-001
Th-230	4687.000	4561.000	4717.000	30.192	99.7	46.99	16.4175	31	3.638E-001	2.946E-001	1.121E-001	2.565E-001
Th-229	4845.000	4737.000	5080.000	43.785	99.6	813.34	14.0000	799	1.506E+001	1.728E+000	1.037E-001	2.396E-001
Th-228	5423.000	5280.000	5453.000	43.479	99.4	52.00	14.9095	37	4.426E-001	3.076E-001	1.072E-001	2.467E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:11PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

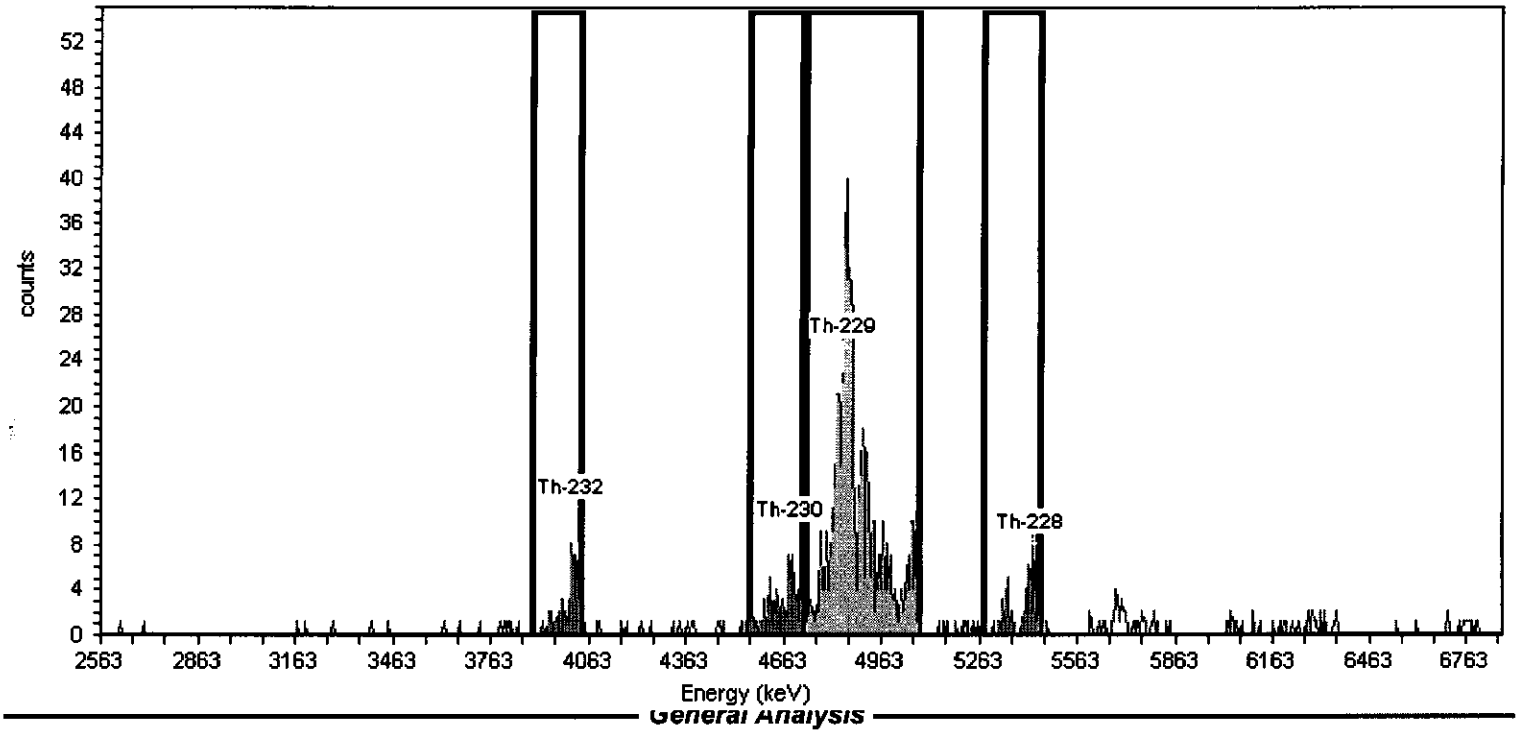
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.21%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/21/2010 9:47:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	28.217	100.0	68.96	3.0000	66	8.471E-001	3.741E-001	5.175E-002	1.382E-001
Th-230	4687.000	4561.000	4717.000	20.603	99.7	84.26	12.0000	72	9.308E-001	4.287E-001	1.038E-001	2.425E-001
Th-229	4845.000	4737.000	5080.000	49.836	99.6	752.65	14.3369	738	1.363E+001	1.622E+000	1.136E-001	2.621E-001
Th-228	5423.000	5280.000	5453.000	13.216	99.4	69.86	12.7944	57	7.373E-001	3.864E-001	1.075E-001	2.500E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:23PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

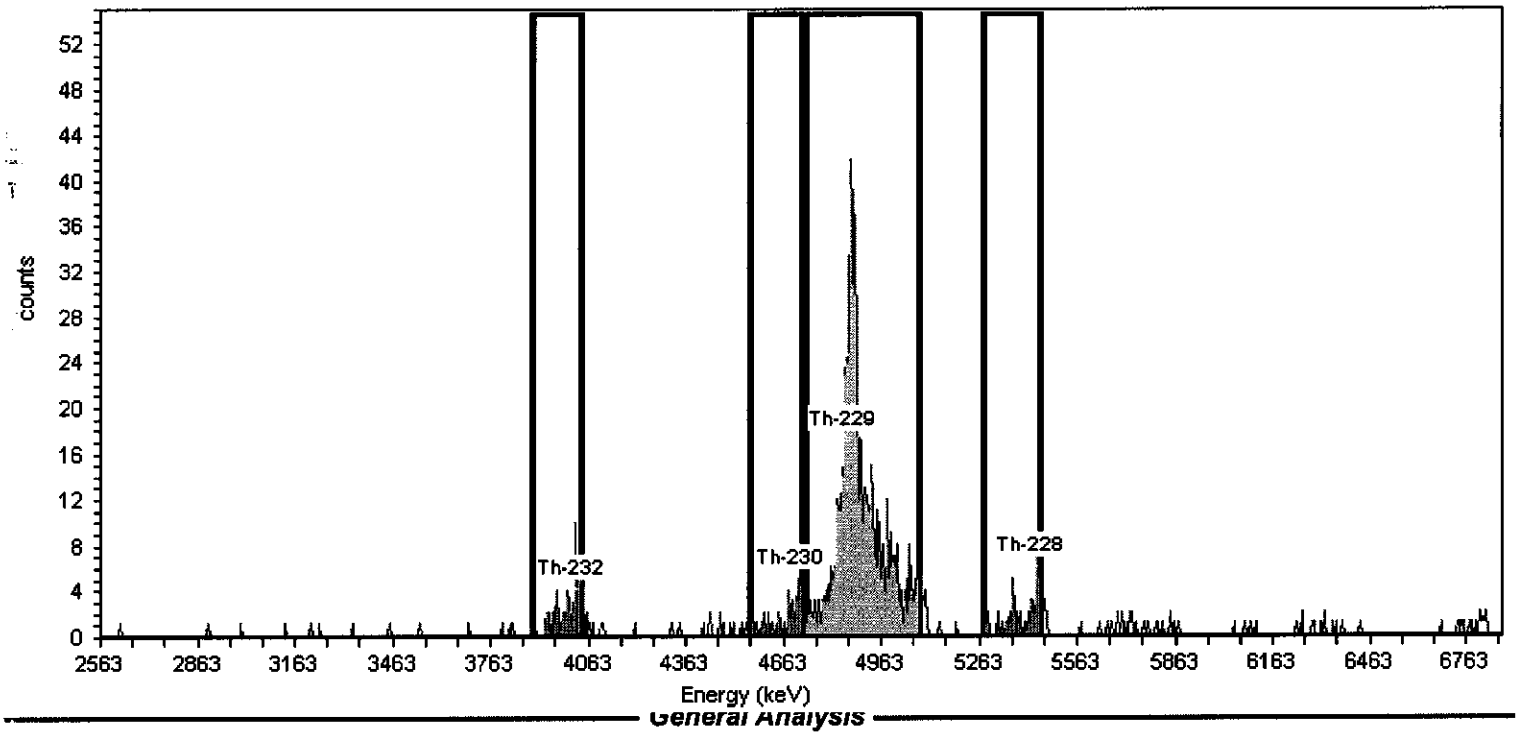
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.72%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/21/2010 9:47:33AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	29.747	99.7	42.09	7.4042	35	4.494E-001	2.900E-001	8.202E-002	1.991E-001
Th-229	4845.000	4737.000	5080.000	45.838	99.6	743.99	10.0000	734	1.368E+001	1.625E+000	9.542E-002	2.259E-001
Th-228	5423.000	5280.000	5453.000	13.615	99.4	59.63	9.8849	50	6.465E-001	3.535E-001	9.505E-002	2.253E-001
Th-232	4010.000	3893.000	4040.000	7.498	100.0	66.98	4.9591	62	8.011E-001	3.711E-001	6.692E-002	1.688E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:30PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

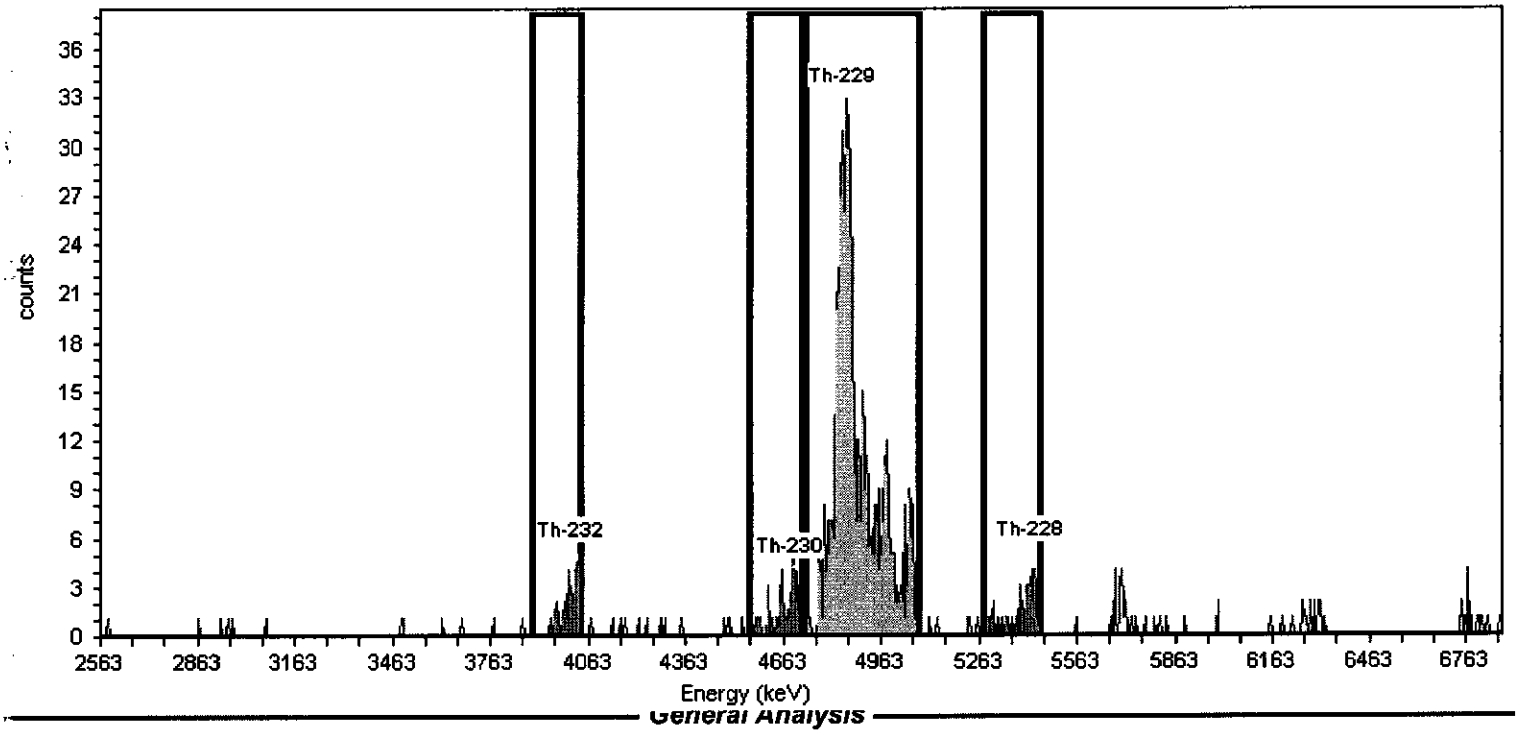
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 145.92%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/21/2010 9:47:35AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	81.940	100.0	46.92	0.9591	46	6.044E-001	3.025E-001	2.996E-002	9.551E-002
Th-230	4687.000	4561.000	4717.000	26.123	99.7	44.16	7.1716	37	4.880E-001	3.024E-001	8.218E-002	2.000E-001
Th-229	4845.000	4737.000	5080.000	58.634	99.6	729.65	8.6631	721	1.389E+001	1.663E+000	9.041E-002	2.166E-001
Th-228	5423.000	5280.000	5453.000	15.233	99.4	45.00	9.0000	36	4.763E-001	3.092E-001	9.233E-002	2.205E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:38PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

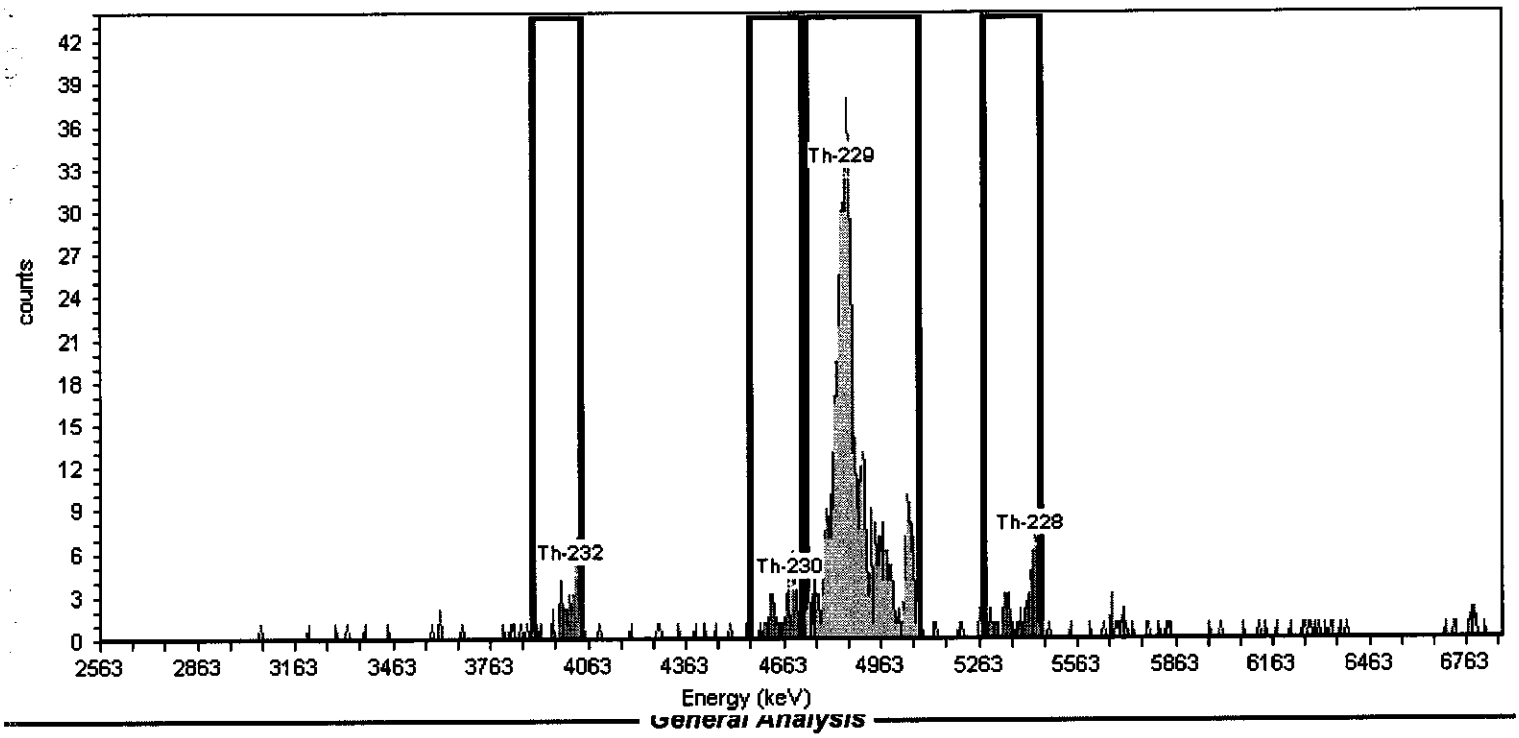
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 139.91%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/21/2010 9:47:37AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	18.033	100.0	51.70	1.0000	51	6.670E-001	3.207E-001	3.061E-002	9.682E-002
Th-230	4687.000	4561.000	4717.000	16.642	99.7	48.00	8.4175	40	5.223E-001	3.180E-001	8.907E-002	2.138E-001
Th-229	4845.000	4737.000	5080.000	53.191	99.6	736.66	16.0000	721	1.332E+001	1.606E+000	1.229E-001	2.816E-001
Th-228	5423.000	5280.000	5453.000	13.925	99.4	63.12	9.0000	54	7.163E-001	3.710E-001	9.238E-002	2.206E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:23AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

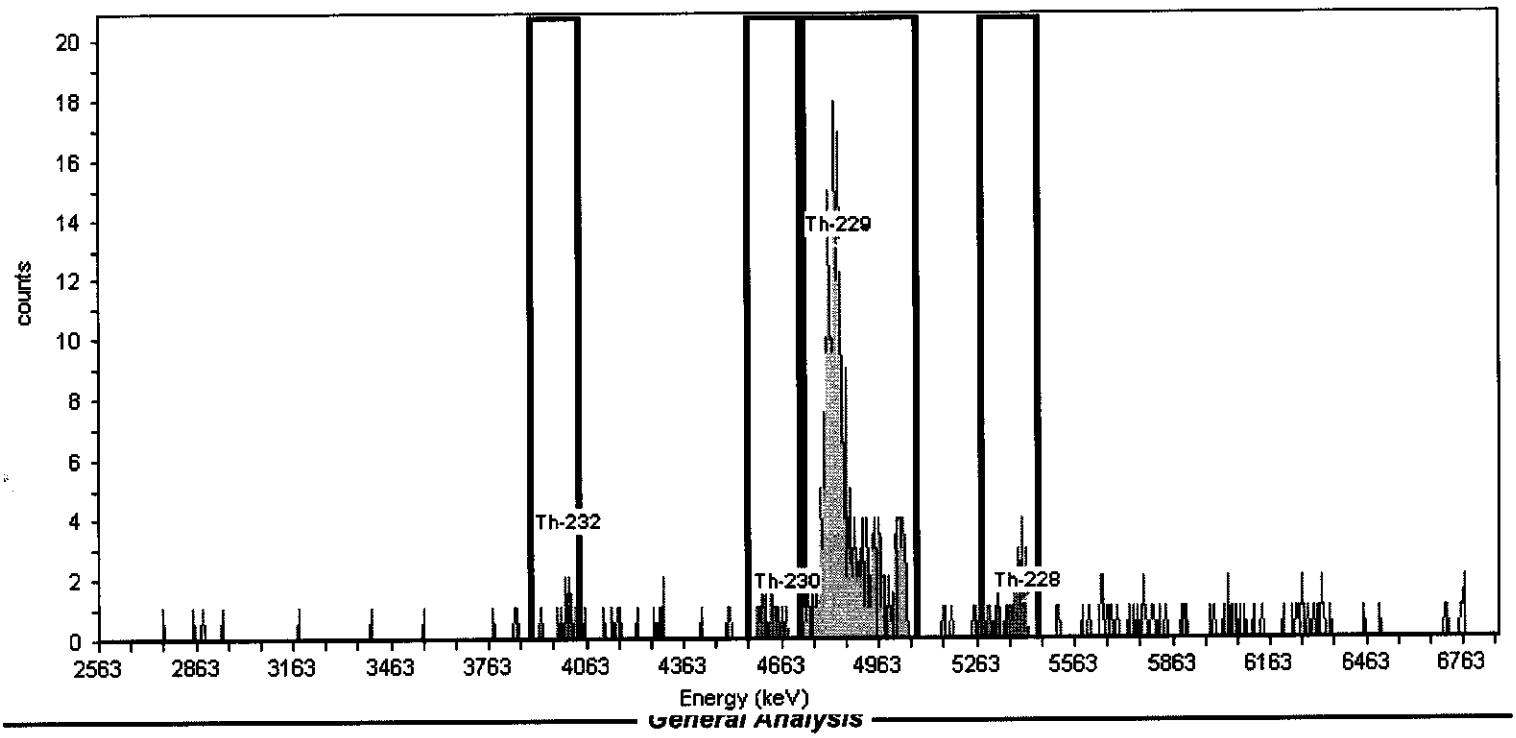
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 55.26%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/21/2010 3:26:34PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	37.459	100.0	12.00	2.0000	10	3.386E-001	3.903E-001	1.114E-001	3.144E-001
Th-230	4687.000	4561.000	4717.000	57.294	99.7	17.00	13.5891	3	1.158E-001	5.644E-001	2.913E-001	6.745E-001
Th-229	4845.000	4737.000	5080.000	56.538	99.6	293.00	13.0000	280	5.261E+000	1.007E+000	2.852E-001	6.624E-001
Th-228	5423.000	5280.000	5453.000	43.170	99.4	30.88	14.0000	17	5.752E-001	7.011E-001	2.965E-001	6.853E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:41:00PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

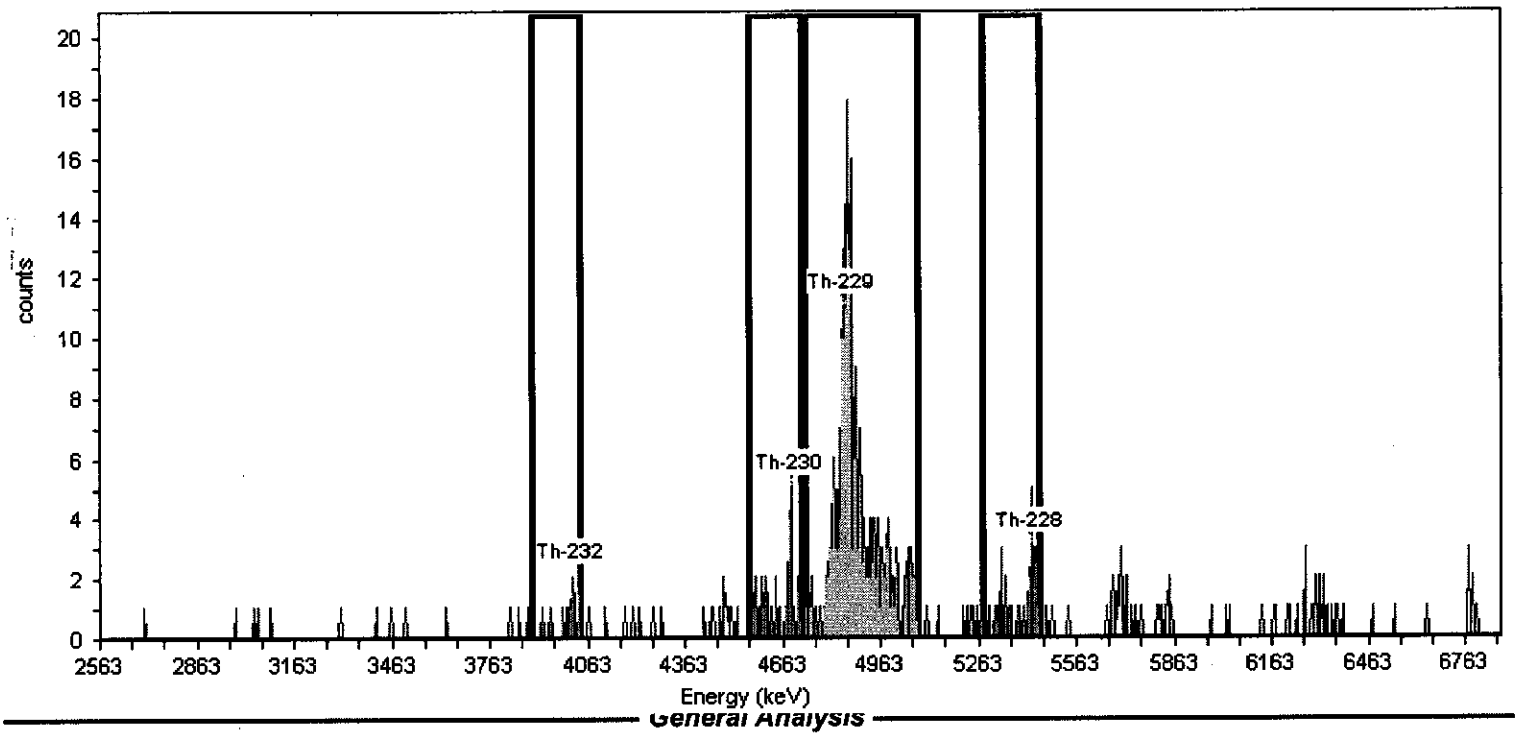
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 50.69%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/22/2010 3:40:57PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/22/2010 3:40:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	18.637	100.0	13.00	3.0000	10	3.628E-001	4.461E-001	1.462E-001	3.905E-001
Th-230	4687.000	4561.000	4717.000	6.546	99.7	33.42	12.0000	21	7.793E-001	7.647E-001	2.932E-001	6.850E-001
Th-229	4845.000	4737.000	5080.000	39.424	99.6	275.69	14.3369	261	4.826E+000	9.616E-001	3.209E-001	7.403E-001
Th-228	5423.000	5280.000	5453.000	18.376	99.4	31.00	12.7944	18	6.645E-001	7.462E-001	3.037E-001	7.062E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:03PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

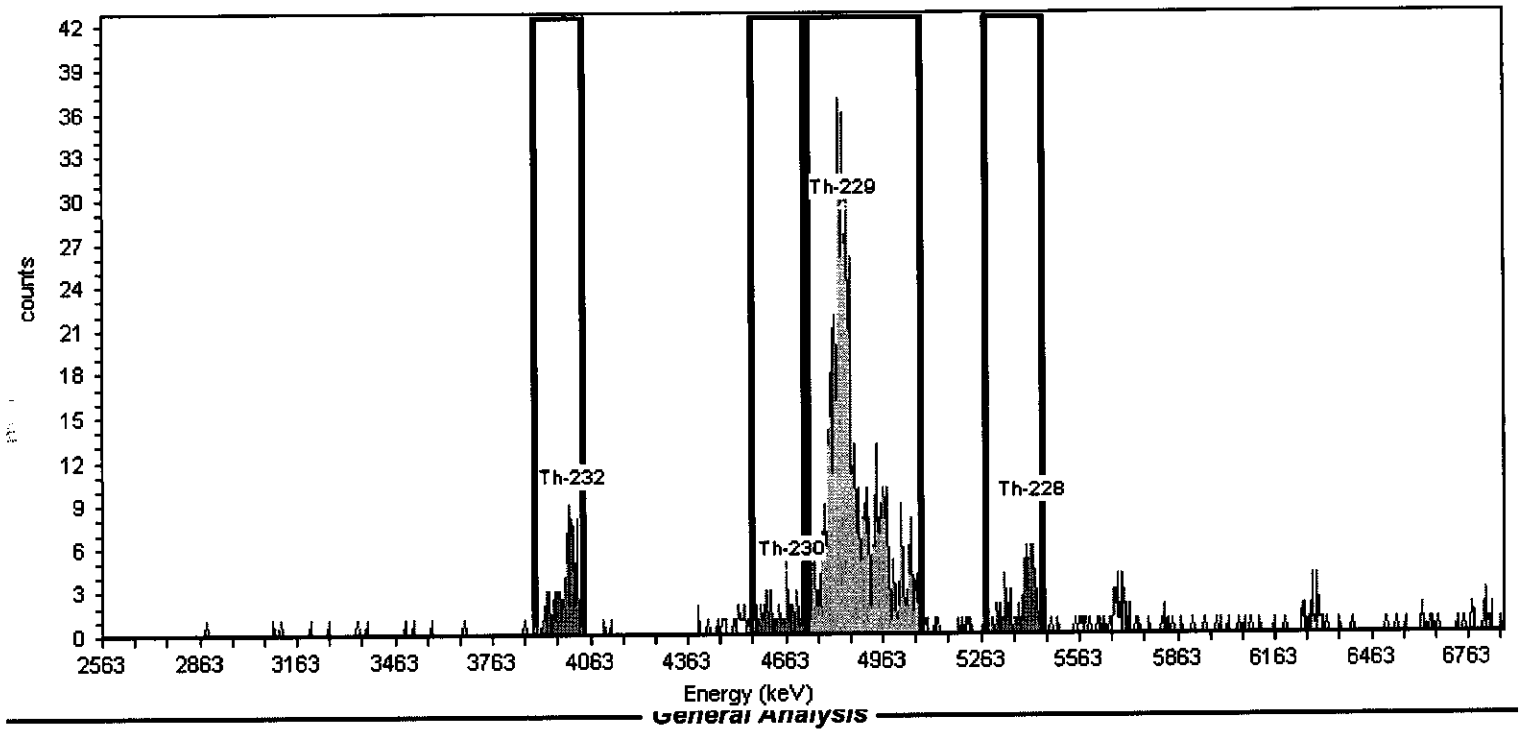
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 150.98%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/21/2010 9:47:40AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	22.199	100.0	87.82	4.0000	84	1.114E+000	4.521E-001	6.184E-002	1.597E-001
Th-230	4687.000	4561.000	4717.000	6.959	99.7	43.42	18.1716	25	3.366E-001	3.223E-001	1.322E-001	3.005E-001
Th-229	4845.000	4737.000	5080.000	56.665	99.6	729.33	16.0000	713	1.437E+001	1.749E+000	1.242E-001	2.845E-001
Th-228	5423.000	5280.000	5453.000	34.983	99.4	73.00	14.0000	59	7.890E-001	4.114E-001	1.164E-001	2.690E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:16:50PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

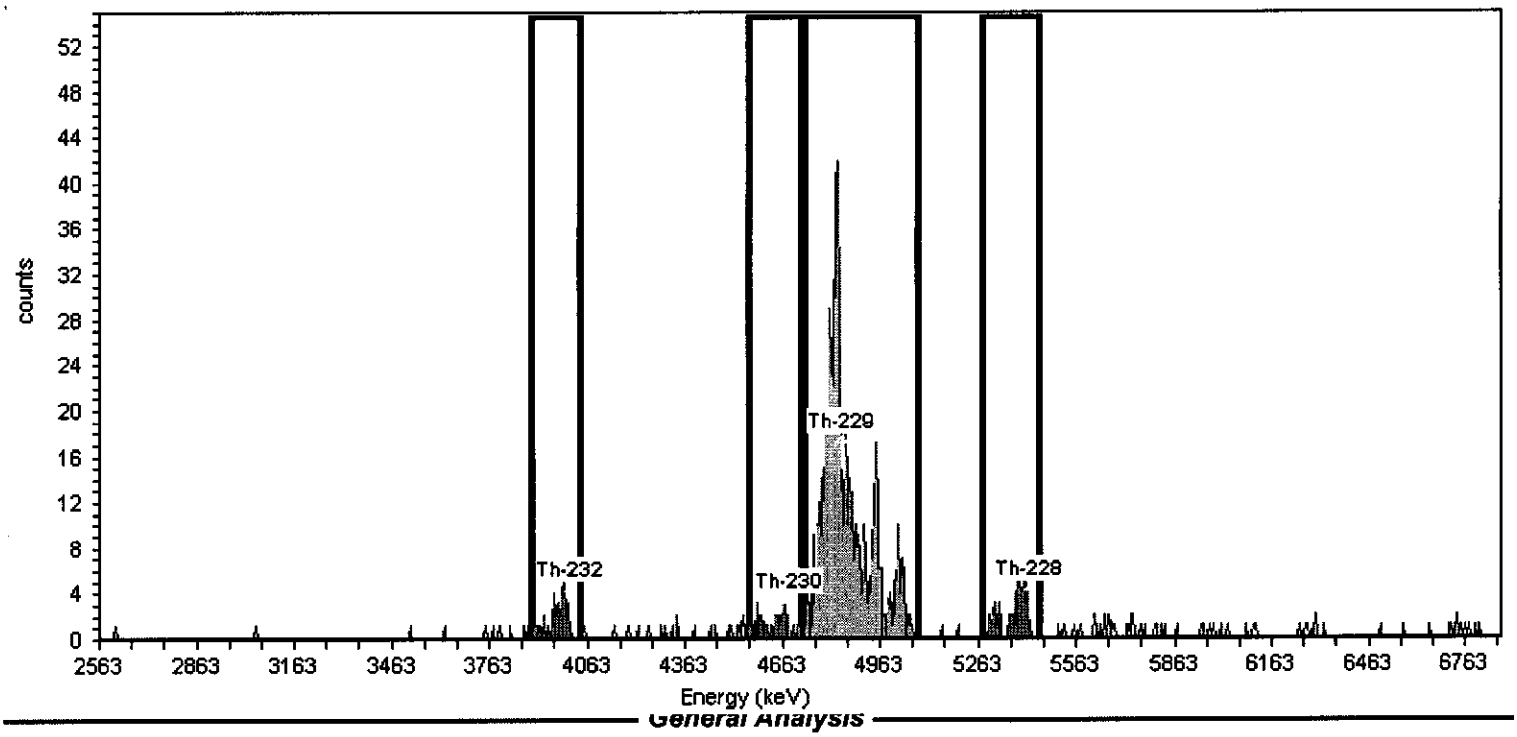
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.28%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/21/2010 9:47:42AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	46.376	100.0	44.18	0.0000	44	5.744E-001	2.900E-001	0.000E+000	3.518E-002
Th-230	4687.000	4561.000	4717.000	117.053	99.7	37.59	7.0000	31	3.989E-001	2.750E-001	8.026E-002	1.958E-001
Th-229	4845.000	4737.000	5080.000	49.207	99.6	744.65	15.3369	729	1.402E+001	1.683E+000	1.189E-001	2.732E-001
Th-228	5423.000	5280.000	5453.000	41.549	99.4	69.00	18.1151	51	6.655E-001	3.934E-001	1.295E-001	2.944E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:17:12PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

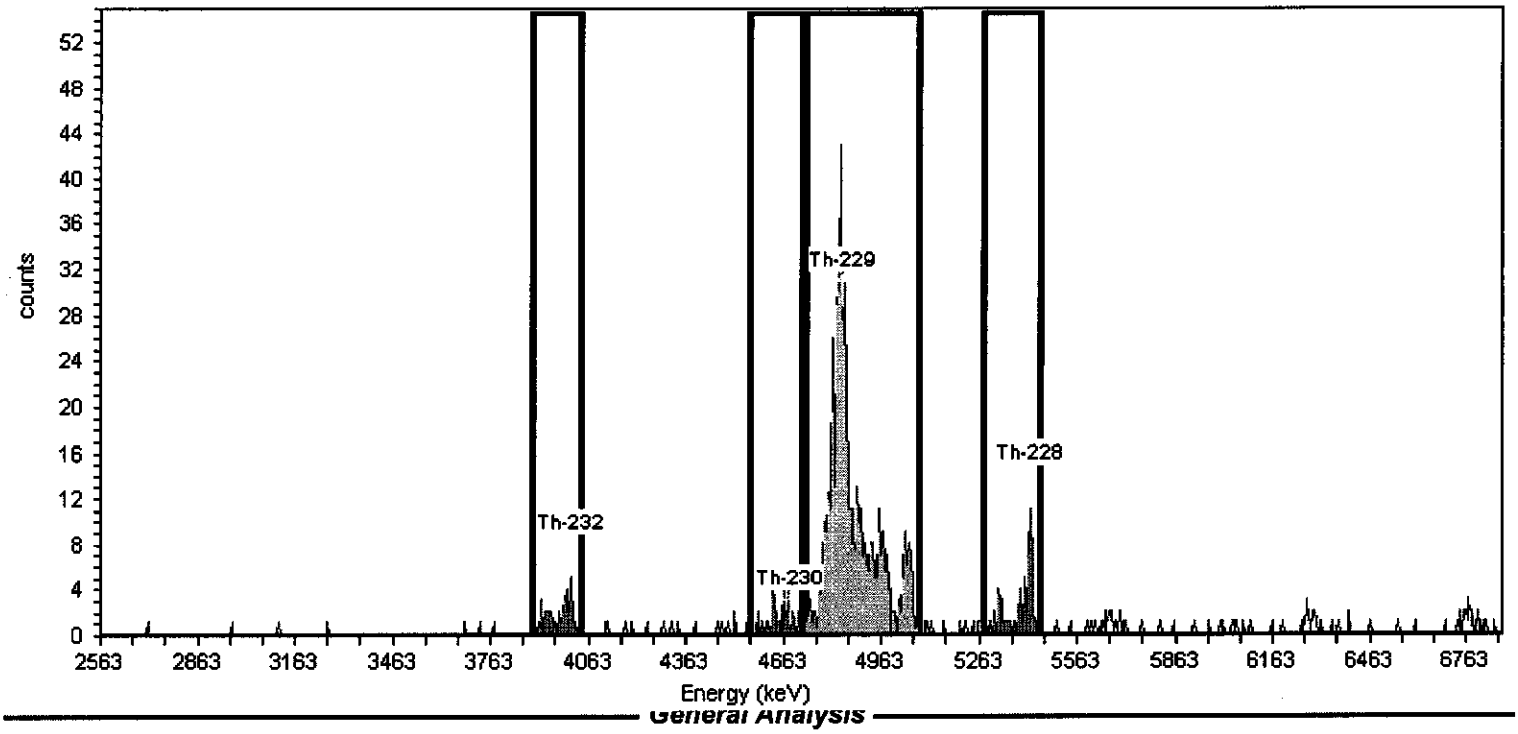
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.81%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/21/2010 9:47:28AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	90.666	100.0	49.96	3.0000	47	6.245E-001	3.202E-001	5.358E-002	1.432E-001
Th-230	4687.000	4561.000	4717.000	64.326	99.7	37.00	11.4109	26	3.413E-001	2.880E-001	1.048E-001	2.457E-001
Th-229	4845.000	4737.000	5080.000	43.493	99.6	727.66	14.6748	713	1.360E+001	1.647E+000	1.190E-001	2.741E-001
Th-228	5423.000	5280.000	5453.000	32.139	99.4	78.00	18.1809	60	8.003E-001	4.300E-001	1.327E-001	3.016E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:07PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

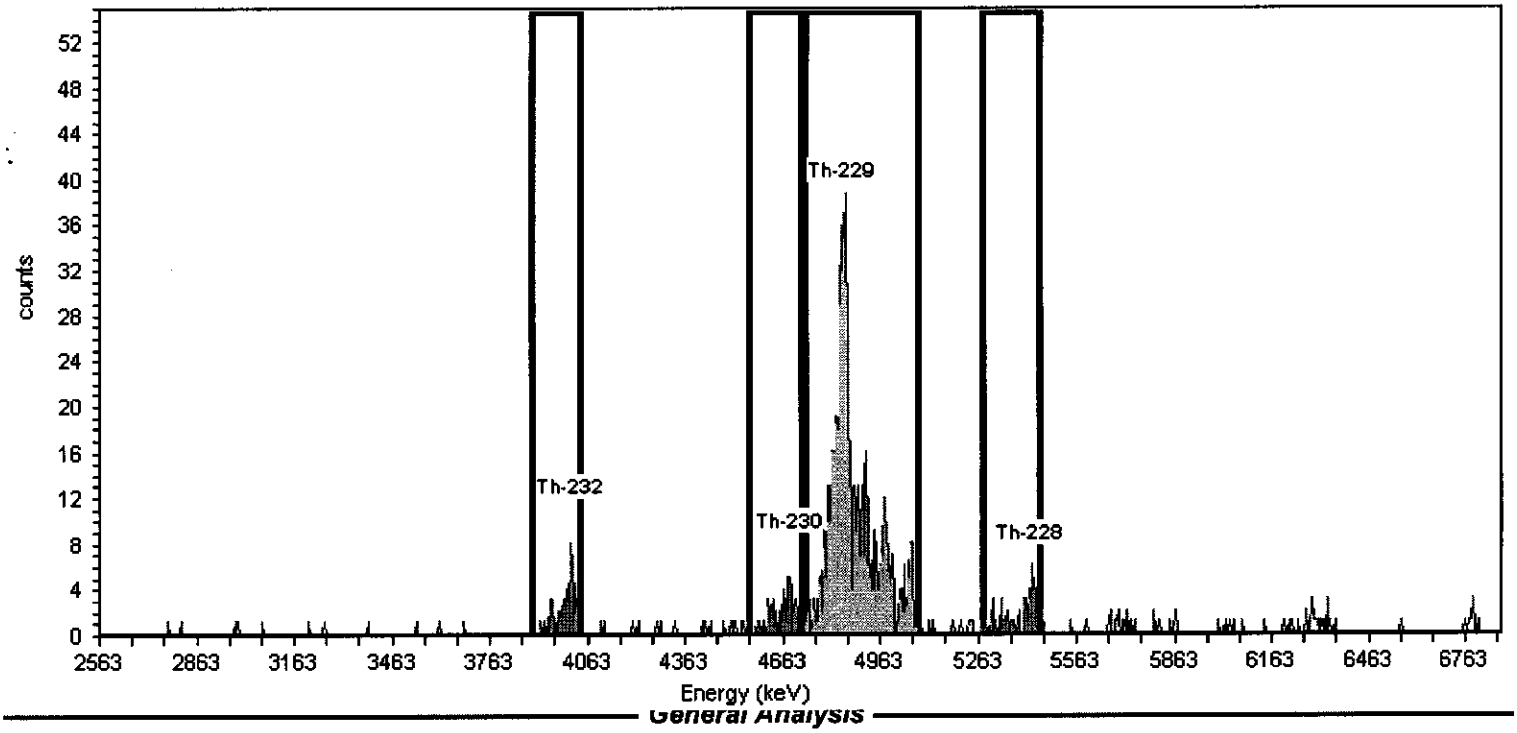
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 150.18%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/21/2010 9:47:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	10.614	100.0	60.00	1.0000	59	8.053E-001	3.645E-001	3.175E-002	1.004E-001
Th-230	4687.000	4561.000	4717.000	16.927	99.7	51.82	6.0000	46	6.273E-001	3.407E-001	7.801E-002	1.931E-001
Th-229	4845.000	4737.000	5080.000	44.687	99.6	702.66	8.0000	695	1.430E+001	1.746E+000	9.018E-002	2.174E-001
Th-228	5423.000	5280.000	5453.000	17.176	99.4	54.00	9.0000	45	6.179E-001	3.534E-001	9.583E-002	2.288E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:34PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

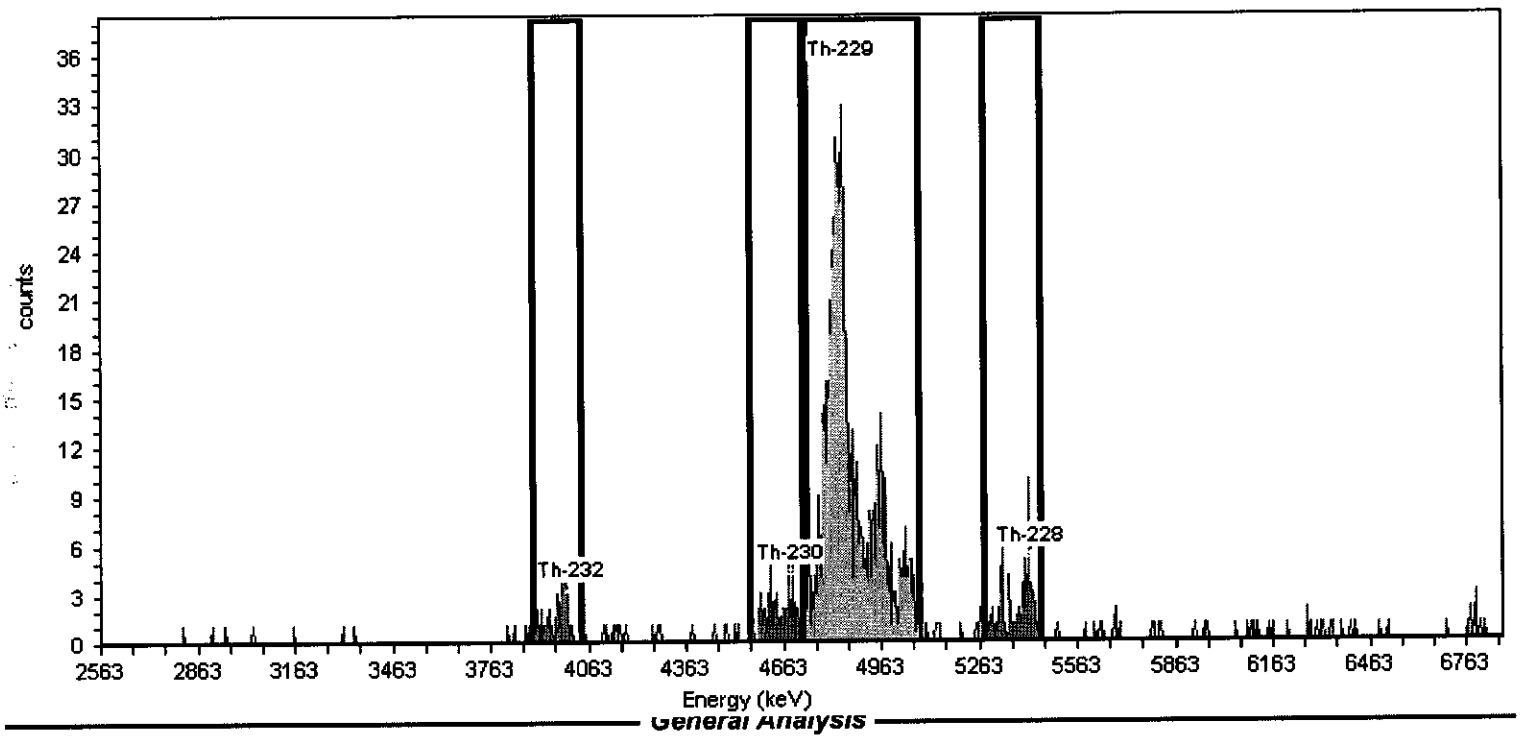
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.19%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/21/2010 9:47:33AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	29.600	100.0	38.14	1.0000	37	4.862E-001	2.670E-001	3.045E-002	9.633E-002
Th-230	4687.000	4561.000	4717.000	7.086	99.7	52.58	9.0000	44	5.722E-001	3.327E-001	9.163E-002	2.188E-001
Th-229	4845.000	4737.000	5080.000	58.640	99.6	729.31	5.0000	724	1.363E+001	1.619E+000	6.837E-002	1.723E-001
Th-228	5423.000	5280.000	5453.000	34.305	99.4	70.09	10.7944	59	7.809E-001	3.930E-001	1.007E-001	2.370E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:27PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

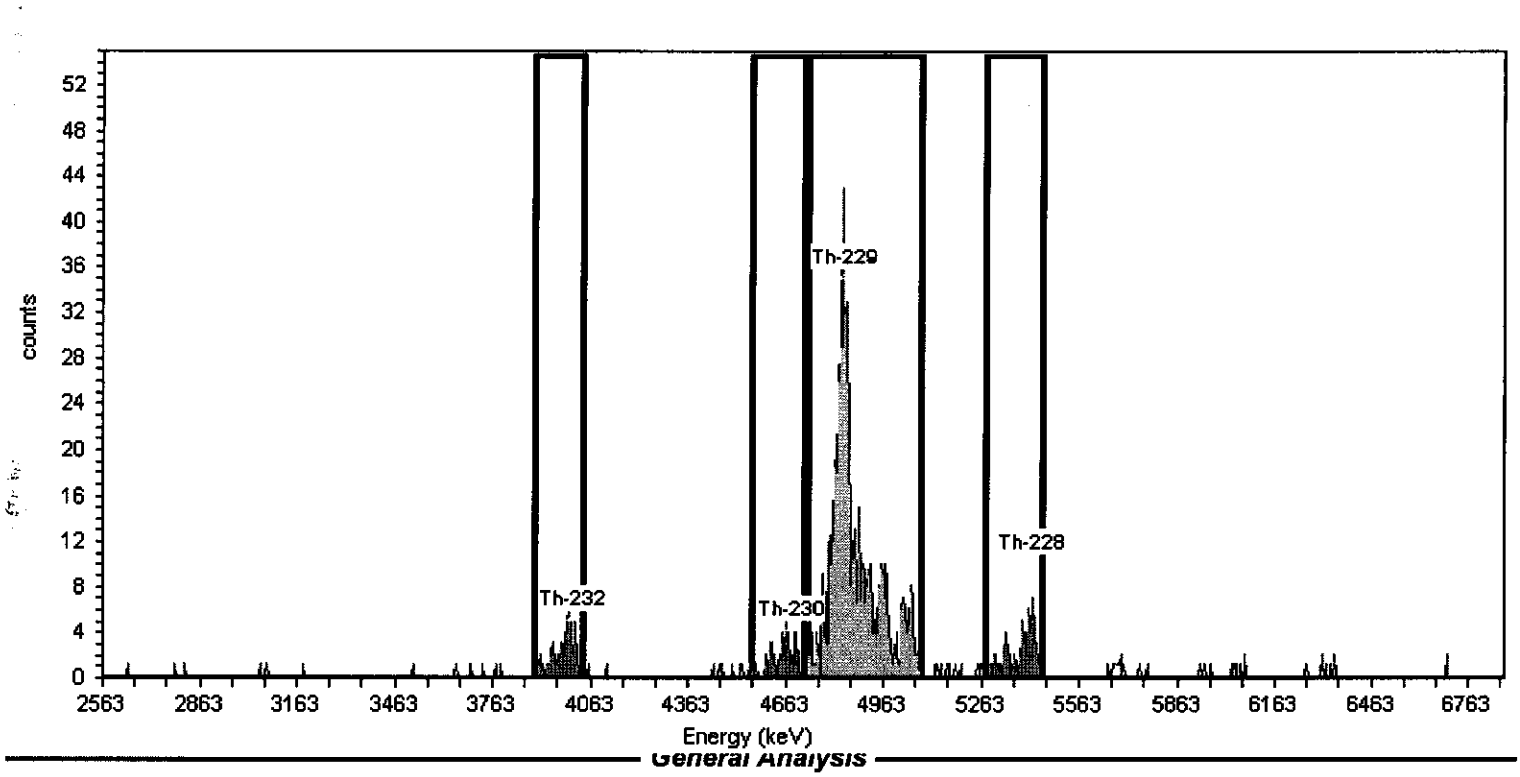
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.13%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/21/2010 9:47:36AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	35.124	100.0	65.00	5.0409	60	8.141E-001	3.838E-001	7.092E-002	1.786E-001
Th-230	4687.000	4561.000	4717.000	45.766	99.7	53.59	10.0000	44	5.936E-001	3.502E-001	1.002E-001	2.372E-001
Th-229	4845.000	4737.000	5080.000	45.043	99.6	706.34	8.0000	698	1.363E+001	1.655E+000	8.970E-002	2.163E-001
Th-228	5423.000	5280.000	5453.000	42.513	99.4	78.00	12.8849	65	8.894E-001	4.356E-001	1.141E-001	2.651E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:42PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

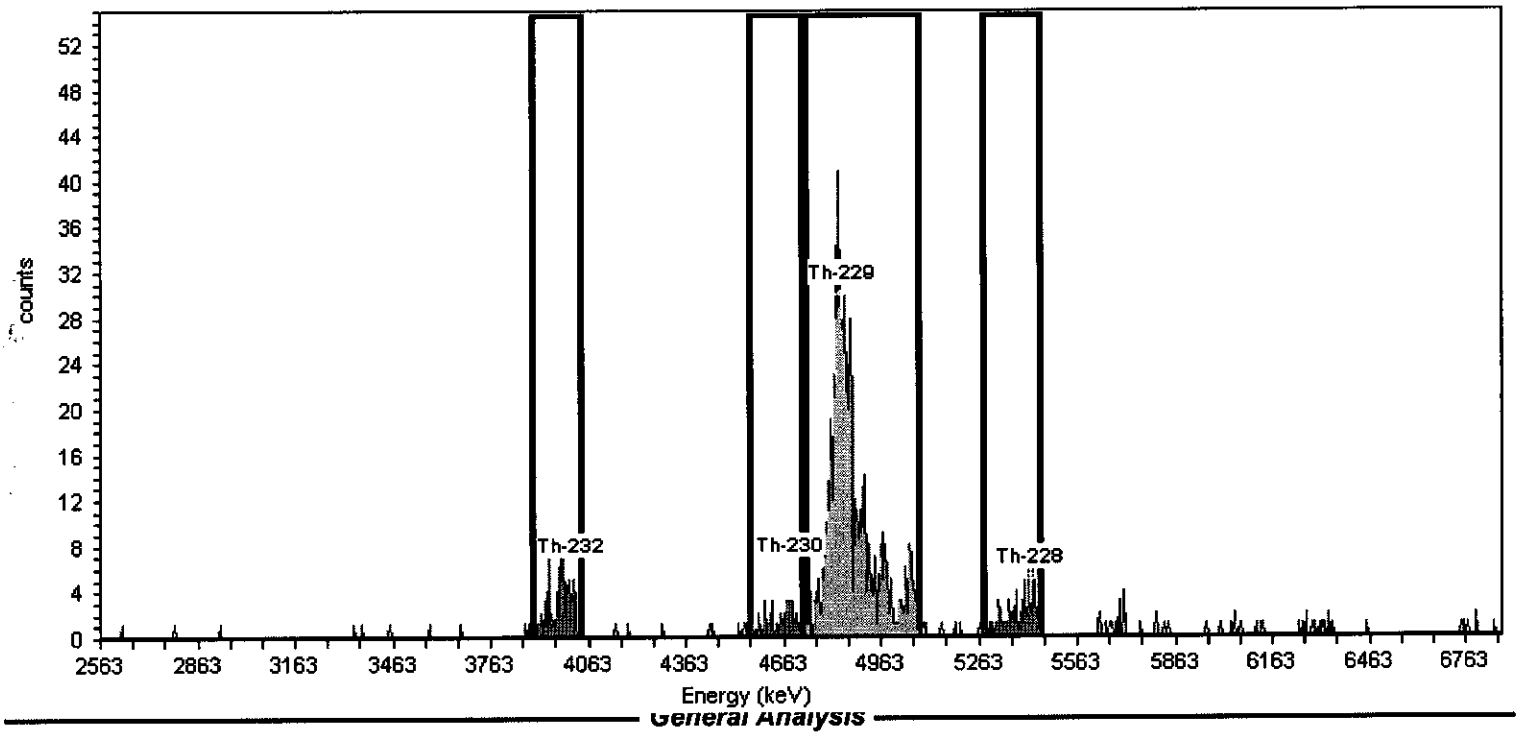
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 138.30%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/21/2010 9:47:38AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	49.357	100.0	78.00	0.0000	78	1.053E+000	4.258E-001	0.000E+000	3.653E-002
Th-230	4687.000	4561.000	4717.000	15.415	99.7	41.41	4.0000	37	5.066E-001	2.948E-001	6.300E-002	1.626E-001
Th-229	4845.000	4737.000	5080.000	63.103	99.6	708.34	6.0000	702	1.317E+001	1.588E+000	7.724E-002	1.912E-001
Th-228	5423.000	5280.000	5453.000	9.115	99.4	71.91	1.1151	71	9.615E-001	4.054E-001	3.336E-002	1.035E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:31AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

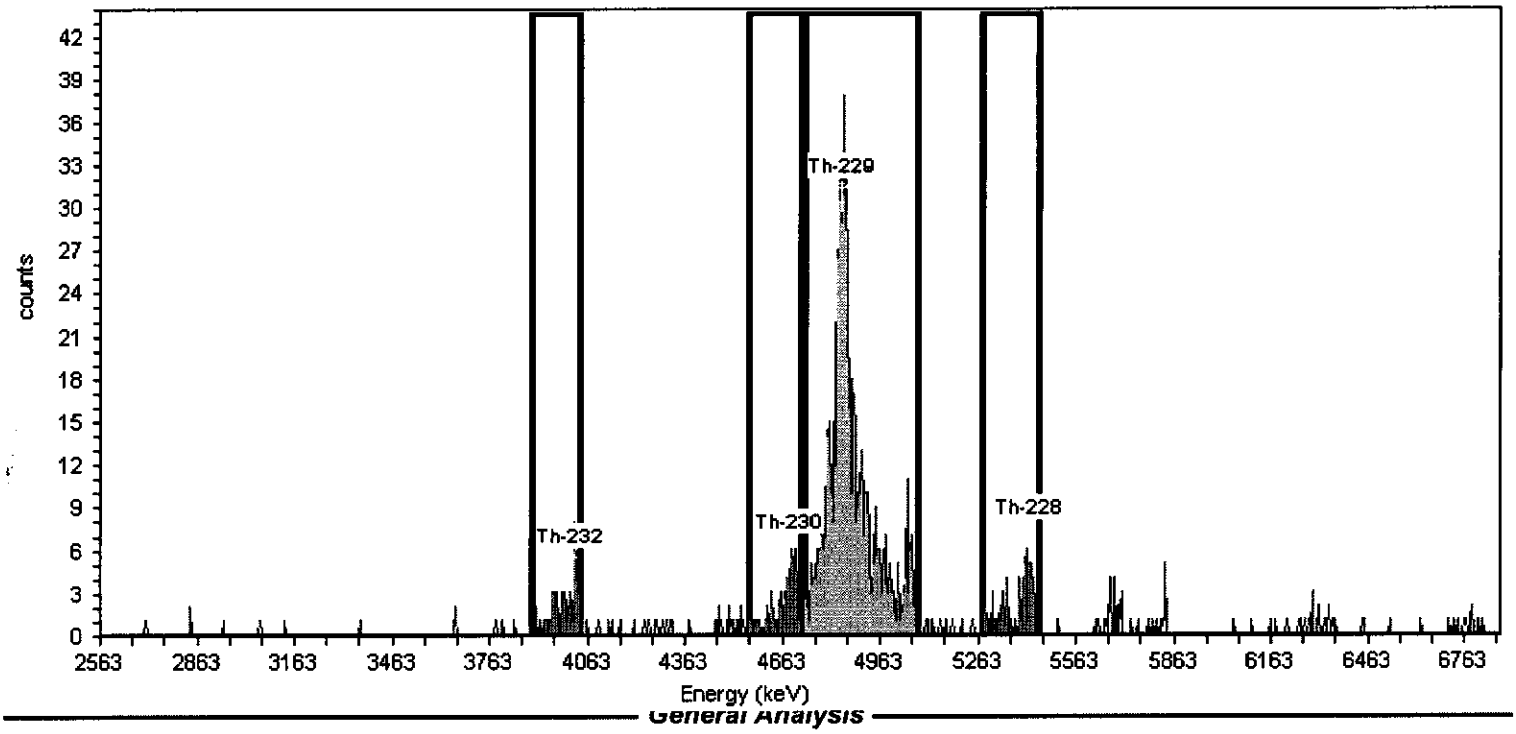
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 144.51%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/21/2010 3:26:37PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	32.653	100.0	65.00	6.0409	59	7.686E-001	3.689E-001	7.454E-002	1.843E-001
Th-230	4687.000	4561.000	4717.000	20.162	99.7	68.59	9.5891	59	7.714E-001	3.846E-001	9.419E-002	2.238E-001
Th-229	4845.000	4737.000	5080.000	48.010	99.6	738.34	11.0000	727	1.376E+001	1.644E+000	1.010E-001	2.374E-001
Th-228	5423.000	5280.000	5453.000	30.953	99.4	68.00	4.0000	64	8.393E-001	3.797E-001	6.102E-002	1.575E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:27AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-01 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

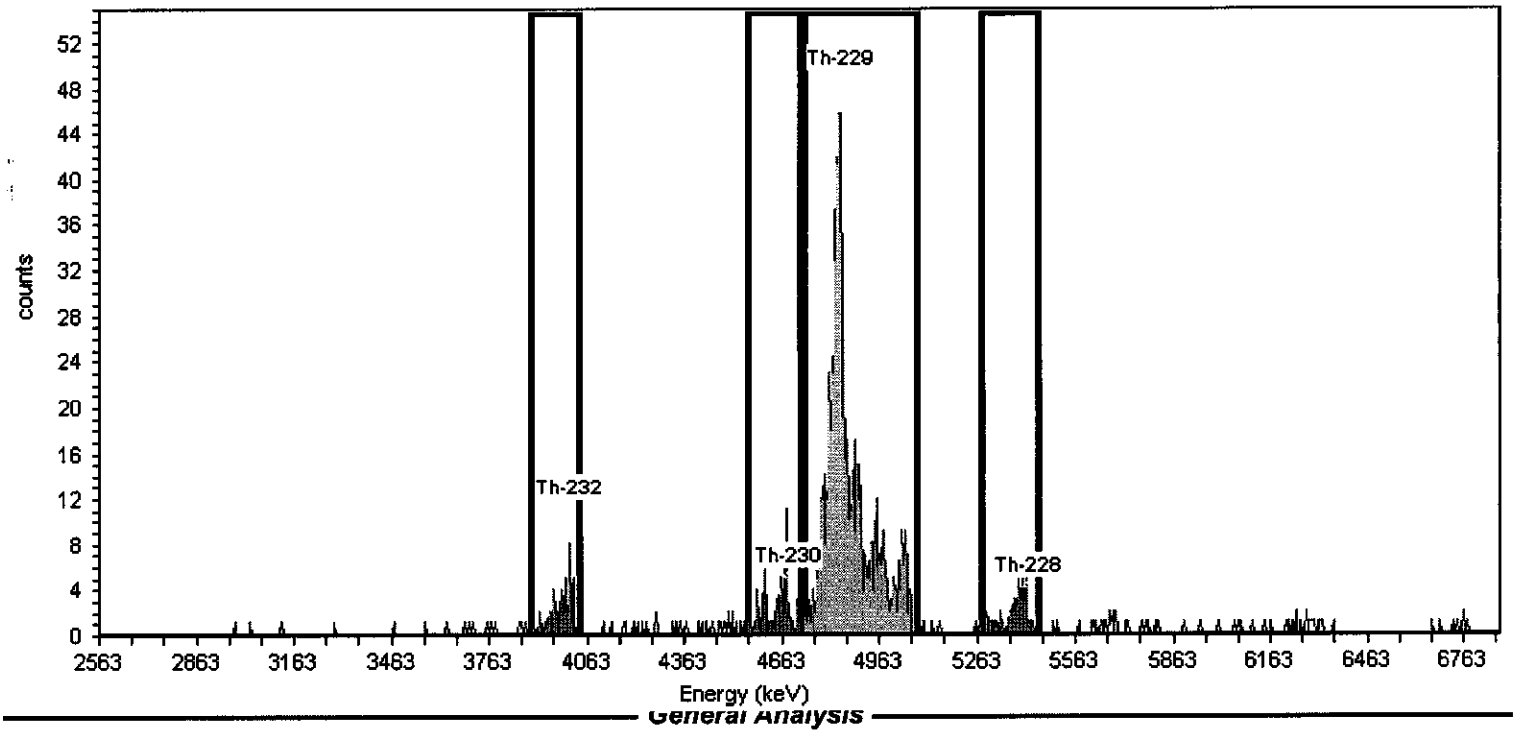
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 153.09%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/21/2010 3:26:38PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	7.397	100.0	56.18	6.8182	49	5.819E-001	3.066E-001	7.161E-002	1.751E-001
Th-230	4687.000	4561.000	4717.000	42.666	99.7	70.42	17.0000	53	6.317E-001	3.577E-001	1.134E-001	2.588E-001
Th-229	4845.000	4737.000	5080.000	40.490	99.6	814.34	10.0000	804	1.457E+001	1.657E+000	8.707E-002	2.062E-001
Th-228	5423.000	5280.000	5453.000	47.574	99.4	58.00	9.0000	49	5.811E-001	3.162E-001	8.277E-002	1.976E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:35AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-03 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

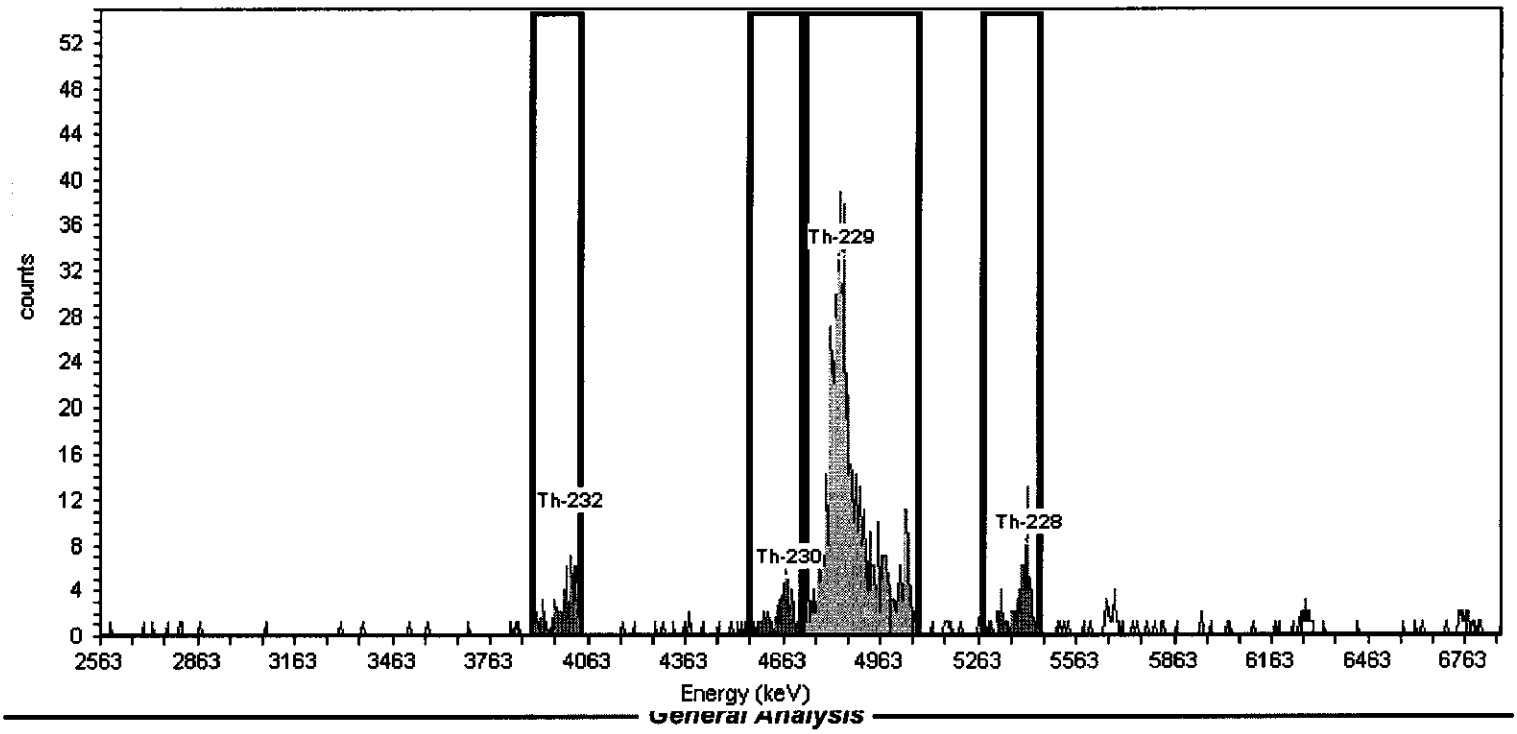
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 151.86%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/21/2010 3:26:41PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-228	5423.000	5280.000	5453.000	37.133	99.4	80.00	14.9095	65	8.092E-001	4.025E-001	1.117E-001	2.570E-001
Th-232	4010.000	3893.000	4040.000	21.166	100.0	71.18	3.0000	68	8.425E-001	3.667E-001	4.979E-002	1.330E-001
Th-230	4687.000	4561.000	4717.000	40.000	99.7	56.00	16.4175	40	4.906E-001	3.334E-001	1.168E-001	2.672E-001
Th-229	4845.000	4737.000	5080.000	56.847	99.6	781.31	14.0000	767	1.446E+001	1.691E+000	1.080E-001	2.496E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:32:25AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-02 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

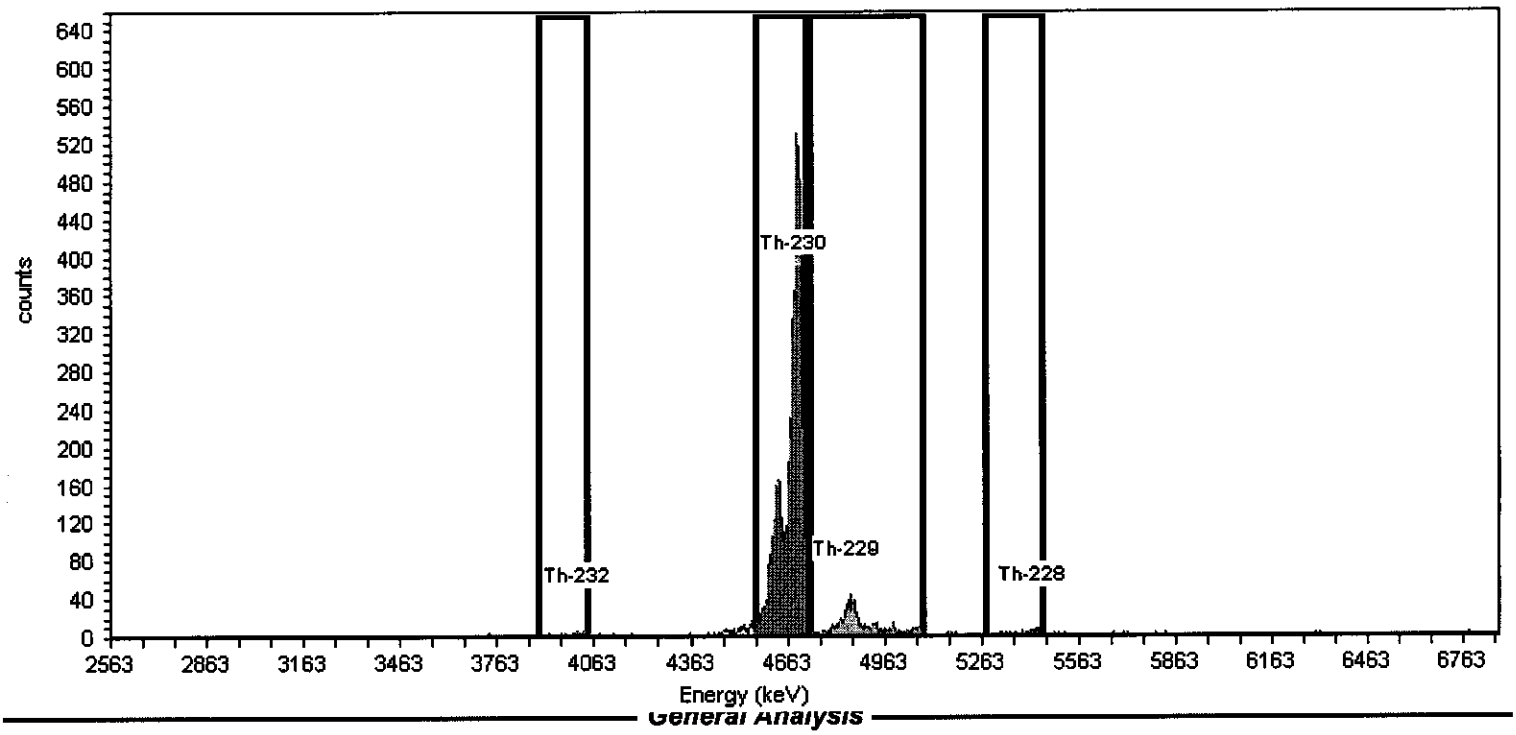
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 132.09%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/21/2010 3:26:42PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	27.230	99.7	5,988.07	12.0000	5,976	8.345E+001	1.845E+001	1.125E-001	2.629E-001
Th-229	4845.000	4737.000	5080.000	45.930	99.6	695.35	14.3369	681	1.258E+001	1.553E+000	1.231E-001	2.841E-001
Th-228	5423.000	5280.000	5453.000	9.549	99.4	63.23	12.7944	50	7.064E-001	3.973E-001	1.166E-001	2.710E-001
Th-232	4010.000	3893.000	4040.000	.000	100.0	62.10	3.0000	59	8.228E-001	3.816E-001	5.610E-002	1.499E-001

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286634

Analyst: MWM
Dept: 55
Prep Date: 7/19/2010
Analysis Date: 7/23/2010
Start Time:
End Time:
Approved: MWM 7-26-10
Approved: MRB 7-26-10

Project:
SDG#:
SOP#: rc017

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: ANALYTICAL

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 ~~Error~~ pCi/g	LLD (+ -)	LLD pCi/g
1	wg286254PBS		0.5000	9.0805	9.0981	**0.0176**	**0.789**	**0.8800**	0.93	1.47	5.68
2	wg286254LCSS	rc100623-1	0.5000	9.0626	9.0806	**0.0180**	**0.807**	**0.9000**	56.59	2.39	5.70
3	L82974-01	BG-10 0-2 COMP	0.4977	9.0946	9.1125	**0.0179**	**0.803**	**0.8950**	0.00	1.42	5.59
4	L82974-02	BG-10 2-12 COMP	0.4972	9.0717	9.0892	**0.0175**	**0.785**	**0.8750**	0.00	1.37	5.38
5	L82974-03	BG-10 12-18 COMP	0.4973	9.0475	9.0619	**0.0144**	**0.646**	**0.7200**	2.23	1.73	6.59
6	L82974-04	BG-14 0-2 COMP	0.4982	9.0778	9.0963	**0.0185**	**0.830**	**0.9250**	3.34	1.49	5.57
7	L82974-05	BG-14-2-12 COMP	0.4993	9.0727	9.0904	**0.0177**	**0.794**	**0.8850**	5.13	1.41	5.07
8	L82974-06	BG-14 12-18 COMP	0.4981	9.0527	9.0693	**0.0166**	**0.744**	**0.8300**	1.97	1.53	5.82
9	L82975-01	BG-5 0-2 COMP	0.4963	9.1062	9.1247	**0.0185**	**0.830**	**0.9250**	0.00	1.39	5.45
10	L82975-02	BG-5 2-12 COMP	0.4966	9.1214	9.1395	**0.0181**	**0.812**	**0.9050**	2.62	1.50	5.68
11	L82975-03	BG-5 12-18 COMP	0.4946	9.0475	9.0657	**0.0182**	**0.816**	**0.9100**	0.00	1.41	5.49
12	L82975-04	BG-9 0-2 COMP	0.4975	9.0774	9.0951	**0.0177**	**0.794**	**0.8850**	0.00	1.48	5.76
13	L82975-05	BG-9 2-12 COMP	0.4947	9.0572	9.0752	**0.0180**	**0.807**	**0.9000**	0.00	1.42	5.52
14	L82975-06	BG-9 12-18 COMP	0.4939	9.0894	9.1069	**0.0175**	**0.785**	**0.8750**	0.95	1.40	5.35
15	L82975-07	BG-13 0-2 COMP	0.4971	9.0612	9.0787	**0.0175**	**0.785**	**0.8750**	4.62	1.49	5.36
16	L82975-08	BG-13 2-12 COMP	0.4977	9.0755	9.0952	**0.0197**	**0.883**	**0.9850**	1.32	1.36	5.17
17	L82975-09	BG-13 12-18 COMP	0.4962	9.0997	9.1187	**0.0190**	**0.852**	**0.9500**	2.32	1.27	4.70
18	L82974-01DUP		0.4977	9.0697	9.0898	**0.0201**	**0.901**	**1.0050**	0.06	1.23	4.76
19	L82974-03DUP		0.4973	9.0555	9.0748	**0.0193**	**0.865**	**0.9650**	1.79	1.37	5.15
20	L82974-02MS	rc100623-1	0.4972	9.0799	9.0979	**0.0180**	**0.807**	**0.9000**	65.50	2.52	5.64
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

KBJ 7/26/10

Seq #	*ACZ Sample No.*	GR CPM Beta	Det #	BG β	NET CPM β	ADJ CPM β	Start Ingrow	Analysis Time	Ingrow minutes	Efficiency Beta	Det #	Det BG β
1	*wg286254PBS*	2.03	1	1.92	0.111	0.11	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	1	1.92
2	*wg286254LCSS*	8.95	2	2.02	6.93	6.93	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	2	2.02
3	*L82974-01*	1.90	3	1.90	0	0.00	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	3	1.9
4	*L82974-02*	1.68	4	1.68	0	0.00	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	4	1.68
5	*L82974-03*	1.93	5	1.71	0.217	0.22	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	5	1.71
6	*L82974-04*	2.44	6	2.02	0.419	0.42	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	6	2.02
7	*L82974-05*	2.16	7	1.54	0.617	0.62	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	7	1.54
8	*L82974-06*	2.00	8	1.78	0.222	0.22	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	8	1.78
9	*L82975-01*	1.92	9	1.92	0	0.00	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	9	1.92
10	*L82975-02*	2.32	10	2.00	0.32	0.32	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	10	2
11	*L82975-03*	1.92	1	1.92	0	0.00	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
12	*L82975-04*	2.02	2	2.02	0	0.00	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
13	*L82975-05*	1.90	3	1.90	0	0.00	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
14	*L82975-06*	1.79	4	1.68	0.113	0.11	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
15	*L82975-07*	2.26	5	1.71	0.553	0.55	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
16	*L82975-08*	2.20	6	2.02	0.178	0.18	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
17	*L82975-09*	1.84	7	1.54	0.301	0.30	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
18	*L82974-01DUP*	1.79	8	1.78	0.008	0.01	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
19	*L82974-03DUP*	2.16	9	1.92	0.236	0.24	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
20	*L82974-02MS*	10.07	10	2.00	8.07	8.07	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		

Decay Equation for Pb210:	Pb-210
Standard Preparation Date	4/1/2002
Initial True Value (pCi/mL)	100.00
Decayed Value (pCi/mL)	77.23

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-26-10

Approved: MWB
Date: 7-26-10

Work Group: WG28634
Sample Type: Sol. d
Analysis Date: 7-23-10
Analyst: MWM
Prep Date: 7-19-10

Weekly background file: Back4516
Daily background file: Back4522

Alpha performance file: —
Beta performance file: Perb2261

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286634

Date Reported: 26-Jul-10
Run ID: R735377
Date Analyzed: 23-Jul-10
ICAL Workgroup:
Instrument ID: PREP

L82974-01

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.6	1.4		TB

L82974-02

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.4	1.4		TB

L82974-03

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.2	1		pCi/g	++	6.6	1.7		TB

L82974-04

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	3.3	1		pCi/g	++	5.6	1.5		TB

L82974-05

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	5.1	1		pCi/g	++	5.1	1.4		TB

L82974-06

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2	1		pCi/g	++	5.8	1.5		TB

L82975-01

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.4		TB

L82975-02

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.6	1		pCi/g	++	5.7	1.5		TB

WG286254LCSS

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	57	1		pCi/g	++	5.7	2.4	RC100623-1	
SREV	LEAD 210	REC	73.8	1		%	++	5.7	2.4	RC100623-1	
SREV	LEAD 210	TRUE	77.23	1		pCi/g	++	5.7	2.4	RC100623-1	

WG286254PBS

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.93	1		pCi/g	++	5.7	1.5		

L82974-01DUP

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.06	1		pCi/g	++	4.8	1.2		
SREV	LEAD 210	RER	0.03	1		%	++	10	5		
FAIL	LEAD 210	RPD	200	1		pCi/g	ALRT	4.8	1.2		

L82974-02MS

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	66	1		pCi/g	++	5.6	2.5	RC100623-1	
SREV	LEAD 210	REC	85.5	1		%	++	5.6	2.5	RC100623-1	
SREV	LEAD 210	TRUE	77.23	1		pCi/g	++	5.6	2.5	RC100623-1	

L82974-03DUP

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	1.8	1		pCi/g	++	5.2	1.4		
SREV	LEAD 210	RER	0.18	1		%	++	10	5		
FAIL	LEAD 210	RPD	20	1		pCi/g	++	5.2	1.4		

L82975-03

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.4		TB

L82975-04

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.8	1.5		TB

L82975-05

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.4		TB

L82975-06

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.95	1		pCi/g	++	5.4	1.4		TB

L82975-07

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	4.6	1		pCi/g	++	5.4	1.5		TB

L82975-08

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.3	1		pCi/g	++	5.2	1.4		TB

L82975-09 **Tag:** **Measured: 7/23/2010 2:53:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.3	1		pCi/g	++	4.7	1.3		TB

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286254

Project:
SDG#:
SOP#:

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-19-10 7:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 Error pCi/g	LLD (+ -)	LLD pCi/g
1	PBS		50mL						#DIV/0!		
2	LCSS								#DIV/0!		
3	L82974-01	BG-10 0-2 COMP							#DIV/0!		
4	L82974-02	BG-10 2-12 COMP							#DIV/0!		
5	L82974-03	BG-10 12-18 COMP							#DIV/0!		
6	L82974-04	BG-14 0-2 COMP							#DIV/0!		
7	L82974-05	BG-14-2-12 COMP							#DIV/0!		
8	L82974-06	BG-14 12-18 COMP							#DIV/0!		
9	L82975-01	BG-5 0-2 COMP							#DIV/0!		
10	L82975-02	BG-5 2-12 COMP							#DIV/0!		
11	L82975-03	BG-5 12-18 COMP							#DIV/0!		
12	L82975-04	BG-9 0-2 COMP							#DIV/0!		
13	L82975-05	BG-9 2-12 COMP							#DIV/0!		
14	L82975-06	BG-9 12-18 COMP							#DIV/0!		
15	L82975-07	BG-13 0-2 COMP							#DIV/0!		
16	L82975-08	BG-13 2-12 COMP							#DIV/0!		
17	L82975-09	BG-13 12-18 COMP							#DIV/0!		
18	DUP 4-01								#DIV/0!		
19	DUP 4-03								#DIV/0!		
20	MS 4-02								#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

Radioactive Standards

Ingrow 7-19-10 13:20

LCS & MS 100623-1

Lead Carrier	100713-1	Sulfuric acid	34642
Iron Chloride	100701-1	Nitric Acid	35035
Nitric Acid 1N	36035	0.1N HNO_3	35035
NH_4OH	34092	2N HNO_3	—
		H_2O_2	—

COMMENTS:

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/16/2010 10:04:41 AM 71610

Calculations for dry weight:

Login #
82974-01
82974-02
82974-03
82974-04
82974-05
82974-06
82975-01
82975-02
82975-03
82975-04
82975-05
82975-06
82975-07
82975-08
82975-09

air dried solid(g)	soils sx wt (g)
0.995421844	0.5
0.99443038	0.5
0.994649805	0.5
0.996349255	0.5
0.998630137	0.5
0.996227997	0.5
0.992674986	0.5
0.993241258	0.5
0.989133388	0.5
0.99501868	0.5
0.989473684	0.5
0.987807581	0.5
0.994196429	0.5
0.99537171	0.5
0.992427719	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.00000			#DIV/0!
0.49771	50	50	0.497711
0.49722	50	50	0.497215
0.49732	50	50	0.497325
0.49817	50	50	0.498175
0.49932	50	50	0.499315
0.49811	50	50	0.498114
0.49634	50	50	0.496337
0.49662	50	50	0.496621
0.49457	50	50	0.494567
0.49751	50	50	0.497509
0.49474	50	50	0.494737
0.49390	50	50	0.493904
0.49710	50	50	0.497098
0.49769	50	50	0.497686
0.49621	50	50	0.496214
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

LB770 Number 1 User File: Lead 210 Sample Data File: 0723-02
Sample Set: WG286254 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

Category	Alpha Low	Alpha High	Beta Low	Beta High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.122	0.267	0.189	0.156	0.233	0.256	0.167	0.267	0.244	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.92	2.02	1.90	1.68	1.71	2.02	1.54	1.78	1.92	2.00
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-23-110 Time 13:20:34
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1167

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	4719	WG286254PBS	0.000	0.000	1	0.23	0.111	> 100	1	0.74
2	4720	WG286254LCSS	0.000	0.000	1	0.31	6.93	15.1	1	0.76
3	4721	L82974-01	0.000	0.000	1	0.27	0.000	0.000	1	0.74
4	4722	L82974-02	0.000	0.000	1	0.25	0.000	0.000	1	0.70
5	4723	L82974-03	0.000	0.000	1	0.30	0.217	> 100	1	0.70
6	4724	L82974-04	0.000	0.000	1	0.31	0.419	> 100	1	0.76
7	4725	L82974-05	0.077	> 100	1	0.26	0.617	99.2	1	0.67
8	4726	L82974-06	0.000	0.000	1	0.31	0.222	> 100	1	0.72
9	4727	L82975-01	0.000	0.000	1	0.30	0.000	0.000	1	0.74
10	4728	L82975-02	0.000	0.000	1	0.29	0.320	> 100	1	0.76

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Lead 210 Sample Data File: 0723-03
Sample Set: WG286254 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = **1600**
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	**0.000**	**20.0**	**0.000**	**20.0**
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.122	0.267	0.189	0.156	0.233	0.256	0.167	0.267	0.244	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.92	2.02	1.90	1.68	1.71	2.02	1.54	1.78	1.92	2.00
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-23-110 Time 14:53:04
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] **1169**

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	4729	L82975-03	0.000	0.000	1	0.23	0.000	0.000	1	0.74
2	4730	L82975-04	0.000	0.000	1	0.31	0.000	0.000	1	0.76
3	4731	L82975-05	0.000	0.000	1	0.27	0.000	0.000	**1**	**0.74**
4	4732	L82975-06	0.000	0.000	1	0.25	0.113	> 100	1	0.70
5	4733	L82975-07	0.000	0.000	1	0.30	0.553	> 100	1	0.70
6	4734	L82975-08	0.000	0.000	1	0.31	0.178	> 100	**1**	**0.76**
7	4735	L82975-09	0.000	0.000	1	0.26	0.301	> 100	1	0.67
8	4736	L82974-01DUP	0.000	0.000	1	0.31	0.008	> 100	1	0.72
9	4737	L82974-03DUP	0.000	0.000	1	0.30	0.236	> 100	**1**	**0.74**
10	4738	L82974-02MS	0.000	0.000	1	0.29	8.07	13.6	1	0.76

MDA = Minimum Detectable Activity [cpm]

Detectors with Trend:1a, 2a, 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10a, 1b, 2b, 3b, 4b, 5b

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG286781

Project:
SDG#:
SOP#: rc020

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/21/2010
Analysis Date: 7/26/2010
Start Time:
End Time:
Approved: MWM 7-28-10
Approved: MTB 7-28-10

MWM
50.00

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	WG286325PBS		0.5	1	10.30	913	0.887	29.340	46.110	16.770	**0.38**	**0.41**	0.20	4.00	5.00	1.000	**0.02**	**0.14**	0.20	12.00	8.00	-4.000	**-0.09**	**0.21**	0.20
2	WG286325LCSS	RC100223-2	0.5	1	10.30	501	0.487	21.000	910.690	889.690	**36.58**	**2.64**	0.36	4.06	40.99	36.933	**1.52**	**0.58**	0.36	5.00	898.77	893.770	**36.75**	**2.60**	0.36
3	L82974-01	BG-10 0-2 COMP	0.49771092	1	10.30	870	0.846	10.060	43.060	33.000	**0.78**	**0.36**	0.21	3.01	4.00	0.987	**0.02**	**0.13**	0.21	6.00	44.86	38.860	**0.92**	**0.36**	0.21
4	L82974-02	BG-10 2-12 COMP	0.49721519	1	10.30	853	0.829	18.000	54.290	36.290	**0.88**	**0.43**	0.21	4.00	4.04	0.040	**0.00**	**0.14**	0.21	7.00	52.57	45.570	**1.11**	**0.39**	0.21
5	L82974-03	BG-10 12-18 COM	0.4973249	1	10.30	816	0.793	17.940	44.230	26.290	**0.67**	**0.42**	0.22	5.00	11.96	6.960	**0.18**	**0.22**	0.22	11.00	46.00	35.000	**0.89**	**0.40**	0.22
6	L82974-04	BG-14 0-2 COMP	0.49817463	1	10.30	837	0.813	29.000	56.060	27.060	**0.67**	**0.48**	0.22	7.00	5.98	-1.020	**-0.03**	**0.19**	0.22	3.00	50.57	47.570	**1.18**	**0.38**	0.22
7	L82974-05	BG-14-2-12 COMP	0.49931507	1	10.30	798	0.776	21.770	36.000	14.230	**0.37**	**0.41**	0.23	11.02	4.00	-7.022	**-0.18**	**0.21**	0.23	8.00	41.00	33.000	**0.85**	**0.38**	0.23
8	L82974-06	BG-14 12-18 COM	0.498114	1	10.30	867	0.843	14.230	43.710	29.480	**0.70**	**0.38**	0.21	2.02	6.00	3.978	**0.09**	**0.14**	0.21	3.00	31.00	28.000	**0.67**	**0.29**	0.21
9	L82975-01	BG-5 0-2 COMP	0.49633749	1	10.30	555	0.539	15.060	55.000	39.940	**1.49**	**0.66**	0.33	9.00	6.00	-3.000	**-0.11**	**0.30**	0.33	6.57	28.00	21.429	**0.80**	**0.46**	0.33
10	L82975-02	BG-5 2-12 COMP	0.49662083	1	10.30	831	0.808	23.000	31.060	8.060	**0.20**	**0.39**	0.22	3.00	5.00	2.000	**0.05**	**0.15**	0.22	4.00	16.00	12.000	**0.30**	**0.23**	0.22
11	L82975-03	BG-5 12-18 COMP	0.49456669	1	10.30	598	0.581	25.060	103.230	78.170	**2.72**	**0.83**	0.30	1.00	9.00	8.000	**0.28**	**0.23**	0.30	8.00	78.33	70.330	**2.45**	**0.68**	0.30
12	L82975-04	BG-9 0-2 COMP	0.49750934	1	10.30	795	0.773	24.000	35.230	11.230	**0.29**	**0.42**	0.23	4.04	5.02	0.985	**0.03**	**0.16**	0.23	8.00	33.67	25.670	**0.67**	**0.35**	0.23
13	L82975-05	BG-9 2-12 COMP	0.49473684	1	10.30	891	0.866	30.459	36.120	5.661	**0.13**	**0.40**	0.20	12.00	7.00	-5.000	**-0.12**	**0.21**	0.20	8.00	32.57	24.570	**0.57**	**0.31**	0.20
14	L82975-06	BG-9 12-18 COMP	0.49390379	1	10.30	689	0.670	30.770	38.770	8.000	**0.24**	**0.53**	0.26	14.04	12.00	-2.035	**-0.06**	**0.32**	0.26	4.43	20.00	15.571	**0.47**	**0.31**	0.26
15	L82975-07	BG-13 0-2 COMP	0.49709821	1	10.30	701	0.681	25.711	41.940	16.229	**0.48**	**0.51**	0.26	11.00	4.02	-6.980	**-0.21**	**0.24**	0.26	7.57	16.43	8.859	**0.26**	**0.30**	0.26
16	L82975-08	BG-13 2-12 COMP	0.49768585	1	10.30	819	0.796	29.340	55.120	25.780	**0.65**	**0.49**	0.22	4.00	10.99	6.990	**0.18**	**0.21**	0.22	12.00	26.33	14.330	**0.36**	**0.33**	0.22
17	L82975-09	BG-13 12-18 COM	0.49621386	1	10.30	528	0.513	21.000	40.710	19.710	**0.77**	**0.65**	0.34	4.06	5.00	0.943	**0.04**	**0.25**	0.34	5.00	16.00	11.000	**0.43**	**0.38**	0.34
18	L82974-02DUP		0.49721519	1	10.30	916	0.890	10.060	42.940	32.880	**0.74**	**0.35**	0.20	3.01	7.00	3.987	**0.09**	**0.15**	0.20	6.00	33.34	27.340	**0.62**	**0.30**	0.20
19	L82974-03DUP		0.4973249	1	10.30	889	0.864	18.000	52.230	34.230	**0.80**	**0.41**	0.20	4.00	7.00	3.000	**0.07**	**0.16**	0.20	7.00	46.57	39.570	**0.92**	**0.36**	0.20
20	L82974-01MS	RC100223-2	0.49771092	1	10.30	459	0.446	17.940	832.770	814.830	**36.74**	**2.76**	0.39	5.00	41.94	36.940	**1.67**	**0.65**	0.39	11.00	910.09	899.090	**40.54**	**2.87**	0.39
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments:

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

HB 7/28/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-28-10

Work Group: WG286781
Sample Type: Sol. d
Analysis Date: 7-26-10
Analyst: MWM
Prep Date: 7-21-10

Approved: MWB
Date: 7-28-10

Weekly background file: 7-26-10
Daily background file: 7-26-10

Alpha performance file: 7-26-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:
PBW failed first run. Reran entire WG and PBW passed.

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286781

Date Reported: 28-Jul-10
Run ID: R735776
Date Analyzed: 26-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286325PBS

Tag: Measured: 7/26/2010 3:39:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.38	1		pCi/g	++	0.2	0.41		
SREV	URANIUM 235	FOUND	0.02	1		pCi/g	++	0.2	0.14		
SREV	URANIUM 238	FOUND	-0.09	1		pCi/g	++	0.2	0.21		

WG286325LCSS

Tag: Measured: 7/26/2010 3:40:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	37	1		pCi/g	++	0.36	2.6	RC100223-2	
SREV	URANIUM 234	REC	111.7	1		%	++	0.36	2.6	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.36	2.6	RC100223-2	
SREV	URANIUM 235	FOUND	1.5	1		pCi/g	++	0.36	0.58	RC100223-2	
SREV	URANIUM 235	REC	94.9	1		%	++	0.36	0.58	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.36	0.58	RC100223-2	
SREV	URANIUM 238	FOUND	36.8	1		pCi/g	++	0.36	2.6	RC100223-2	
SREV	URANIUM 238	REC	107	1		%	++	0.36	2.6	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.36	2.6	RC100223-2	

L82974-01

Tag: Measured: 7/26/2010 3:41:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.78	1		pCi/g	++	0.21	0.36		TB
SREV	URANIUM 235	OM-3050	0.02	1		pCi/g	++	0.21	0.13		TB
SREV	URANIUM 238	OM-3050	0.92	1		pCi/g	++	0.21	0.36		TB

L82974-02

Tag: Measured: 7/26/2010 3:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.88	1		pCi/g	++	0.21	0.43		TB
SREV	URANIUM 235	OM-3050	0	1		pCi/g	++	0.21	0.14		TB
SREV	URANIUM 238	OM-3050	1.11	1		pCi/g	++	0.21	0.39		TB

L82974-03

Tag: Measured: 7/26/2010 3:44:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.67	1		pCi/g	++	0.22	0.42		TB
SREV	URANIUM 235	OM-3050	0.18	1		pCi/g	++	0.22	0.22		TB
SREV	URANIUM 238	OM-3050	0.89	1		pCi/g	++	0.22	0.4		TB

L82974-04

Tag: Measured: 7/26/2010 3:46:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.67	1		pCi/g	++	0.22	0.48		TB
SREV	URANIUM 235	OM-3050	-0.03	1		pCi/g	++	0.22	0.19		TB
SREV	URANIUM 238	OM-3050	1.18	1		pCi/g	++	0.22	0.38		TB

L82974-05

Tag: Measured: 7/26/2010 3:47:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.37	1		pCi/g	++	0.23	0.41		TB
SREV	URANIUM 235	OM-3050	-0.18	1		pCi/g	++	0.23	0.21		TB
SREV	URANIUM 238	OM-3050	0.85	1		pCi/g	++	0.23	0.38		TB

L82974-06

Tag: Measured: 7/26/2010 3:49:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.7	1		pCi/g	++	0.21	0.38		TB
SREV	URANIUM 235	OM-3050	0.09	1		pCi/g	++	0.21	0.14		TB
SREV	URANIUM 238	OM-3050	0.67	1		pCi/g	++	0.21	0.29		TB

L82975-01

Tag: Measured: 7/26/2010 3:50:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1.5	1		pCi/g	++	0.33	0.66		TB
SREV	URANIUM 235	OM-3050	-0.11	1		pCi/g	++	0.33	0.3		TB
SREV	URANIUM 238	OM-3050	0.8	1		pCi/g	++	0.33	0.46		TB

L82975-02

Tag: Measured: 7/26/2010 3:51:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.2	1		pCi/g	++	0.22	0.39		TB
SREV	URANIUM 235	OM-3050	0.05	1		pCi/g	++	0.22	0.15		TB
SREV	URANIUM 238	OM-3050	0.3	1		pCi/g	++	0.22	0.23		TB

L82975-03

Tag: Measured: 7/26/2010 3:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	2.7	1		pCi/g	++	0.3	0.83		TB
SREV	URANIUM 235	OM-3050	0.28	1		pCi/g	++	0.3	0.23		TB
SREV	URANIUM 238	OM-3050	2.45	1		pCi/g	++	0.3	0.68		TB

L82975-04

Tag: Measured: 7/26/2010 3:54:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.29	1		pCi/g	++	0.23	0.42		TB
SREV	URANIUM 235	OM-3050	0.03	1		pCi/g	++	0.23	0.16		TB
SREV	URANIUM 238	OM-3050	0.67	1		pCi/g	++	0.23	0.35		TB

L82975-05

Tag: Measured: 7/26/2010 3:56:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.13	1		pCi/g	++	0.2	0.4		TB
SREV	URANIUM 235	OM-3050	-0.12	1		pCi/g	++	0.2	0.21		TB
SREV	URANIUM 238	OM-3050	0.57	1		pCi/g	++	0.2	0.31		TB

L82975-06

Tag: Measured: 7/26/2010 3:57:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.24	1		pCi/g	++	0.26	0.53		TB
SREV	URANIUM 235	OM-3050	-0.06	1		pCi/g	++	0.26	0.32		TB
SREV	URANIUM 238	OM-3050	0.47	1		pCi/g	++	0.26	0.31		TB

L82975-07

Tag: Measured: 7/26/2010 3:59:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.48	1		pCi/g	++	0.26	0.51		TB
SREV	URANIUM 235	OM-3050	-0.21	1		pCi/g	++	0.26	0.24		TB
SREV	URANIUM 238	OM-3050	0.26	1		pCi/g	++	0.26	0.3		TB

L82975-08

Tag: Measured: 7/26/2010 4:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.65	1		pCi/g	++	0.22	0.49		TB
SREV	URANIUM 235	OM-3050	0.18	1		pCi/g	++	0.22	0.21		TB
SREV	URANIUM 238	OM-3050	0.36	1		pCi/g	++	0.22	0.33		TB

L82975-09

Tag: Measured: 7/26/2010 4:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.77	1		pCi/g	++	0.34	0.65		TB
SREV	URANIUM 235	OM-3050	0.04	1		pCi/g	++	0.34	0.25		TB
SREV	URANIUM 238	OM-3050	0.43	1		pCi/g	++	0.34	0.38		TB

L82974-02DUP

Tag: Measured: 7/26/2010 4:03:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.74	1		pCi/g	++	0.2	0.35		
SREV	URANIUM 234	RER	0.25	1		%	++				
FAIL	URANIUM 234	RPD	17.3	1		pCi/g	++	0.2	0.35		
SREV	URANIUM 235	FOUND	0.09	1		pCi/g	++	0.2	0.15		
SREV	URANIUM 235	RER	0.44	1		%	++				
FAIL	URANIUM 235	RPD	200	1		pCi/g	ALRT	0.2	0.15		
SREV	URANIUM 238	FOUND	0.62	1		pCi/g	++	0.2	0.3		
SREV	URANIUM 238	RER	1	1		%	++				
FAIL	URANIUM 238	RPD	56.6	1		pCi/g	ALRT	0.2	0.3		

L82974-03DUP

Tag: Measured: 7/26/2010 4:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.8	1		pCi/g	++	0.2	0.41		
SREV	URANIUM 234	RER	0.22	1		%	++				
FAIL	URANIUM 234	RPD	17.7	1		pCi/g	++	0.2	0.41		
SREV	URANIUM 235	FOUND	0.07	1		pCi/g	++	0.2	0.16		
SREV	URANIUM 235	RER	0.4	1		%	++				
FAIL	URANIUM 235	RPD	88	1		pCi/g	ALRT	0.2	0.16		
SREV	URANIUM 238	FOUND	0.92	1		pCi/g	++	0.2	0.36		
SREV	URANIUM 238	RER	0.06	1		%	++				
FAIL	URANIUM 238	RPD	3.3	1		pCi/g	++	0.2	0.36		

L82974-01MS Tag: **Measured: 7/26/2010 4:06:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	37	1		pCi/g	++	0.39	2.8	RC100223-2	
SREV	URANIUM 234	REC	109.3	1		%	++	0.39	2.8	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.39	2.8	RC100223-2	
SREV	URANIUM 235	FOUND	1.7	1		pCi/g	++	0.39	0.65	RC100223-2	
SREV	URANIUM 235	REC	106.3	1		%	++	0.39	0.65	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.39	0.65	RC100223-2	
SREV	URANIUM 238	FOUND	40.5	1		pCi/g	++	0.39	2.9	RC100223-2	
SREV	URANIUM 238	REC	115.1	1		%	++	0.39	2.9	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.39	2.9	RC100223-2	

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG286325

Project: _____
SDG#: _____
SOP#: _____

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-21-10 7:30
Analysis Date: _____
Start Time: _____
End Time: _____
Approved: _____
Approved: _____

MWM
50.00

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50mL	1	0.00					0.000						0.000						0.000			
2	LCSS				0.00					0.000						0.000						0.000			
3	L82974-01	BG-10 0-2 COMP			0.00					0.000						0.000						0.000			
4	L82974-02	BG-10 2-12 COMP			0.00					0.000						0.000						0.000			
5	L82974-03	BG-10 12-18 COMP			0.00					0.000						0.000						0.000			
6	L82974-04	BG-14 0-2 COMP			0.00					0.000						0.000						0.000			
7	L82974-05	BG-14-2-12 COMP			0.00					0.000						0.000						0.000			
8	L82974-06	BG-14 12-18 COMP			0.00					0.000						0.000						0.000			
9	L82975-01	BG-5 0-2 COMP			0.00					0.000						0.000						0.000			
10	L82975-02	BG-5 2-12 COMP			0.00					0.000						0.000						0.000			
11	L82975-03	BG-5 12-18 COMP			0.00					0.000						0.000						0.000			
12	L82975-04	BG-9 0-2 COMP			0.00					0.000						0.000						0.000			
13	L82975-05	BG-9 2-12 COMP			0.00					0.000						0.000						0.000			
14	L82975-06	BG-9 12-18 COMP			0.00					0.000						0.000						0.000			
15	L82975-07	BG-13 0-2 COMP			0.00					0.000						0.000						0.000			
16	L82975-08	BG-13 2-12 COMP			0.00					0.000						0.000						0.000			
17	L82975-09	BG-13 12-18 COMP			0.00					0.000						0.000						0.000			
18	DUP 4-02				0.00					0.000						0.000						0.000			
19	DUP 4-03				0.00					0.000						0.000						0.000			
20	MS 4-01				0.00					0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments: _____

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Uranium iso
Water

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: wg286325 7/20/2010 7:23 AM

PROJECT/WG: _____
Method _____ INSTR: Octete

Radioactive Standards

LCS & MS 100223-2 Tracer: 100223-1

Reagents

3M Nitric Acid	35035	Aluminum nitrate / 3M nitric acid	100715-1
Nitric Acid (concentrated)	35035	HF	33549
0.05M oxalic acid / 5M HCl	100715-2	Titanium Choride	100629-1
0.01M Hydrochloric acid	34317	Cerium solution	100721-1
9M Hydrochloric acid	33927	Ethanol	33789

COMMENTS:

*12/29/08 MTB adjusted template to error using Gross cpm and specific backgrounds used to calculate net cpm

RSUISO-S.xls

Calculations for dry weight:

Login #
82974-01
82974-02
82974-03
82974-04
82974-05
82974-06
82975-01
82975-02
82975-03
82975-04
82975-05
82975-06
82975-07
82975-08
82975-09

air dried solid(g)	soils sx wt (g)
0.995421844	0.5
0.99443038	0.5
0.994649805	0.5
0.996349255	0.5
0.998630137	0.5
0.996227997	0.5
0.992674986	0.5
0.993241258	0.5
0.989133388	0.5
0.99501868	0.5
0.989473684	0.5
0.987807581	0.5
0.994196429	0.5
0.99537171	0.5
0.992427719	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.00000			#DIV/0!
0.49771	50	50	0.497711
0.49722	50	50	0.497215
0.49732	50	50	0.497325
0.49817	50	50	0.498175
0.49932	50	50	0.499315
0.49811	50	50	0.498114
0.49634	50	50	0.496337
0.49662	50	50	0.496621
0.49457	50	50	0.494567
0.49751	50	50	0.497509
0.49474	50	50	0.494737
0.49390	50	50	0.493904
0.49710	50	50	0.497098
0.49769	50	50	0.497686
0.49621	50	50	0.496214
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:52PM 7/26/2010

Analyst: ORTEC

Sample

Sample: WG286325 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

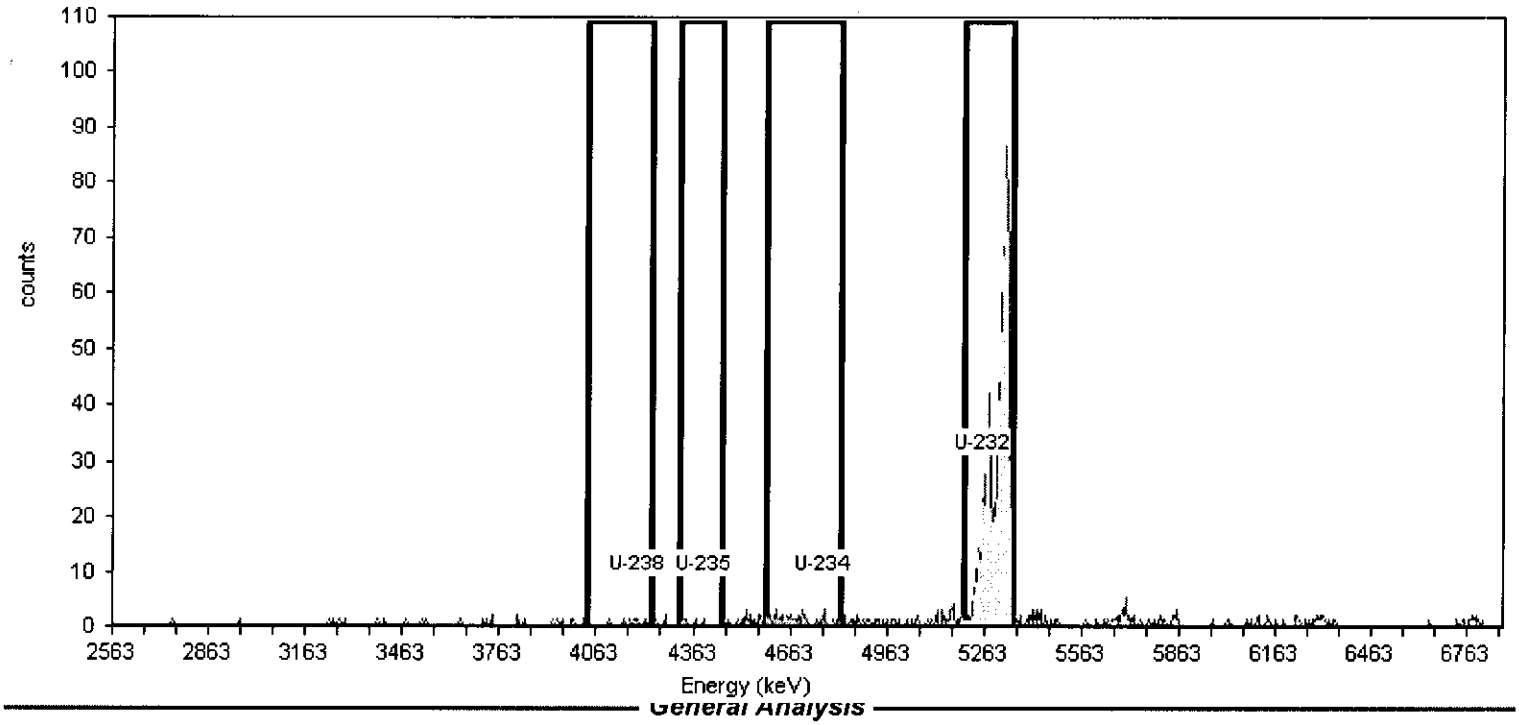
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.37%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/26/2010 3:39:11PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.347	100.2	8.00	12.0000	-4	-4.709E-002	1.583E-001	9.488E-002	2.216E-001
U-235	4396.000	4318.000	4453.000	19.915	80.9	5.00	4.0000	1	1.459E-002	1.313E-001	6.787E-002	1.752E-001
U-234	4765.000	4592.000	4819.000	20.938	100.0	46.11	29.3399	17	1.978E-001	3.102E-001	1.486E-001	3.292E-001
U-232	5263.000	5203.000	5350.000	22.816	99.8	927.58	14.3100	913	8.068E+000	8.695E-001	1.137E-001	2.624E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:37PM 7/26/2010

Analyst: ORTEC

Sample

Sample: WG286325 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

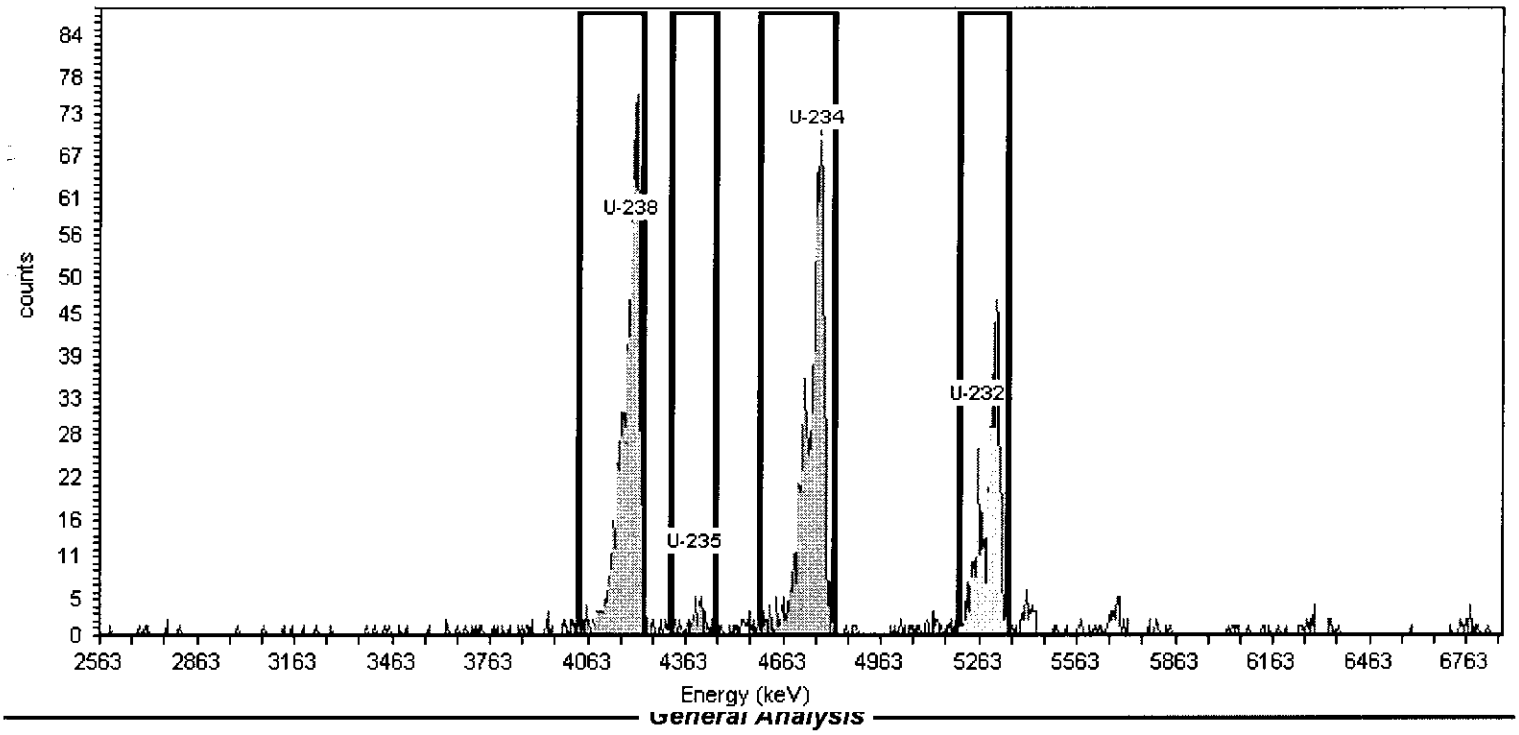
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 38.30%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/26/2010 3:39:13PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.420	100.2	898.77	5.0000	894	1.919E+001	4.798E+000	1.117E-001	2.815E-001
U-235	4396.000	4318.000	4453.000	42.955	80.9	40.99	4.0567	37	9.824E-001	5.808E-001	1.246E-001	3.212E-001
U-234	4765.000	4592.000	4819.000	39.938	100.0	910.69	21.0000	890	1.914E+001	4.801E+000	2.293E-001	5.168E-001
U-232	5263.000	5203.000	5350.000	14.416	99.8	512.14	11.3100	501	4.519E+000	6.433E-001	1.843E-001	4.324E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:40PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

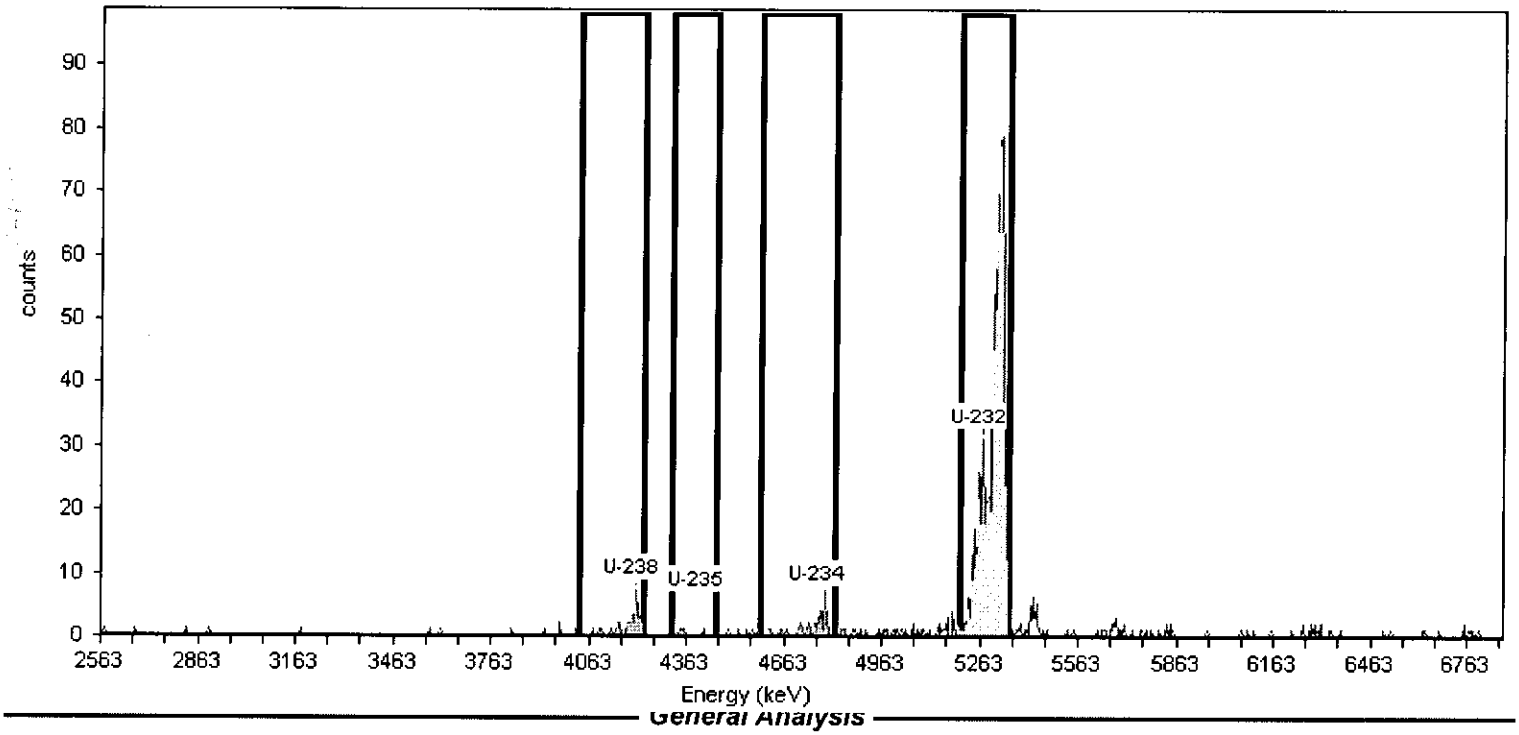
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.16%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/26/2010 3:39:15PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	15.175	100.2	44.86	6.0000	39	4.801E-001	2.829E-001	7.040E-002	1.742E-001
U-235	4396.000	4318.000	4453.000	23.540	80.9	4.00	3.0135	1	1.510E-002	1.217E-001	6.182E-002	1.651E-001
U-234	4765.000	4592.000	4819.000	6.475	100.0	43.06	10.0596	33	4.085E-001	2.839E-001	9.133E-002	2.162E-001
U-232	5263.000	5203.000	5350.000	20.742	99.8	875.99	5.6900	870	7.807E+000	8.533E-001	7.524E-002	1.872E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:44PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

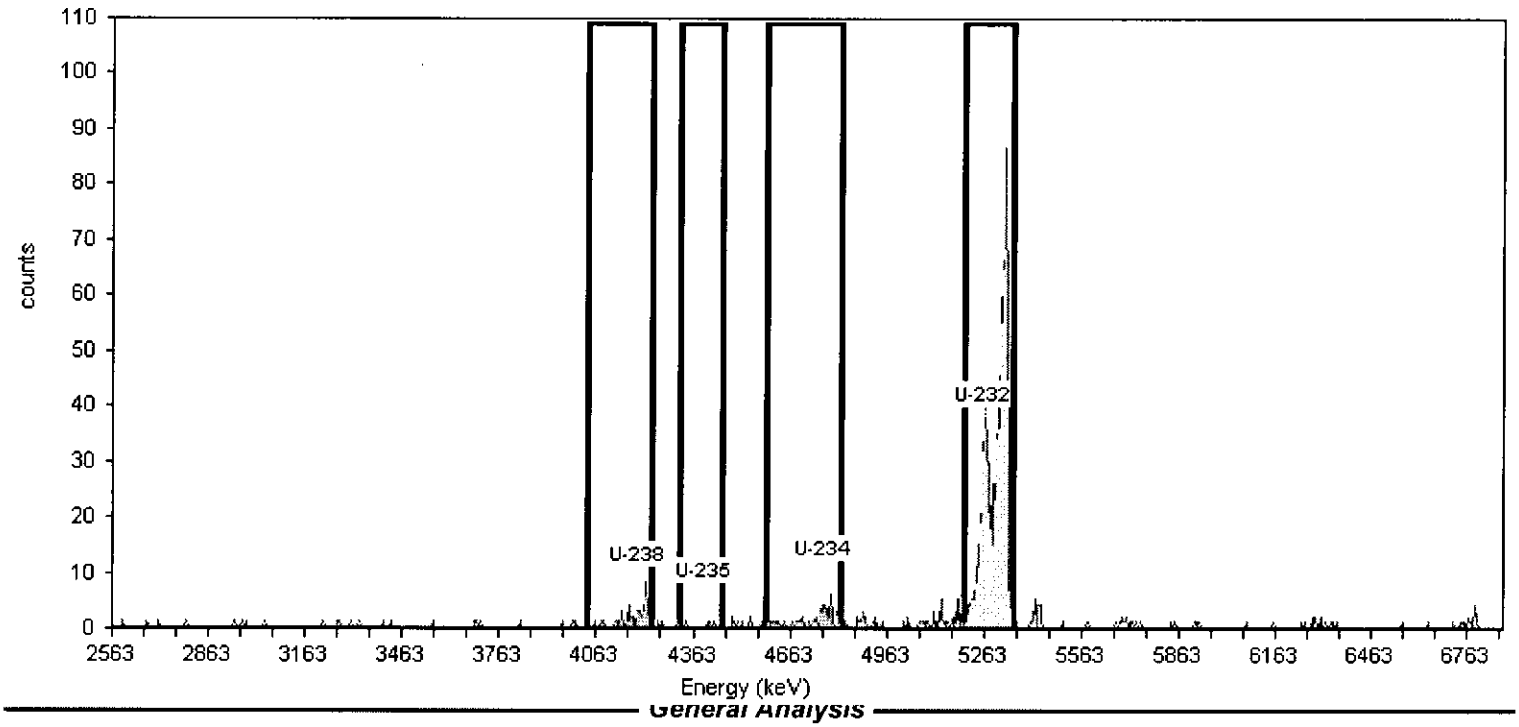
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.97%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/26/2010 3:39:17PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	13.932	100.2	52.57	7.0000	46	5.741E-001	3.158E-001	7.754E-002	1.892E-001
U-235	4396.000	4318.000	4453.000	5.859	80.9	4.04	4.0000	0	5.479E-004	1.327E-001	7.262E-002	1.875E-001
U-234	4765.000	4592.000	4819.000	7.091	100.0	54.29	18.0000	36	4.581E-001	3.361E-001	1.246E-001	2.833E-001
U-232	5263.000	5203.000	5350.000	19.661	99.8	862.65	9.1691	853	7.666E+000	8.483E-001	9.739E-002	2.322E-001

AlphaVision v5.3

Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
8:39:48PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

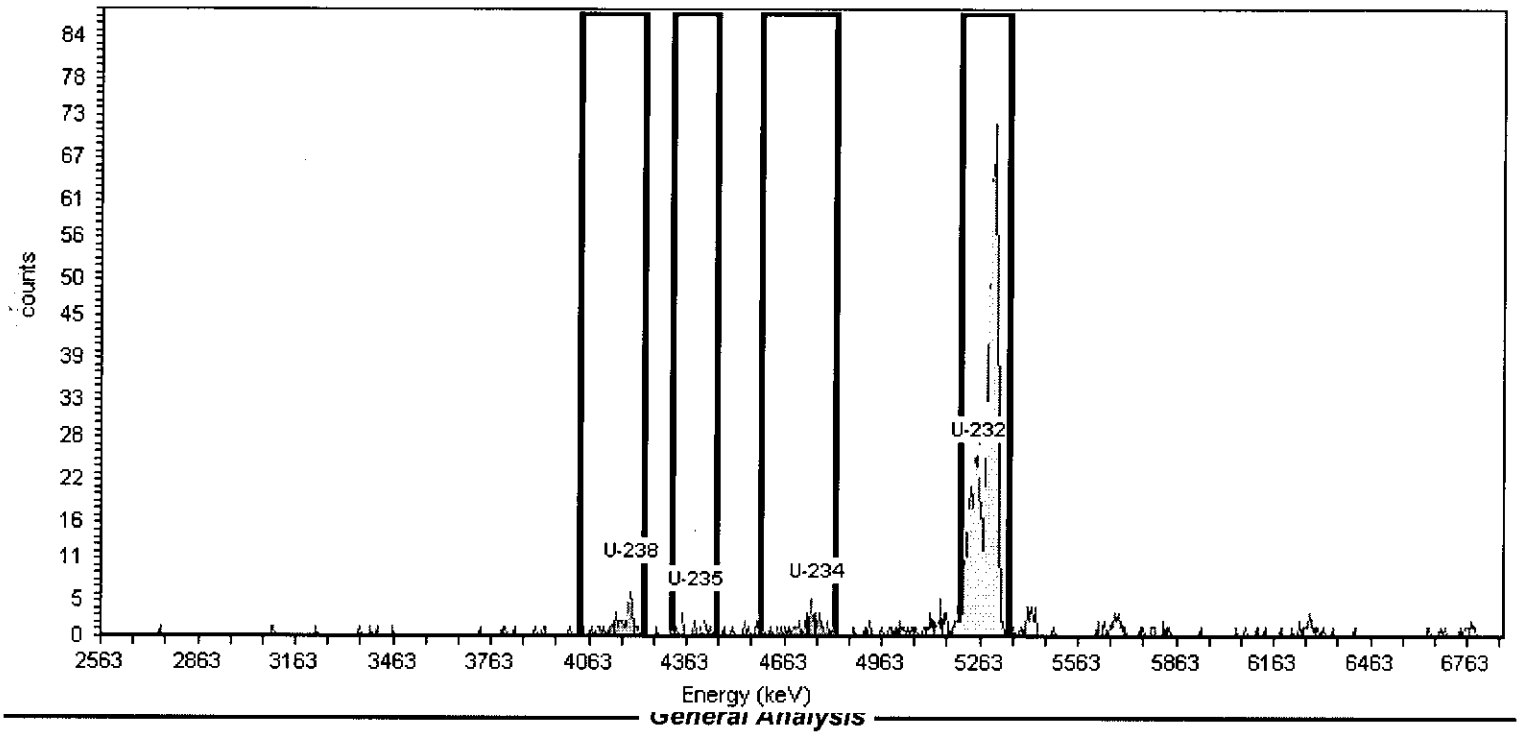
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.47%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/26/2010 3:39:17PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.797	100.2	46.00	11.0000	35	4.610E-001	3.139E-001	1.016E-001	2.389E-001
U-235	4396.000	4318.000	4453.000	94.365	80.9	11.96	5.0000	7	1.137E-001	2.031E-001	8.489E-002	2.139E-001
U-234	4765.000	4592.000	4819.000	44.107	100.0	44.23	17.9404	26	3.469E-001	3.207E-001	1.300E-001	2.958E-001
U-232	5263.000	5203.000	5350.000	38.786	99.8	823.35	7.0000	816	7.372E+000	8.306E-001	8.897E-002	2.171E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:12PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

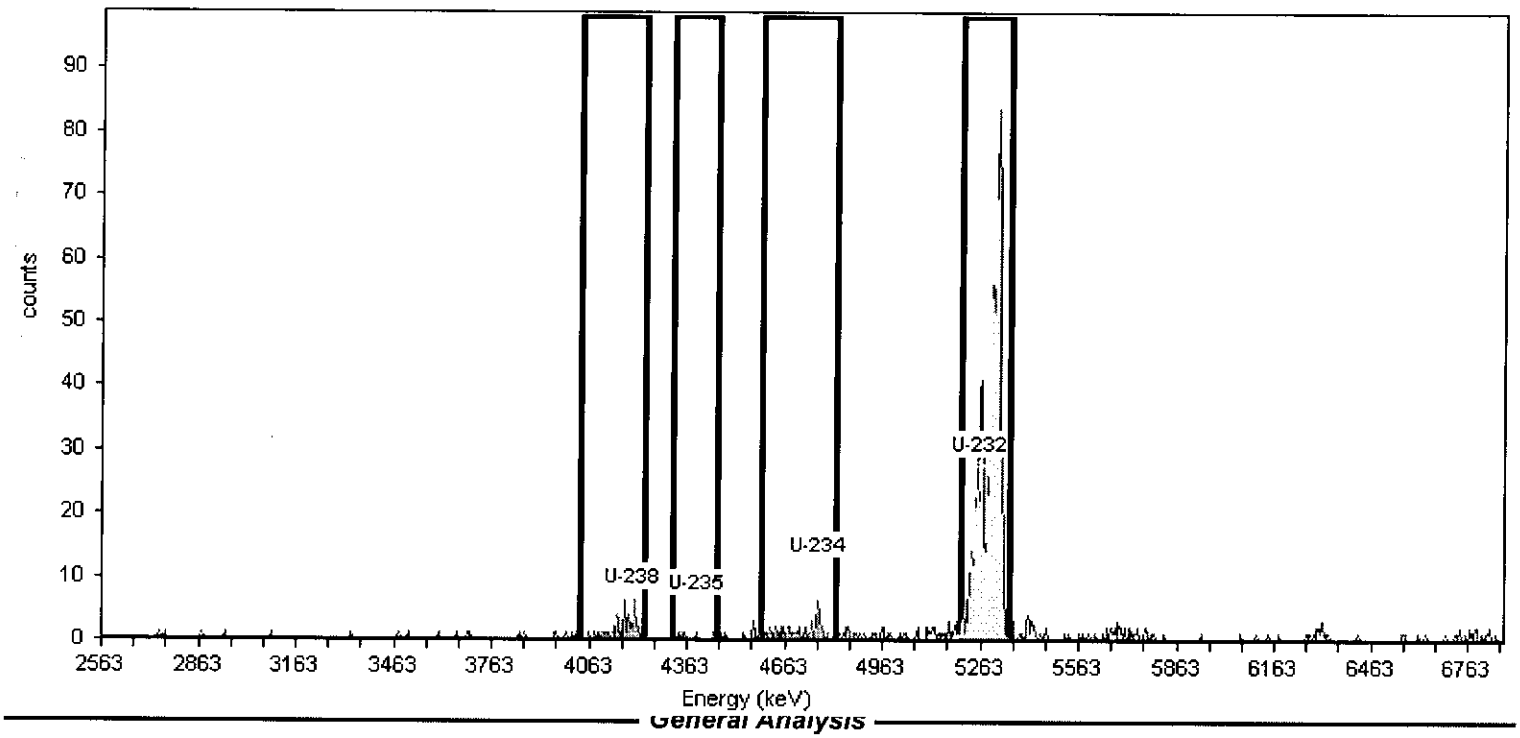
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.51%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/26/2010 3:39:18PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	44.860	100.2	50.57	3.0000	48	6.109E-001	3.100E-001	5.174E-002	1.382E-001
U-235	4396.000	4318.000	4453.000	5.810	80.9	5.98	7.0000	-1	-1.625E-002	1.720E-001	9.793E-002	2.389E-001
U-234	4765.000	4592.000	4819.000	30.103	100.0	56.06	29.0000	27	3.481E-001	3.635E-001	1.612E-001	3.572E-001
U-232	5263.000	5203.000	5350.000	21.938	99.8	849.14	11.8309	837	7.376E+000	8.246E-001	1.128E-001	2.637E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:25PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

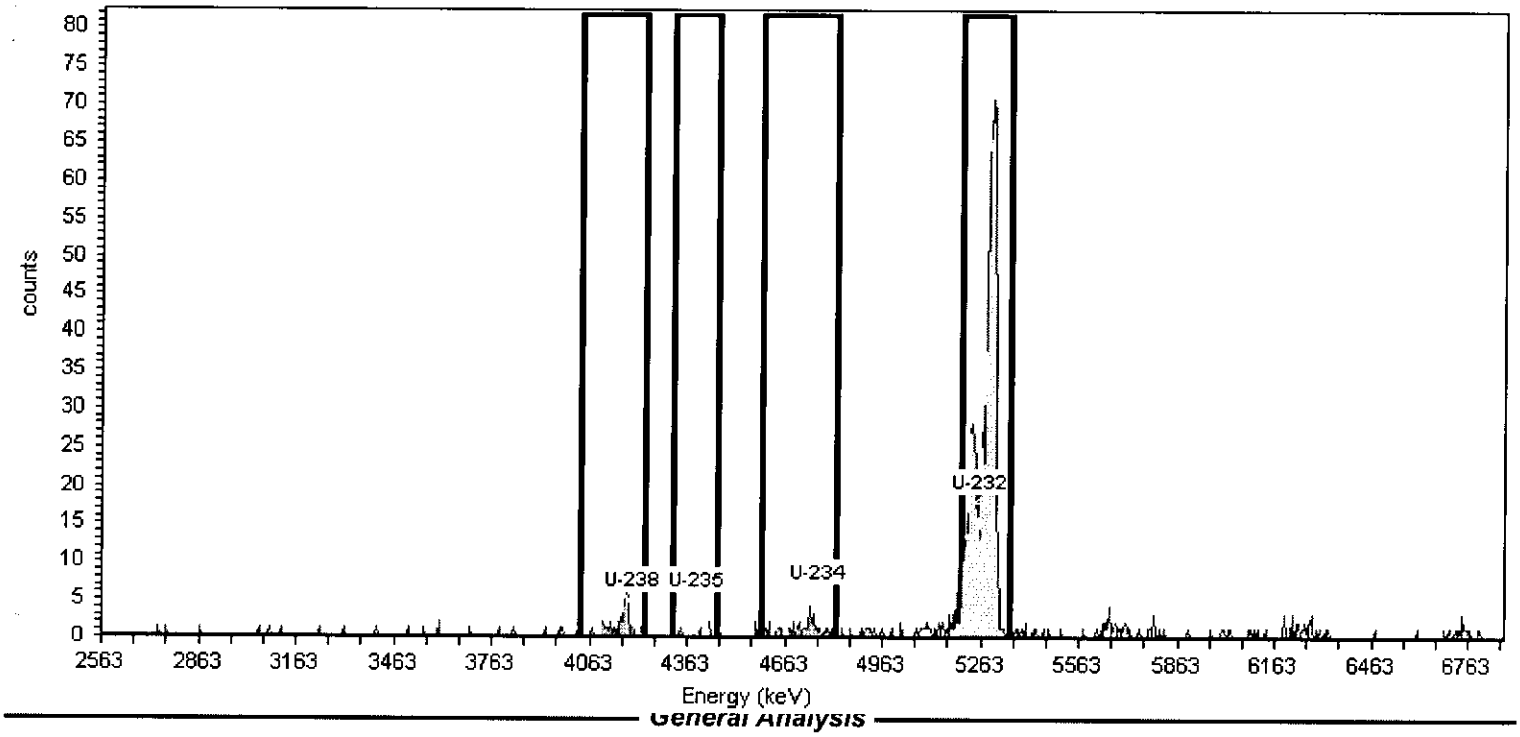
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.32%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/26/2010 3:39:07PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	28.771	100.2	41.00	8.0000	33	4.447E-001	2.983E-001	8.868E-002	2.138E-001
U-235	4396.000	4318.000	4453.000	5.556	80.9	4.00	11.0216	-7	-1.172E-001	1.957E-001	1.290E-001	3.031E-001
U-234	4765.000	4592.000	4819.000	66.909	100.0	36.00	21.7704	14	1.921E-001	3.106E-001	1.466E-001	3.297E-001
U-232	5263.000	5203.000	5350.000	34.743	99.8	801.83	4.0000	798	7.472E+000	8.497E-001	6.881E-002	1.777E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:08PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

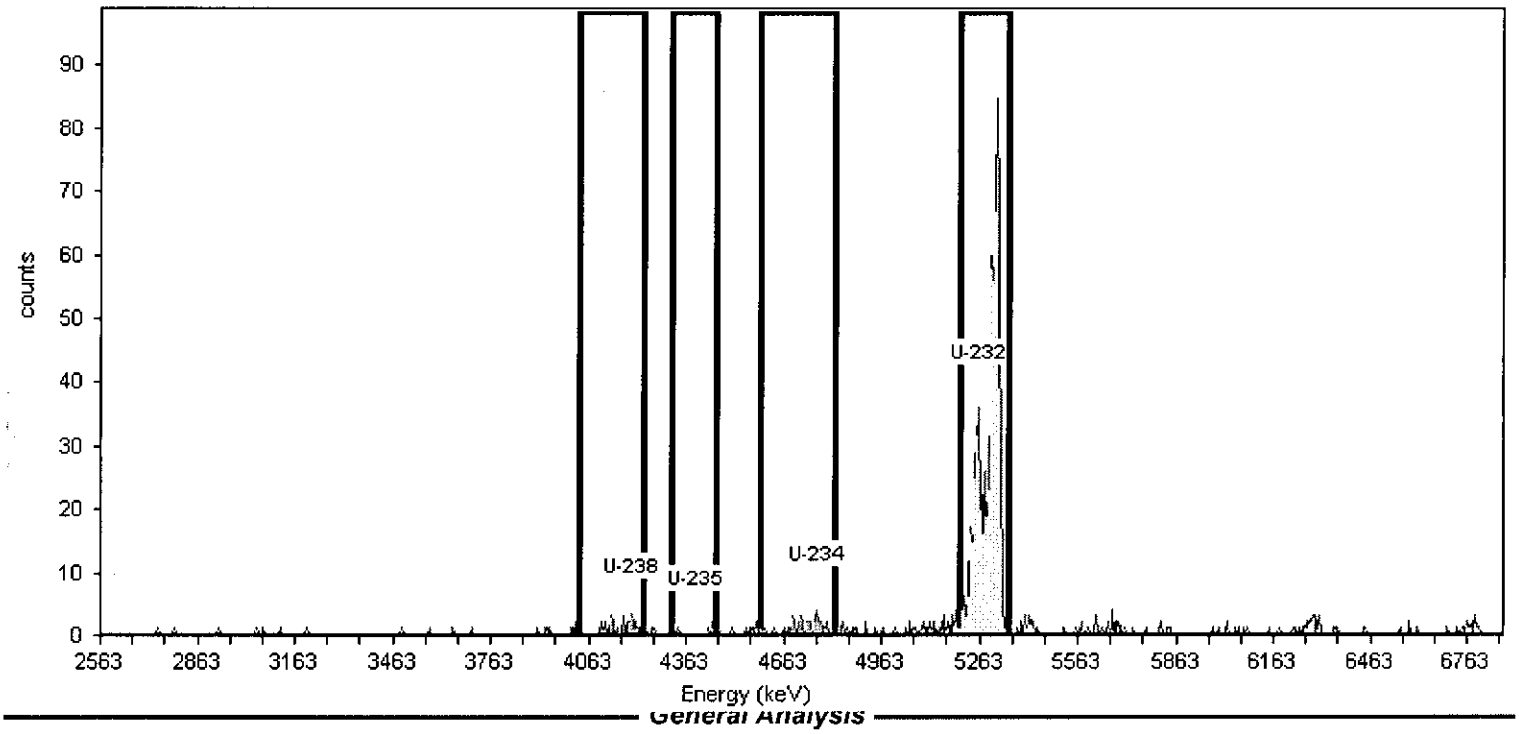
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.26%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/26/2010 3:39:08PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	41.077	100.2	31.00	3.0000	28	3.472E-001	2.289E-001	4.997E-002	1.335E-001
U-235	4396.000	4318.000	4453.000	6.053	80.9	6.00	2.0216	4	6.113E-002	1.312E-001	5.082E-002	1.432E-001
U-234	4765.000	4592.000	4819.000	95.310	100.0	43.71	14.2296	29	3.663E-001	2.940E-001	1.090E-001	2.517E-001
U-232	5263.000	5203.000	5350.000	22.244	99.8	874.01	7.0000	867	8.055E+000	8.850E-001	8.377E-002	2.044E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:20PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

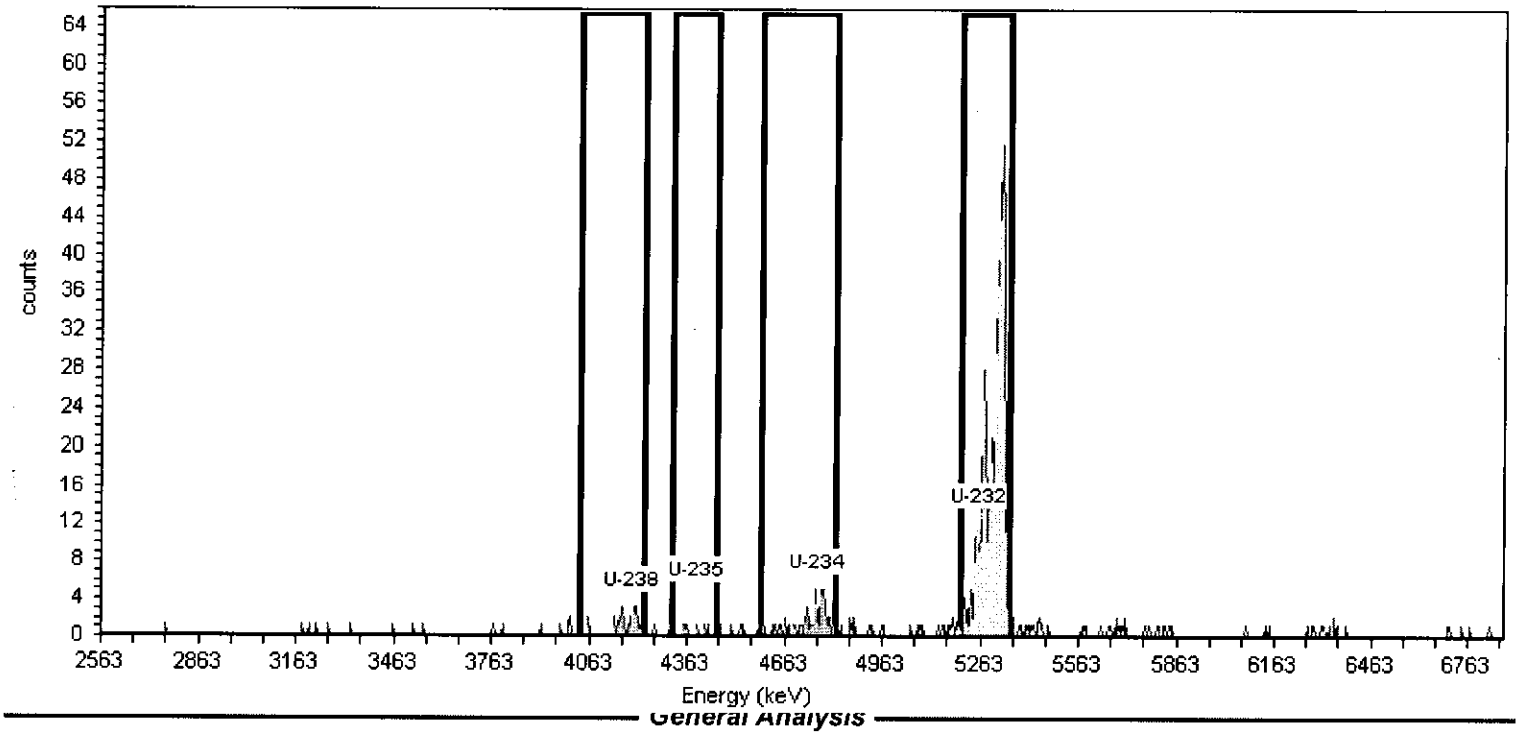
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 44.11%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/26/2010 3:39:09PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.232	100.2	28.00	6.5711	21	4.152E-001	3.543E-001	1.155E-001	2.835E-001
U-235	4396.000	4318.000	4453.000	5.920	80.9	6.00	9.0000	-3	-7.201E-002	2.794E-001	1.675E-001	4.000E-001
U-234	4765.000	4592.000	4819.000	22.844	100.0	55.00	15.0596	40	7.753E-001	5.177E-001	1.752E-001	4.030E-001
U-232	5263.000	5203.000	5350.000	22.282	99.8	565.96	11.0000	555	5.205E+000	7.060E-001	1.641E-001	3.857E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:29PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82975-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

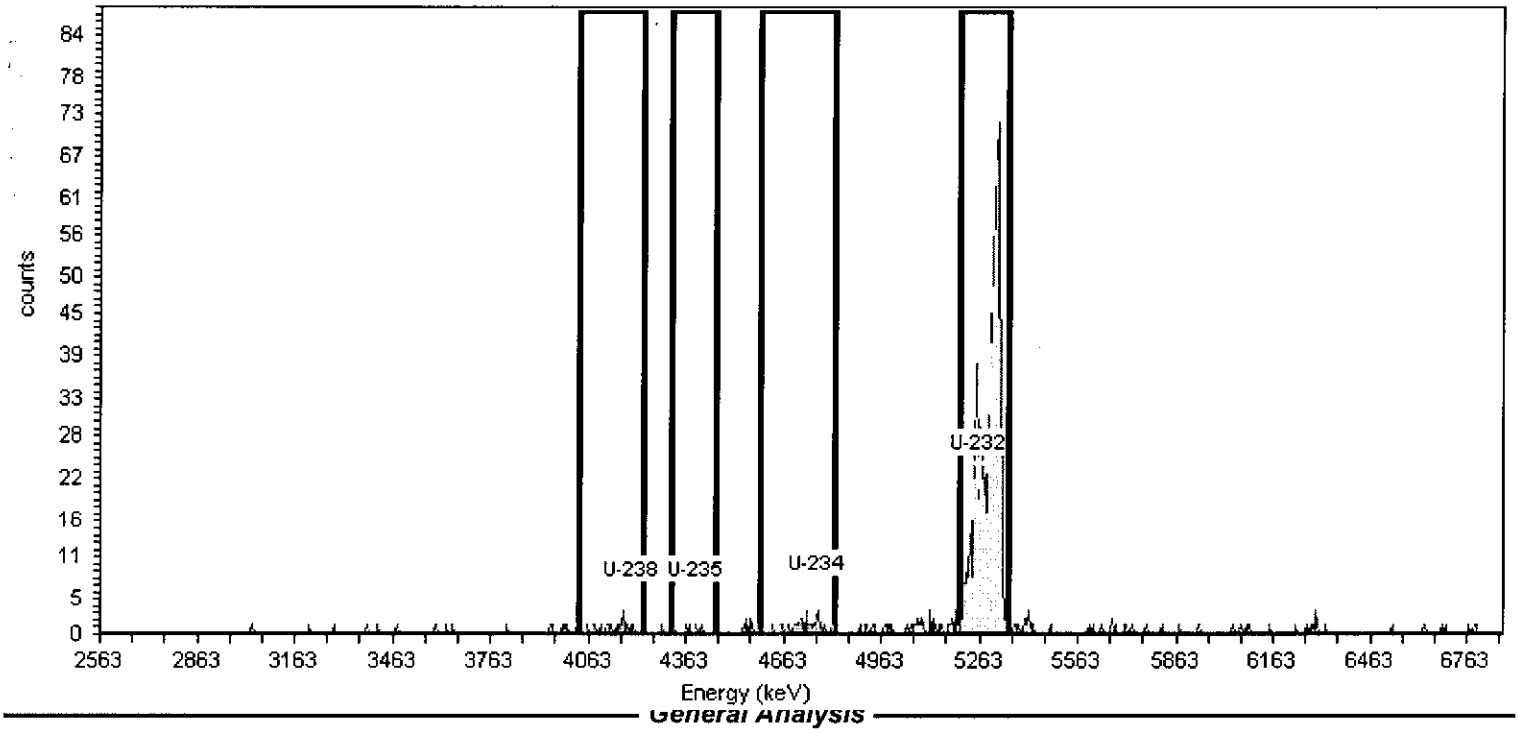
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.34%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/26/2010 3:39:10PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	65.129	100.2	16.00	4.0000	12	1.553E-001	1.767E-001	6.021E-002	1.554E-001
U-235	4396.000	4318.000	4453.000	65.306	80.9	5.00	3.0000	2	3.207E-002	1.362E-001	6.461E-002	1.726E-001
U-234	4765.000	4592.000	4819.000	80.817	100.0	31.06	23.0000	8	1.045E-001	2.869E-001	1.447E-001	3.244E-001
U-232	5263.000	5203.000	5350.000	13.748	99.8	849.66	18.8309	831	7.592E+000	8.597E-001	1.434E-001	3.252E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
8:39:33PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82975-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

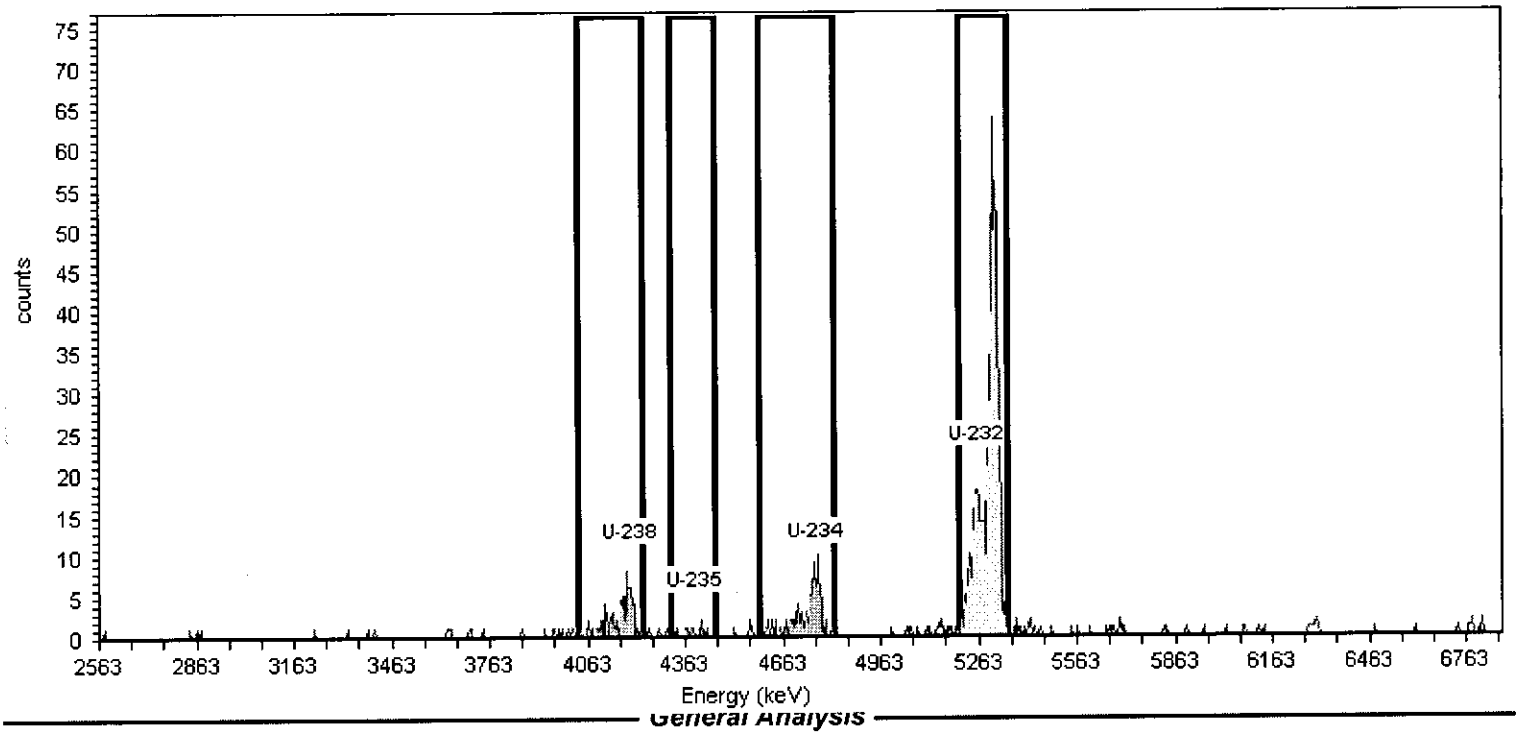
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 46.08%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/26/2010 3:39:10PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	40.283	100.2	78.33	8.0000	70	1.265E+000	5.744E-001	1.183E-001	2.853E-001
U-235	4396.000	4318.000	4453.000	56.689	80.9	9.00	1.0000	8	1.783E-001	2.150E-001	5.184E-002	1.640E-001
U-234	4765.000	4592.000	4819.000	33.289	100.0	103.23	25.0596	78	1.409E+000	6.873E-001	2.098E-001	4.684E-001
U-232	5263.000	5203.000	5350.000	22.878	99.8	608.17	10.3100	598	5.438E+000	7.104E-001	1.474E-001	3.483E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:01PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

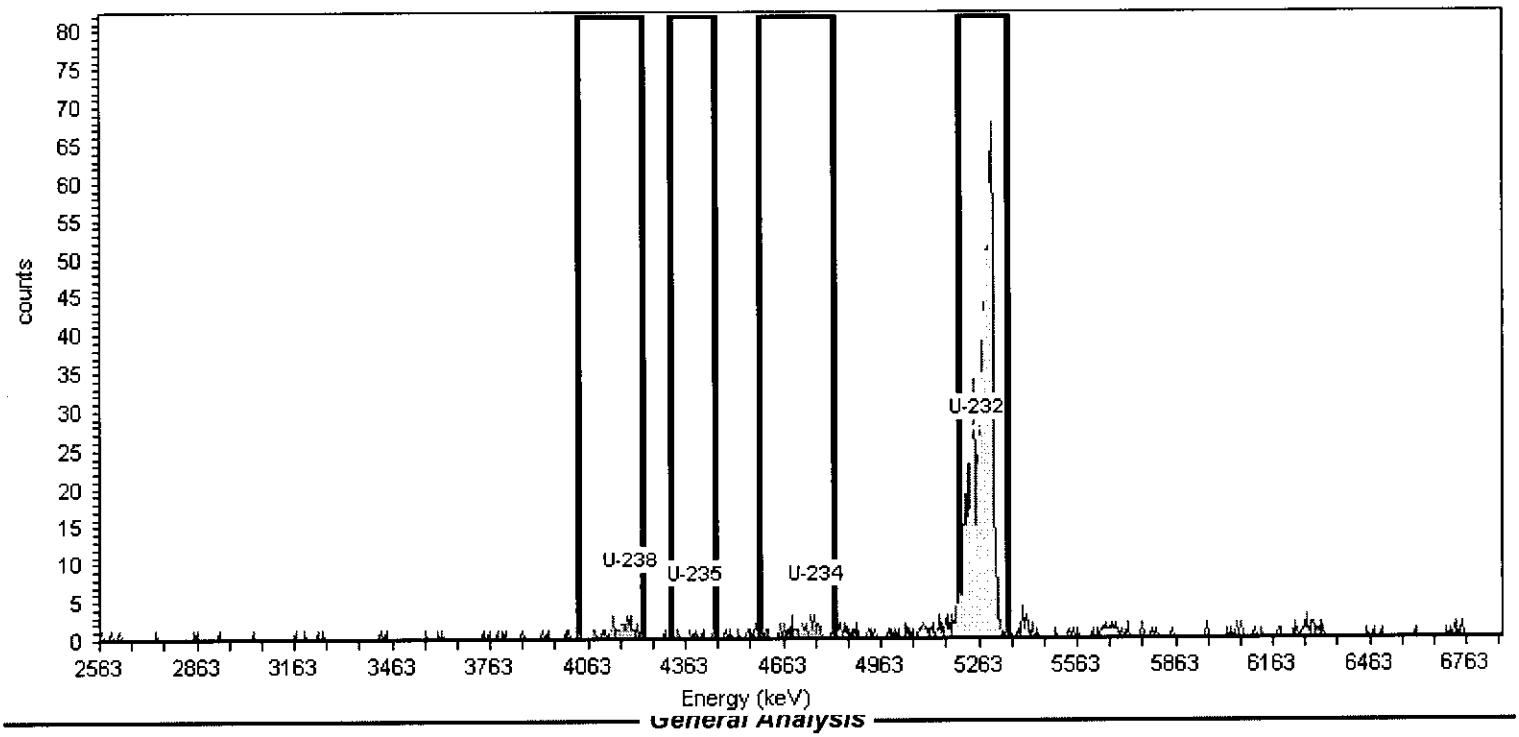
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 60.65%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/27/2010 7:44:01AM
Live Time: 300.00 min.
Real Time: 299.99 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	57.806	100.2	33.67	8.0000	26	3.473E-001	2.722E-001	8.902E-002	2.146E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	5.02	4.0351	1	1.654E-002	1.514E-001	7.833E-002	2.020E-001
U-234	4765.000	4592.000	4819.000	82.039	100.0	35.23	24.0000	11	1.522E-001	3.146E-001	1.545E-001	3.456E-001
U-232	5263.000	5203.000	5350.000	41.816	99.8	800.48	5.6900	795	7.157E+000	8.148E-001	8.239E-002	2.050E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:05PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

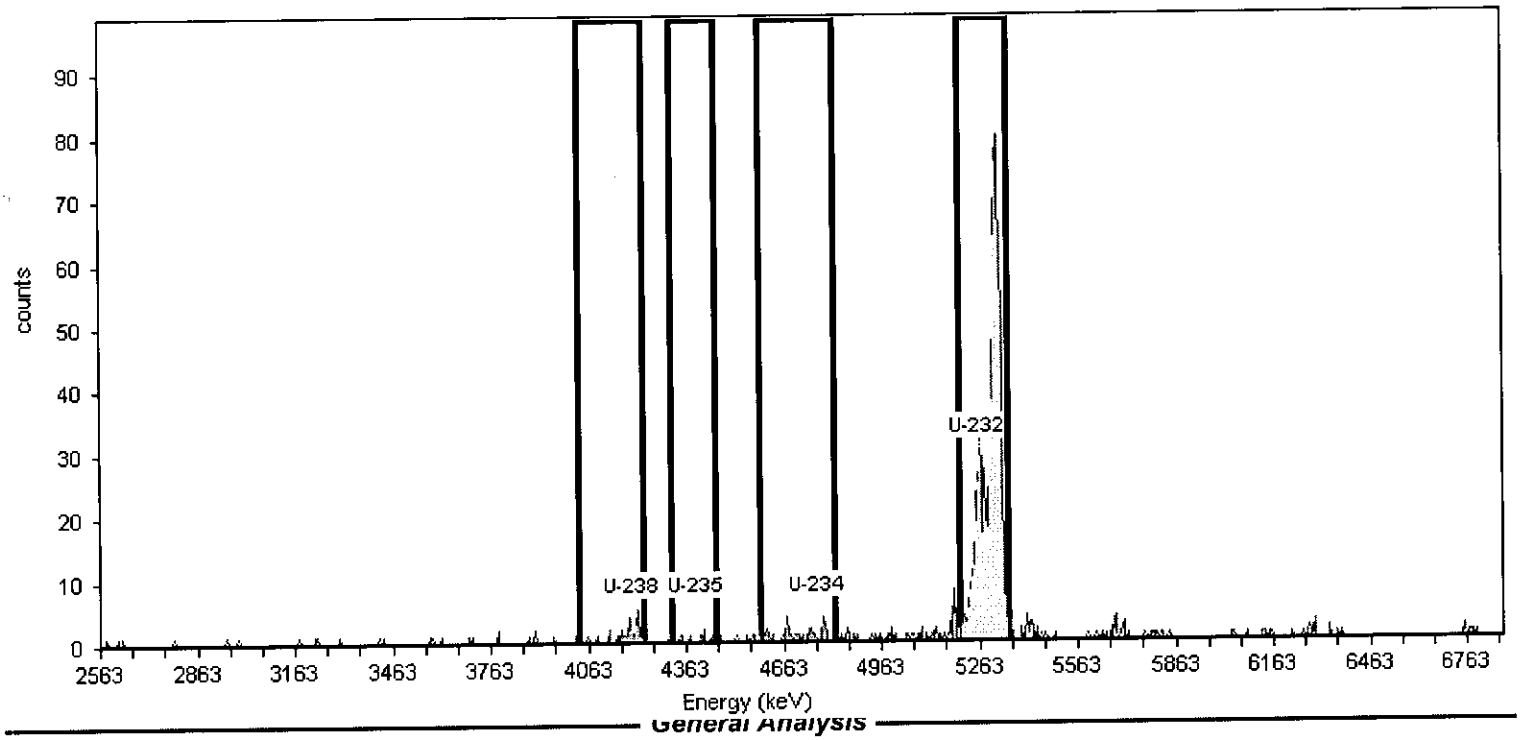
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.68%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/27/2010 7:44:03AM
Live Time: 300.00 min.
Real Time: 300.02 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.491	100.2	32.57	8.0000	25	2.965E-001	2.387E-001	7.939E-002	1.914E-001
U-235	4396.000	4318.000	4453.000	6.029	80.9	7.00	12.0000	-5	-7.474E-002	1.961E-001	1.205E-001	2.814E-001
U-234	4765.000	4592.000	4819.000	7.912	100.0	36.12	30.4592	6	6.842E-002	2.963E-001	1.552E-001	3.431E-001
U-232	5263.000	5203.000	5350.000	18.294	99.8	898.31	7.1691	891	7.750E+000	8.379E-001	8.248E-002	2.008E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:44:10PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

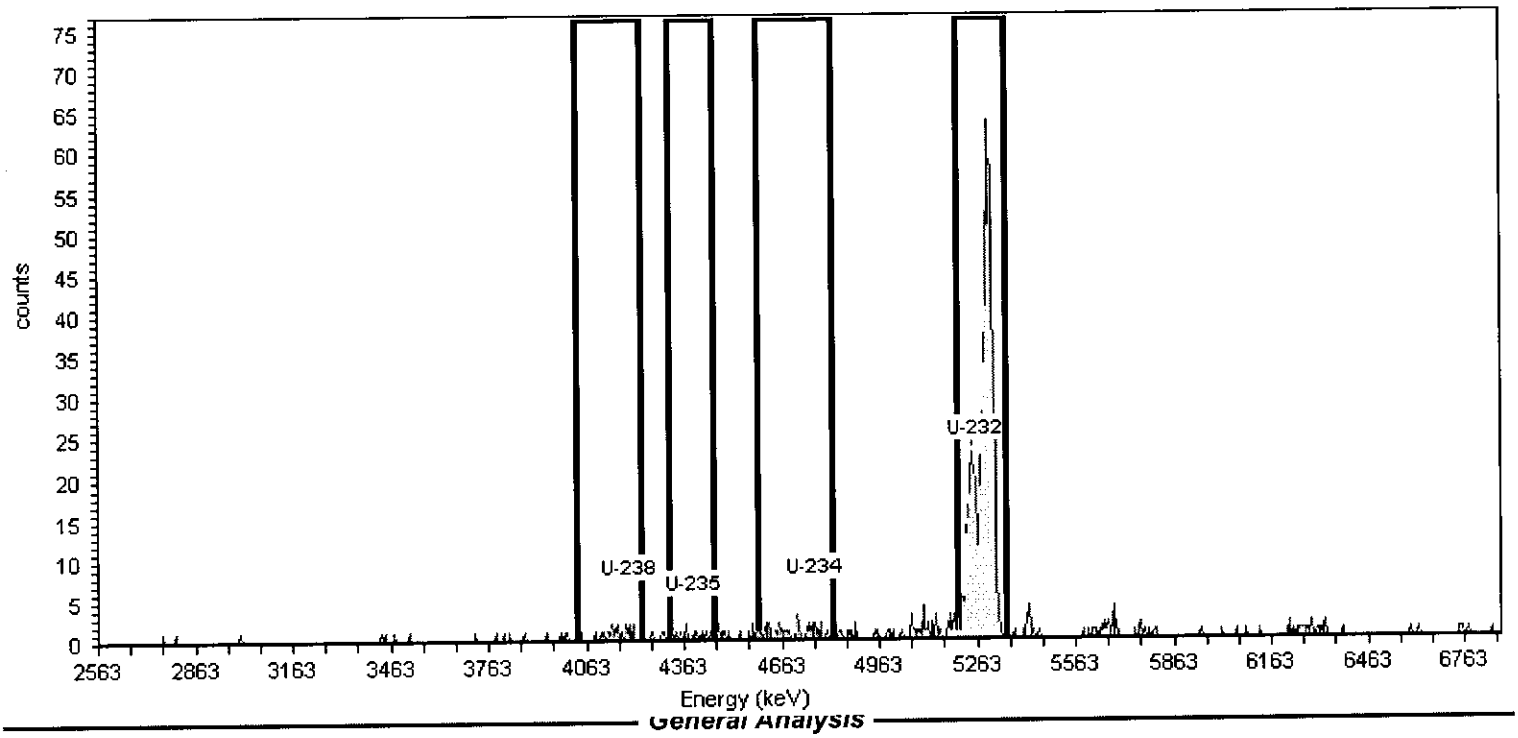
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 51.87%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/27/2010 7:43:46AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	34.591	100.2	20.00	4.4289	16	2.431E-001	2.374E-001	7.643E-002	1.951E-001
U-235	4396.000	4318.000	4453.000	9.499	80.9	12.00	14.0351	-2	-3.936E-002	2.962E-001	1.686E-001	3.895E-001
U-234	4765.000	4592.000	4819.000	198.491	100.0	38.77	30.7704	8	1.251E-001	3.923E-001	2.019E-001	4.460E-001
U-232	5263.000	5203.000	5350.000	41.662	99.8	696.01	7.3100	689	6.121E+000	7.448E-001	1.078E-001	2.619E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
12:44:13PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

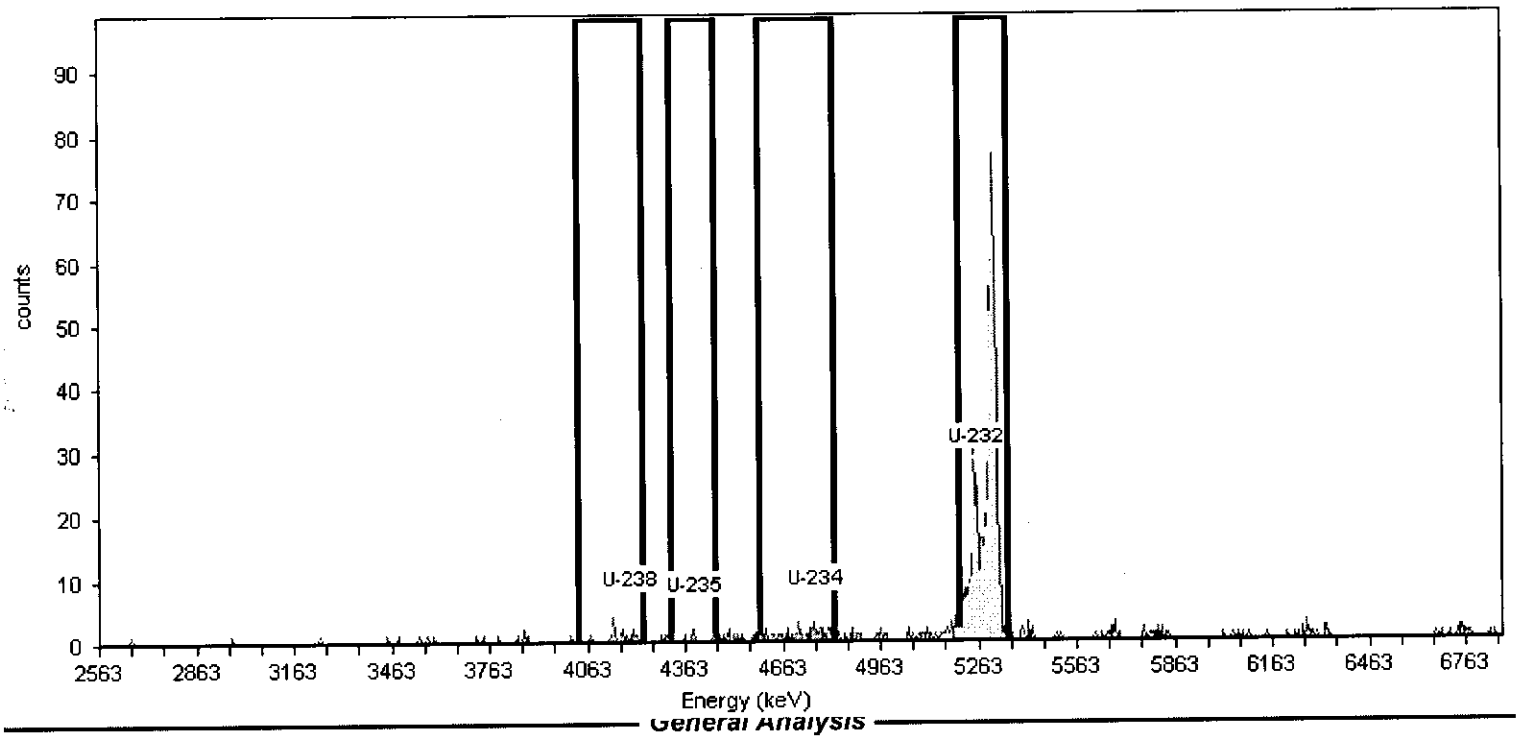
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 53.29%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/27/2010 7:43:49AM
Live Time: 300.00 min.
Real Time: 300.02 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	82.814	100.2	16.43	7.5711	9	1.358E-001	2.273E-001	9.815E-002	2.378E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	4.02	11.0000	-7	-1.326E-001	2.227E-001	1.466E-001	3.446E-001
U-234	4765.000	4592.000	4819.000	56.023	100.0	41.94	25.7108	16	2.493E-001	3.829E-001	1.812E-001	4.040E-001
U-232	5263.000	5203.000	5350.000	29.523	99.8	705.52	4.3100	701	6.288E+000	7.563E-001	8.127E-002	2.081E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:44:17PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

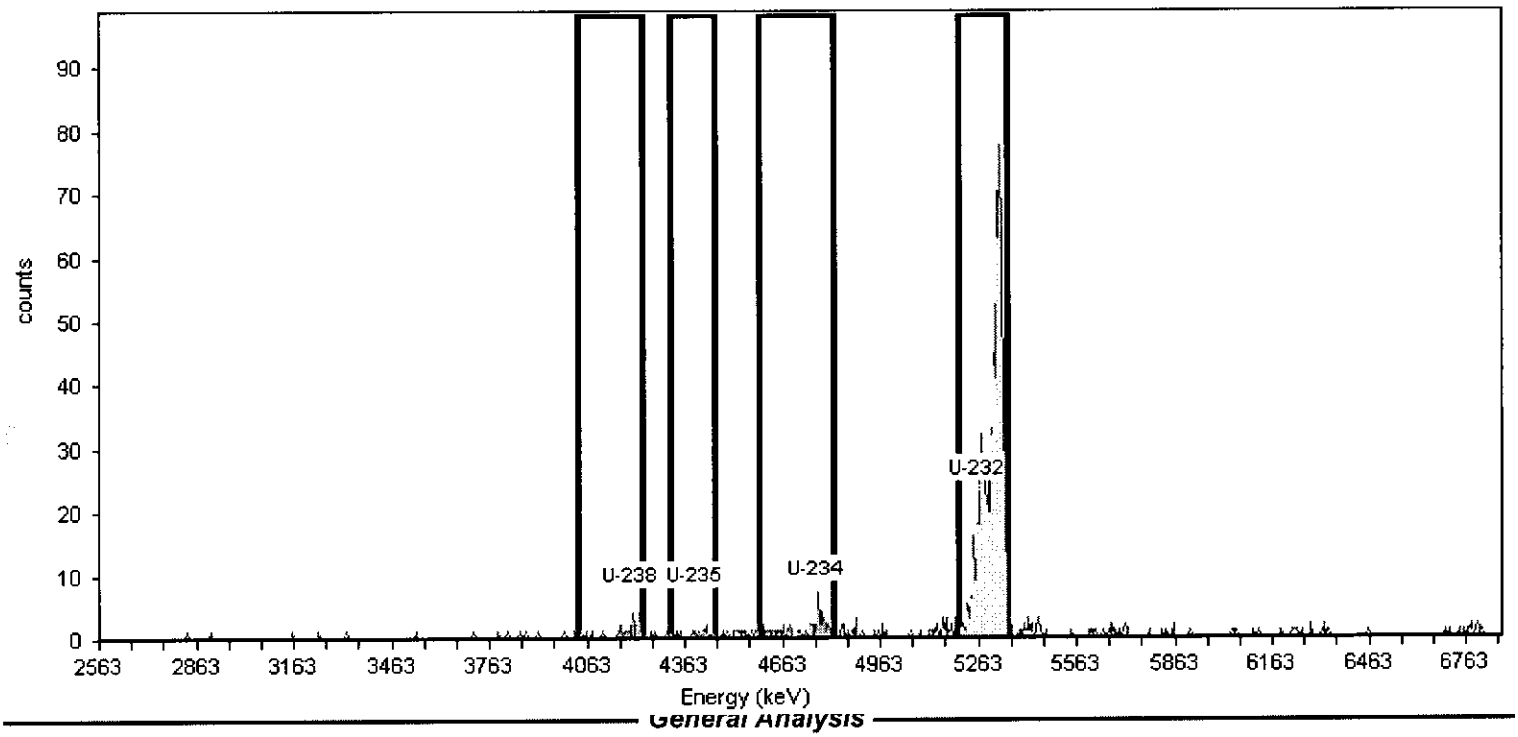
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 61.29%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/27/2010 7:43:52AM
Live Time: 300.00 min.
Real Time: 299.97 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	14.513	100.2	26.33	12.0000	14	1.882E-001	2.472E-001	1.058E-001	2.472E-001
U-235	4396.000	4318.000	4453.000	8.150	80.9	10.99	4.0000	7	1.137E-001	1.905E-001	7.571E-002	1.954E-001
U-234	4765.000	4592.000	4819.000	22.642	100.0	55.12	29.3399	26	3.392E-001	3.698E-001	1.658E-001	3.672E-001
U-232	5263.000	5203.000	5350.000	25.975	99.8	833.00	14.3100	819	7.233E+000	8.192E-001	1.268E-001	2.927E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:57PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

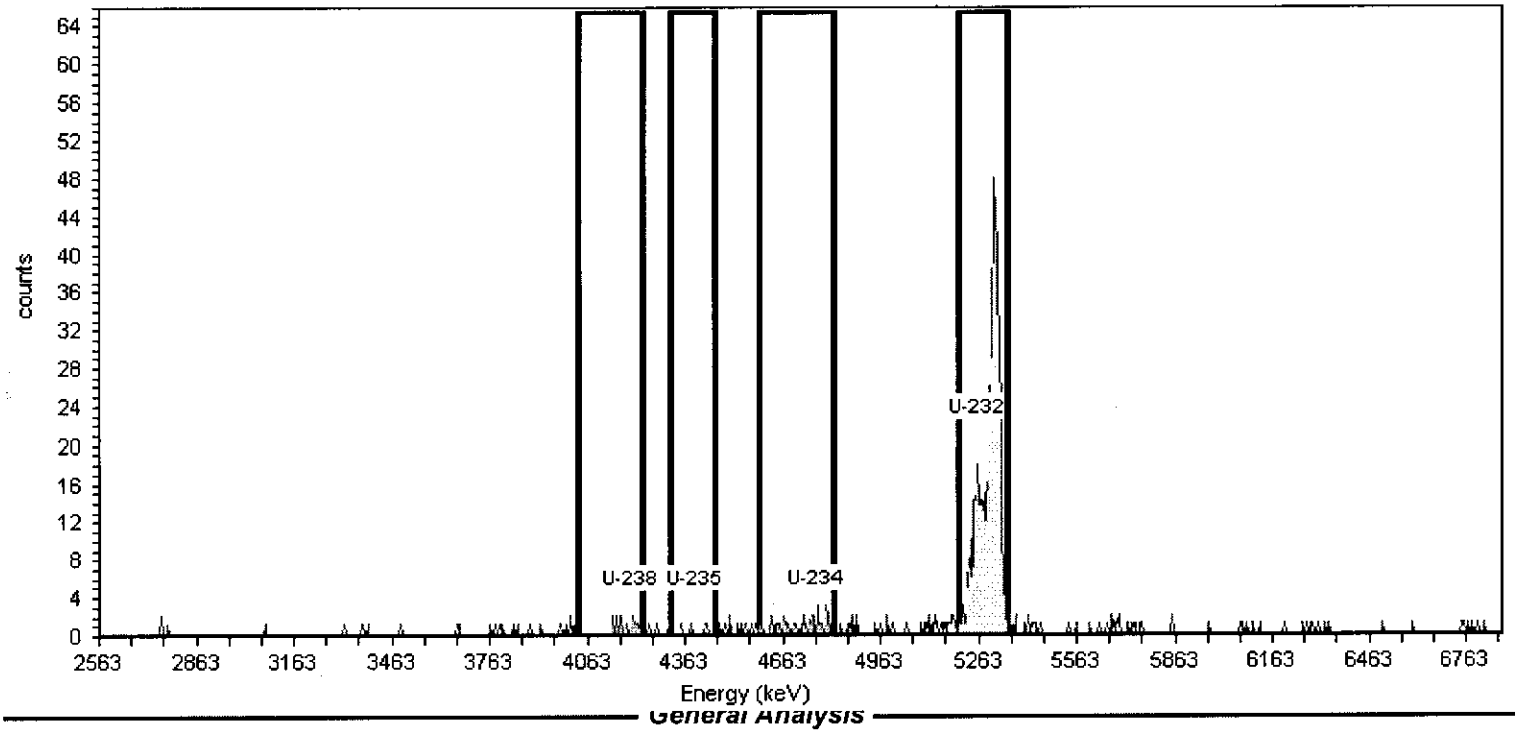
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 40.36%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/27/2010 7:43:55AM
Live Time: 300.00 min.
Real Time: 299.99 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.617	100.2	16.00	5.0000	11	2.241E-001	2.846E-001	1.060E-001	2.671E-001
U-235	4396.000	4318.000	4453.000	9.269	80.9	5.00	4.0567	1	2.381E-002	2.279E-001	1.183E-001	3.048E-001
U-234	4765.000	4592.000	4819.000	9.226	100.0	40.71	21.0000	20	4.023E-001	4.895E-001	2.176E-001	4.904E-001
U-232	5263.000	5203.000	5350.000	22.918	99.8	539.14	11.3100	528	4.763E+000	6.611E-001	1.749E-001	4.103E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:53PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82974-02 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:
:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

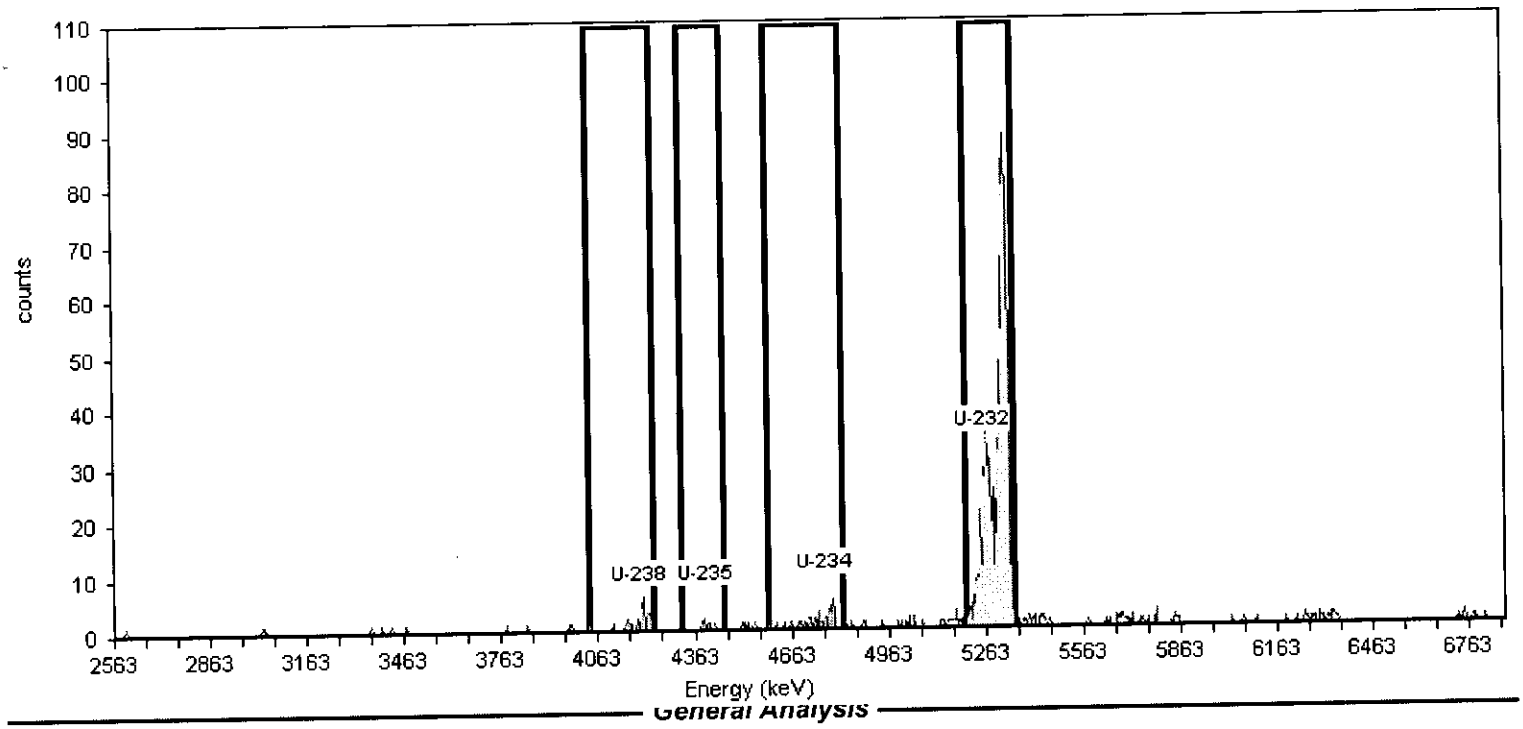
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 69.63%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/27/2010 7:43:48AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.635	100.2	33.34	6.0000	27	3.210E-001	2.308E-001	6.689E-002	1.656E-001
U-235	4396.000	4318.000	4453.000	27.404	80.9	7.00	3.0135	4	5.798E-002	1.386E-001	5.874E-002	1.568E-001
U-234	4765.000	4592.000	4819.000	8.764	100.0	42.94	10.0596	33	3.867E-001	2.692E-001	8.678E-002	2.054E-001
U-232	5263.000	5203.000	5350.000	19.967	99.8	921.62	5.6900	916	8.216E+000	8.780E-001	7.149E-002	1.778E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:43:56PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82974-03 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

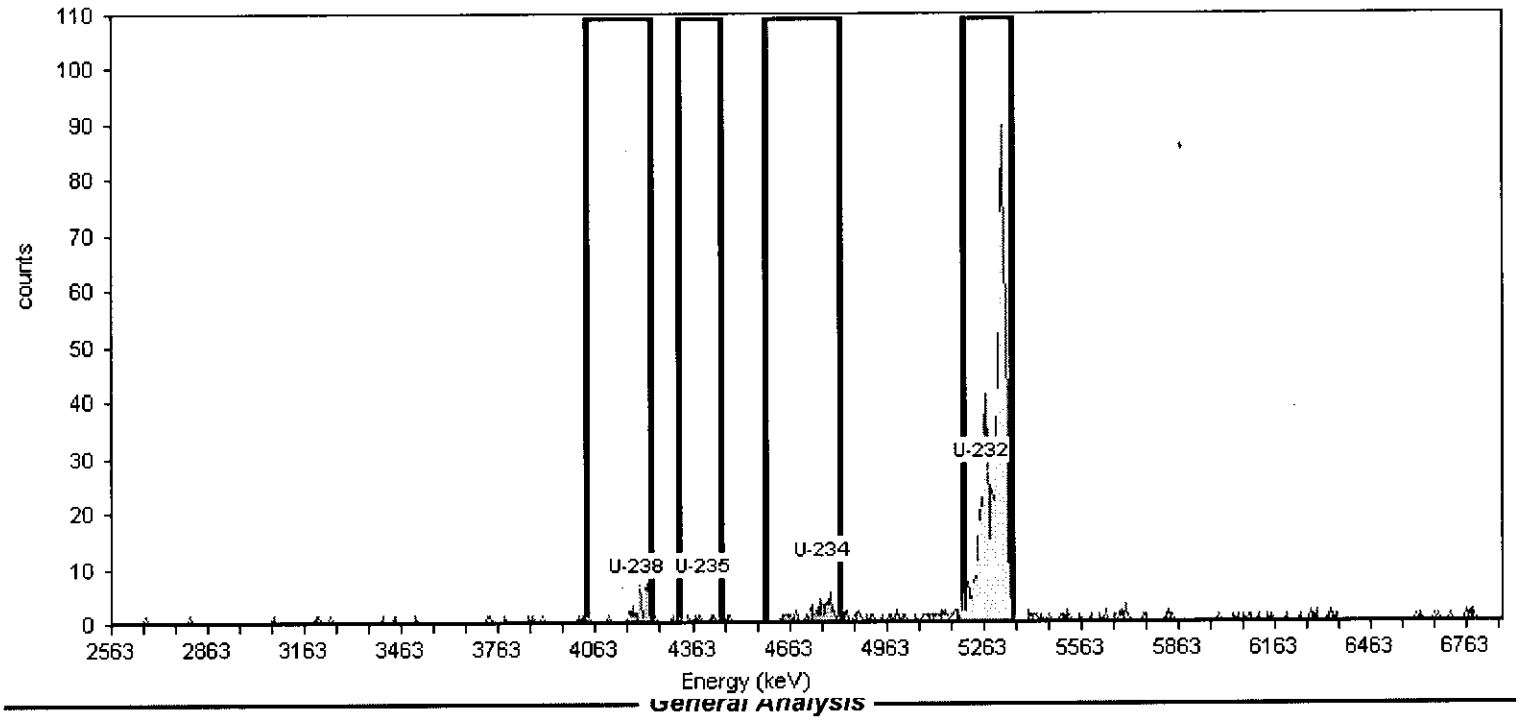
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.67%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/27/2010 7:43:51AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	12.624	100.2	46.57	7.0000	40	4.786E-001	2.839E-001	7.445E-002	1.816E-001
U-235	4396.000	4318.000	4453.000	5.927	80.9	7.00	4.0000	3	4.496E-002	1.494E-001	6.972E-002	1.800E-001
U-234	4765.000	4592.000	4819.000	7.479	100.0	52.23	18.0000	34	4.148E-001	3.168E-001	1.196E-001	2.720E-001
U-232	5263.000	5203.000	5350.000	18.746	99.8	898.11	9.1691	889	7.985E+000	8.676E-001	9.351E-002	2.229E-001

AlphaVision v5.3

Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
12:44:00PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82974-01 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

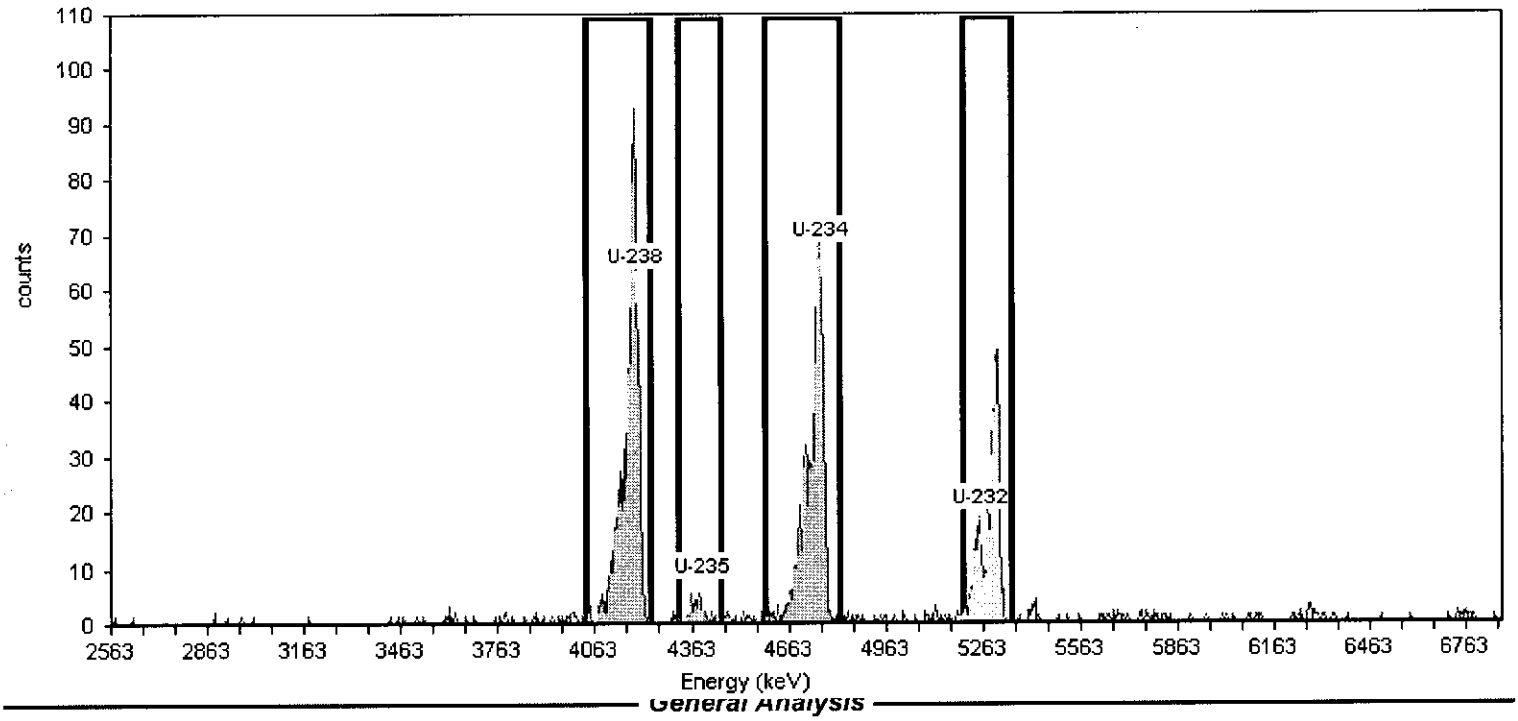
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 35.11%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/27/2010 7:43:59AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	36.527	100.2	910.09	11.0000	899	2.107E+001	5.331E+000	1.808E-001	4.250E-001
U-235	4396.000	4318.000	4453.000	41.970	80.9	41.94	5.0000	37	1.073E+000	6.465E-001	1.510E-001	3.806E-001
U-234	4765.000	4592.000	4819.000	35.742	100.0	832.77	17.9404	815	1.913E+001	4.889E+000	2.313E-001	5.262E-001
U-232	5263.000	5203.000	5350.000	32.810	99.8	465.83	7.0000	459	4.143E+000	6.103E-001	1.583E-001	3.862E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:33:19PM 7/22/2010

Analyst: ORTEC

Sample

Sample: WG286325 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

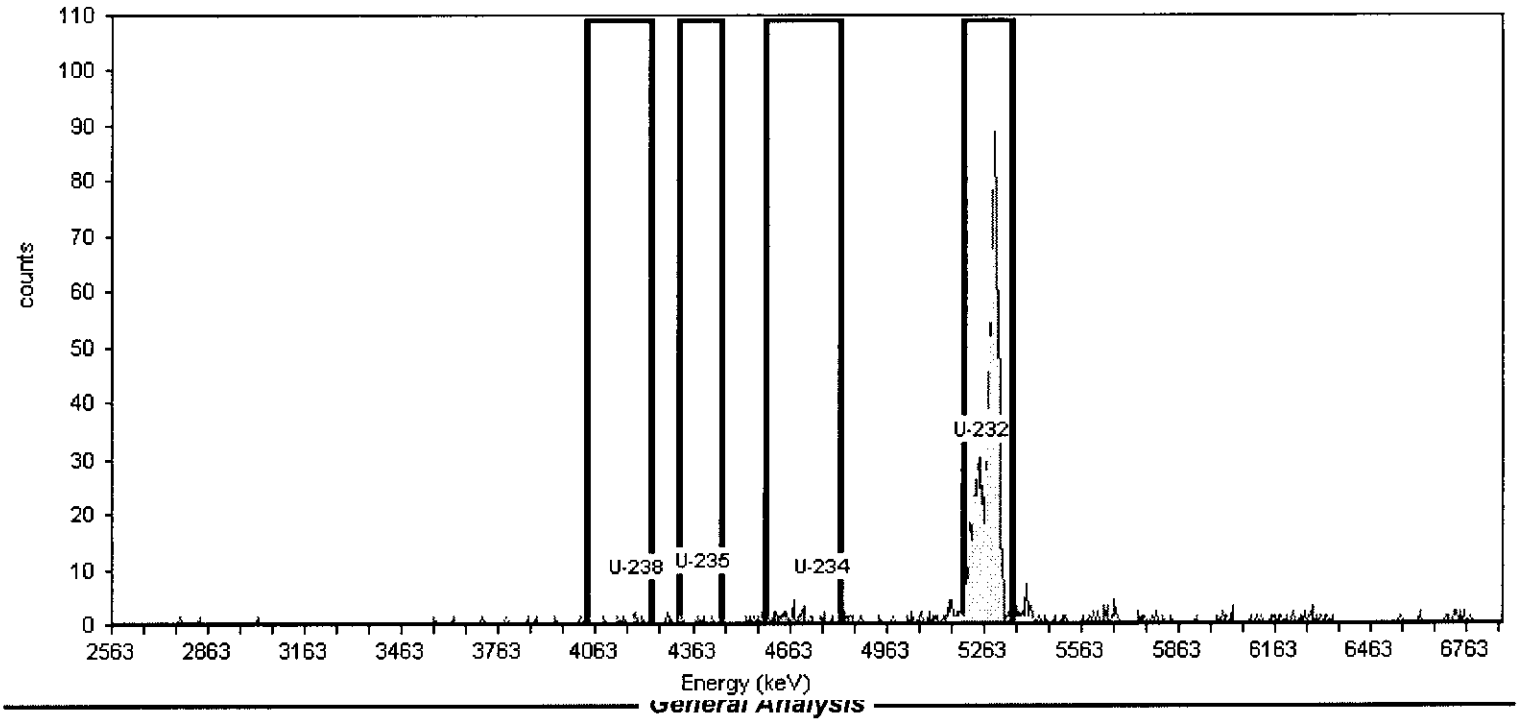
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.97%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/22/2010 10:25:23AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	64.775	100.2	7.00	3.0000	4	4.740E-002	1.129E-001	4.775E-002	1.276E-001
U-235	4396.000	4318.000	4453.000	13.938	80.9	7.94	6.0000	2	2.853E-002	1.646E-001	8.366E-002	2.070E-001
U-234	4765.000	4592.000	4819.000	109.968	100.0	34.31	12.3488	22	2.607E-001	2.493E-001	9.706E-002	2.262E-001
U-232	5263.000	5203.000	5350.000	35.648	99.8	912.17	4.6900	907	8.374E+000	8.994E-001	6.551E-002	1.662E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:33:37PM 7/22/2010

Analyst: ORTEC

Sample

Sample: WG286325 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

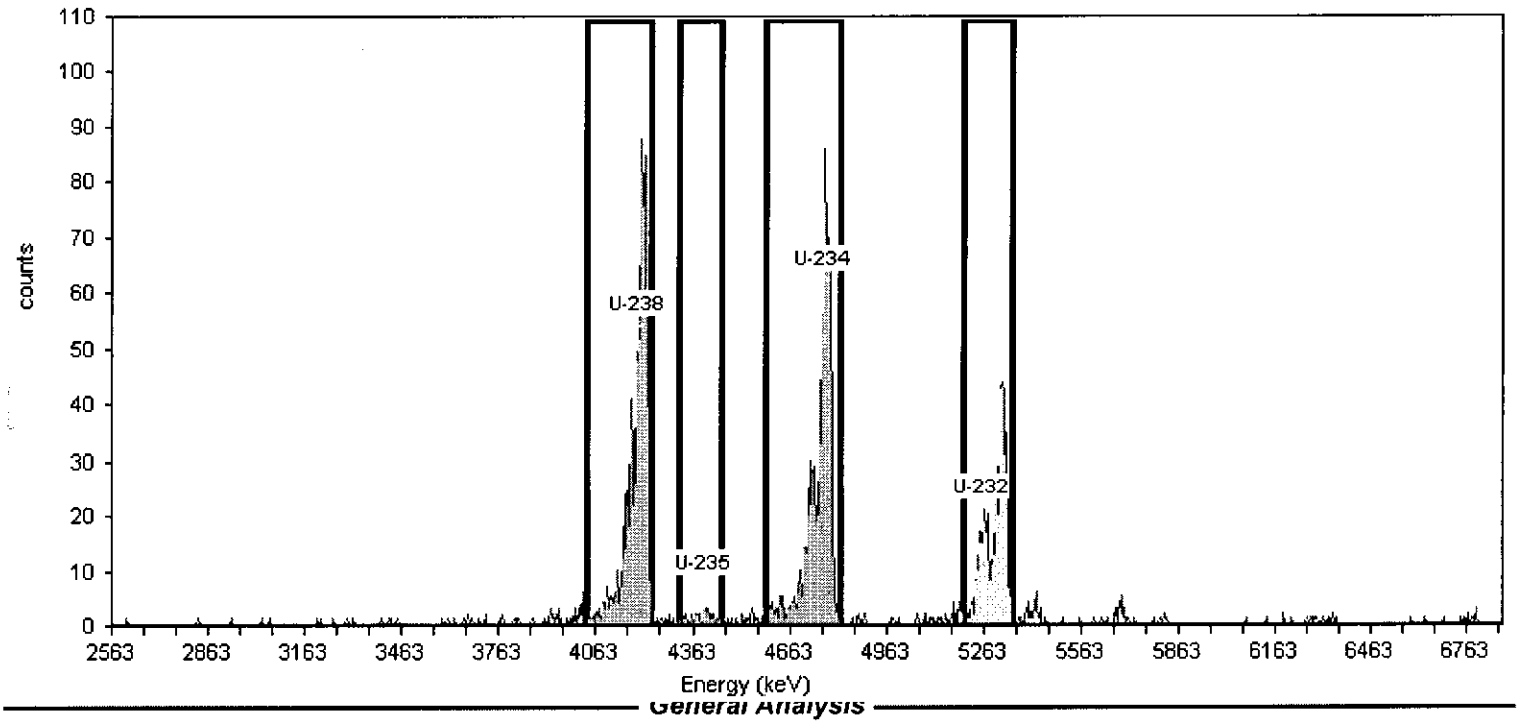
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 42.15%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/22/2010 10:25:25AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.256	100.2	953.09	6.0000	947	1.902E+001	4.673E+000	1.145E-001	2.833E-001
U-235	4396.000	4318.000	4453.000	63.600	80.9	36.96	7.0000	30	7.457E-001	5.227E-001	1.532E-001	3.737E-001
U-234	4765.000	4592.000	4819.000	28.678	100.0	885.29	14.0000	871	1.753E+001	4.344E+000	1.752E-001	4.048E-001
U-232	5263.000	5203.000	5350.000	20.063	99.8	539.37	4.0000	535	4.974E+000	6.781E-001	1.026E-001	2.647E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:26:04PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

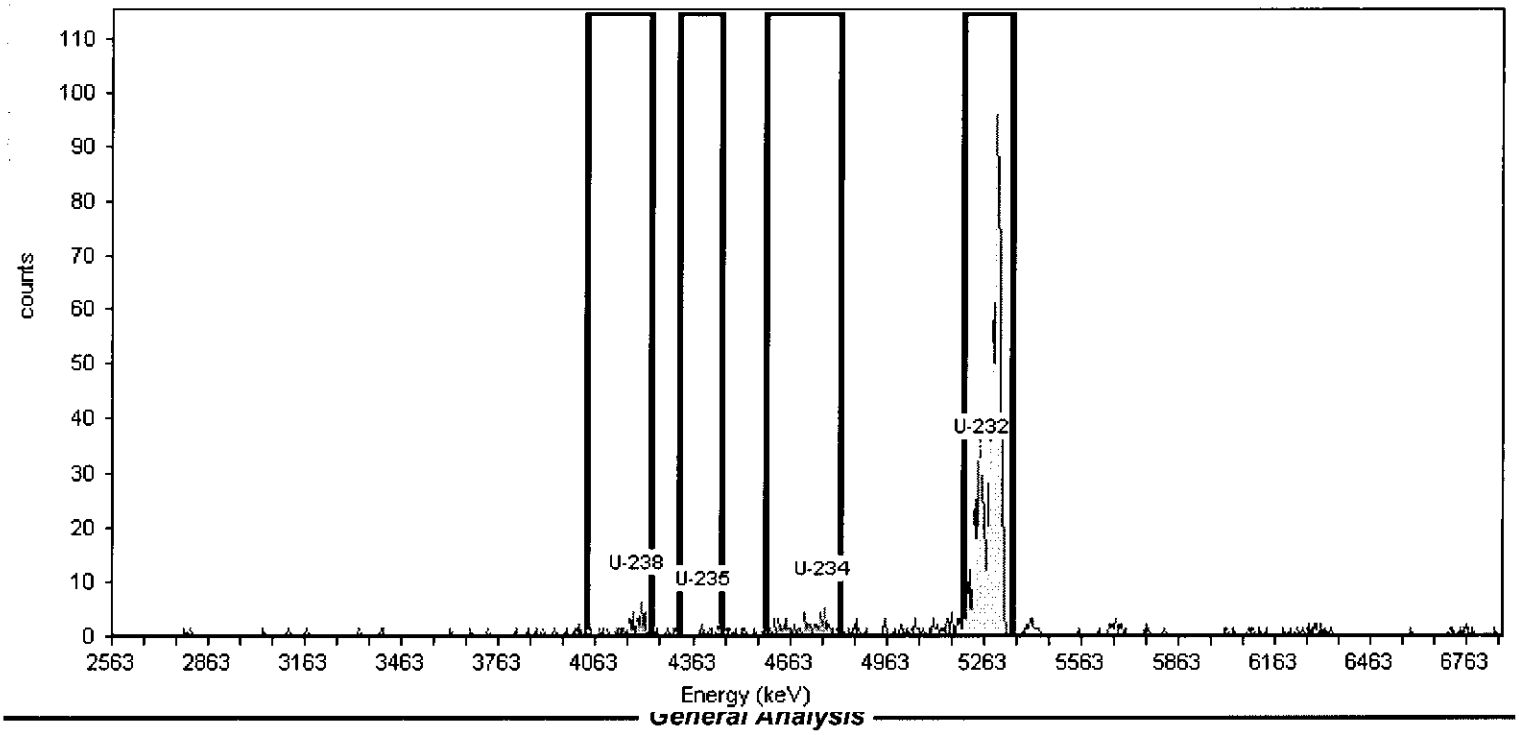
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.25%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/22/2010 10:25:27AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	19.796	100.2	47.00	10.0000	37	4.462E-001	2.887E-001	8.872E-002	2.101E-001
U-235	4396.000	4318.000	4453.000	10.287	80.9	8.00	7.9784	0	3.233E-004	1.792E-001	9.818E-002	2.368E-001
U-234	4765.000	4592.000	4819.000	152.247	100.0	65.00	21.1193	44	5.302E-001	3.542E-001	1.292E-001	2.911E-001
U-232	5263.000	5203.000	5350.000	36.931	99.8	898.66	7.0000	892	7.935E+000	8.588E-001	8.145E-002	1.987E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:26:07PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

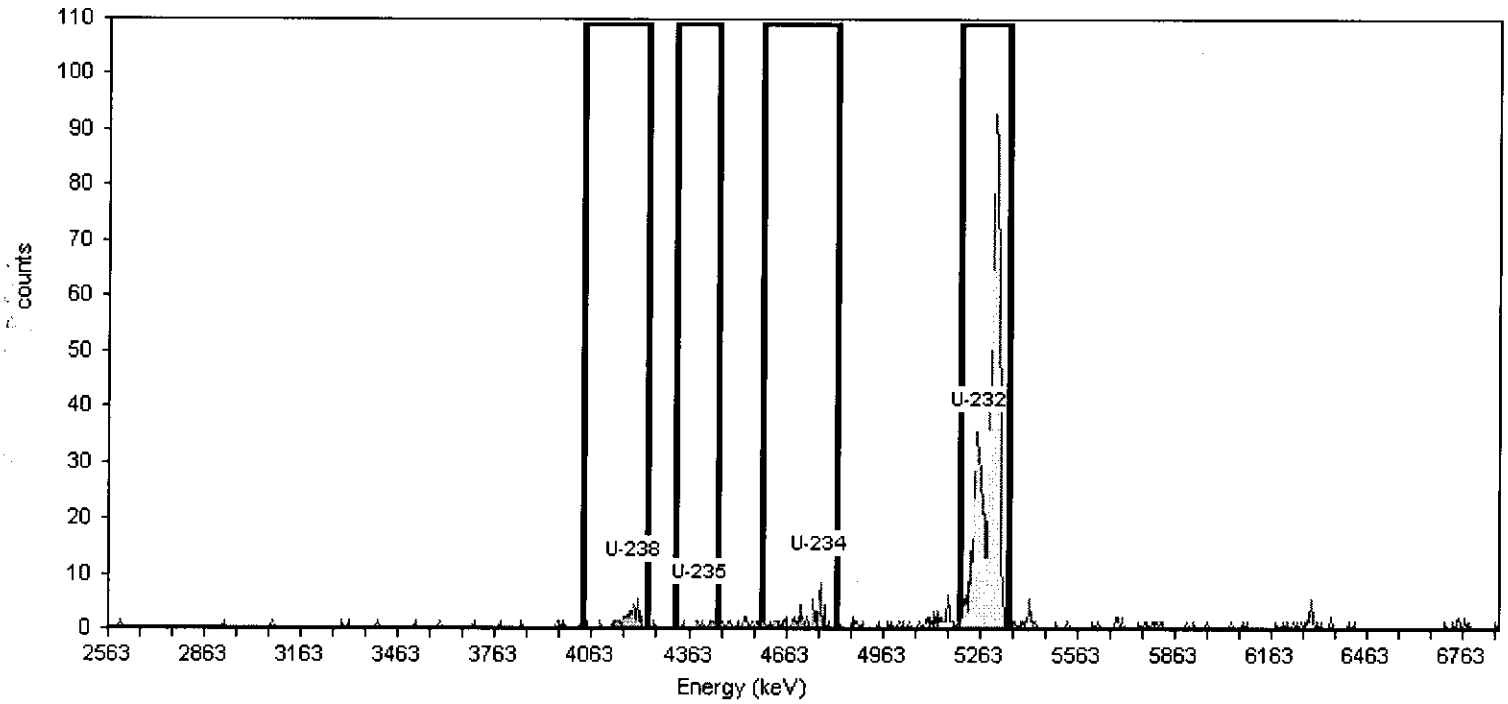
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.12%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/22/2010 10:25:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	50.674	100.2	37.57	3.0000	35	4.158E-001	2.457E-001	4.846E-002	1.295E-001
U-235	4396.000	4318.000	4453.000	16.942	80.9	7.00	8.0216	-1	-1.522E-002	1.733E-001	9.817E-002	2.367E-001
U-234	4765.000	4592.000	4819.000	31.295	100.0	57.94	23.1700	35	4.190E-001	3.372E-001	1.349E-001	3.025E-001
U-232	5263.000	5203.000	5350.000	26.147	99.8	901.17	7.0000	894	8.275E+000	8.966E-001	8.123E-002	1.982E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:03PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

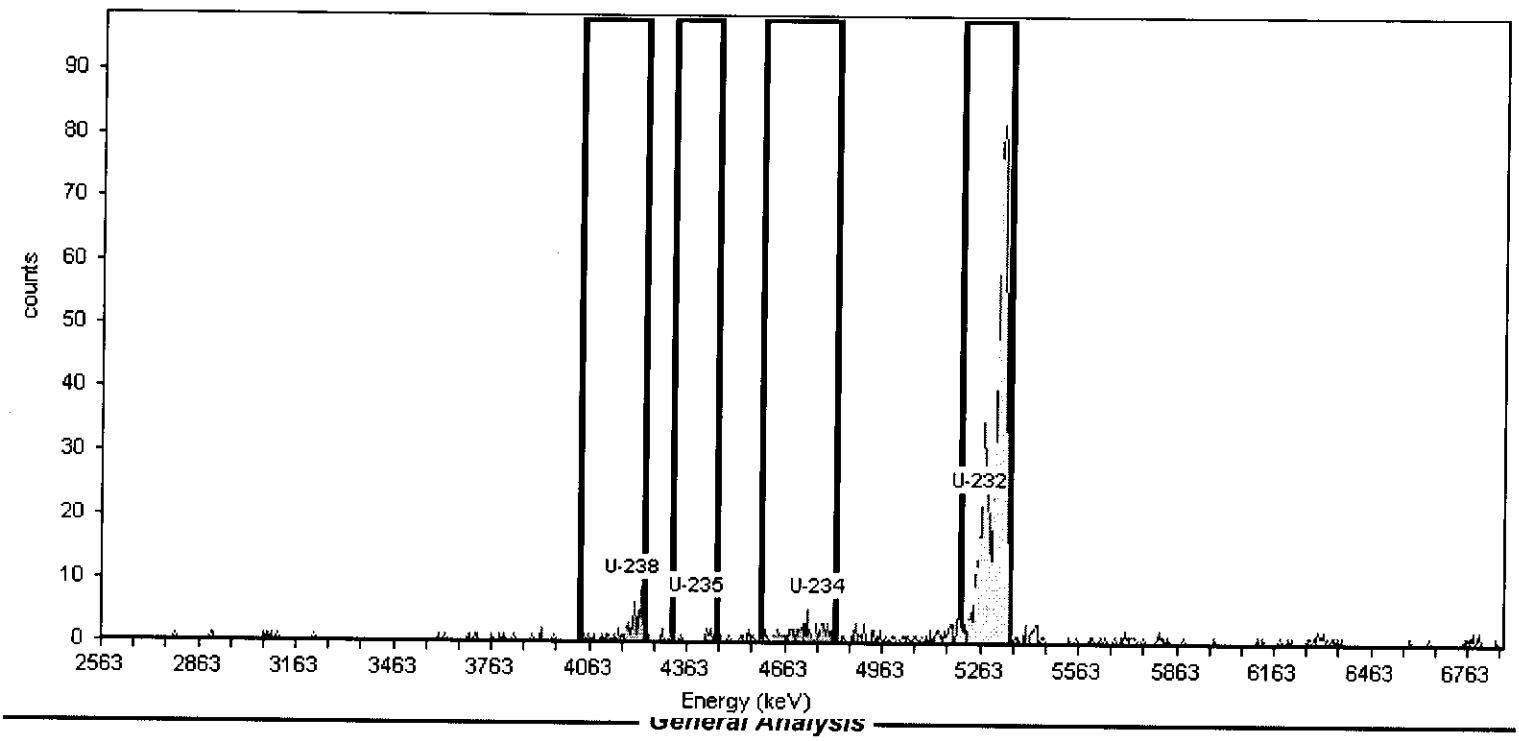
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.88%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/22/2010 10:25:10AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	14.305	100.2	53.57	4.0000	50	6.414E-001	3.242E-001	6.020E-002	1.554E-001
U-235	4396.000	4318.000	4453.000	13.271	80.9	8.04	1.0000	7	1.128E-001	1.465E-001	3.729E-002	1.180E-001
U-234	4765.000	4592.000	4819.000	20.913	100.0	67.94	18.1700	50	6.452E-001	3.858E-001	1.286E-001	2.922E-001
U-232	5263.000	5203.000	5350.000	25.253	99.8	838.76	7.6900	831	7.537E+000	8.433E-001	9.160E-002	2.216E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:15PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

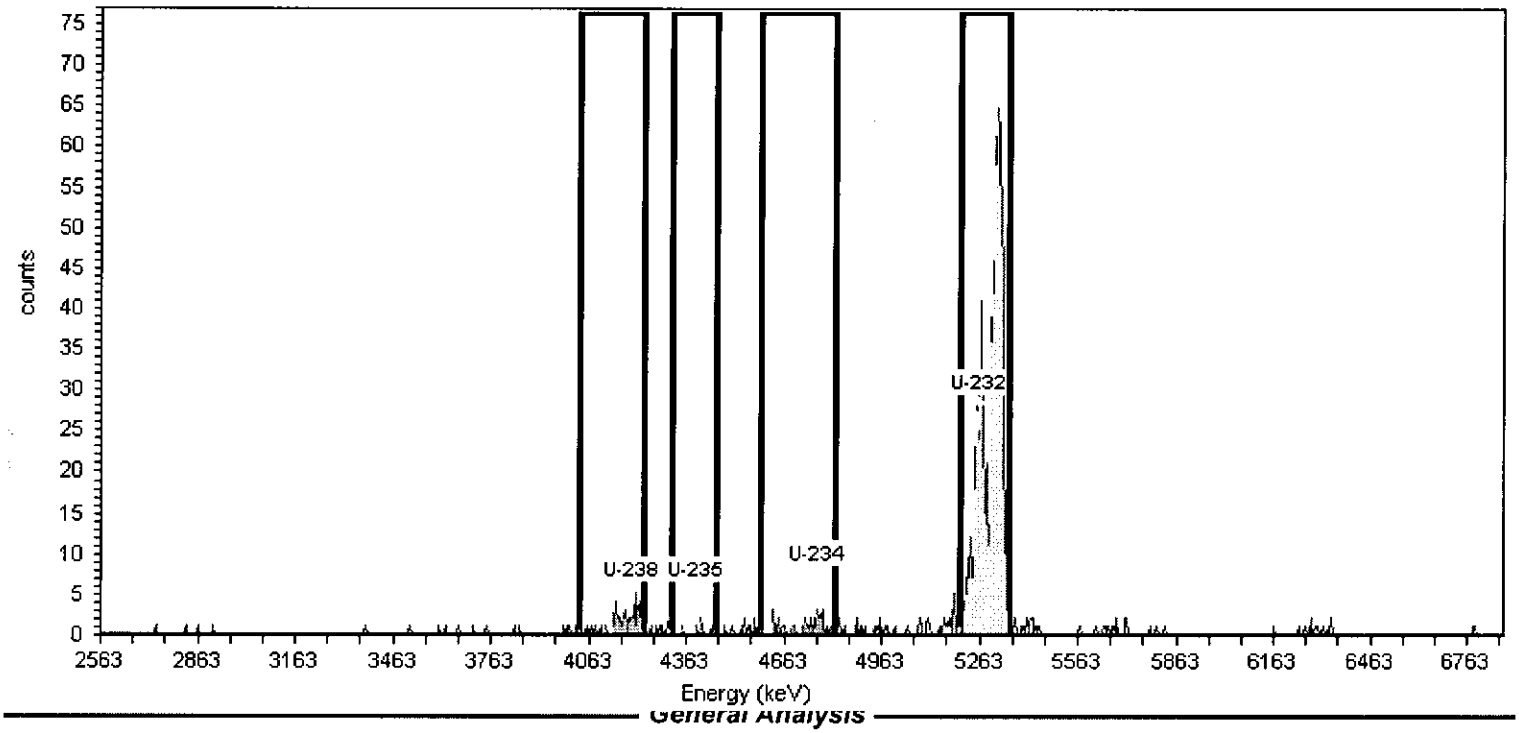
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.29%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/22/2010 10:25:10AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	17.754	100.2	47.67	5.9006	42	5.421E-001	3.071E-001	7.334E-002	1.818E-001
U-235	4396.000	4318.000	4453.000	45.786	80.9	6.06	2.0000	4	6.523E-002	1.376E-001	5.290E-002	1.493E-001
U-234	4765.000	4592.000	4819.000	33.851	100.0	37.94	11.0000	27	3.503E-001	2.827E-001	1.003E-001	2.358E-001
U-232	5263.000	5203.000	5350.000	19.016	99.8	832.62	4.0000	829	7.586E+000	8.471E-001	6.626E-002	1.711E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:29PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

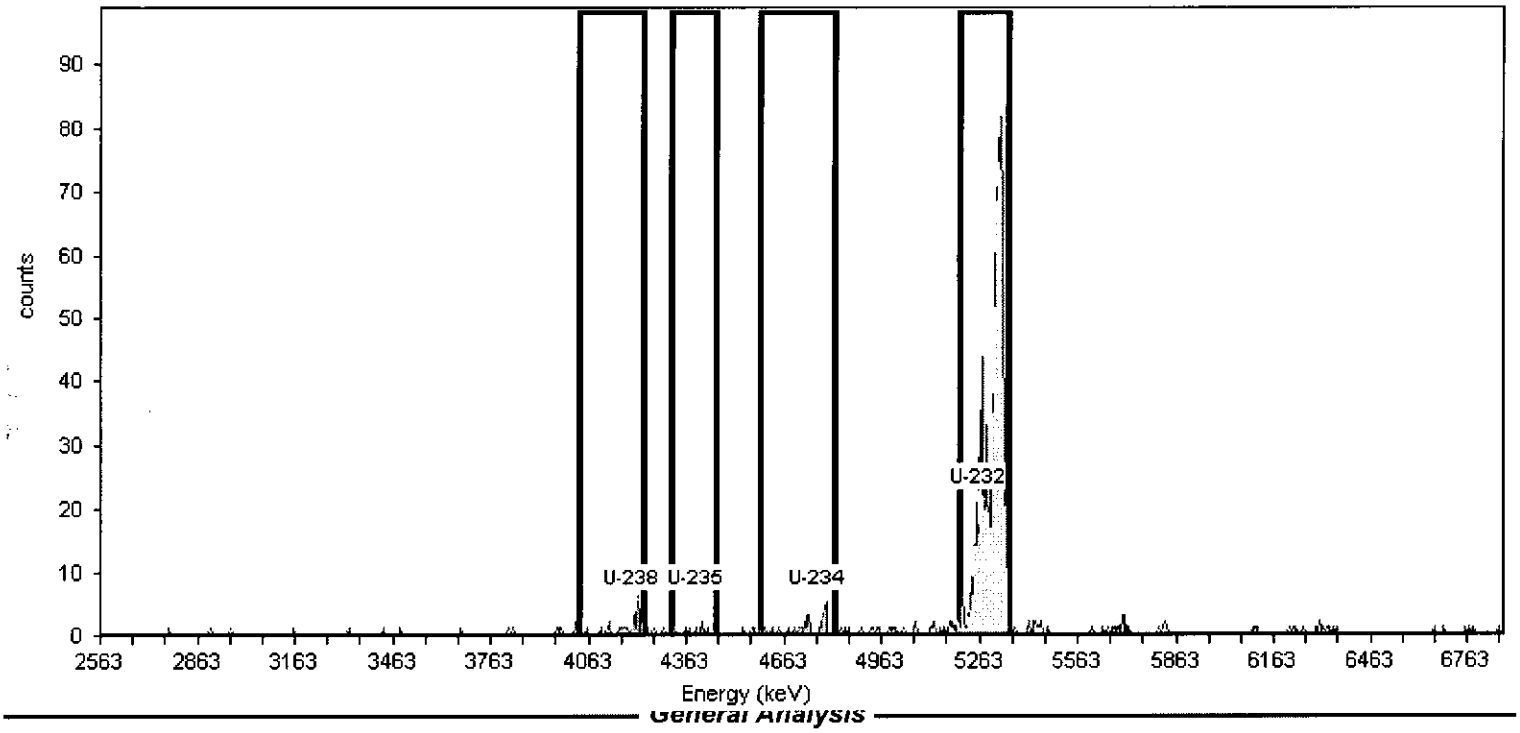
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.84%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/22/2010 10:25:12AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.066	100.2	31.00	4.3295	27	3.158E-001	2.212E-001	5.731E-002	1.467E-001
U-235	4396.000	4318.000	4453.000	111.004	80.9	8.98	2.0000	7	1.024E-001	1.474E-001	4.826E-002	1.362E-001
U-234	4765.000	4592.000	4819.000	9.238	100.0	31.94	10.0000	22	2.603E-001	2.368E-001	8.727E-002	2.066E-001
U-232	5263.000	5203.000	5350.000	22.539	99.8	914.27	6.0000	908	8.595E+000	9.255E-001	7.403E-002	1.832E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:25:14PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

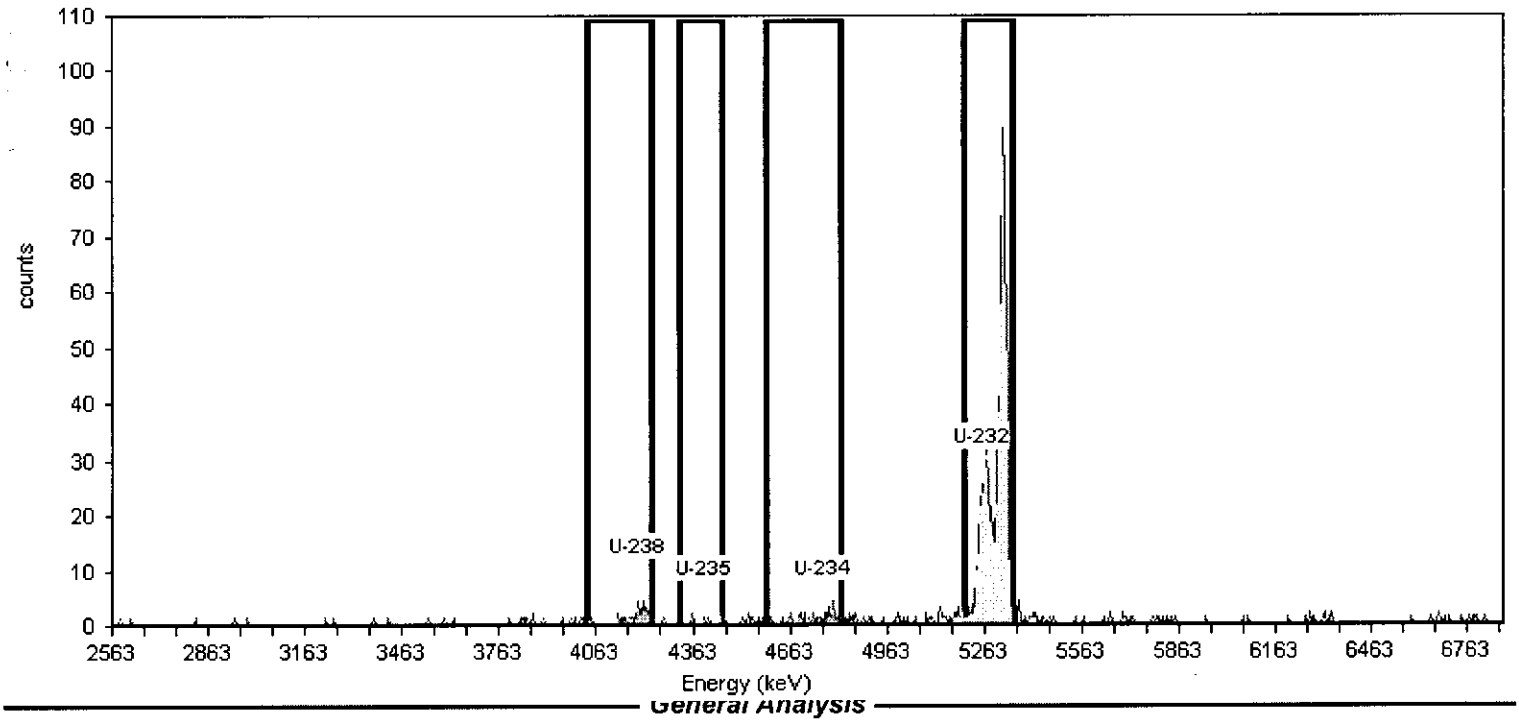
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.88%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/22/2010 10:25:14AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	22.340	100.2	37.47	1.0000	36	4.651E-001	2.567E-001	2.966E-002	9.383E-002
U-235	4396.000	4318.000	4453.000	.183	80.9	6.02	4.0000	2	3.194E-002	1.502E-001	7.350E-002	1.898E-001
U-234	4765.000	4592.000	4819.000	12.914	100.0	35.00	9.0596	26	3.314E-001	2.638E-001	8.946E-002	2.135E-001
U-232	5263.000	5203.000	5350.000	19.764	99.8	847.03	3.6900	843	7.656E+000	8.475E-001	6.253E-002	1.629E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:47PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

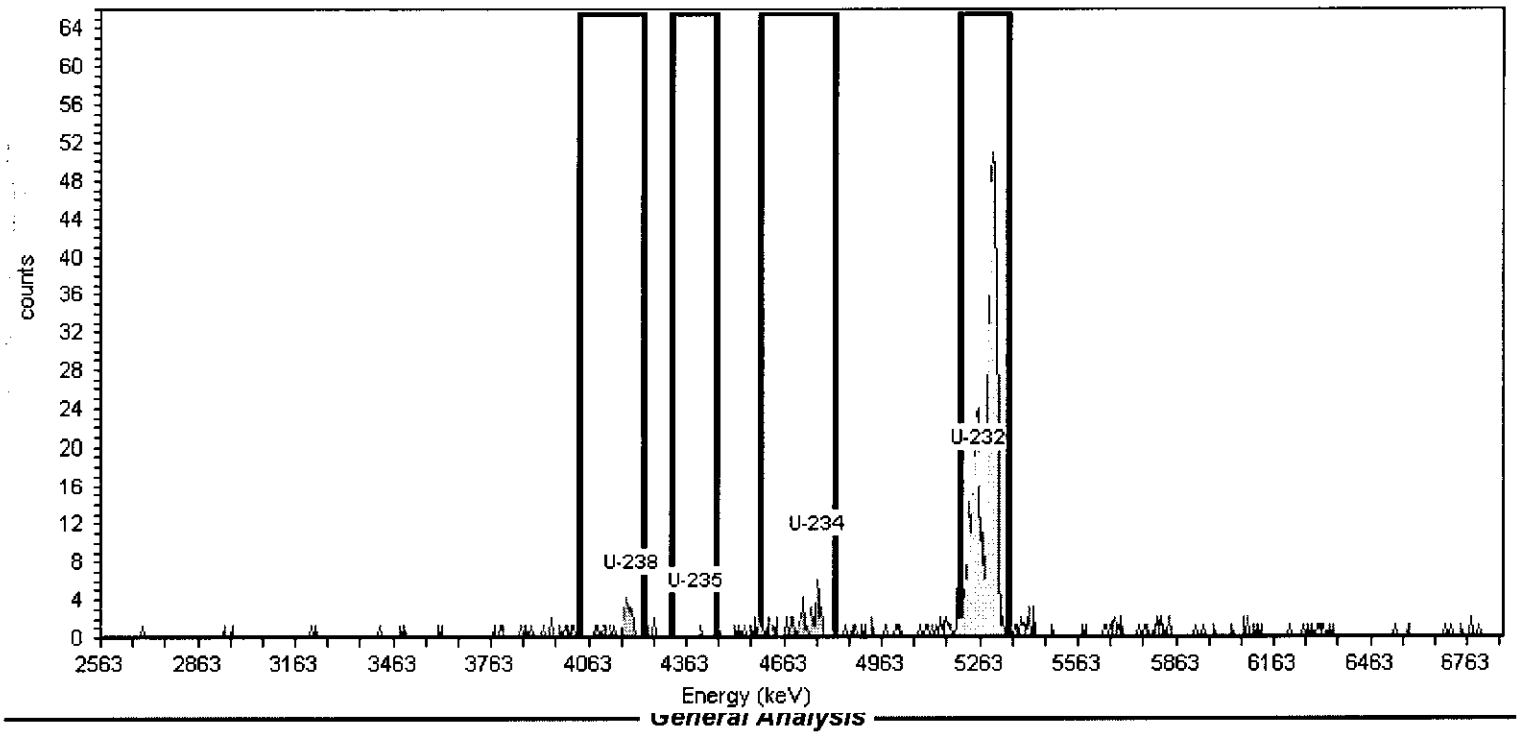
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 45.01%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/22/2010 10:25:15AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	27.356	100.2	27.00	5.0000	22	4.211E-001	3.382E-001	9.956E-002	2.509E-001
U-235	4396.000	4318.000	4453.000	25.143	80.9	1.00	5.0000	-4	-9.485E-002	1.755E-001	1.234E-001	3.109E-001
U-234	4765.000	4592.000	4819.000	73.200	100.0	49.83	27.0000	23	4.378E-001	5.137E-001	2.318E-001	5.155E-001
U-232	5263.000	5203.000	5350.000	35.956	99.8	569.00	7.1409	562	5.311E+000	7.121E-001	1.306E-001	3.180E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:51PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

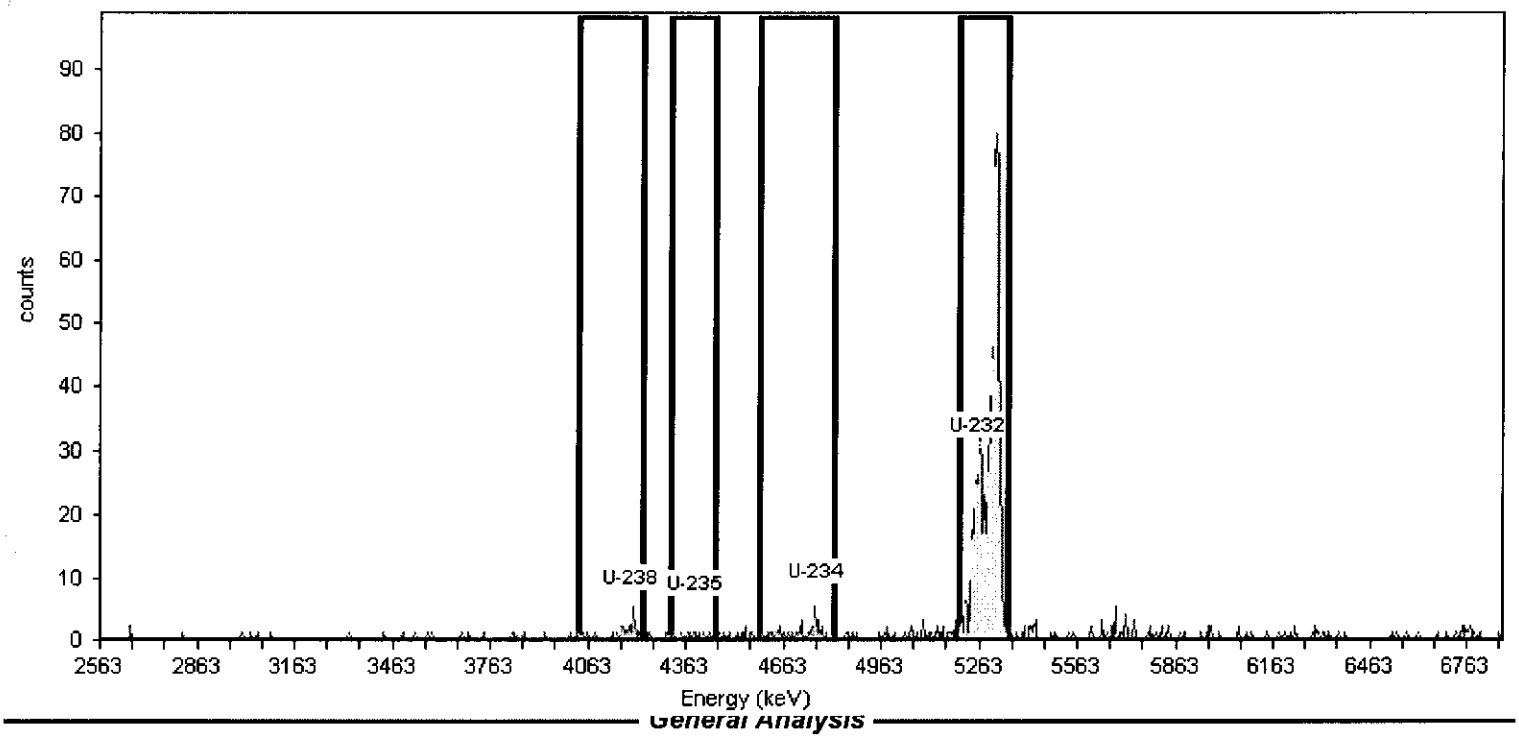
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.41%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/22/2010 10:25:15AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	6.800	100.2	27.00	8.0000	19	2.580E-001	2.472E-001	8.936E-002	2.155E-001
U-235	4396.000	4318.000	4453.000	6.076	80.9	9.04	4.0216	5	8.435E-002	1.833E-001	7.849E-002	2.025E-001
U-234	4765.000	4592.000	4819.000	128.787	100.0	44.77	24.0000	21	2.826E-001	3.438E-001	1.551E-001	3.469E-001
U-232	5263.000	5203.000	5350.000	12.016	99.8	799.83	7.9718	792	7.837E+000	9.010E-001	9.788E-002	2.361E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:58PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

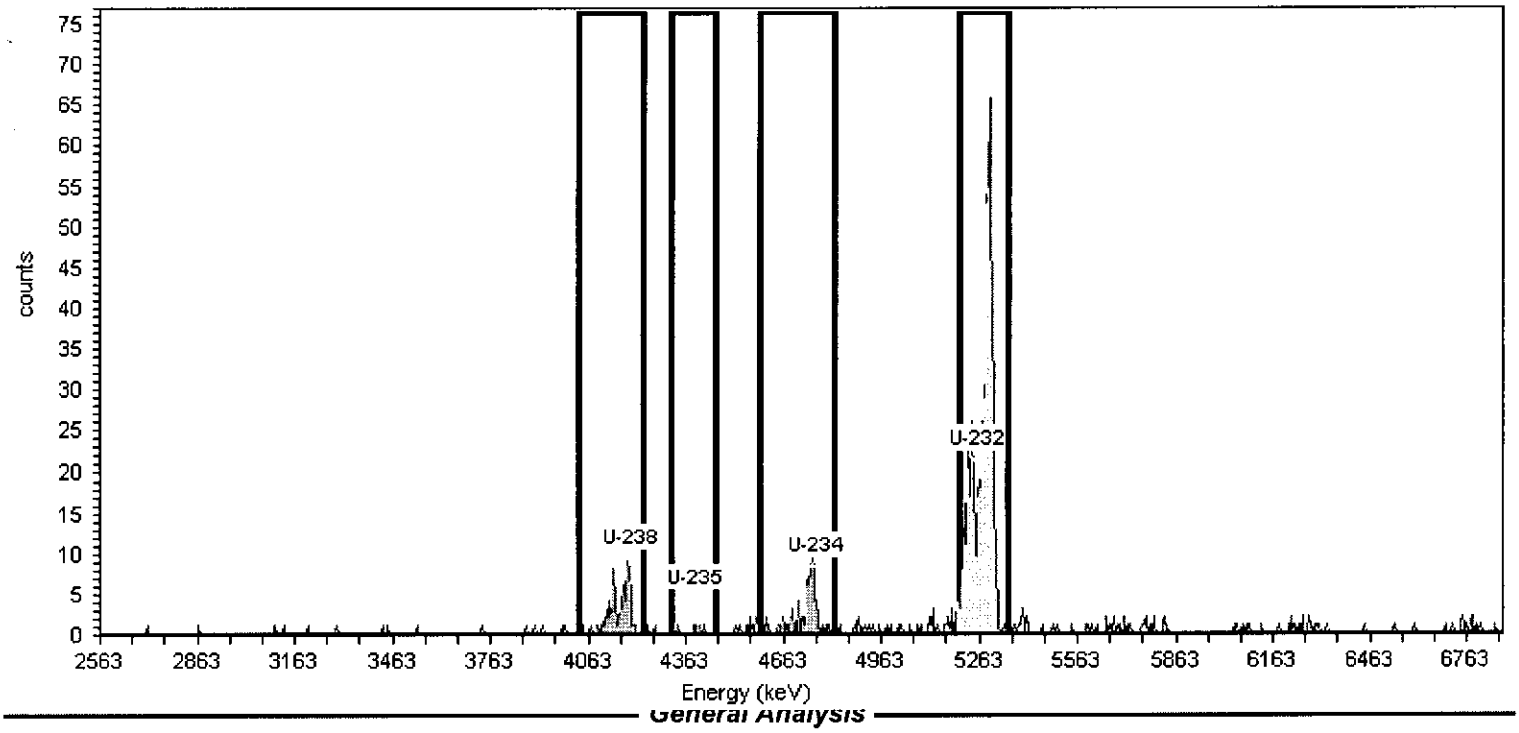
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 52.40%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/22/2010 10:25:16AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	64.180	100.2	87.00	5.0000	82	1.347E+000	5.564E-001	8.542E-002	2.153E-001
U-235	4396.000	4318.000	4453.000	84.096	80.9	6.00	5.0000	1	2.034E-002	2.025E-001	1.058E-001	2.667E-001
U-234	4765.000	4592.000	4819.000	32.435	100.0	87.00	8.2296	79	1.296E+000	5.585E-001	1.098E-001	2.641E-001
U-232	5263.000	5203.000	5350.000	33.093	99.8	658.52	3.6619	655	6.183E+000	7.685E-001	8.022E-002	2.092E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:54PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

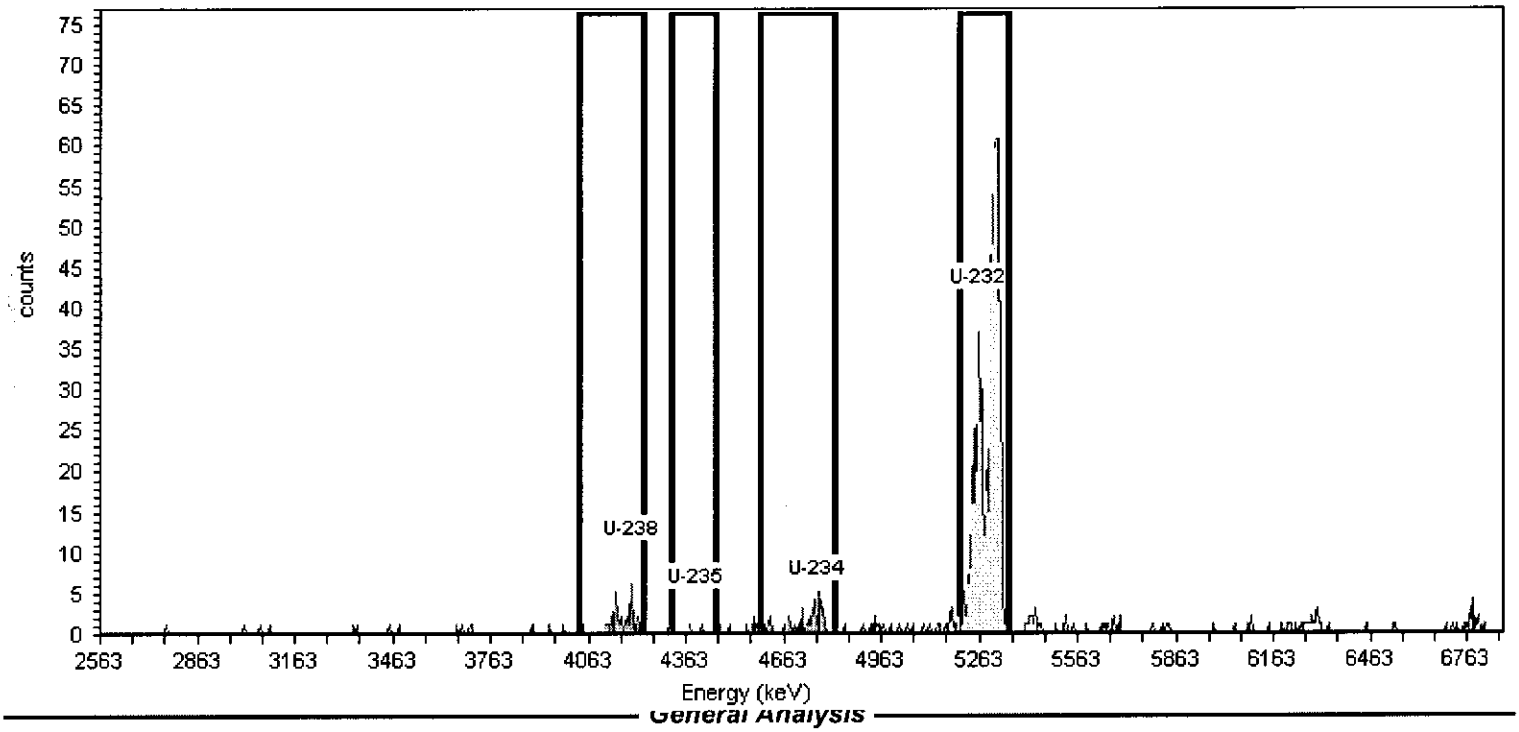
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 60.64%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/22/2010 10:25:16AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	67.492	100.2	41.00	6.0000	35	4.926E-001	3.081E-001	8.021E-002	1.985E-001
U-235	4396.000	4318.000	4453.000	.000	80.9	2.04	5.9649	-4	-6.853E-002	1.487E-001	9.908E-002	2.454E-001
U-234	4765.000	4592.000	4819.000	49.698	100.0	47.71	14.0596	34	4.746E-001	3.477E-001	1.230E-001	2.842E-001
U-232	5263.000	5203.000	5350.000	20.078	99.8	778.00	14.0000	764	7.155E+000	8.390E-001	1.344E-001	3.107E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:56PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

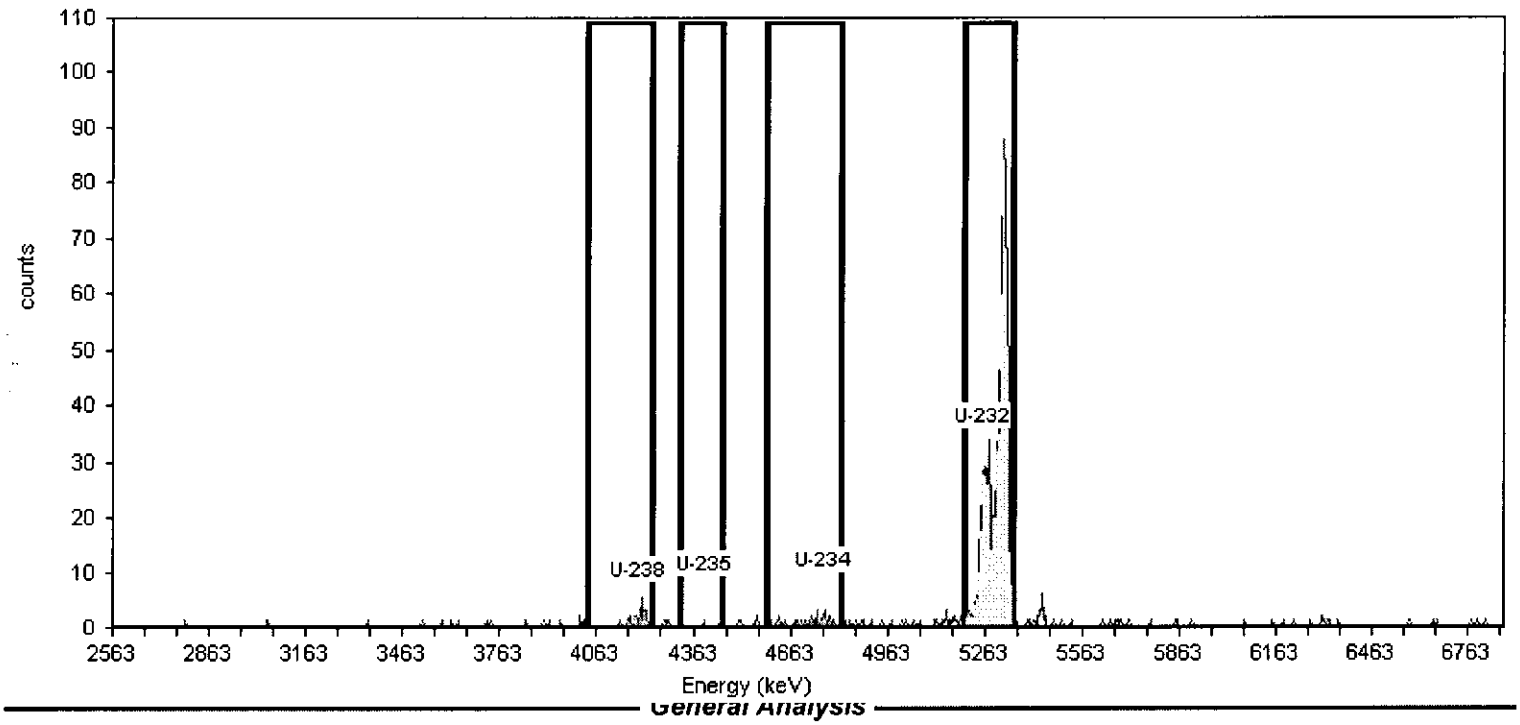
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 74.06%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/22/2010 10:25:17AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	13.127	100.2	28.00	4.0000	24	2.985E-001	2.203E-001	5.787E-002	1.494E-001
U-235	4396.000	4318.000	4453.000	5.810	80.9	2.98	1.0216	2	3.015E-002	9.268E-002	3.624E-002	1.142E-001
U-234	4765.000	4592.000	4819.000	54.736	100.0	32.00	9.0000	23	2.866E-001	2.469E-001	8.697E-002	2.077E-001
U-232	5263.000	5203.000	5350.000	19.229	99.8	868.55	4.0000	865	8.739E+000	9.639E-001	6.350E-002	1.639E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:29:41PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

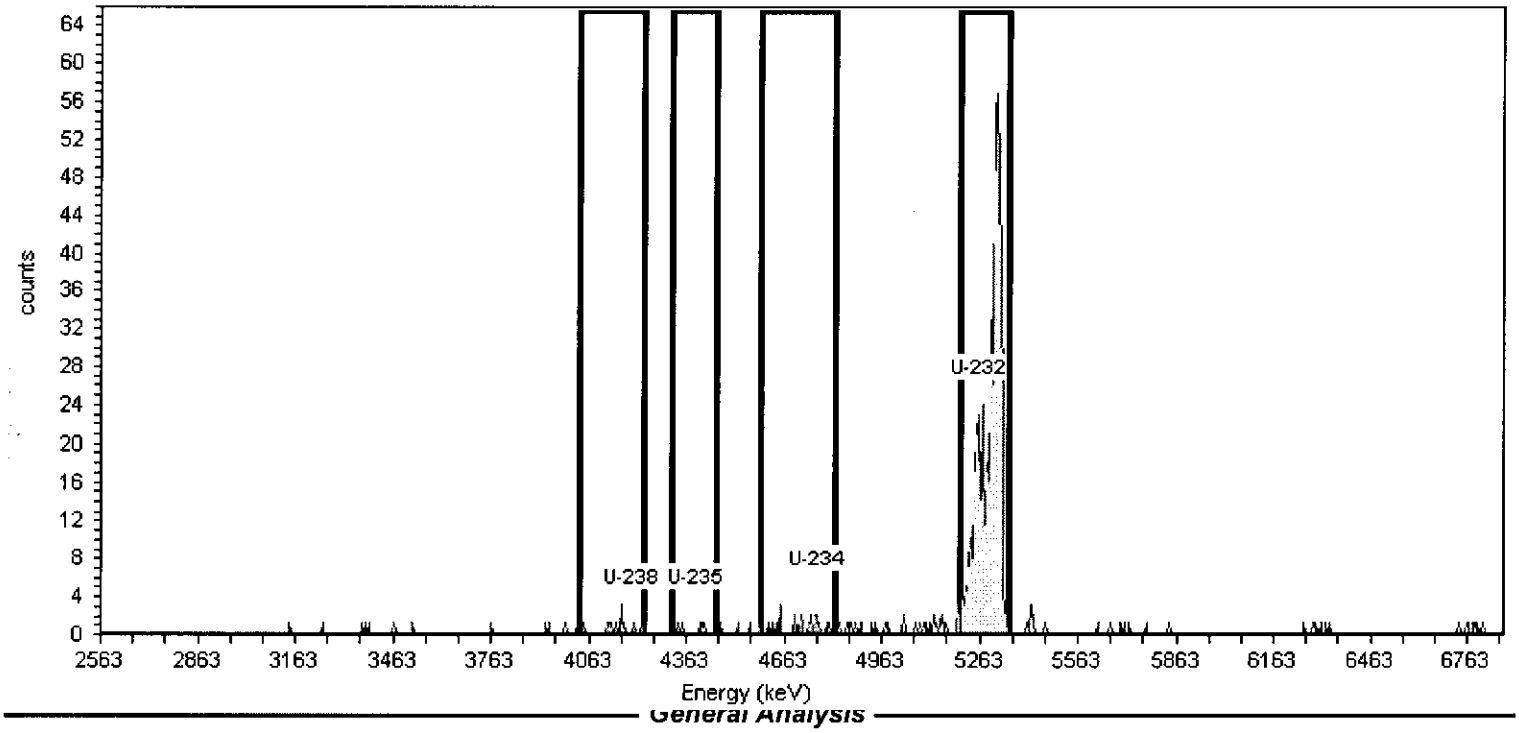
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 51.13%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/22/2010 10:25:19AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4396.000	4318.000	4453.000	92.207	80.9	6.00	0.0000	6	1.225E-001	1.642E-001	0.000E+000	5.524E-002
U-234	4765.000	4592.000	4819.000	61.974	100.0	23.06	10.0000	13	2.156E-001	2.886E-001	1.214E-001	2.876E-001
U-232	5263.000	5203.000	5350.000	16.071	99.8	663.65	11.0000	653	6.033E+000	7.576E-001	1.395E-001	3.279E-001
U-238	4193.000	4037.000	4232.000	74.052	100.2	12.57	1.0000	12	1.907E-001	1.868E-001	3.833E-002	1.212E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:29:45PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

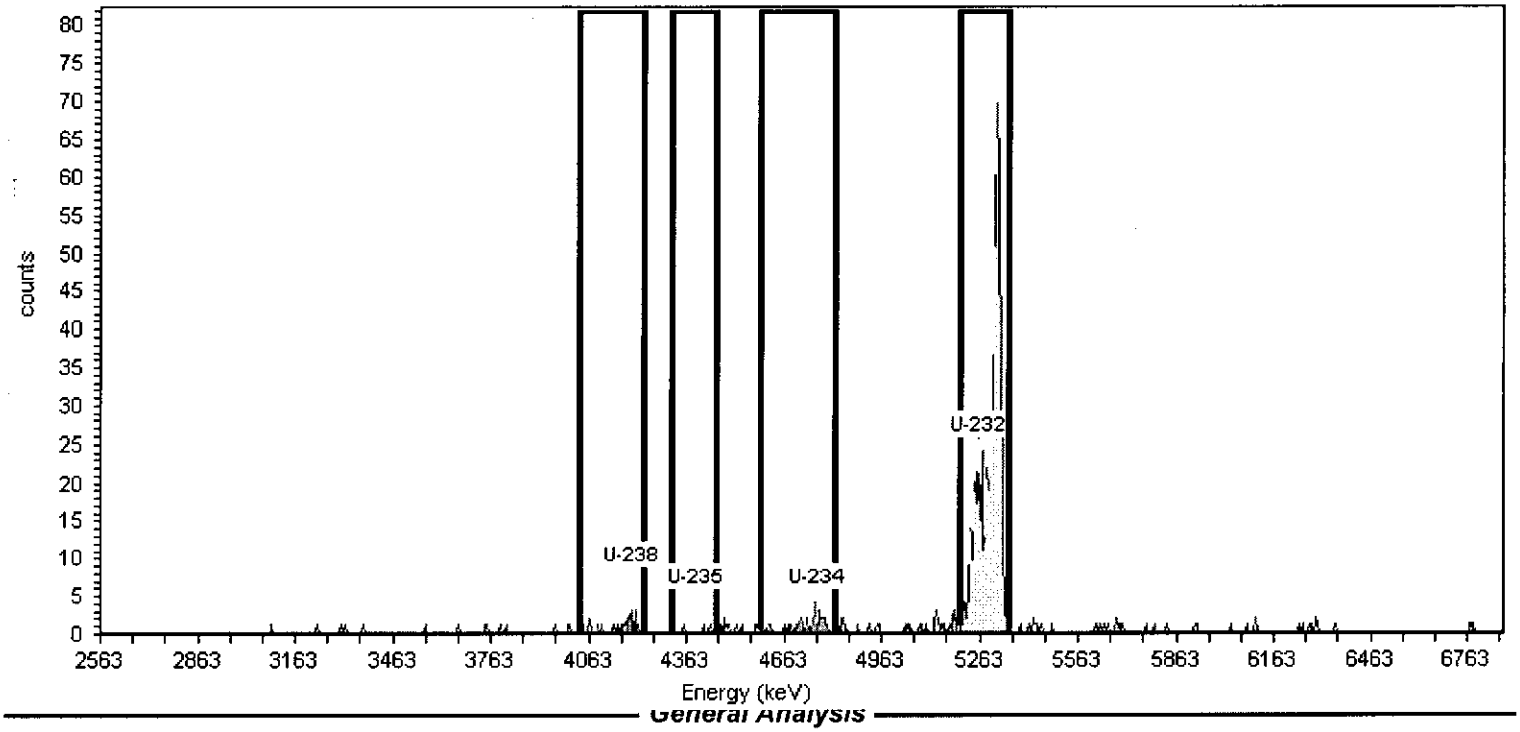
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 54.67%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/22/2010 10:25:20AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	34.606	100.2	22.00	2.0000	20	3.195E-001	2.449E-001	5.256E-002	1.483E-001
U-235	4396.000	4318.000	4453.000	5.740	80.9	3.00	0.0000	3	5.938E-002	1.195E-001	0.000E+000	5.356E-002
U-234	4765.000	4592.000	4819.000	32.189	100.0	34.06	13.0000	21	3.371E-001	3.375E-001	1.343E-001	3.118E-001
U-232	5263.000	5203.000	5350.000	13.675	99.8	677.83	4.6900	673	6.451E+000	7.935E-001	8.832E-002	2.241E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:29:49PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

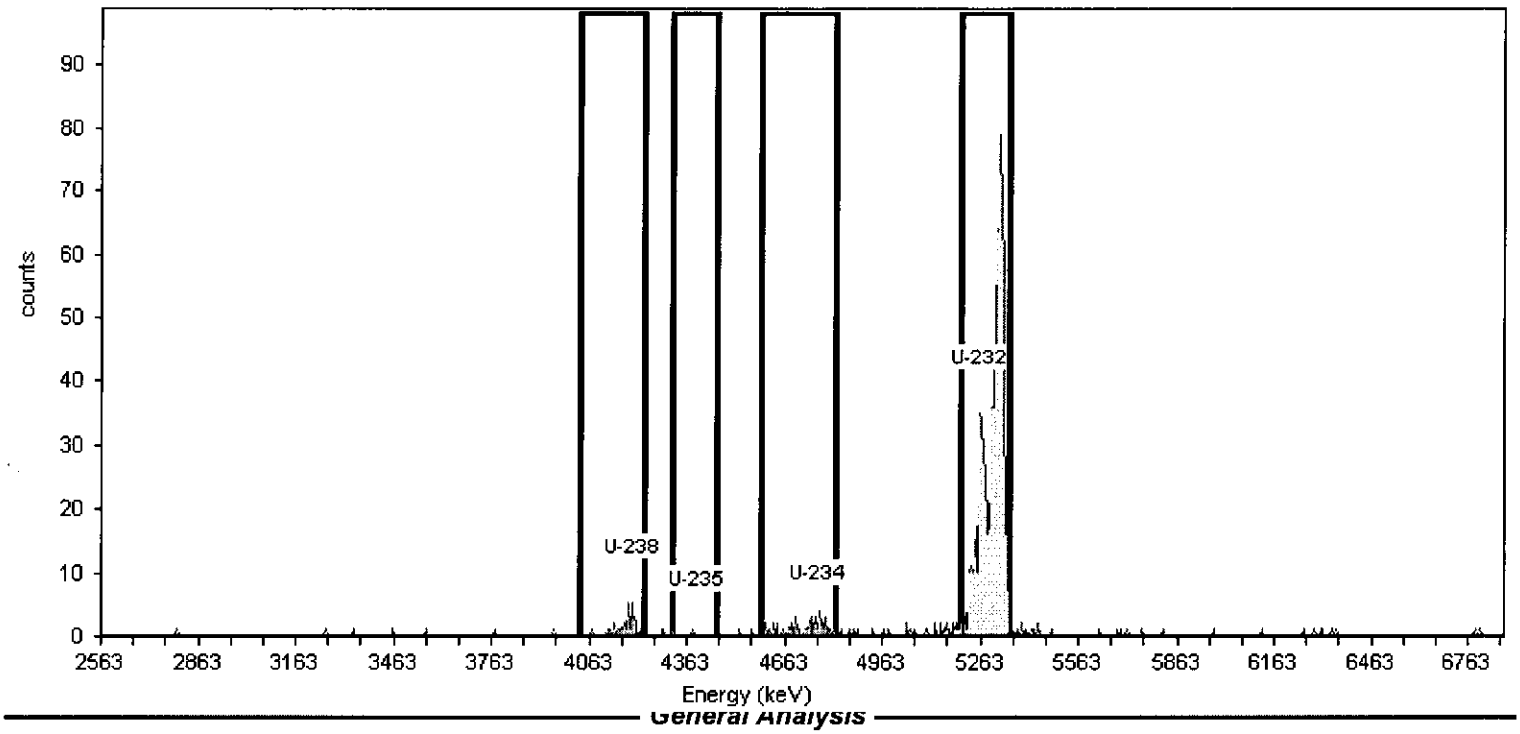
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.29%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/22/2010 10:25:20AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.619	100.2	36.00	2.0000	34	4.059E-001	2.365E-001	3.927E-002	1.109E-001
U-235	4396.000	4318.000	4453.000	10.167	80.9	1.96	2.0000	0	-5.192E-004	8.835E-002	4.866E-002	1.373E-001
U-234	4765.000	4592.000	4819.000	36.477	100.0	48.23	3.0000	45	5.410E-001	2.806E-001	4.819E-002	1.288E-001
U-232	5263.000	5203.000	5350.000	20.379	99.8	902.82	2.0000	901	8.294E+000	8.912E-001	4.310E-002	1.216E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:43PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

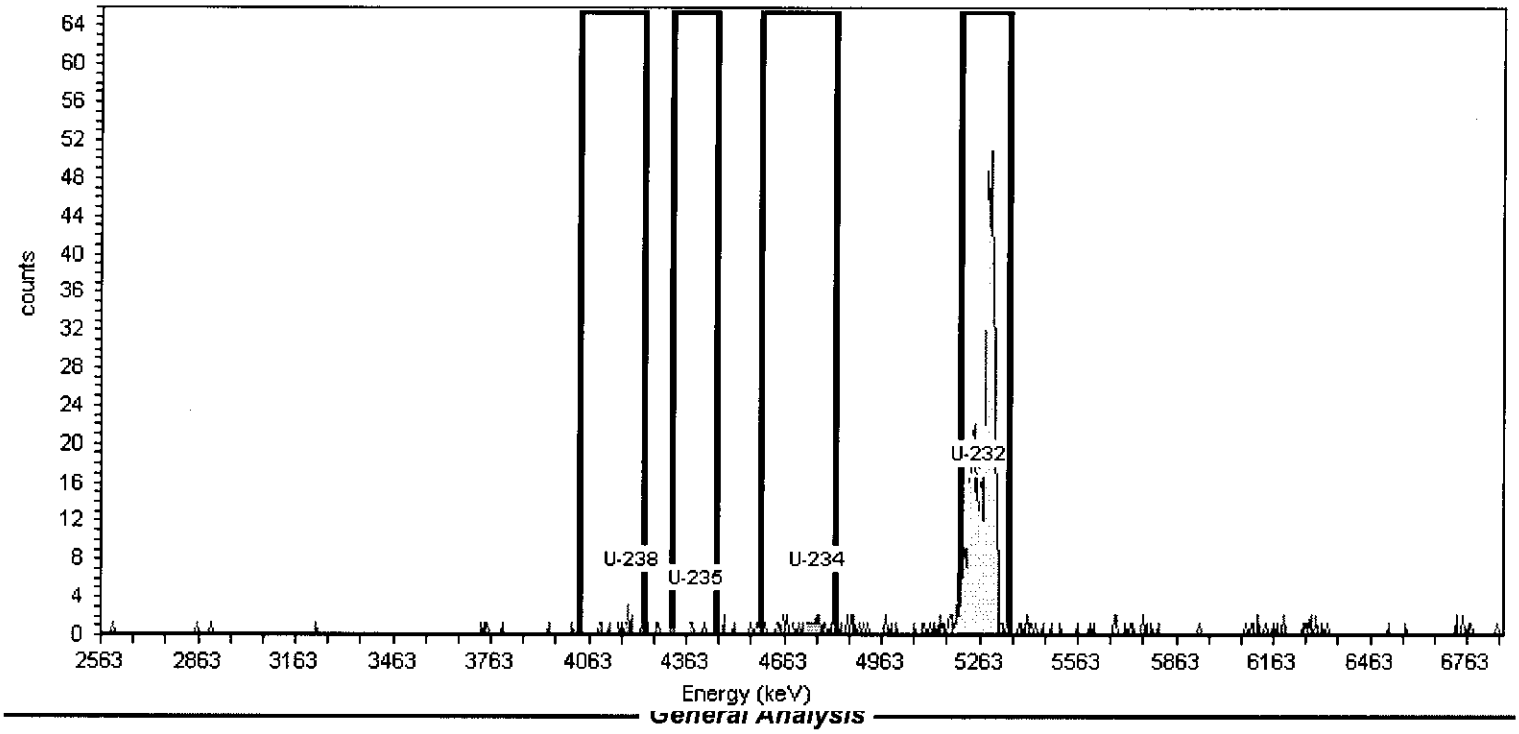
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 45.68%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/22/2010 3:39:41PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-232	5263.000	5203.000	5350.000	34.663	99.8	588.80	4.6900	584	5.390E+000	7.063E-001	1.018E-001	2.582E-001
U-238	4193.000	4037.000	4232.000	56.522	100.2	13.00	3.0000	10	1.841E-001	2.247E-001	7.418E-002	1.982E-001
U-235	4396.000	4318.000	4453.000	10.167	80.9	4.96	6.0000	-1	-2.361E-002	2.266E-001	1.300E-001	3.217E-001
U-234	4765.000	4592.000	4819.000	148.012	100.0	28.06	12.3488	16	2.898E-001	3.576E-001	1.508E-001	3.515E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:47PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-02 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

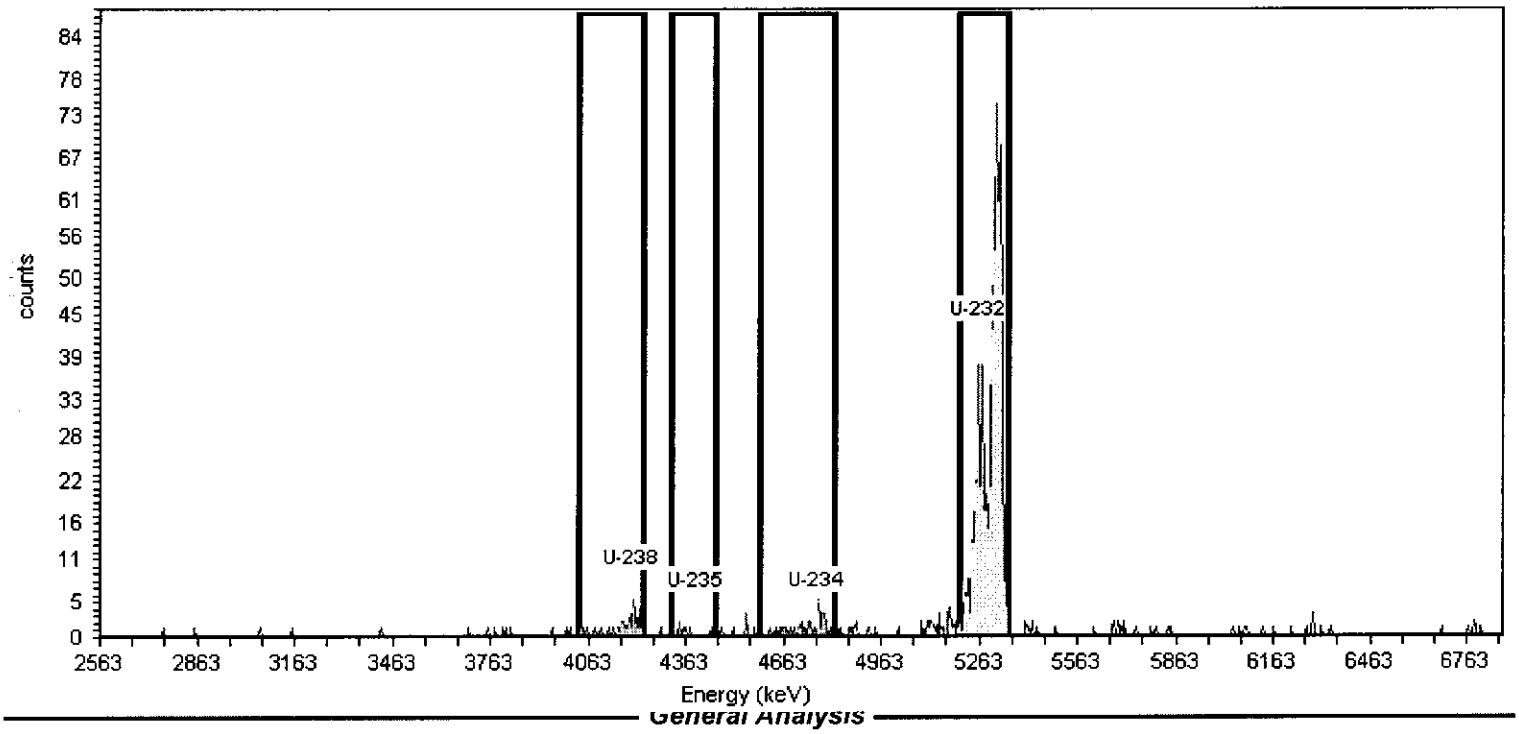
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.62%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/22/2010 3:39:35PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.998	100.2	42.19	6.0000	36	4.669E-001	2.862E-001	7.352E-002	1.820E-001
U-235	4396.000	4318.000	4453.000	6.023	80.9	7.00	7.0000	0	0.000E+000	1.794E-001	9.839E-002	2.400E-001
U-234	4765.000	4592.000	4819.000	20.089	100.0	38.77	14.0000	25	3.202E-001	2.897E-001	1.125E-001	2.600E-001
U-232	5263.000	5203.000	5350.000	19.953	99.8	837.45	4.0000	833	7.743E+000	8.631E-001	6.587E-002	1.701E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
8:39:51PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-03 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

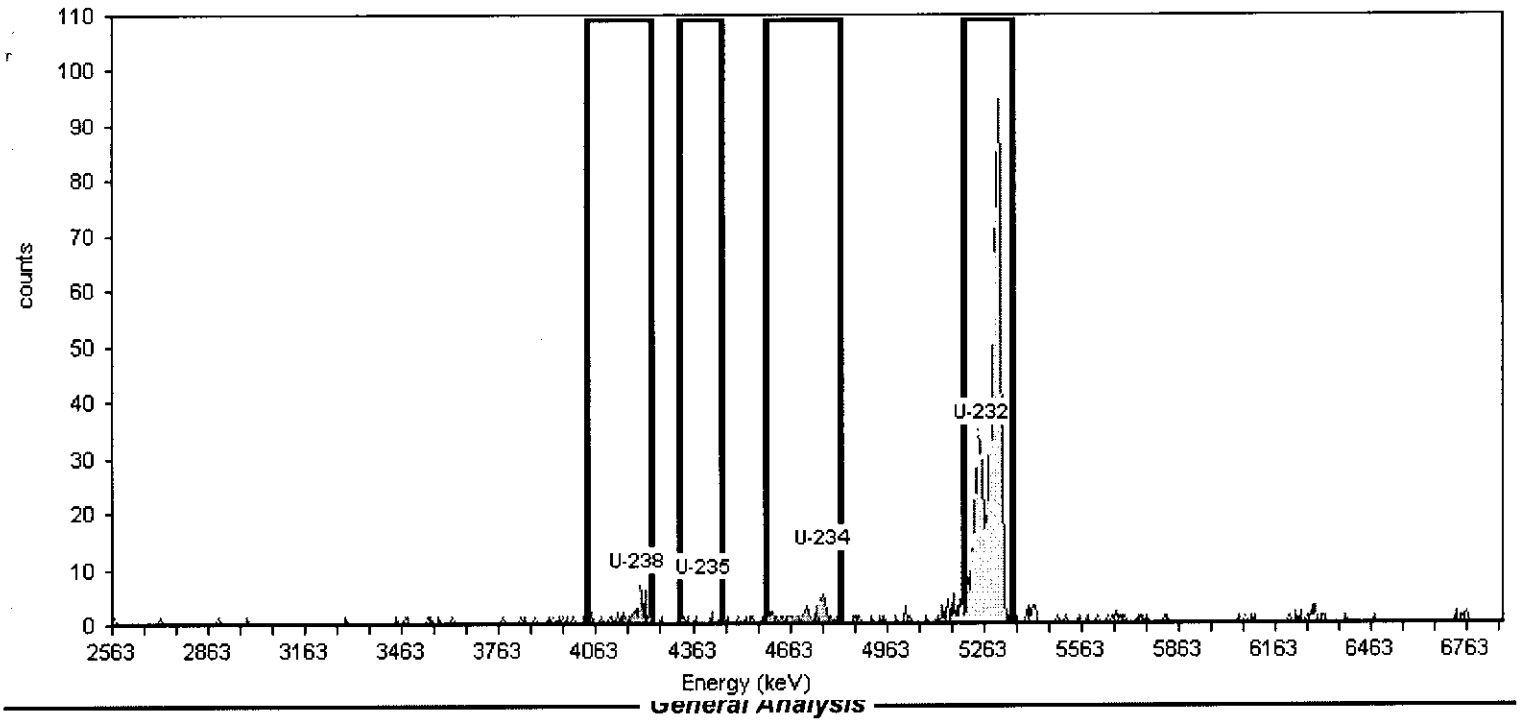
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.61%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/22/2010 3:39:37PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	13.795	100.2	51.00	10.0000	41	4.847E-001	2.949E-001	8.696E-002	2.059E-001
U-235	4396.000	4318.000	4453.000	6.135	80.9	7.00	7.9784	-1	-1.433E-002	1.701E-001	9.624E-002	2.321E-001
U-234	4765.000	4592.000	4819.000	73.560	100.0	58.12	21.1193	37	4.382E-001	3.292E-001	1.266E-001	2.853E-001
U-232	5263.000	5203.000	5350.000	36.519	99.8	916.68	7.0000	910	8.096E+000	8.684E-001	7.984E-002	1.948E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:55PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-01 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

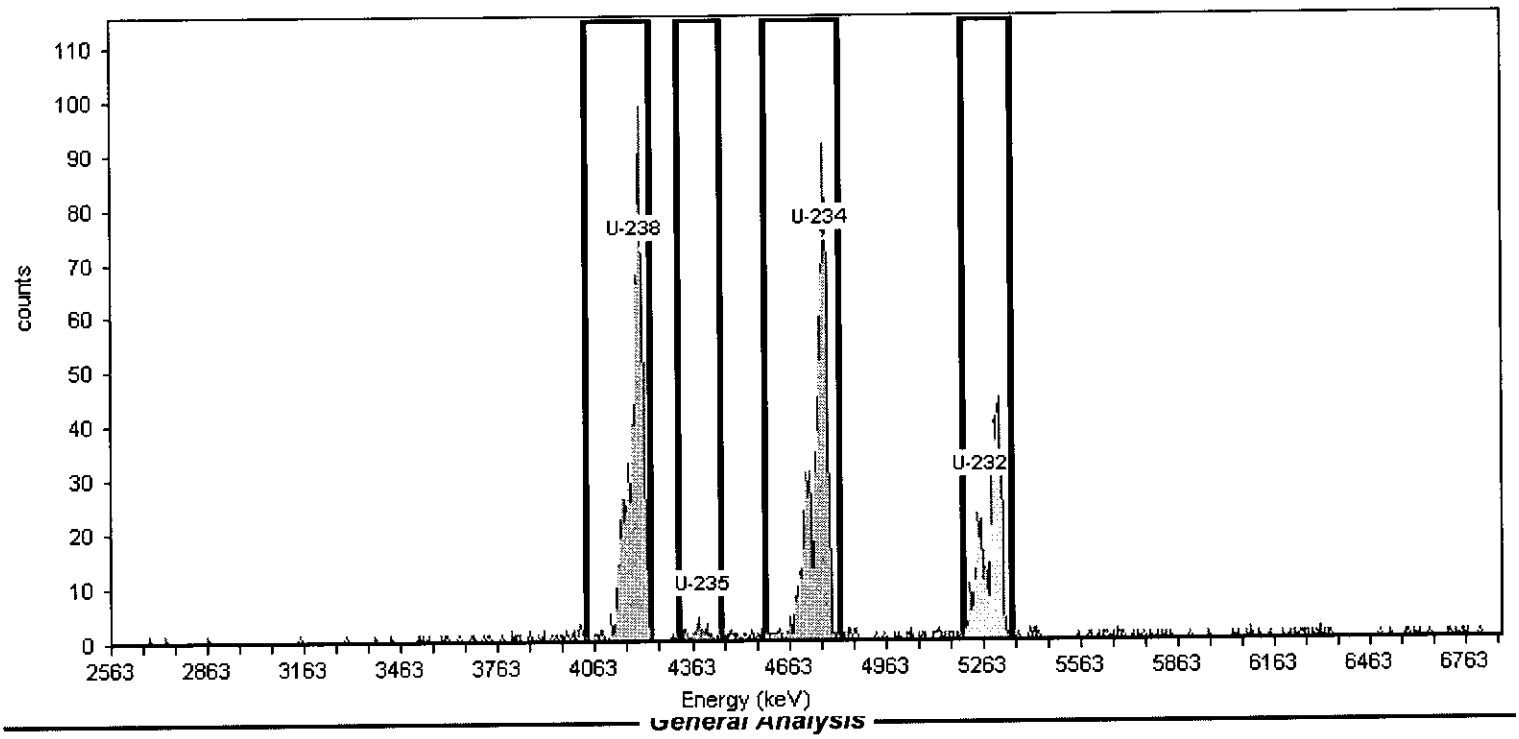
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 41.37%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/22/2010 3:39:39PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.934	100.2	896.96	3.0000	894	1.822E+001	4.511E+000	8.214E-002	2.194E-001
U-235	4396.000	4318.000	4453.000	79.333	80.9	32.01	8.0216	24	6.059E-001	4.986E-001	1.664E-001	4.011E-001
U-234	4765.000	4592.000	4819.000	40.241	100.0	904.88	23.1700	882	1.801E+001	4.480E+000	2.287E-001	5.127E-001
U-232	5263.000	5203.000	5350.000	32.894	99.8	534.55	7.0000	528	4.882E+000	6.735E-001	1.377E-001	3.359E-001

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82975

Soil Preparation

WG285851 **Air Dry**

Sample	Date	SCN	SP AIRDRY
L82935-01	07/12/10 13:00		X
L82974-01	07/12/10 13:05		X
L82974-02	07/12/10 13:10		X
L82974-03	07/12/10 13:15		X
L82974-04	07/12/10 13:21		X
L82974-05	07/12/10 13:26		X
L82974-06	07/12/10 13:31		X
L82975-01	07/12/10 13:37		X
L82975-02	07/12/10 13:42		X
L82975-03	07/12/10 13:47		X
L82975-04	07/12/10 13:53		X
L82975-05	07/12/10 13:58		X
L82975-06	07/12/10 14:03		X
L82975-07	07/12/10 14:08		X
L82975-08	07/12/10 14:14		X
L82975-09	07/12/10 14:19		X
L83116-01	07/12/10 14:24		X
L83156-01	07/12/10 14:30		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82975

Soil Preparation

WG286023 **Crush Pulverize**

Sample	Date	SCN	SP CRUSHPULV
L82974-01	07/14/10 13:00		X
L82974-02	07/14/10 13:04		X
L82974-03	07/14/10 13:08		X
L82974-04	07/14/10 13:12		X
L82974-05	07/14/10 13:17		X
L82974-06	07/14/10 13:21		X
L82975-01	07/14/10 13:25		X
L82975-02	07/14/10 13:29		X
L82975-03	07/14/10 13:34		X
L82975-04	07/14/10 13:38		X
L82975-05	07/14/10 13:42		X
L82975-06	07/14/10 13:47		X
L82975-07	07/14/10 13:51		X
L82975-08	07/14/10 13:55		X
L82975-09	07/14/10 13:59		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82975

Radiochemistry

WG286455 **Ra226**

Sample	Date	SCN	WITTING RADIUM IS
WG286266PBS	07/20/10 12:02		X
WG286266LCSS	07/20/10 12:03		X
L82974-01	07/20/10 12:04		X
L82974-02	07/20/10 12:06		X
L82974-03	07/20/10 12:07		X
L82974-04	07/20/10 12:09		X
L82974-05	07/20/10 12:10		X
L82974-06	07/20/10 12:12		X
L82975-01	07/20/10 12:13		X
L82975-02	07/20/10 12:14		X
L82975-03	07/20/10 12:16		X
L82975-04	07/20/10 12:17		X
L82975-05	07/20/10 12:19		X
L82975-06	07/20/10 12:20		X
L82975-07	07/20/10 12:22		X
L82975-08	07/20/10 12:23		X
L82975-09	07/20/10 12:25		X
L82974-01DUP	07/20/10 12:26		X
L82974-02DUP	07/20/10 12:27		X
L82974-03MS	07/20/10 12:29		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82975

Radiochemistry

WG286554 **Th**

Sample	Date	SCN	THORIUM 228	THORIUM 230	THORIUM 232
WG286328PBS	07/21/10 09:47			X	X
WG286328LCSS	07/21/10 09:48			X	
L82974-01	07/21/10 09:49			X	
L82974-02	07/21/10 09:51			X	
L82974-03	07/21/10 09:52			X	
L82974-04	07/21/10 09:54			X	
L82974-05	07/21/10 09:55			X	
L82974-06	07/21/10 09:57			X	
L82975-01	07/21/10 09:58			X	
L82975-02	07/21/10 09:59			X	
L82975-03	07/21/10 10:01			X	
L82975-04	07/21/10 10:02			X	
L82975-05	07/21/10 10:04			X	
L82975-06	07/21/10 10:05			X	
L82975-07	07/21/10 10:07			X	
L82975-08	07/21/10 10:08			X	
L82975-09	07/21/10 10:10			X	
L82974-01DUP	07/21/10 10:11		X	X	X
L82974-03DUP	07/21/10 10:12		X	X	X
L82974-02MS	07/21/10 10:14			X	

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82975

Radiochemistry

WG286634 **pb**

Sample	Date	SCN	LEAD 210
L82974-05	07/23/10 13:21		X
L82975-02	07/23/10 13:21		X
WG286254PBS	07/23/10 13:21		X
L82974-06	07/23/10 13:21		X
L82974-04	07/23/10 13:21		X
L82974-03	07/23/10 13:21		X
L82974-02	07/23/10 13:21		X
L82974-01	07/23/10 13:21		X
WG286254LCSS	07/23/10 13:21		X
L82975-01	07/23/10 13:21		X
L82975-09	07/23/10 14:53		X
L82975-03	07/23/10 14:53		X
L82974-03DUP	07/23/10 14:53		X
L82974-02MS	07/23/10 14:53		X
L82974-01DUP	07/23/10 14:53		X
L82975-07	07/23/10 14:53		X
L82975-06	07/23/10 14:53		X
L82975-04	07/23/10 14:53		X
L82975-05	07/23/10 14:53		X
L82975-08	07/23/10 14:53		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82975

Radiochemistry

WG286781 **U**

Sample	Date	SCN	URANIUM 234	URANIUM 235	URANIUM 238
WG286325PBS	07/26/10 15:39		X	X	X
WG286325LCSS	07/26/10 15:40		X	X	X
L82974-01	07/26/10 15:41		X	X	X
L82974-02	07/26/10 15:43		X	X	X
L82974-03	07/26/10 15:44		X	X	X
L82974-04	07/26/10 15:46		X	X	X
L82974-05	07/26/10 15:47		X	X	X
L82974-06	07/26/10 15:49		X	X	X
L82975-01	07/26/10 15:50		X	X	X
L82975-02	07/26/10 15:51		X	X	X
L82975-03	07/26/10 15:53		X	X	X
L82975-04	07/26/10 15:54		X	X	X
L82975-05	07/26/10 15:56		X	X	X
L82975-06	07/26/10 15:57		X	X	X
L82975-07	07/26/10 15:59		X	X	X
L82975-08	07/26/10 16:00		X	X	X
L82975-09	07/26/10 16:02		X	X	X
L82974-02DUP	07/26/10 16:03		X	X	X
L82974-03DUP	07/26/10 16:04		X	X	X
L82974-01MS	07/26/10 16:06		X	X	X

Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

July 30, 2010 Analytical Report for Service Request No: K1006636

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Dear Andrea:

Enclosed are the results of the samples submitted to our laboratory on June 26, 2010. For your reference, these analyses have been assigned our service request number K1006636.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006636
Project:	Rhodia Silver Bow Plant Background	**Date Received:**	6/26/2010
Sample Matrix:	Soil, Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eight samples were received for analysis at Columbia Analytical Services on 6/26/2010. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

Fluoride by EPA Method 340.2 Modified:
The matrix spike recovery of Fluoride for sample BG-10 0-2 COMP was outside control criteria because of suspected matrix interference. A matrix spike duplicate was also analyzed, but produced similar results. The results of the original analysis were reported. No further corrective action was appropriate.

Total Metals – Soil

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Iron for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Uranium in the Batch QC sample was outside the normal CAS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Total Metals – Water

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Iron for the Batch QC sample were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Radiochemistry

The analyses for the Radiochemistry parameters were performed at ACZ Laboratories in Steamboat Springs, Colorado. The results from this testing are included in their entirety herein.

Approved by LAW **Date** 7/30/10

Chain of Custody

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-33 - 1

SR# K1006636

PAGE 1 OF 3

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: [signature]

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
BG-10 0-2 COMP	6/23/10	12:50		Solid	2	X	X	X	X		
BG-10 2-12 COMP	6/23/10	13:00		Solid	2	X	X	X	X		
BG-10 12-18 COMP	6/23/10	13:10		Solid	2	X	X	X	X		
~~BG-11 0-2 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-11 2-12 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-11 12-18 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
BG-121 COMP	6/23/10	13:30		Water	4	X	X		X		
~~BG-12 0-2 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-12 2-12 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-12 12-18 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		

Analysis Requested: See Table 1-1, 1-3, 1-5, and 6 for details.

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

__X__ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: __Margaret Treanor @ Barr__

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

__X__ V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn

Method 6020: Sb, As, Se, Tl, U

Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified

Thorium 230: Method ESM4506

Radium 226: Method EPA9315 Modified

Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

RELINQUISHED BY:

Shipping Tracking #: 867092799832

Signature: [signature]

Printed Name: Kevin McGilp

Firm: Barr Engineering Co.

Date/Time: 6/24/10 15:00

RECEIVED BY:

Signature: [signature]

Printed Name: [signature]

Firm: CAS

Date/Time: 6/26/10 0915

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

8

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-34-2 SR# _____

PAGE 2 OF 3

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13 2610-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: _____

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		Analysis Requested: See Table 1-1, 1-3, 1-5, and 6 for details. REMARKS
[redacted]											
[redacted]											
[redacted]											
BG-14 0-2 COMP	6/23/10	16:25		Solid	2	X	X	X	X		
BG-14 2-12 COMP	6/23/10	16:35		Solid	2	X	X	X	X		
BG-14 12-18 COMP	6/23/10	16:45		Solid	2	X	X	X	X		
[redacted]											
[redacted]				Solid	2	X	X	X	X		
[redacted]											
[redacted]											

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

__X__ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: **Margaret Treanor @ Barr**

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

RELINQUISHED BY:

Shipping Tracking #: 867092799832

Signature: _____

Printed Name: Kevin McGlip

Firm: Barr Eng. Co.

Date/Time: 6/24/10 15:00

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: CAS

Date/Time: 6/26/10 0915

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-35-1 SR# _____

PAGE 3 OF 3

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: Kevin McGilp

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
						Analysis Requested					See Table 1-1, 1-3, 1-5, and 6 for details.
BG-122 COMP	6/23/10	16:55		Water	4	X	X		X		
~~BG-10 0-2 COMP~~				~~Solid~~	~~1~~	~~X~~	~~X~~				
~~BG-10 2-12 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		
~~BG-10 12-18 COMP~~				~~Solid~~	~~2~~	~~X~~	~~X~~	~~X~~	~~X~~		

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

__X__ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date:_____

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

RELINQUISHED BY:

Shipping Tracking #: 8670 9279 4832

Signature: Kevin McGilp

Printed Name: Kevin McGilp

Firm: Barr Eng. Co.

Date/Time: 6/24/10 15:00

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: 6/24/10 0915

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

10

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC LH

Client / Project: Barr Service Request K10 1006360

Received: 6/26/10 Opened: 6/26/10 By: AJ

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
6.0	4.5	223		8650 0993 3426	
2.8	3.0	261		8650 0993 3415	
0.6	3.4	257			

7. Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
15. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow Pl/26-46-0006.13-2010-4
Sample Matrix: Soil

Service Request: K1006636

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
BG-10 0-2 COMP	K1006636-001	06/23/2010	06/26/2010	06/30/2010	84.3	
BG-10 2-12 COMP	K1006636-002	06/23/2010	06/26/2010	06/30/2010	84.4	
BG-10 12-18 COMP	K1006636-003	06/23/2010	06/26/2010	06/30/2010	83.6	
BG-14 0-2 COMP	K1006636-005	06/23/2010	06/26/2010	06/30/2010	87.5	
BG-14-2-12 COMP	K1006636-006	06/23/2010	06/26/2010	06/30/2010	87.9	
BG-14 12-18 COMP	K1006636-007	06/23/2010	06/26/2010	06/30/2010	85.9	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project:	Rhodia Silver Bow Pl/26-46-0006.13-2010-4	**Date Collected:**	06/23/2010
Sample Matrix:	Soil	**Date Received:**	06/26/2010
		Date Analyzed:	06/30/2010

Duplicate Sample Summary

Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
BG-10 0-2 COMP	K1006636-001	84.3	84.5	84.4	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

206821

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	GL
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K1005040-001	001	SOIL	1.31g	5.52g	3.55g	53.2		
2	K1005040-002	002	SOIL	1.31g	6.84g	5.36g	73.2		
3	K1005040-003	003	SOIL	1.31g	8.66g	7.10g	78.8		
4	K1005040-004	004	SOIL	1.31g	7.81g	4.87g	54.8		
5	K1005040-005	005	SOIL	1.29g	6.60g	3.50g	41.6		
6	K1005040-006	006	SOIL	1.30g	8.61g	5.44g	56.6		
7	K1005040-007	007	SOIL	1.31g	11.16g	8.42g	72.2		
8	K1005734-001	95302807-F010724	PAPERBOA	1.31g	2.33g	2.33g	100		
9	K1006485-001	PRC-2010-DU1-Comp-C	SEDIMENT	1.31g	17.77g	8.07g	41.1		
10	K1006519-001	EP055	SOIL	1.30g	11.64g	10.92g	93.0		
11	K1006519-002	EP056	SOIL	1.31g	10.35g	9.08g	86.0		
12	K1006519-003	EP057	SOIL	1.31g	13.25g	12.29g	92.0		
13	K1006519-004	EP058	SOIL	1.31g	15.88g	14.70g	91.9		
14	K1006519-005	EP059	SOIL	1.32g	14.30g	13.65g	95.0		
15	K1006519-006	EP060	SOIL	1.30g	10.35g	9.81g	94.0		
16	K1006519-007	EP061	SOIL	1.31g	16.77g	15.83g	93.9		
17	K1006519-008	EP062	SOIL	1.30g	11.61g	11.26g	96.6		
18	K1006519-009	EP063	SOIL	1.32g	14.67g	13.68g	92.6		
19	K1006519-010	EP064	SOIL	1.31g	15.88g	15.05g	94.3		
20	K1006519-011	EP065	SOIL	1.31g	11.69g	11.53g	98.5		
21	K1006519-012	EP066	SOIL	1.31g	14.19g	14.07g	99.1		
22	K1006519-013	EP067	SOIL	1.30g	14.64g	13.79g	93.6		
23	K1006519-014	EP068	SOIL	1.30g	14.94g	13.99g	93.0		
24	K1006519-015	EP069	SOIL	1.31g	18.18g	17.95g	98.6		
25	K1006520-001	EP070	SOIL	1.32g	15.98g	14.96g	93.0		
26	K1006520-002	EP071	SOIL	1.31g	16.34g	14.96g	90.8		

Group ID:	KWG1006311		
Analyst:	SArwood	**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	6/30/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K1006520-003	EP072	SOIL	1.30g	32.44g	31.58g	97.2		
28	K1006520-004	EP073	SOIL	1.32g	14.78g	13.21g	88.3		
29	K1006520-005	EP074	SOIL	1.31g	18.30g	15.88g	85.8		
30	K1006520-006	EP075	SOIL	1.32g	16.29g	14.10g	85.4		
31	K1006520-007	EP076	SOIL	1.32g	20.16g	19.83g	98.2		
32	K1006520-008	EP077	SOIL	1.30g	13.87g	12.87g	92.0		
33	K1006520-009	EP078	SOIL	1.32g	14.19g	13.18g	92.2		
34	K1006520-010	EP079	SOIL	1.31g	13.93g	12.95g	92.2		
35	K1006520-011	EP080	SOIL	1.32g	20.19g	19.32g	95.4		
36	K1006520-012	EP081	SOIL	1.32g	14.65g	13.75g	93.2		
37	K1006520-013	EP082	SOIL	1.31g	23.64g	23.13g	97.7		
38	K1006520-014	EP083	SOIL	1.32g	19.64g	19.23g	97.8		
39	K1006520-015	EP084	SOIL	1.30g	14.78g	14.00g	94.2		
40	K1006522-001	EP085	SOIL	1.31g	16.20g	14.94g	91.5		
41	K1006522-002	EP086	SOIL	1.31g	29.43g	27.74g	94.0		
42	K1006522-003	EP087	SOIL	1.30g	13.62g	12.88g	94.0		
43	K1006522-004	EP088	SOIL	1.32g	14.13g	13.38g	94.1		
44	K1006522-005	EP089	SOIL	1.31g	22.68g	22.15g	97.5		
45	K1006522-006	EP090	SOIL	1.33g	47.97g	45.86g	95.5		
46	K1006522-007	EP091	SOIL	1.31g	18.40g	17.66g	95.7		
47	K1006522-008	EP092	SOIL	1.32g	16.91g	15.70g	92.2		
48	K1006522-009	EP093	SOIL	1.31g	14.93g	14.71g	98.4		
49	K1006522-010	EP094	SOIL	1.31g	20.99g	20.04g	95.2		
50	K1006522-011	EP095	SOIL	1.31g	22.98g	21.94g	95.2		
51	K1006522-012	EP096	SOIL	1.33g	20.34g	19.23g	94.2		
52	K1006549-001	OL-SED-06	SEDIMENT	1.29g	15.33g	10.38g	64.7		
53	K1006549-002	OL-SED-09	SEDIMENT	1.32g	22.66g	15.05g	64.3		
54	K1006549-003	OL-SED-04	SEDIMENT	1.30g	12.66g	6.81g	48.5		
55	K1006549-004	OL-SED-05	SEDIMENT	1.31g	16.94g	12.50g	71.6		
56	K1006549-005	OL-SED-07	SEDIMENT	1.30g	16.28g	12.41g	74.2		
57	K1006549-006	OL-SED-08	SEDIMENT	1.32g	16.94g	10.31g	57.6		

16

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
58	K1006549-007	OL-SED-01	SEDIMENT	1.32g	19.07g	15.00g	77.1		
59	K1006549-008	OL-SED-02	SEDIMENT	1.32g	16.81g	12.26g	70.6		
60	K1006549-009	OL-SED-03	SEDIMENT	1.33g	12.90g	10.12g	76.0		
61	K1006569-001	Residue 001	MISC. SOLID	1.31g	4.76g	4.72g	98.8		
62	K1006571-001	EP098	SOIL	1.32g	16.83g	16.40g	97.2		
63	K1006571-002	EP099	SOIL	1.31g	15.00g	14.34g	95.2		
64	K1006571-003	EP100	SOIL	1.31g	16.01g	14.88g	92.3		
65	K1006571-004	EP101	SOIL	1.29g	13.97g	11.91g	83.8		
66	K1006571-005	EP102	SOIL	1.29g	15.87g	14.68g	91.8		
67	K1006571-006	EP103	SOIL	1.31g	17.21g	16.00g	92.4		
68	K1006571-007	EP104	SOIL	1.30g	16.32g	15.14g	92.1		
69	K1006571-008	EP105	SOIL	1.31g	29.18g	28.27g	96.7		
70	K1006571-009	EP106	SOIL	1.31g	24.98g	21.78g	86.5		
71	K1006571-010	EP107	SOIL	1.29g	19.10g	16.71g	86.6		
72	K1006571-011	EP108	SOIL	1.30g	12.67g	11.30g	88.0		
73	K1006571-012	EP109	SOIL	1.30g	35.87g	35.28g	98.3		
74	K1006571-013	EP110	SOIL	1.30g	14.46g	13.28g	91.0		
75	K1006571-014	EP111	SOIL	1.32g	14.59g	13.13g	89.0		
76	K1006571-015	EP112	SOIL	1.30g	13.91g	13.61g	97.6		
77	K1006571-016	EP113	SOIL	1.31g	21.74g	21.24g	97.6		
78	K1006571-017	EP114	SOIL	1.30g	19.09g	18.19g	94.9		
79	K1006571-018	EP115	SOIL	1.30g	13.29g	12.20g	90.9		
80	K1006571-019	EP116	SOIL	1.31g	19.06g	17.59g	91.7		
81	K1006571-020	EP117	SOIL	1.30g	14.65g	14.43g	98.4		
82	K1006572-001	EP118	SOIL	1.32g	10.42g	9.75g	92.6		
83	K1006572-002	EP119	SOIL	1.32g	9.21g	8.75g	94.2		
84	K1006572-003	EP120	SOIL	1.32g	18.33g	17.96g	97.8		
85	K1006572-004	EP121	SOIL	1.31g	16.97g	16.27g	95.5		
86	K1006572-005	EP122	SOIL	1.31g	16.96g	16.23g	95.3		
87	K1006572-006	EP123	SOIL	1.32g	16.80g	15.22g	89.8		

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	BC
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
88	K1006572-007	EP124	SOIL	1.31g	18.16g	17.85g	98.2		
89	K1006572-008	EP125	SOIL	1.32g	16.33g	16.11g	98.5		
90	K1006572-009	EP126	SOIL	1.31g	18.33g	17.79g	96.8		
91	K1006572-010	EP127	SOIL	1.31g	12.28g	11.88g	96.4		
92	K1006572-011	EP128	SOIL	1.32g	13.00g	12.60g	96.6		
93	K1006572-012	EP129	SOIL	1.31g	12.80g	12.00g	93.0		
94	K1006572-013	EP130	SOIL	1.31g	13.38g	12.57g	93.3		
95	K1006572-014	EP131	SOIL	1.31g	17.63g	16.54g	93.3		
96	K1006572-015	EP132	SOIL	1.32g	17.81g	17.59g	98.7		
97	K1006572-016	EP133	SOIL	1.31g	11.54g	11.14g	96.1		
98	K1006572-017	EP134	SOIL	1.31g	14.15g	13.61g	95.8		
99	K1006572-018	EP135	SOIL	1.31g	19.91g	19.60g	98.3		
100	K1006572-019	EP136	SOIL	1.31g	23.54g	22.15g	93.7		
101	K1006572-020	EP137	SOIL	1.31g	10.19g	9.56g	92.9		
102	K1006592-001	CRWRF RDP	SOIL	1.31g	5.88g	3.22g	41.8		
103	K1006601-001	ND09C CURR-1	SOIL	1.32g	17.91g	17.66g	98.5		
104	K1006601-002	ND09C CURR-2	SOIL	1.31g	15.89g	15.21g	95.3		
105	K1006601-003	ND09C AREA 4-1C	SOIL	1.31g	22.11g	21.83g	98.7		
106	K1006601-004	ND09C AREA 4-2C	SOIL	1.31g	17.43g	17.31g	99.3		
107	K1006601-005	ND09C Metals-1	SOIL	1.32g	14.92g	14.79g	99.0		
108	K1006601-006	ND09C ORIG-2	SOIL	1.31g	22.19g	22.07g	99.4		
109	K1006601-007	ND09C ORIG-1	SOIL	1.31g	22.52g	22.29g	98.9		
110	K1006601-008	ND09C AREA1-4 C	SOIL	1.30g	21.91g	21.66g	98.8		
111	K1006601-009	ND09C AREA1-5 C	SOIL	1.32g	17.12g	16.92g	98.7		
112	K1006601-010	ND09C AREA1-3 C	SOIL	1.33g	13.94g	13.76g	98.6		
113	K1006601-011	ND09C AREA1-2 C	SOIL	1.31g	10.43g	10.35g	99.1		
114	K1006601-012	ND09C AREA1-1 C	SOIL	1.31g	11.01g	10.89g	98.8		
115	K1006601-013	ND09C AREA2-1	SOIL	1.31g	14.50g	14.36g	98.9		
116	K1006615-001	BG-5 0-2 COMP	SOIL	1.31g	7.45g	6.41g	83.1		
117	K1006615-002	BG-5 2-12 COMP	SOIL	1.33g	12.42g	10.60g	83.6		
118	K1006615-003	BG-5 2-18 COMP	SOIL	1.31g	11.38g	9.91g	85.4		

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
119	K1006615-004	BG-9 0-2 COMP	SOIL	1.30g	9.89g	8.77g	87.0		
120	K1006615-005	BG-9 2-12 COMP	SOIL	1.31g	10.62g	8.72g	79.6		
121	K1006615-006	BG-9 12-18 COMP	SOIL	1.31g	7.99g	7.01g	85.3		
122	K1006615-007	BG-13 0-2 COMP	SOIL	1.31g	8.08g	6.97g	83.6		
123	K1006615-008	BG-13 2-12 COMP	SOIL	1.31g	12.07g	10.84g	88.6		
124	K1006615-009	BG-13 12-18 COMP	SOIL	1.30g	11.25g	9.87g	86.1		
125	K1006621-001	WS #1	SOIL	1.31g	10.21g	5.30g	44.8		
126	K1006621-002	WS #1 Dup	SOIL	1.32g	12.28g	5.75g	40.4		
127	K1006621-003	WS #2	SOIL	1.33g	10.97g	9.11g	80.7		
128	K1006621-004	WS #2 Dup	SOIL	1.31g	15.43g	12.31g	77.9		
129	K1006621-005	WS #3	SOIL	1.31g	15.97g	11.16g	67.2		
130	K1006621-006	WS #3 Dup	SOIL	1.30g	14.80g	9.41g	60.1		
131	K1006627-001	Day 60-Sed-C-Surf-1 (-01)	SEDIMENT	1.31g	8.07g	1.92g	9.02		
132	K1006627-002	Day 60-Sed-C-Surf-2 (-02)	SEDIMENT	1.32g	11.35g	2.23g	9.07		
133	K1006627-003	Day 60-Sed-C-Bot-1 (-03)	SEDIMENT	1.31g	7.07g	1.88g	9.90		
134	K1006627-004	Day 60-Sed-C-Bot-2 (-04)	SEDIMENT	1.31g	8.75g	1.95g	8.60		
135	K1006627-005	Day 60-Sed-T-Surf-1 (-05)	SEDIMENT	1.31g	10.40g	2.19g	9.68		
136	K1006627-006	Day 60-Sed-T-Surf-2 (-06)	SEDIMENT	1.31g	9.53g	1.90g	7.18		
137	K1006627-007	Day 60-Sed-T-Bot-1 (-07)	SEDIMENT	1.31g	10.96g	2.26g	9.84		
138	K1006627-008	Day 60-Sed-T-Bot-2 (-08)	SEDIMENT	1.30g	8.64g	2.03g	9.95		
139	K1006630-001	EP139	SOIL	1.31g	10.59g	10.28g	96.7		
140	K1006630-002	EP140	SOIL	1.32g	9.30g	9.17g	98.4		
141	K1006630-003	EP141	SOIL	1.32g	17.96g	17.52g	97.4		
142	K1006630-004	EP142	SOIL	1.32g	27.17g	26.28g	96.6		
143	K1006630-005	EP143	SOIL	1.33g	17.42g	16.64g	95.2		
144	K1006630-006	EP144	SOIL	1.32g	17.70g	16.84g	94.7		
145	K1006630-007	EP145	SOIL	1.31g	10.62g	10.04g	93.8		
146	K1006630-008	EP146	SOIL	1.31g	12.44g	12.13g	97.2		
147	K1006630-009	EP147	SOIL	1.32g	13.93g	13.18g	94.1		
148	K1006630-010	EP148	SOIL	1.31g	13.59g	12.65g	92.3		
149	K1006630-011	EP149	SOIL	1.31g	14.12g	12.87g	90.2		

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
150	K1006630-012	EP150	SOIL	1.32g	13.04g	12.87g	98.5		
151	K1006630-013	EP151	SOIL	1.31g	14.83g	14.23g	95.6		
152	K1006630-014	EP152	SOIL	1.32g	13.51g	12.62g	92.7		
153	K1006630-015	EP153	SOIL	1.31g	17.95g	17.53g	97.5		
154	K1006630-016	EP154	SOIL	1.30g	14.35g	13.81g	95.9		
155	K1006630-017	EP155	SOIL	1.31g	18.62g	17.84g	95.5		
156	K1006630-018	EP156	SOIL	1.31g	21.02g	20.53g	97.5		
157	K1006630-019	EP157	SOIL	1.30g	22.43g	21.56g	95.9		
158	K1006630-020	EP158	SOIL	1.30g	21.78g	20.82g	95.3		
159	K1006631-001	EP159	SOIL	1.31g	16.35g	15.79g	96.3		
160	K1006631-002	EP160	SOIL	1.31g	17.06g	16.10g	93.9		
161	K1006631-003	EP161	SOIL	1.29g	10.87g	10.03g	91.2		
162	K1006631-004	EP162	SOIL	1.30g	22.55g	22.03g	97.6		
163	K1006631-005	EP163	SOIL	1.31g	18.49g	17.74g	95.6		
164	K1006631-006	EP164	SOIL	1.33g	21.38g	20.75g	96.9		
165	K1006631-007	EP165	SOIL	1.33g	20.65g	20.17g	97.5		
166	K1006631-008	EP166	SOIL	1.33g	16.77g	16.02g	95.1		
167	K1006631-009	EP167	SOIL	1.31g	17.27g	16.19g	93.2		
168	K1006631-010	EP168	SOIL	1.32g	23.67g	23.02g	97.1		
169	K1006631-011	EP169	SOIL	1.31g	12.49g	11.71g	93.0		
170	K1006631-012	EP170	SOIL	1.31g	13.00g	12.07g	92.0		
171	K1006631-013	EP171	SOIL	1.31g	11.07g	10.57g	94.9		
172	K1006631-014	EP172	SOIL	1.32g	14.72g	13.57g	91.4		
173	K1006631-015	EP173	SOIL	1.31g	10.73g	9.86g	90.8		
174	K1006631-016	EP174	SOIL	1.32g	14.97g	14.50g	96.6		
175	K1006631-017	EP175	SOIL	1.33g	12.05g	11.27g	92.7		
176	K1006631-018	EP176	SOIL	1.32g	13.00g	12.10g	92.3		
177	K1006631-019	EP177	SOIL	1.33g	14.99g	14.74g	98.2		
178	K1006631-020	EP178	SOIL	1.31g	15.24g	14.45g	94.3		
179	K1006632-001	EP179	SOIL	1.34g	9.12g	7.86g	83.8		
180	K1006632-002	EP180	SOIL	1.32g	23.72g	23.16g	97.5		

Group ID:	KWG1006311		
Analyst:	SArwood	**Reviewed By:**	CH
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	6/30/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
181	K1006636-001	BG-10 0-2 COMP	SOIL	1.32g	8.75g	7.58g	84.3		
182	K1006636-002	BG-10 2-12 COMP	SOIL	1.31g	9.02g	7.82g	84.4		
183	K1006636-003	BG-10 12-18 COMP	SOIL	1.33g	11.34g	9.70g	83.6		
184	K1006636-005	BG-14 0-2 COMP	SOIL	1.33g	11.39g	10.13g	87.5		
185	K1006636-006	BG-14-2-12 COMP	SOIL	1.32g	8.45g	7.59g	87.9		
186	K1006636-007	BG-14 12-18 COMP	SOIL	1.31g	9.95g	8.73g	85.9		
187	KWG1006311-1	Duplicate Client Sample	SOIL	1.31g	4.85g	3.19g	53.1	K1005040-001	
188	KWG1006311-10	Duplicate Client Sample	SEDIMENT	1.32g	17.05g	11.86g	67.0	K1006549-001	
189	KWG1006311-11	Duplicate Client Sample	SOIL	1.31g	20.18g	19.10g	94.3	K1006571-005	
190	KWG1006311-12	Duplicate Client Sample	SOIL	1.32g	17.72g	16.14g	90.4	K1006571-013	
191	KWG1006311-13	Duplicate Client Sample	SOIL	1.30g	13.11g	12.41g	94.1	K1006572-002	
192	KWG1006311-14	Duplicate Client Sample	SOIL	1.31g	17.80g	17.56g	98.5	K1006572-015	
193	KWG1006311-15	Duplicate Client Sample	SOIL	1.32g	13.11g	12.69g	96.4	K1006572-016	
194	KWG1006311-16	Duplicate Client Sample	SOIL	1.32g	12.13g	11.35g	92.8	K1006572-020	
195	KWG1006311-17	Duplicate Client Sample	SOIL	1.32g	6.54g	3.49g	41.6	K1006592-001	
196	KWG1006311-18	Duplicate Client Sample	SOIL	1.32g	17.36g	17.14g	98.6	K1006601-001	
197	KWG1006311-19	Duplicate Client Sample	SOIL	1.31g	11.66g	11.57g	99.1	K1006601-012	
198	KWG1006311-2	Duplicate Client Sample	PAPERBOA	1.30g	3.02g	2.96g	96.5	K1005734-001	
199	KWG1006311-20	Duplicate Client Sample	SOIL	1.32g	8.34g	7.31g	85.3	K1006615-006	
200	KWG1006311-21	Duplicate Client Sample	SOIL	1.31g	13.14g	6.59g	44.6	K1006621-001	
201	KWG1006311-22	Duplicate Client Sample	SEDIMENT	1.31g	8.74g	1.98g	9.02	K1006627-001	
202	KWG1006311-23	Duplicate Client Sample	SOIL	1.31g	21.16g	20.66g	97.5	K1006630-003	
203	KWG1006311-24	Duplicate Client Sample	SOIL	1.32g	20.97g	19.29g	91.5	K1006630-011	
204	KWG1006311-25	Duplicate Client Sample	SOIL	1.30g	14.15g	13.71g	96.6	K1006631-001	
205	KWG1006311-26	Duplicate Client Sample	SOIL	1.32g	16.37g	15.23g	92.4	K1006631-011	
206	KWG1006311-27	Duplicate Client Sample	SOIL	1.31g	10.42g	8.64g	80.5	K1006632-001	
207	KWG1006311-28	Duplicate Client Sample	SOIL	1.32g	9.82g	8.50g	84.5	K1006636-001	
208	KWG1006311-3	Duplicate Client Sample	SEDIMENT	1.31g	17.53g	7.98g	41.1	K1006485-001	
209	KWG1006311-4	Duplicate Client Sample	SOIL	1.31g	12.98g	11.74g	89.4	K1006519-002	
210	KWG1006311-5	Duplicate Client Sample	SOIL	1.32g	12.34g	12.00g	96.9	K1006519-008	

Group ID:	KWG1006311				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	06/30/2010 07:49	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	6/30/10
Date Completed:	06/30/2010 14:47	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
211	KWG1006311-6	Duplicate Client Sample	SOIL	1.32g	17.43g	15.72g	89.4	K1006520-002	
212	KWG1006311-7	Duplicate Client Sample	SOIL	1.31g	17.11g	15.79g	91.6	K1006520-010	
213	KWG1006311-8	Duplicate Client Sample	SOIL	1.32g	15.51g	14.66g	94.0	K1006522-003	
214	KWG1006311-9	Duplicate Client Sample	SOIL	1.30g	30.38g	28.94g	95.0	K1006522-011	

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General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006636
Date Collected : 06/23/10
Date Received : 06/26/10

Fluoride, Total

Prep Method : EPA 340.1 Modified
Analysis Method : 340.2 Modified
Test Notes :

Units : mg/Kg
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
BG-10 0-2 COMP	K1006636-001	1.2	0.8	1	7/1/2010	07/01/10	162	
BG-10 2-12 COMP	K1006636-002	1.2	0.8	1	7/1/2010	07/01/10	190	
BG-10 12-18 COMP	K1006636-003	1.2	0.8	1	7/1/2010	07/01/10	233	
BG-14 0-2 COMP	K1006636-005	1.1	0.8	1	7/1/2010	07/01/10	173	
BG-14-2-12 COMP	K1006636-006	1.1	0.8	1	7/1/2010	07/01/10	202	
BG-14 12-18 COMP	K1006636-007	1.2	0.8	1	7/1/2010	07/01/10	233	
Method Blank	K1006636-MB	1.0	0.2	1	7/1/2010	07/01/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006636
Date Collected : 6/23/2010
Date Received : 6/26/2010
Date Prepared : 07/01/10
Date Analyzed : 07/01/10

Duplicate Summary
Inorganic Parameters

Sample Name : BG-10 0-2 COMP
Lab Code : K1006636-001DUP
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	1.2	162	160	161	1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006636
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	6/23/2010
Project Number :	26-46-0006.13-2010-400	**Date Received :**	6/26/2010
Sample Matrix :	SOIL	**Date Prepared :**	07/01/10
		Date Analyzed :	07/01/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	BG-10 0-2 COMP		Units :	mg/Kg
Lab Code :	K1006636-001MS	K1006636-001DMS	Basis :	Dry
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	1.2	2340	4680	162	1000	2210	36	44	75-125	20	*

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006636
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	07/01/10
		Date Analyzed :	07/01/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006636-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	13.5	12.4	92	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006636
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/1/2010	5.00	4.90	98
CCV2 Result	7/1/2010	5.00	4.90	98
CCV3 Result	7/1/2010	5.00	4.84	97
CCV4 Result	7/1/2010	5.00	4.82	96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006636
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/1/2010	0.20	0.05 J
CCB2 Result	7/1/2010	0.20	0.05 J
CCB3 Result	7/1/2010	0.20	0.04 J
CCB4 Result	7/1/2010	0.20	0.05 J

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : WATER

Service Request : K1006636
Date Collected : 06/23/10
Date Received : 06/26/10

Fluoride

Analysis Method : 340.2
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BG-121 COMP	K1006636-004	0.20	0.01	1	07/01/10	0.04	J
BG-122 COMP	K1006636-008	0.20	0.01	1	07/01/10	0.03	J
Method Blank	K1006636-MB	0.20	0.01	1	07/01/10	0.04	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : WATER

Service Request : K1006636
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/01/10

Duplicate Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K1006499-001DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride	340.2	0.20	12.7	12.7	12.7	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : WATER

Service Request : K1006636
Date Collected : NA
Date Received : NA
Date Prepared : NA
Date Analyzed : 07/01/10

Matrix Spike Summary
Inorganic Parameters

Sample Name : Batch QC
Lab Code : K1006499-001MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	340.2	0.20	25.0	12.7	37.6	100	74-128	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006636
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/01/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006636-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	NONE	340.2	13.5	13.3	99	87-117	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006636
Date Collected : NA
Date Received : NA

Fluoride
340.2
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/1/2010	5.00	4.82	96
CCV2 Result	7/1/2010	5.00	4.84	97
CCV3 Result	7/1/2010	5.00	4.90	98
CCV4 Result	7/1/2010	5.00	4.90	98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006636
Date Collected : NA
Date Received : NA

Fluoride
340.2
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/1/2010	0.20	0.05 J
CCB2 Result	7/1/2010	0.20	0.05 J
CCB3 Result	7/1/2010	0.20	0.04 J
CCB4 Result	7/1/2010	0.20	0.05 J

Original

Work Request # (K0499) K0501 K0510 K0695 K0696 K0636

Tier: I II V I I V

Date Analyzed: 6-27-10 & 7-1-10

Analyst: A Chatterjee

Analysis: Fluoride SM4500 F-C Mod

207219
207222
207224

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

K0636 - Initial failed - Suspect matrix interference

Final Approved by: _____ Date: 7/2/10

DQREPORT

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 207219 **Method/Testco**

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL
1006499-001	Fluoride	N/A		Water	12.70 mg/L	mL	12.7 mg/L	1	0.01	0.20
1006501-001	Fluoride	N/A		Water	3.02 mg/L	mL	3.02 mg/L	1	0.01	0.20
1006510-004	Fluoride	N/A		Misc. Liquid	0.00 mg/L	mL	0.20 mg/L U	1	0.01	0.20
1006636-004	Fluoride	N/A		Water	0.04 mg/L	mL	0.04 mg/L BJ	1	0.01	0.20
1006636-008	Fluoride	N/A		Water	0.03 mg/L	mL	0.03 mg/L BJ	1	0.01	0.20
1006695-001	Fluoride	N/A		Water	7.74 mg/L	mL	7.74 mg/L	1	0.01	0.20
1006696-001	Fluoride	N/A		Ground Water	6.20 mg/L	mL	6.20 mg/L	1	0.01	0.20
Q1006591-01	Fluoride	CCB		Water	0.05 mg/L	mL	0.05 mg/L	1	0.01	0.20
Q1006591-02	Fluoride	CCB		Water	0.04 mg/L	mL	0.04 mg/L	1	0.01	0.20
Q1006591-03	Fluoride	CCB		Water	0.05 mg/L	mL	0.05 mg/L	1	0.01	0.20
Q1006591-04	Fluoride	CCB		Water	0.05 mg/L	mL	0.05 mg/L	1	0.01	0.20
Q1006591-05	Fluoride	CCV		Water	4.90 mg/L 98%	mL	4.90 mg/L	1		
Q1006591-06	Fluoride	CCV		Water	4.90 mg/L 98%	mL	4.90 mg/L	1		
Q1006591-07	Fluoride	CCV		Water	4.84 mg/L 97%	mL	4.84 mg/L	1		
Q1006591-08	Fluoride	CCV		Water	4.82 mg/L 96%	mL	4.82 mg/L	1		
Q1006591-09	Fluoride	MB		Water	0.04 mg/L	mL	0.04 mg/L	1	0.01	0.20
Q1006591-10	Fluoride	LCS		Water	13.30 mg/L	mL	13.3 mg/L	1	0.01	0.20
Q1006591-11	Fluoride	DUP	K1006499-001	Water	12.70 mg/L	mL	12.7 mg/L	1	0.01	0.20
Q1006591-12	Fluoride	MS	K1006499-001	Water	37.60 mg/L	mL	37.6 mg/L	1	0.01	0.20

7/2/10

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 207222 **Method/Testco**

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL
1005977-002	Fluoride	N/A		Water	5.48 mg/L	100 mL	5.04 mg/L	1	0.20	0.20
1005977-004	Fluoride	N/A		Water	6.92 mg/L	200 mL	6.06 mg/L	1	0.20	0.20
Q1006586-01	Fluoride	LCS		Water	13.00 mg/L	200 mL	12.5 mg/L	1	0.20	0.20
Q1006586-02	Fluoride	MB		Water	0.05 mg/L	200 mL	0.20 mg/L U	1	0.20	0.20
Q1006586-03	Fluoride	DUP	K1005977-002	Water	5.02 mg/L	100 mL	5.17 mg/L	1	0.20	0.20
Q1006586-04	Fluoride	MS	K1005977-002	Water	15.60 mg/L	100 mL	13.1 mg/L	1	0.20	0.20
Q1006586-05	Fluoride	DMS	K1005977-002	Water	25.20 mg/L	100 mL	22.7 mg/L	1	0.20	0.20
Q1006598-01	Fluoride	CCB		Water	0.05 mg/L	mL	0.20 mg/L U	1	0.20	0.20
Q1006598-02	Fluoride	CCB		Water	0.04 mg/L	mL	0.20 mg/L U	1	0.20	0.20
Q1006598-03	Fluoride	CCB		Water	0.05 mg/L	mL	0.20 mg/L U	1	0.20	0.20
Q1006598-04	Fluoride	CCB		Water	0.05 mg/L	mL	0.20 mg/L U	1	0.20	0.20
Q1006598-05	Fluoride	CCV		Water	4.90 mg/L 98%	mL	4.90 mg/L	1		
Q1006598-06	Fluoride	CCV		Water	4.90 mg/L 98%	mL	4.90 mg/L	1		
Q1006598-07	Fluoride	CCV		Water	4.84 mg/L 97%	mL	4.84 mg/L	1		
Q1006598-08	Fluoride	CCV		Water	4.82 mg/L 96%	mL	4.82 mg/L	1		

7/2/10

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 207224 **Method/Testco**

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL
1006636-001	Fluoride, Total	N/A		Soil	3.50 mg/L	136.86	162 mg/Kg	1	0.8	1.2
1006636-002	Fluoride, Total	N/A		Soil	4.08 mg/L	160.05	190 mg/Kg	1	0.8	1.2
1006636-003	Fluoride, Total	N/A		Soil	4.94 mg/L	195.16	233 mg/Kg	1	0.8	1.2
1006636-005	Fluoride, Total	N/A		Soil	4.18 mg/L	150.99	173 mg/Kg	1	0.8	1.1
1006636-006	Fluoride, Total	N/A		Soil	4.90 mg/L	177.54	202 mg/Kg	1	0.8	1.1
1006636-007	Fluoride, Total	N/A		Soil	5.32 mg/L	199.87	233 mg/Kg	1	0.8	1.2
Q1006588-01	Fluoride, Total	LCS		Soil	12.50 mg/L	12.38	12.4 mg/Kg	1	0.2	1.0
Q1006588-02	Fluoride, Total	MB		Soil	0.08 mg/L	0.08	1.0 mg/Kg U	1	0.2	1.0
Q1006588-03	Fluoride, Total	DUP	K1006636-001	Soil	3.54 mg/L	134.86	160 mg/Kg	1	0.8	1.2
Q1006588-04	Fluoride, Total	MS	K1006636-001	Soil	22.40 mg/L	846.95	1000 mg/Kg	1	0.8	1.2
Q1006588-05	Fluoride, Total	DMS	K1006636-001	Soil	47.20 mg/L	1861.93	2210 mg/Kg	1	0.8	1.2
Q1006599-01	Fluoride, Total	CCB		Soil	0.05 mg/L		1.0 mg/Kg U	1	0.2	1.0
Q1006599-02	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0
Q1006599-03	Fluoride, Total	CCB		Soil	0.05 mg/L		1.0 mg/Kg U	1	0.2	1.0
Q1006599-04	Fluoride, Total	CCB		Soil	0.05 mg/L		1.0 mg/Kg U	1	0.2	1.0
Q1006599-05	Fluoride, Total	CCV		Soil	4.90 mg/L		4.90 mg/Kg	1		
Q1006599-06	Fluoride, Total	CCV		Soil	4.90 mg/L		4.90 mg/Kg	1		
Q1006599-07	Fluoride, Total	CCV		Soil	4.84 mg/L		4.84 mg/Kg	1		
Q1006599-08	Fluoride, Total	CCV		Soil	4.82 mg/L		4.82 mg/Kg	1		

7/2/10

Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

207219

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.22	1.00	0.220	
CCV1	20	20	4.9	1.00	4.900	98
CCB1	20	20	0.045	1.00	0.045	
MB	20	20	0.0528	1.00	0.053	
LCS	20	20	13.0	1.00	13.000	
K1005977-002	20	20	5.48	1.00	5.480	
K1005977-002d	20	20	5.02	1.00	5.020	
K1005977-002ms	20	20	15.6	1.00	15.600	
K1005977-002ms	20	20	25.2	1.00	25.200	
K1005977-004	20	20	6.92	1.00	6.920	
MB	20	20	0.044	1.00	0.044	
LCS	20	20	13.3	1.00	13.300	
K1006499-001	20	20	12.7	1.00	12.700	
CCV2	20	20	4.9	1.00	4.900	98
CCB2	20	20	0.04	1.00	0.040	
K1006499-001d	20	20	12.7	1.00	12.700	
K1006499-001ms	20	20	37.6	1.00	37.600	
K1006501-001	20	20	3.02	1.00	3.020	
K1006510-004	20	20	0.0002	10.00	0.002	
K1006695-001	20	20	7.74	1.00	7.740	
K1006696-001	20	20	6.2	1.00	6.200	
K1006636-004	20	20	0.037	1.00	0.037	
K1006636-008	20	20	0.025	1.00	0.025	
MB	20	20	0.083	1.00	0.083	
LCS	20	20	12.5	1.00	12.500	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L3 STD 100 mg/L

1-100ppm Slope:-57.9,-57.1 EF%97.8,96.5

LCS APG: % REC = 99 Lot# ID#AN1-33 T

TV=13.5 5977-1ms=o.5mlx1000ppm/20=25

CCV TV=5ppm x=12.7 rpd=<1 %REC=100

PROBE ID#B

	DATE	TIME
Analyzed By:AC	7/1/2010	12:00:00 AM
Reviewed By:	SAK	7/2/10

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV3	20	20	4.84	1.00	4.840	96.8
CCB3	20	20	0.0484	1.00	0.048	
K1006636-001	20	20	3.5	1.00	3.500	
K1006636-001d	20	20	3.54	1.00	3.540	
K1006636-001ms	20	20	22.4	1.00	22.400	
K1006636-001msd	20	20	47.2	1.00	47.200	
K1006636-002	20	20	4.08	1.00	4.080	
K1006636-003	20	20	4.94	1.00	4.940	
K1006636-005	20	20	4.18	1.00	4.180	
K1006636-006	20	20	4.90	1.00	4.900	
K1006636-007	20	20	5.32	1.00	5.320	
0.2 std	20	20	0.214	1.00	0.214	
CCV4	20	20	4.82	1.00	4.820	96.4
CCB4	20	20	0.0522	1.00	0.052	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	

		DATE	TIME
Analyzed By:	TC	7/1/2010	9"55
Reviewed By:	SAN		7/2/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114802
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist Aq F
Prep Method: EPA 340.1
Rush/NPDES: NPDES

Status: Prepped
Current Step: Distillation

Prep Date: 06/27/2010 10:30
Due Date: 06/27/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1005977-002	115-1C-060810	.08	100 mL	92 mL			
K1005977-004	115-2C-060810	.08	200 mL	175 mL			
KQ1006586-01	Lab Control Sample		200 mL	192 mL	200 mL	17012	
KQ1006586-02	Method Blank		200 mL	196 mL			
K1005977-002: KQ1006586-03	Duplicate	.08	100 mL	103 mL			
K1005977-002: KQ1006586-04	Matrix Spike	.08	100 mL	84 mL	1 mL	15378	
K1005977-002: KQ1006586-05	Duplicate Matrix Spike	.08	100 mL	90 mL	2 mL	15378	

7 Total Samples consisting of 2 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 13.5ppm LCS	Spike	17012	7/19/2010	Sodium Fluoride 1000 ppm	Spike	15378	7/7/2010

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	27-JUN-10 10:30	27-JUN-10 15:00	ac		N	

Comments

Review

Reviewed by: _____ Date: 7/2/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114803
Team: GenChem
Analyst: ac
Prep Workflow: Gen Dist SFluor
Prep Method: EPA 340.1 Modified
Rush/NPDES: N/A
Status: Prepped
Current Step: Distillation
Prep Date: 07/01/2010 09:00
Due Date: 07/13/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006636-001	BG-10 0-2 COMP	.01	5.038 g	197 mL			
K1006636-002	BG-10 2-12 COMP	.01	5.073 g	199 mL			
K1006636-003	BG-10 12-18 COMP	.01	5.012 g	198 mL			
K1006636-005	BG-14 0-2 COMP	.01	5.066 g	183 mL			
K1006636-006	BG-14-2-12 COMP	.01	5.023 g	182 mL			
K1006636-007	BG-14 12-18 COMP	.01	5.004 g	188 mL			
KQ1006588-01	Lab Control Sample		200 mL	198 mL	200 mL	17012	
KQ1006588-02	Method Blank		200 mL	182 mL			
K1006636-001: KQ1006588-03	Duplicate	.01	5.040 g	192 mL			
K1006636-001: KQ1006588-04	Matrix Spike	.01	5.078 g	192 mL	10 mL	15378	
K1006636-001: KQ1006588-05	Duplicate Matrix Spike	.01	5.070 g	200 mL	20 mL	15378	

11 Total Samples consisting of 6 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 13.5ppm LCS	Spike	17012	7/19/2010	Sodium Fluoride 1000 ppm	Spike	15378	7/7/2010

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	01-JUL-10 09:00	01-JUL-10 15:00	ac		N	

Comments

Review

Reviewed by: _____ Date: 7/2/10

Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow Plant background
Project No.: 26-46-0006.13-2010-400

Service Request: K1006636

Sample Name:	Lab Code:
Batch QCD	K1006615-006D
Batch QCS	K1006615-006S
BG-10 0-2 COMP	K1006636-001
BG-10 2-12 COMP	K1006636-002
BG-10 12-18 COMP	K1006636-003
BG-14 0-2 COMP	K1006636-005
BG-14-2-12 COMP	K1006636-006
BG-14 12-18 COMP	K1006636-007
Method Blank	K1006636-MB

Comments:

Approved By: _____ **Date:** 7/30/10

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/26/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-10 0-2 COMP **Lab Code:** K1006636-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.059	0.011	5.0	07/14/10	07/28/10	0.537		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	38.2		
Barium	6010B	2.4	0.4	2.0	07/19/10	07/20/10	120		
Beryllium	6010B	1.17	0.01	2.0	07/14/10	07/16/10	0.47	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.4	J	
Calcium	6010B	11.7	2.4	2.0	07/14/10	07/16/10	2200		
Chromium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	11.9		
Cobalt	6010B	2.4	0.4	2.0	07/14/10	07/16/10	6.1		
Copper	6010B	2.4	0.7	2.0	07/14/10	07/16/10	32.3		
Iron	6010B	4.7	0.4	2.0	07/14/10	07/16/10	26500		
Lead	6010B	23.7	3.6	2.0	07/19/10	07/20/10	12.7	J	
Magnesium	6010B	4.70	0.05	2.0	07/14/10	07/16/10	2840		
Manganese	6010B	2.37	0.05	2.0	07/19/10	07/20/10	655		
Mercury	7471A	0.020	0.002	1.0	07/02/10	07/07/10	0.023		
Nickel	6010B	4.7	0.6	2.0	07/14/10	07/16/10	4.5	J	
Potassium	6010B	237	5.9	2.0	07/19/10	07/20/10	2530		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.5	J	
Silver	6010B	2.4	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.5	4.7	2.0	07/14/10	07/16/10	44.7		
Thallium	6020	0.024	0.004	5.0	07/14/10	07/27/10	0.275		
Uranium	6020	0.024	0.007	5.0	07/14/10	07/27/10	2.670		*
Vanadium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	55.5		
Zinc	6010B	2.4	0.4	2.0	07/14/10	07/16/10	54.1		

% Solids: 84.3

Comments:

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/26/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-10 2-12 COMP **Lab Code:** K1006636-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.059	0.011	5.0	07/14/10	07/28/10	0.138		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	5.14		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	155		
Beryllium	6010B	1.18	0.01	2.0	07/14/10	07/16/10	0.60	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.8	2.4	2.0	07/14/10	07/16/10	2710		
Chromium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	9.9		
Cobalt	6010B	2.4	0.4	2.0	07/14/10	07/16/10	6.1		
Copper	6010B	2.4	0.7	2.0	07/14/10	07/16/10	12.4		
Iron	6010B	4.7	0.4	2.0	07/14/10	07/16/10	24000		
Lead	6010B	23.2	3.5	2.0	07/19/10	07/20/10	8.0	J	
Magnesium	6010B	4.74	0.05	2.0	07/14/10	07/16/10	3330		
Manganese	6010B	2.32	0.05	2.0	07/19/10	07/20/10	671		
Mercury	7471A	0.020	0.002	1.0	07/02/10	07/07/10	0.013	J	
Nickel	6010B	4.7	0.6	2.0	07/14/10	07/16/10	4.9		
Potassium	6010B	232	5.8	2.0	07/19/10	07/20/10	3010		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.5	J	
Silver	6010B	2.4	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.7	4.7	2.0	07/14/10	07/16/10	59.2		
Thallium	6020	0.024	0.004	5.0	07/14/10	07/27/10	0.292		
Uranium	6020	0.024	0.007	5.0	07/14/10	07/27/10	2.270		*
Vanadium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	48.9		
Zinc	6010B	2.4	0.4	2.0	07/14/10	07/16/10	38.6		

% Solids: 84.4

Comments:

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/26/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-10 12-18 COMP **Lab Code:** K1006636-003

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.059	0.011	5.0	07/14/10	07/28/10	0.109		
Arsenic	6020	0.59	0.06	5.0	07/14/10	07/27/10	2.31		
Barium	6010B	2.4	0.4	2.0	07/19/10	07/20/10	154		
Beryllium	6010B	1.18	0.01	2.0	07/14/10	07/16/10	0.75	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.8	2.4	2.0	07/14/10	07/16/10	3540		
Chromium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	8.4		
Cobalt	6010B	2.4	0.4	2.0	07/14/10	07/16/10	7.5		
Copper	6010B	2.4	0.7	2.0	07/14/10	07/16/10	12.7		
Iron	6010B	4.7	0.4	2.0	07/14/10	07/16/10	23000		
Lead	6010B	23.7	3.6	2.0	07/19/10	07/20/10	10.2	J	
Magnesium	6010B	4.74	0.05	2.0	07/14/10	07/16/10	5140		
Manganese	6010B	2.37	0.05	2.0	07/19/10	07/20/10	861		
Mercury	7471A	0.018	0.002	1.0	07/02/10	07/07/10	0.012	J	
Nickel	6010B	4.7	0.6	2.0	07/14/10	07/16/10	5.6		
Potassium	6010B	237	5.9	2.0	07/19/10	07/20/10	5250		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.5	J	
Silver	6010B	2.4	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.7	4.7	2.0	07/14/10	07/16/10	80.4		
Thallium	6020	0.023	0.004	5.0	07/14/10	07/27/10	0.345		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	3.390		*
Vanadium	6010B	2.4	0.5	2.0	07/14/10	07/16/10	43.5		
Zinc	6010B	2.4	0.4	2.0	07/14/10	07/16/10	43.1		

% Solids: 83.6

Comments:

METALS

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/26/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-14 0-2 COMP **Lab Code:** K1006636-005

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/14/10	07/28/10	0.626		
Arsenic	6020	0.57	0.06	5.0	07/14/10	07/27/10	25.4		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	108		
Beryllium	6010B	1.12	0.01	2.0	07/14/10	07/16/10	0.45	J	
Cadmium	6010B	1.1	0.2	2.0	07/14/10	07/16/10	0.6	J	
Calcium	6010B	11.2	2.2	2.0	07/14/10	07/16/10	2300		
Chromium	6010B	2.2	0.4	2.0	07/14/10	07/16/10	9.3		
Cobalt	6010B	2.2	0.3	2.0	07/14/10	07/16/10	5.0		
Copper	6010B	2.2	0.7	2.0	07/14/10	07/16/10	38.3		
Iron	6010B	4.5	0.3	2.0	07/14/10	07/16/10	20200		
Lead	6010B	22.9	3.4	2.0	07/19/10	07/20/10	15.4	J	
Magnesium	6010B	4.48	0.05	2.0	07/14/10	07/16/10	2660		
Manganese	6010B	2.29	0.05	2.0	07/19/10	07/20/10	495		
Mercury	7471A	0.018	0.002	1.0	07/02/10	07/07/10	0.016	J	
Nickel	6010B	4.5	0.6	2.0	07/14/10	07/16/10	3.9	J	
Potassium	6010B	229	5.7	2.0	07/19/10	07/20/10	2230		
Selenium	6020	1.1	0.2	5.0	07/14/10	07/27/10	0.3	J	
Silver	6010B	2.2	0.4	2.0	07/14/10	07/16/10	0.4	U	
Sodium	6010B	22.4	4.5	2.0	07/14/10	07/16/10	53.0		
Thallium	6020	0.023	0.003	5.0	07/14/10	07/27/10	0.274		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	1.570		*
Vanadium	6010B	2.2	0.4	2.0	07/14/10	07/16/10	42.1		
Zinc	6010B	2.2	0.3	2.0	07/14/10	07/16/10	61.5		

% Solids: 87.5

Comments:

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/26/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-14-2-12 COMP **Lab Code:** K1006636-006

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/14/10	07/28/10	0.170		
Arsenic	6020	0.57	0.06	5.0	07/14/10	07/27/10	6.54		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	109		
Beryllium	6010B	1.13	0.01	2.0	07/14/10	07/16/10	0.46	J	
Cadmium	6010B	1.1	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/14/10	07/16/10	2170		
Chromium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	8.5		
Cobalt	6010B	2.3	0.3	2.0	07/14/10	07/16/10	5.3		
Copper	6010B	2.3	0.7	2.0	07/14/10	07/16/10	13.1		
Iron	6010B	4.5	0.3	2.0	07/14/10	07/16/10	18700		
Lead	6010B	22.5	3.4	2.0	07/19/10	07/20/10	8.6	J	
Magnesium	6010B	4.51	0.05	2.0	07/14/10	07/16/10	3520		
Manganese	6010B	2.25	0.05	2.0	07/19/10	07/20/10	441		
Mercury	7471A	0.018	0.002	1.0	07/02/10	07/07/10	0.013	J	
Nickel	6010B	4.5	0.6	2.0	07/14/10	07/16/10	4.4	J	
Potassium	6010B	225	5.6	2.0	07/19/10	07/20/10	2770		
Selenium	6020	1.1	0.2	5.0	07/14/10	07/27/10	0.5	J	
Silver	6010B	2.3	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	22.5	4.5	2.0	07/14/10	07/16/10	108		
Thallium	6020	0.023	0.003	5.0	07/14/10	07/27/10	0.261		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	1.490		*
Vanadium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	35.5		
Zinc	6010B	2.3	0.3	2.0	07/14/10	07/16/10	35.3		

% Solids: 87.9

Comments:

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant backgrou	**Date Received:**	6/26/2010
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-14 12-18 COMP **Lab Code:** K1006636-007

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/14/10	07/28/10	0.107		
Arsenic	6020	0.58	0.06	5.0	07/14/10	07/27/10	2.59		
Barium	6010B	2.3	0.3	2.0	07/19/10	07/20/10	235		
Beryllium	6010B	1.16	0.01	2.0	07/14/10	07/16/10	0.60	J	
Cadmium	6010B	1.2	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/14/10	07/16/10	3870		
Chromium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	7.9		
Cobalt	6010B	2.3	0.3	2.0	07/14/10	07/16/10	5.1		
Copper	6010B	2.3	0.7	2.0	07/14/10	07/16/10	12.7		
Iron	6010B	4.7	0.3	2.0	07/14/10	07/16/10	21500		
Lead	6010B	22.8	3.4	2.0	07/19/10	07/20/10	7.0	J	
Magnesium	6010B	4.66	0.05	2.0	07/14/10	07/16/10	4860		
Manganese	6010B	2.28	0.05	2.0	07/19/10	07/20/10	665		
Mercury	7471A	0.020	0.002	1.0	07/02/10	07/07/10	0.035		
Nickel	6010B	4.7	0.6	2.0	07/14/10	07/16/10	5.4		
Potassium	6010B	228	5.7	2.0	07/19/10	07/20/10	3540		
Selenium	6020	1.2	0.2	5.0	07/14/10	07/27/10	0.6	J	
Silver	6010B	2.3	0.5	2.0	07/14/10	07/16/10	0.5	U	
Sodium	6010B	23.3	4.7	2.0	07/14/10	07/16/10	239		
Thallium	6020	0.023	0.003	5.0	07/14/10	07/27/10	0.422		
Uranium	6020	0.023	0.007	5.0	07/14/10	07/27/10	2.030		*
Vanadium	6010B	2.3	0.5	2.0	07/14/10	07/16/10	39.7		
Zinc	6010B	2.3	0.3	2.0	07/14/10	07/16/10	36.7		

% Solids: 85.9

Comments:

METALS

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project No.: 26-46-0006.13-2010-400
Project Name: Rhodia Silver Bow Plant backgrou
Matrix: SOIL

Service Request: K1006636
Date Collected:
Date Received:
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1006636-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.050	0.009	5.0	07/14/10	07/28/10	0.009	U	
Arsenic	6020	0.50	0.05	5.0	07/14/10	07/27/10	0.05	U	
Barium	6010B	2.0	0.3	2.0	07/19/10	07/20/10	0.3	U	
Beryllium	6010B	1.00	0.01	2.0	07/14/10	07/16/10	0.02	J	
Cadmium	6010B	1.0	0.2	2.0	07/14/10	07/16/10	0.2	U	
Calcium	6010B	10.0	2.0	2.0	07/14/10	07/16/10	2.0	U	
Chromium	6010B	2.0	0.4	2.0	07/14/10	07/16/10	0.4	U	
Cobalt	6010B	2.0	0.3	2.0	07/14/10	07/16/10	0.3	U	
Copper	6010B	2.0	0.6	2.0	07/14/10	07/16/10	0.6	U	
Iron	6010B	4.0	0.3	2.0	07/14/10	07/16/10	1.3	J	
Lead	6010B	20.0	3.0	2.0	07/19/10	07/20/10	3.0	U	
Magnesium	6010B	4.00	0.04	2.0	07/14/10	07/16/10	0.09	J	
Manganese	6010B	2.00	0.04	2.0	07/19/10	07/20/10	0.04	U	
Mercury	7471A	0.020	0.002	1.0	07/02/10	07/07/10	0.002	U	
Nickel	6010B	4.0	0.5	2.0	07/14/10	07/16/10	0.5	U	
Potassium	6010B	200	5.0	2.0	07/19/10	07/20/10	5.0	U	
Selenium	6020	1.0	0.2	5.0	07/14/10	07/27/10	0.2	U	
Silver	6010B	2.0	0.4	2.0	07/14/10	07/16/10	0.4	U	
Sodium	6010B	20.0	4.0	2.0	07/14/10	07/16/10	4.0	U	
Thallium	6020	0.020	0.003	5.0	07/14/10	07/27/10	0.003	U	
Uranium	6020	0.020	0.006	5.0	07/14/10	07/27/10	0.006	U	*
Vanadium	6010B	2.0	0.4	2.0	07/14/10	07/16/10	0.4	U	
Zinc	6010B	2.0	0.3	2.0	07/14/10	07/16/10	0.5	J	

% Solids: 100.0

Comments:

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	24.5	98	25.0	25.3	101	25.4	102	6020
Arsenic	25.0	24.2	97	25.0	25.1	100	24.4	98	6020
Barium	5000	5052	101	2500	2437	97	2476	99	6010B
Beryllium	125	126	101	50	51	102	51	102	6010B
Cadmium	1250	1238	99	500	487	97	488	98	6010B
Calcium	5000	5173	103	2500	2490	100	2490	100	6010B
Calcium	12500	12607	101	25000	25202	101	25215	101	6010B
Chromium	500	506	101	500	488	98	489	98	6010B
Cobalt	1250	1241	99	500	489	98	490	98	6010B
Copper	625	624	100	500	495	99	496	99	6010B
Iron	2500	2533	101	500	489	98	506	101	6010B
Iron	10000	9902	99	25000	25446	102	24951	100	6010B
Lead	2500	2550	102	2500	2531	101	2588	104	6010B
Magnesium	5000	4942	99	2000	2051	103	2063	103	6010B
Magnesium	12500	12648	101	25000	25115	100	25464	102	6010B
Manganese	1250	1238	99	1000	999	100	1011	101	6010B
Manganese	10000	9906	99	5000	4976	100	5034	101	6010B
Mercury	5.00	5.00	100	5.00	5.00	100	5.20	104	7471A
Nickel	1250	1237	99	500	490	98	490	98	6010B
Potassium	12500	12685	101	10000	10024	100	10023	100	6010B
Selenium	25.0	24.3	97	25.0	25.4	102	24.8	99	6020
Silver	625	629	101	500	495	99	495	99	6010B
Sodium	12500	12535	100	10000	10042	100	9824	98	6010B
Thallium	25.0	25.8	103	25.0	25.1	100	25.6	102	6020
Uranium	25.0	24.2	97	25.0	25.1	100	25.2	101	6020
Vanadium	1250	1247	100	500	492	98	497	99	6010B
Zinc	1250	1244	100	500	488	98	491	98	6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.2	101	6020
Arsenic				25.0	24.4	98	24.5	98	6020
Barium				2500	2489	100	2515	101	6010B
Beryllium				50	51	102	50	100	6010B
Cadmium				500	494	99	497	99	6010B
Calcium				2500	2488	100	2453	98	6010B
Calcium				25000	25829	103	26704	107	6010B
Chromium				500	494	99	494	99	6010B
Cobalt				500	494	99	490	98	6010B
Copper				500	502	100	516	103	6010B
Iron				500	517	103	507	101	6010B
Iron				25000	25186	101	25754	103	6010B
Lead				2500	2486	99	2596	104	6010B
Magnesium				2000	2078	104	2071	104	6010B
Magnesium				25000	25454	102	25478	102	6010B
Manganese				1000	1014	101	1027	103	6010B
Manganese				5000	4974	99	5126	103	6010B
Mercury				5.00	5.10	102	5.10	102	7471A
Nickel				500	493	99	490	98	6010B
Potassium				10000	9917	99	10019	100	6010B
Selenium				25.0	24.6	98	25.2	101	6020
Silver				500	502	100	502	100	6010B
Sodium				10000	9873	99	9809	98	6010B
Thallium				25.0	25.6	102	25.7	103	6020
Uranium				25.0	25.2	101	25.5	102	6020
Vanadium				500	495	99	481	96	6010B
Zinc				500	489	98	493	99	6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.1	100	6020
Barium				2500	2588	104			6010B
Lead				2500	2631	105			6010B
Manganese				5000	1017	20			6010B
Mercury				5.00	5.00	100	5.10	102	7471A
Potassium				10000	9948	99			6010B

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.6	102	25.5	102	6020

METALS

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.5	102	25.1	100	6020

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.1	0.09	90		
Arsenic				1.00	1.06	106		
Barium				5.0	4.9	98		
Beryllium				5.0	4.8	96		
Cadmium				5.0	4.5	90		
Calcium				50.0	51.7	103		
Chromium				5.0	5.7	114		
Cobalt				10.0	8.6	86		
Copper				10.0	10.6	106		
Iron				20.0	24.4	122		
Lead				50.0	52.5	105		
Magnesium				20.0	19.3	96		
Manganese				5.0	5.0	100		
Mercury				0.20	0.18	90		
Nickel				20.0	19.6	98		
Potassium				400.0	434.0	108		
Selenium				2.0	2.11	106		
Silver				10.0	7.5	75		
Sodium				200.0	217.0	108		
Thallium				0.04	0.042	105		
Uranium				0.04	0.04	100		
Vanadium				10.0	10.6	106		
Zinc				10.0	10.9	109		

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.018	U	0.018	U	-0.036	J	-0.036	J	6020
Arsenic	0.1	U	0.1	U	0.1	U	0.1	U	6020
Barium	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Beryllium	0.06	J	0.07	J	0.07	J	0.06	J	6010B
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	6010B
Calcium	10.0	U	10.0	U	10.0	U	10.0	U	6010B
Chromium	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Copper	3.0	U	3.0	U	3.0	U	3.0	U	6010B
Iron	3.6	J	1.5	U	2.8	J	4.0	J	6010B
Lead	15	U	15	U	15	U	15	U	6010B
Magnesium	0.2	U	0.2	U	0.4	J	1.4	J	6010B
Manganese	2.0	J	-0.3	J	0.2	U	0.2	U	6010B
Mercury	0.02	U	0.02	U	0.02	U	0.02	U	7471A
Nickel	2.5	U	2.5	U	2.5	U	2.5	U	6010B
Potassium	25.0	U	25.0	U	25.0	U	25.0	U	6010B
Selenium	0.4	U	0.4	U	0.4	U	0.4	U	6020
Silver	2.0	U	2.0	U	2.0	U	-3.3	J	6010B
Sodium	20	J	20	U	20	U	20	U	6010B
Thallium	0.006	U	0.006	U	0.006	U	0.006	U	6020
Uranium	0.012	U	0.012	U	0.012	U	0.012	U	6020
Vanadium	4	J	3	J	2	J	3	J	6010B
Zinc	1.5	J	2.0	J	1.5	U	1.5	U	6010B

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.028	J	-0.043	J	6020
Arsenic			0.1	U					6020
Barium			1.5	U	1.5	U			6010B
Beryllium			0.13	J					6010B
Cadmium			1.0	U					6010B
Calcium			10.0	U					6010B
Chromium			2.0	U					6010B
Cobalt			1.5	U					6010B
Copper			3.5	J					6010B
Iron			4.8	J					6010B
Lead			15	U	15	U			6010B
Magnesium			2.5	J					6010B
Manganese			-0.3	J	-0.2	J			6010B
Mercury			0.02	U	0.02	U	0.02	U	7471A
Nickel			2.5	U					6010B
Potassium			25.0	U	25.0	U			6010B
Selenium			0.4	U					6020
Silver			2.0	U					6010B
Sodium			20	U					6010B
Thallium			0.006	U					6020
Uranium			0.012	U					6020
Vanadium			2	U					6010B
Zinc			1.5	U					6010B

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.044	J	-0.054	J	6020

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.054	J					6020

METALS

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0		0.1	0.1				
Arsenic	0.0	25.0	0.0	26.3	105			
Selenium	0.0	25.0	0.1	25.9	104			
Thallium	0.0		0.0	0.0				
Uranium	0.0		0.0	0.0				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

METALS

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	-1	453.7	90.7			
Beryllium		500	0	527.6	105.5			
Cadmium		1000	9	929.8	93.0			
Calcium	500000	500000	495616	494832.6	99.0			
Chromium		500	0	471.2	94.2			
Cobalt		500	-1	464.8	93.0			
Copper		500	1	460.3	92.1			
Iron	200000	200000	197807	192916.5	96.5			
Lead		1000	1	1003.3	100.3			
Magnesium	500000	500000	516515	515041.8	103.0			
Manganese		500	4	464.1	92.8			
Nickel		1000	-3	908.6	90.9			
Potassium			8	-55.6				
Silver		1000	1	955.6	95.6			
Sodium			61	21.9				
Vanadium		500	3	488.6	97.7			
Zinc		1000	8	902.1	90.2			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

METALS

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SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	MG/KG
Project Name:	Rhodia Silver Bow Plant backgrou	Basis:	DRY
Matrix:	SOIL	% Solids:	85.3

Sample Name: Batch QCS Lab Code: K1006615-006S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	10 - 103	61.5		0.092		117.23	52.4		6020
Arsenic	57 - 133	123		1.47		117.23	103.7		6020
Barium	60 - 139	583		104		460.00	104.1		6010B
Beryllium	78 - 115	12.7		0.47	J	11.70	104.5		6010B
Cadmium	78 - 118	11.5		0.2	U	11.70	98.3		6010B
Chromium	32 - 170	55.1		7.0		46.90	102.6		6010B
Cobalt	67 - 129	124		5.0		117.00	101.7		6010B
Copper	24 - 173	70.4		10.6		58.60	102.0		6010B
Iron		18800		17100		234.00	726.5		6010B
Lead	46 - 151	120		6.1	J	115.00	99.0		6010B
Manganese	28 - 181	555		400		115.00	134.8		6010B
Mercury	60 - 135	0.509		0.010	J	0.48	104.0		7471A
Nickel	77 - 121	120		2.9	J	117.00	100.1		6010B
Selenium	65 - 125	129		0.6	J	117.23	109.5		6020
Silver	52 - 148	11.2		0.5	U	11.70	95.7		6010B
Thallium	70 - 128	126		0.272		117.23	107.2		6020
Uranium	75 - 125	25.0		0.915		23.45	102.7		6020
Vanadium	64 - 132	160		39.9		117.00	102.6		6010B
Zinc	13 - 172	155		27.8		117.00	108.7		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

METALS

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POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400 **Units:** UG/L

Project Name: Rhodia Silver Bow Plant backgrou **Basis:** DRY

Matrix: WATER

Sample Name: Batch QCA **Lab Code:** K1006615-006A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	50.70		0.16		50.0	101		6020
Arsenic	75 - 125	52.0		2.5		50.0	99		6020
Mercury	85 - 115	4.90		0.10	J	5.00	96		7471A
Selenium	75 - 125	50.0		1.0	J	50.0	98		6020
Thallium	75 - 125	53.110		0.468		50.0	105		6020
Uranium	75 - 125	55.18		1.58		50.0	107		6020

METALS

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DUPLICATES

Client: Barr Engineering Company
Service Request: K1006636
Project No.: 26-46-0006.13-2010-400
Units: MG/KG
Project Name: Rhodia Silver Bow Plant backgrou
Basis: DRY
Matrix: SOIL
% Solids: 85.3

Sample Name: Batch QCD
Lab Code: K1006615-006D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.092		0.091		1.1		6020
Arsenic		1.47		1.25		16.2		6020
Barium	30	104		112		7.4		6010B
Beryllium		0.47	J	0.49	J	4.2		6010B
Cadmium		0.2	U	0.2	U			6010B
Calcium	30	5380		4870		10.0		6010B
Chromium		7.0		8.2		15.8		6010B
Cobalt		5.0		5.3		5.8		6010B
Copper		10.6		11.2		5.5		6010B
Iron	30	17100		16700		2.4		6010B
Lead		6.1	J	6.9	J	12.3		6010B
Magnesium	30	3660		3760		2.7		6010B
Manganese	30	400		401		0.2		6010B
Mercury		0.010	J	0.008	J	22.2		7471A
Nickel		2.9	J	2.8	J	3.5		6010B
Potassium	30	2600		2430		6.8		6010B
Selenium		0.6	J	0.4	J	40.0		6020
Silver		0.5	U	0.5	U			6010B
Sodium	30	244		222		9.4		6010B
Thallium	20	0.272		0.239		12.9		6020
Uranium	20	0.915		1.290		34.0	*	6020
Vanadium	30	39.9		38.0		4.9		6010B
Zinc	30	27.8		28.6		2.8		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Aqueous LCS Source: CAS MIXED **Solid LCS Source:** ERA D065540

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony				105	92.8		50 150	88.4
Arsenic				88.3	84.8		78 122	96.0
Barium				432	456		81 119	105.6
Beryllium				58.2	66.4		83 117	114.1
Cadmium				91	89.9		81 119	98.8
Calcium				9630	9940		79 121	103.2
Chromium				144	149		80 119	103.5
Cobalt				190	195		82 118	102.6
Copper				237	239		83 116	100.8
Iron				18900	19200		50 149	101.6
Lead				104	109		79 121	104.8
Magnesium				4040	4000		73 127	99.0
Manganese				497	554		81 119	111.5
Mercury				6.8	7.06		71 128	103.8
Nickel				200	198		81 118	99.0
Potassium				4340	4070		73 126	93.8
Selenium				192	189		80 120	98.4
Silver				76.4	77.4		66 134	101.3
Sodium				735	675		74 126	91.8
Thallium				247	270		79 120	109.3
Uranium	200	204	102.0					
Vanadium				180	185		79 121	102.8
Zinc				292	287		73 121	98.3

METALS

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400 Units: UG/L

Project Name: Rhodia Silver Bow Plant backgrou

Sample Name: Batch QCL Lab Code: K1006615-006L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.158		0.090	U	100.0		MS
Arsenic	2.5		2.5	J	0		MS
Barium	441.53		431.90		2.2		P
Beryllium	2.02	J	2.05	J	1.5		P
Cadmium	1.00	U	5.00	U			P
Calcium	23293.95		22737.80		2.4		P
Calcium	23178.37		22413.90		3.3		P
Chromium	29.92		34.80	J	16.3		P
Cobalt	21.53		17.60	J	18.3		P
Copper	45.59		40.45	J	11.3		P
Iron	71832.86		73133.50		1.8		P
Iron	73670.64		70348.75		4.5		P
Lead	25.81	J	75.00	U	100.0		P
Magnesium	13804.45		15393.15		11.5	E	P
Magnesium	15773.11		14982.75		5.0		P
Manganese	1707.62		1596.40		6.5		P
Nickel	12.39	J	12.50	U	100.0		P
Potassium	11081.59		10880.00		1.8		P
Selenium	1.0	J	2.0	U	100.0		MS
Silver	2.00	U	10.45	J	100.0		P
Sodium	1051.63		1078.60		2.6		P
Thallium	0.468		0.440		6		MS
Uranium	1.577		1.530		3		MS
Vanadium	171.81		172.65		0.5		P
Zinc	119.56		115.45		3.4		P

METALS

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Barium	233.5		10.0	1.5	P
Beryllium	313.04		5.00	0.05	P
Cadmium	226.50		5.0	1.0	P
Calcium	211.2		50	10.0	P
Chromium	267.72		10.0	2.0	P
Cobalt	228.62		10.0	1.5	P
Copper	324.75		10.0	3.0	P
Iron	259.90		20.0	1.5	P
Lead	220.35		100	15.0	P
Magnesium	202.5		20	0.2	P
Manganese	257.61		10.00	0.20	P
Nickel	231.60		20.0	2.5	P
Potassium	766.49		1000	25.0	P
Silver	328.07		10.0	2.0	P
Sodium	330.23		100	20.0	P
Vanadium	310.2		10.0	2.0	P
Zinc	206.2		10.0	1.5	P

Comments:

METALS

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.100	0.018	MS
Arsenic	75		1.0	0.1	MS
Selenium	82		2.0	0.4	MS
Thallium	205		0.040	0.006	MS
Uranium	238		0.04	0.012	MS

Comments:

METALS

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP/ICP-MS ID #:

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury			0.10	.00	CV

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	259.94	0.0000000	0.0000000	0.0000000	-0.0003400	-0.0005200
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	317.933	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	279.5	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.2	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000	

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
Aluminum	308.215					
Antimony	206.838					
Arsenic	189.042					
Barium	493.409					
Beryllium	313.042					
Boron	249.678					
Cadmium	228.802					
Calcium	317.933					
Calcium	211.2					
Chromium	267.716					
Cobalt	228.616					
Copper	324.754					
Iron	259.94					
Iron	271.4					
Lead	220.353					
Magnesium	279.5					
Magnesium	285.2					
Magnesium	202.5					
Manganese	257.61					
Manganese	293.9					
Molybdenum	202.03					
Nickel	231.604					
Phosphorus	214.9					
Potassium	766.491					
Selenium	196.026					
Silicon	228.158					
Silver	328.068					
Sodium	588.995					
Strontium	421.552					
Thallium	190.864					
Tin	189.989					

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Titanium	334.941					
Vanadium	292.402					
Zinc	213.856					

Comments:

METALS
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Barium	5.000	45000	6010B
Beryllium	5.000	9000	6010B
Cadmium	5.000	90000	6010B
Calcium	5.000	1800000	6010B
Chromium	5.000	90000	6010B
Cobalt	5.000	90000	6010B
Copper	5.000	90000	6010B
Iron	5.000	900000	6010B
Lead	5.000	90000	6010B
Magnesium	5.000	900000	6010B
Manganese	5.000	180000	6010B
Nickel	5.000	90000	6010B
Potassium	5.000	450000	6010B
Silver	5.000	9000	6010B
Sodium	5.000	180000	6010B
Vanadium	5.000	90000	6010B
Zinc	5.000	90000	6010B

Comments:

METALS
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	900	6020
Arsenic	15.000	900	6020
Selenium	15.000	900	6020
Thallium	15.000	450	6020
Uranium	15.000	450	6020

Comments:

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: ~~MS~~ CV

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006615-006D	7/2/2010	0.61	50.0
K1006615-006S	7/2/2010	0.61	50.0
K1006636-001	7/2/2010	0.59	50.0
K1006636-002	7/2/2010	0.60	50.0
K1006636-003	7/2/2010	0.68	50.0
K1006636-005	7/2/2010	0.65	50.0
K1006636-006	7/2/2010	0.64	50.0
K1006636-007	7/2/2010	0.58	50.0
K1006636-MB	7/2/2010	0.50	50.0
LCSS	7/2/2010	0.25	50.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006615-006D	7/14/2010	1.01	100.0
K1006615-006S	7/14/2010	1.00	100.0
K1006636-001	7/14/2010	1.01	100.0
K1006636-002	7/14/2010	1.00	100.0
K1006636-003	7/14/2010	1.01	100.0
K1006636-005	7/14/2010	1.02	100.0
K1006636-006	7/14/2010	1.01	100.0
K1006636-007	7/14/2010	1.00	100.0
K1006636-MB	7/14/2010	1.00	100.0
LCSS	7/14/2010	1.02	100.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006615-006D	7/19/2010	1.00	100.0
K1006615-006S	7/19/2010	1.02	100.0
K1006636-001	7/19/2010	1.00	100.0
K1006636-002	7/19/2010	1.02	100.0
K1006636-003	7/19/2010	1.01	100.0
K1006636-005	7/19/2010	1.00	100.0
K1006636-006	7/19/2010	1.01	100.0
K1006636-007	7/19/2010	1.02	100.0
K1006636-MB	7/19/2010	1.00	100.0
LCSS	7/19/2010	1.00	100.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006615-006D	7/14/2010	1.02	100.0
K1006615-006S	7/14/2010	1.00	100.0
K1006636-001	7/14/2010	1.00	100.0
K1006636-002	7/14/2010	1.00	100.0
K1006636-003	7/14/2010	1.02	100.0
K1006636-005	7/14/2010	1.00	100.0
K1006636-006	7/14/2010	1.00	100.0
K1006636-007	7/14/2010	1.01	100.0
K1006636-MB	7/14/2010	1.00	100.0
LCSS	7/14/2010	1.01	100.0
LCSW	7/14/2010	50.0	50.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006615-006D	7/14/2010	1.01	100.0
K1006615-006S	7/14/2010	1.00	100.0
K1006636-001	7/14/2010	1.01	100.0
K1006636-002	7/14/2010	1.00	100.0
K1006636-003	7/14/2010	1.01	100.0
K1006636-005	7/14/2010	1.02	100.0
K1006636-006	7/14/2010	1.01	100.0
K1006636-007	7/14/2010	1.00	100.0
K1006636-MB	7/14/2010	1.00	100.0
LCSS	7/14/2010	1.02	100.0

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/16/2010 **End Date:** 7/16/2010

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1	09:20						X	X	X	X	X	X	X		X			X			X	X		X	X	
STDB	1	09:23						X		X				X		X							X				
STDA	1	09:26							X	X	X	X	X	X		X			X			X			X	X	
ICV1	1	09:29						X	X	X	X	X	X	X		X			X			X	X		X	X	
ICV1	1	09:32								X				X		X											
ICB1	1	09:35						X	X	X	X	X	X	X		X			X			X	X		X	X	
CCV1	1	09:39						X		X				X		X							X				
CCV1	1	09:49							X	X	X	X	X	X		X			X			X			X	X	
CCB1	1	09:56						X	X	X	X	X	X	X		X			X			X	X		X	X	
CRDL1	1	09:59						X	X	X	X	X	X	X		X			X			X	X		X	X	
ICS-A1	1	10:02						X	X	X	X	X	X	X		X			X			X	X		X	X	
ICS-AB1	1	10:05						X	X	X	X	X	X	X		X			X			X	X		X	X	
ZZZZZZ	1	10:08																									
CCV2	1	10:11						X		X				X		X							X				
CCV2	1	10:14							X	X	X	X	X	X		X			X			X			X	X	
CCB2	1	10:17						X	X	X	X	X	X	X		X			X			X	X		X	X	
K1006636-MB	2	10:20						X	X	X	X	X	X	X		X			X			X	X		X	X	
LCSS	2	10:23						X	X	X	X	X	X	X		X			X			X	X		X	X	
ZZZZZZ	2	10:26																									
K1006615-006D	2	10:29						X	X	X	X	X	X	X		X			X			X	X		X	X	
K1006615-006L	10	10:32						X	X	X	X	X	X	X		X			X			X	X		X	X	
K1006615-006S	2	10:35						X	X		X	X	X	X					X			X			X	X	
ZZZZZZ	2	10:38																									
ZZZZZZ	2	10:41																									
ZZZZZZ	2	10:44																									
ZZZZZZ	2	10:47																									
CCV3	1	10:50						X		X				X		X							X				
CCV3	1	10:53							X	X	X	X	X	X		X			X			X			X	X	
CCB3	1	10:56						X	X	X	X	X	X	X		X			X			X	X		X	X	
ZZZZZZ	2	10:59																									
ZZZZZZ	2	11:02																									
ZZZZZZ	2	11:05																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/16/2010 **End Date:** 7/16/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2	11:08																												
K1006636-001	2	11:10						X	X	X	X	X	X	X		X			X			X	X		X	X			
K1006636-002	2	11:13						X	X	X	X	X	X	X		X			X			X	X		X	X			
K1006636-003	2	11:16						X	X	X	X	X	X	X		X			X			X	X		X	X			
K1006636-005	2	11:19						X	X	X	X	X	X	X		X			X			X	X		X	X			
K1006636-006	2	11:22						X	X	X	X	X	X	X		X			X			X	X		X	X			
K1006636-007	2	11:25						X	X	X	X	X	X	X		X			X			X	X		X	X			
CCV4	1	11:28						X		X				X		X							X							
CCV4	1	11:31							X	X	X	X	X	X		X			X			X			X	X			
CCB4	1	11:34						X	X	X	X	X	X	X		X			X			X	X		X	X			
ZZZZZZ	1	11:37																												
ZZZZZZ	1	11:40																												
ZZZZZZ	1	11:43																												
ZZZZZZ	1	11:46																												
ZZZZZZ	1	11:49																												
ZZZZZZ	1	11:52																												
ZZZZZZ	1	11:55																												
ZZZZZZ	1	11:58																												
ZZZZZZ	1	12:01																												
ZZZZZZ	1	12:04																												
ZZZZZZ	1	12:07																												
ZZZZZZ	1	12:09																												
ZZZZZZ	1	12:12																												
ZZZZZZ	1	12:15																												
ZZZZZZ	1	12:18																												
ZZZZZZ	1	12:21																												
ZZZZZZ	1	12:24																												
ZZZZZZ	1	12:27																												
ZZZZZZ	1	12:30																												
ZZZZZZ	1	12:33																												
ZZZZZZ	1	12:36																												
ZZZZZZ	1	12:39																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/20/2010 **End Date:** 7/20/2010

Sample No.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1	09:46					X								X		X			X							
STDB	1	09:49					X										X			X							
STDA	1	09:52													X												
ICV1	1	09:56					X								X		X			X							
ICV1	1	09:59															X										
ICB1	1	10:02					X								X		X			X							
CCV1	1	10:05					X										X			X							
CCV1	1	10:08													X		X										
CCB1	1	10:11					X								X		X			X							
CRDL1	1	10:14					X								X		X			X							
ICS-A1	1	10:17					X								X		X			X							
ICS-AB1	1	10:20					X								X		X			X							
ZZZZZZ	1	10:23																									
CCV2	1	10:26					X										X			X							
CCV2	1	10:29													X		X										
CCB2	1	10:32					X								X		X			X							
K1006636-MB	2	10:35					X								X		X			X							
LCSS	2	10:38					X								X		X			X							
ZZZZZZ	1	10:41																									
ZZZZZZ	2	10:44																									
K1006615-006D	2	10:47					X								X		X			X							
K1006615-006L	10	10:50					X								X		X			X							
K1006615-006S	2	10:53					X								X		X										
ZZZZZZ	2	10:56																									
ZZZZZZ	2	10:59																									
ZZZZZZ	2	11:01																									
CCV3	1	11:04					X										X			X							
CCV3	1	11:07													X		X										
CCB3	1	11:10					X								X		X			X							
ZZZZZZ	2	11:13																									
ZZZZZZ	2	11:16																									
ZZZZZZ	2	11:19																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/20/2010 **End Date:** 7/20/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2	11:22																												
ZZZZZZ	2	11:25																												
K1006636-001	2	11:28					X								X		X			X										
K1006636-002	2	11:31					X								X		X			X										
K1006636-003	2	11:34					X								X		X			X										
K1006636-005	2	11:37					X								X		X			X										
K1006636-006	2	11:40					X								X		X			X										
CCV4	1	11:43					X										X			X										
CCV4	1	11:46													X		X													
ZZZZZZ	1	11:54																												
CCB4	1	11:57					X								X		X			X										
K1006636-007	2	12:01					X								X		X			X										
ZZZZZZ	1	12:04																												
ZZZZZZ	1	12:07																												
ZZZZZZ	1	12:10																												
ZZZZZZ	1	12:13																												
ZZZZZZ	1	12:16																												
ZZZZZZ	1	12:19																												
ZZZZZZ	1	12:22																												
ZZZZZZ	1	12:25																												
ZZZZZZ	1	12:28																												
CCV5	1	12:31					X										X			X										
CCV5	1	12:34													X		X													
CCB5	1	12:37					X								X		X			X										
ZZZZZZ	1	12:46																												
ZZZZZZ	1	12:49																												
ZZZZZZ	1	12:51																												
ZZZZZZ	1	12:54																												
ZZZZZZ	1	12:58																												
ZZZZZZ	1	13:01																												
ZZZZZZ	1	13:04																												
ZZZZZZ	1	13:07																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	17:16				X															X			X				*
Cal. Blk	1	17:26				X															X			X				*
ICV1	1	17:28				X															X			X				*
CCV1	1	17:31				X															X			X				*
ICB1	1	17:36				X															X			X				*
CCB1	1	17:38				X															X			X				*
SOIL CRA	1	17:44				X															X			X				*
ICS-A1	1	17:47				X															X			X				*
ICS-AB1	1	17:50				X															X			X				*
K1006636-MB	5	17:53				X															X			X				*
LCSS	100	17:56				X															X			X				
LCSW	5	18:00																										*
ZZZZZZ	5	18:02																										
K1006615-006D	5	18:06				X															X			X				*
K1006615-006L	25	18:09				X															X			X				*
K1006615-006A	5	18:12				X															X			X				*
K1006615-006S	25	18:16				X															X			X				*
ZZZZZZ	1	18:20																										
ZZZZZZ	1	18:24																										
CCV2	1	18:27				X															X			X				*
CCB2	1	18:32				X															X			X				*
ZZZZZZ	1	18:34																										
ZZZZZZ	1	18:38																										
ZZZZZZ	1	18:41																										
ZZZZZZ	1	18:45																										
ZZZZZZ	1	18:49																										
ZZZZZZ	1	18:52																										
K1006636-001	5	18:56				X															X			X				*
K1006636-002	5	18:59				X															X			X				*
K1006636-003	5	19:03				X															X			X				*
K1006636-005	5	19:06				X															X			X				*
CCV3	1	19:10				X															X			X				*

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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS
Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	Analytes B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U
Cal. Blk	1.00	17:16															X
Cal. Blk	1.00	17:26															X
ICV1	1.00	17:28															X
CCV1	1.00	17:31															X
ICB1	1.00	17:36															X
CCB1	1.00	17:38															X
SOIL CRA	1.00	17:44															X
ICS-A1	1.00	17:47															X
ICS-AB1	1.00	17:50															X
K1006636-MB	5.00	17:53															X
LCSS	00.00	17:56															
LCSW	5.00	18:00															X
ZZZZZZ	5.00	18:02															
K1006615-006D	5.00	18:06															X
K1006615-006L	25.00	18:09															X
K1006615-006A	5.00	18:12															X
K1006615-006S	25.00	18:16															X
ZZZZZZ	1.00	18:20															
ZZZZZZ	1.00	18:24															
CCV2	1.00	18:27															X
CCB2	1.00	18:32															X
ZZZZZZ	1.00	18:34															
ZZZZZZ	1.00	18:38															
ZZZZZZ	1.00	18:41															
ZZZZZZ	1.00	18:45															
ZZZZZZ	1.00	18:49															
ZZZZZZ	1.00	18:52															
K1006636-001	5.00	18:56															X
K1006636-002	5.00	18:59															X
K1006636-003	5.00	19:03															X
K1006636-005	5.00	19:06															X
CCV3	1.00	19:10															X
CCB3	1.00	19:14															X
K1006636-006	5.00	19:17															X

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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB3	1	19:14				X															X			X				*
K1006636-006	5	19:17				X															X			X				*
K1006636-007	5	19:20				X															X			X				*
ZZZZZZ	1	19:24																											
ZZZZZZ	1	19:26																											
ZZZZZZ	1	19:30																											
ZZZZZZ	1	19:33																											
ZZZZZZ	1	19:36																											
ZZZZZZ	1	19:40																											
ZZZZZZ	1	19:43																											
ZZZZZZ	1	19:47																											
CCV4	1	19:51				X															X			X				*
CCB4	1	19:55				X															X			X				*
ZZZZZZ	1	19:58																											
ZZZZZZ	1	20:01																											
ZZZZZZ	1	20:05																											
ZZZZZZ	1	20:08																											
ZZZZZZ	1	20:12																											
ZZZZZZ	1	20:16																											
ZZZZZZ	1	20:19																											
ZZZZZZ	1	20:23																											
ZZZZZZ	1	20:26																											
ZZZZZZ	1	20:30																											
ZZZZZZ	1	20:33																											
ZZZZZZ	1	20:38																											
ZZZZZZ	1	20:40																											
ZZZZZZ	1	20:44																											
ZZZZZZ	1	20:47																											
ZZZZZZ	1	20:51																											
ZZZZZZ	1	20:54																											
ZZZZZZ	1	20:58																											
ZZZZZZ	1	21:01																											

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METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/27/2010 **End Date:** 7/27/2010

Sample No.	D/F	Time	% R	B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U
K1006636-007	5.00	19:20															X
ZZZZZZ	1.00	19:24															
ZZZZZZ	1.00	19:26															
ZZZZZZ	1.00	19:30															
ZZZZZZ	1.00	19:33															
ZZZZZZ	1.00	19:36															
ZZZZZZ	1.00	19:40															
ZZZZZZ	1.00	19:43															
ZZZZZZ	1.00	19:47															
CCV4	1.00	19:51															X
CCB4	1.00	19:55															X
ZZZZZZ	1.00	19:58															
ZZZZZZ	1.00	20:01															
ZZZZZZ	1.00	20:05															
ZZZZZZ	1.00	20:08															
ZZZZZZ	1.00	20:12															
ZZZZZZ	1.00	20:16															
ZZZZZZ	1.00	20:19															
ZZZZZZ	1.00	20:23															
ZZZZZZ	1.00	20:26															
ZZZZZZ	1.00	20:30															
ZZZZZZ	1.00	20:33															
ZZZZZZ	1.00	20:38															
ZZZZZZ	1.00	20:40															
ZZZZZZ	1.00	20:44															
ZZZZZZ	1.00	20:47															
ZZZZZZ	1.00	20:51															
ZZZZZZ	1.00	20:54															
ZZZZZZ	1.00	20:58															
ZZZZZZ	1.00	21:01															
ZZZZZZ	1.00	21:05															
ZZZZZZ	1.00	21:09															
ZZZZZZ	1.00	21:12															
ZZZZZZ	1.00	21:16															

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal. Blk	1	15:50			X																								
Cal. Stn	1	15:52			X																								
ICV1	1	15:54			X																								
CCV1	1	15:56			X																								
ICB1	1	16:03			X																								
CCB1	1	16:06			X																								
SOIL CRA	1	16:08			X																								
ICS-A1	1	16:10			X																								
ICS-AB1	1	16:12			X																								
ZZZZZZ	1	16:16																											
ZZZZZZ	1	16:19																											
ZZZZZZ	1	16:25																											
ZZZZZZ	1	16:29																											
ZZZZZZ	5	16:32																											
ZZZZZZ	1	16:35																											
ZZZZZZ	1	16:39																											
ZZZZZZ	1	16:45																											
ZZZZZZ	1	16:48																											
ZZZZZZ	1	16:51																											
CCV2	1	16:54			X																								
CCB2	1	17:00			X																								
ZZZZZZ	1	17:02																											
ZZZZZZ	1	17:05																											
ZZZZZZ	1	17:08																											
ZZZZZZ	1	17:12																											
ZZZZZZ	1	17:17																											
ZZZZZZ	1	17:20																											
ZZZZZZ	1	17:23																											
ZZZZZZ	1	17:26																											
ZZZZZZ	1	17:29																											
ZZZZZZ	1	17:32																											
CCV3	1	17:35			X																								

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METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB3	1	17:41			X																								
ZZZZZZ	1	17:43																											
ZZZZZZ	1	17:46																											
ZZZZZZ	1	17:50																											
ZZZZZZ	1	17:53																											
ZZZZZZ	1	17:56																											
ZZZZZZ	1	17:59																											
ZZZZZZ	1	18:02																											
ZZZZZZ	1	18:05																											
CCV4	1	18:08			X																								
CCB4	1	18:14			X																								
ZZZZZZ	1	18:16																											
ZZZZZZ	1	18:18																											
ZZZZZZ	1	18:23																											
ZZZZZZ	1	18:26																											
ZZZZZZ	1	18:29																											
ZZZZZZ	1	18:33																											
ZZZZZZ	1	18:36																											
ZZZZZZ	1	18:41																											
ZZZZZZ	1	18:44																											
ZZZZZZ	1	18:47																											
CCV5	1	18:51			X																								
CCB5	1	18:57			X																								
ZZZZZZ	1	18:59																											
ZZZZZZ	1	19:03																											
ZZZZZZ	1	19:08																											
ZZZZZZ	1	19:11																											
ZZZZZZ	1	19:14																											
ZZZZZZ	1	19:18																											
ZZZZZZ	1	19:21																											
ZZZZZZ	1	19:24																											
ZZZZZZ	1	19:27																											

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METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	19:31																												
CCV6	1	19:34			X																									
CCB6	1	19:40			X																									
ZZZZZZ	1	19:42																												
ZZZZZZ	1	19:45																												
ZZZZZZ	1	19:48																												
ZZZZZZ	1	19:52																												
ZZZZZZ	1	19:55																												
ZZZZZZ	1	19:58																												
ZZZZZZ	1	20:01																												
ZZZZZZ	1	20:04																												
ZZZZZZ	1	20:07																												
CCV7	1	20:10			X																									
CCB7	1	20:16			X																									
K1006636-MB	5	20:18			X																									
LCSS	100	20:20			X																									
ZZZZZZ	5	20:27																												
K1006615-006D	5	20:30			X																									
K1006615-006L	25	20:33			X																									
K1006615-006A	5	20:36			X																									
K1006615-006S	25	20:39			X																									
ZZZZZZ	5	20:44																												
ZZZZZZ	5	20:48																												
ZZZZZZ	5	20:51																												
CCV8	1	20:54			X																									
CCB8	1	21:00			X																									
ZZZZZZ	5	21:02																												
ZZZZZZ	5	21:05																												
ZZZZZZ	5	21:09																												
ZZZZZZ	5	21:12																												
ZZZZZZ	5	21:15																												
K1006636-001	5	21:18			X																									

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METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/28/2010 **End Date:** 7/29/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006636-002	5	21:21			X																								
K1006636-003	5	21:24			X																								
K1006636-005	5	21:27			X																								
K1006636-006	5	21:31			X																								
CCV9	1	21:34			X																								
CCB9	1	21:39			X																								
K1006636-007	5	21:42			X																								
ZZZZZZ	1	21:45																											
ZZZZZZ	1	21:47																											
ZZZZZZ	1	21:53																											
ZZZZZZ	1	21:56																											
ZZZZZZ	1	22:00																											
ZZZZZZ	1	22:03																											
ZZZZZZ	1	22:06																											
ZZZZZZ	1	22:11																											
ZZZZZZ	1	22:14																											
CCV10	1	22:17			X																								
CCB10	1	22:23			X																								
ZZZZZZ	1	22:25																											
ZZZZZZ	1	22:28																											
ZZZZZZ	1	22:31																											
ZZZZZZ	1	22:35																											
ZZZZZZ	1	22:38																											
ZZZZZZ	1	22:41																											
ZZZZZZ	1	22:44																											
ZZZZZZ	1	22:47																											
ZZZZZZ	1	22:50																											
ZZZZZZ	1	22:54																											
ZZZZZZ	1	22:57																											
ZZZZZZ	1	23:02																											
ZZZZZZ	1	23:05																											
ZZZZZZ	1	23:08																											

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METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/7/2010 **End Date:** 7/7/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CalibrationBlank	1	09:59																												
Standard#1	1	10:00																X												
Standard#2	1	10:02																X												
Standard#3	1	10:03																X												
Standard#4	1	10:05																X												
Standard#5	1	10:07																X												
ICV1	1	10:08																X												
ICB1	1	10:10																X												
CRDL1	1	10:12																X												
CCV1	1	10:13																X												
CCB1	1	10:15																X												
ZZZZZZ	1	10:16																												
ZZZZZZ	1	10:18																												
ZZZZZZ	1	10:20																												
ZZZZZZ	1	10:21																												
ZZZZZZ	1	10:23																												
ZZZZZZ	1	10:24																												
ZZZZZZ	1	10:26																												
ZZZZZZ	1	10:28																												
ZZZZZZ	1	10:29																												
ZZZZZZ	1	10:31																												
CCV2	1	10:33																X												
CCB2	1	10:34																X												
ZZZZZZ	1	10:36																												
ZZZZZZ	1	10:37																												
ZZZZZZ	1	10:39																												
ZZZZZZ	1	10:41																												
ZZZZZZ	1	10:42																												
ZZZZZZ	1	10:44																												
ZZZZZZ	1	10:45																												
ZZZZZZ	1	10:47																												
ZZZZZZ	1	10:49																												

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METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/7/2010 **End Date:** 7/7/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	10:50																												
CCV3	1	10:52																X												
CCB3	1	10:53																X												
ZZZZZZ	1	10:55																												
ZZZZZZ	1	10:57																												
ZZZZZZ	1	10:58																												
ZZZZZZ	1	11:00																												
ZZZZZZ	1	11:02																												
ZZZZZZ	1	11:03																												
K1006636-MB	1	11:05																X												
LCSS	10	11:06																X												
ZZZZZZ	1	11:08																												
ZZZZZZ	1	11:10																												
CCV4	1	11:11																X												
CCB4	1	11:13																X												
ZZZZZZ	1	11:14																												
ZZZZZZ	1	11:16																												
ZZZZZZ	1	11:18																												
ZZZZZZ	1	11:19																												
K1006615-006A	1	11:21																X												
K1006615-006D	1	11:23																X												
K1006615-006S	1	11:24																X												
ZZZZZZ	1	11:26																												
ZZZZZZ	1	11:27																												
ZZZZZZ	1	11:29																												
CCV5	1	11:31																X												
CCB5	1	11:32																X												
K1006636-001	1	11:34																X												
K1006636-002	1	11:35																X												
K1006636-003	1	11:37																X												
K1006636-005	1	11:39																X												
K1006636-006	1	11:40																X												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/7/2010 **End Date:** 7/7/2010

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006636-007	1	11:42																X									
CCV6	1	13:10																X									
CCB6	1	13:12																X									

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Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115367 **Prep Workflow**: MetDigSMS **Status**: Prepped **Prep Date**: 07/14/2010 12:30
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
Analyst: WSchumann **Rush/NPDES**: N/A **Due Date**: 07/12/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006954-01	Method Blank		g	As Received	100 mL			10% HNO3
KQ1006954-02	Lab Control Sample		1.01 g	As Received	100 mL			10% HNO3
KQ1006954-03	Lab Control Sample		g	As Received	100 mL			10% HNO3
K1006615-001	BG-5 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-002	BG-5 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-003	BG-5 2-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006615-004	BG-9 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006615-005	BG-9 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-006	BG-9 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006615-006: KQ1006954-04	Duplicate	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-006: KQ1006954-05	Matrix Spike	.01	1.00 g	As Received	100 mL	2 mL 1 mL 1 mL	17544 18837 18980	10% HNO3
K1006615-007	BG-13 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006615-008	BG-13 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006615-009	BG-13 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-001	BG-10 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-002	BG-10 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-003	BG-10 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006636-005	BG-14 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-006	BG-14-2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006636-007	BG-14 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3

20 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011	K-MET SS3	Spike	18837	12/1/2010
K-MET SS1	Spike	17544	9/11/2010	K-MET SS4	Spike	18980	12/16/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HNO3	18888

Step	Name	ID
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/14/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-01	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	14-JUL-10 12:30	14-JUL-10 13:30	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min The Second LCS and spike are spiked with 2.00mls of 10ppm U MS13-67-C

Review

Reviewed by: _____ Date: _____

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

MS

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	~~1.00~~ WS 7/14/10
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date
V	2.00	10	1513-67-C	11/21/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115366 **Prep Workflow**: MetDigSICP **Status**: Prepped **Prep Date**: 07/14/2010 12:30
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
Analyst: WSchumann **Rush/NPDES**: N/A **Due Date**: 07/12/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006953-01	Method Blank		g	As Received	100 mL			10% HNO3 10% HCL
KQ1006953-02	Lab Control Sample		1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-001	BG-5 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-002	BG-5 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-003	BG-5 2-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-004	BG-9 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-005	BG-9 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-006	BG-9 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-006: KQ1006953-03	Duplicate	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-006: KQ1006953-04	Matrix Spike	.01	1.00 g	As Received	100 mL	2 mL 1 mL 1 mL 1 mL	17544 18003 18837 18980	10% HNO3 10% HCL
K1006615-007	BG-13 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-008	BG-13 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006615-009	BG-13 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-001	BG-10 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-002	BG-10 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-003	BG-10 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-005	BG-14 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-006	BG-14-2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006636-007	BG-14 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011
K-MET SS1	Spike	17544	9/11/2010
K-MET SS3	Spike	18837	12/1/2010
K-MET SS4	Spike	18980	12/16/2010
K-MET SS5	Spike	18003	11/20/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HCL	18676

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/14/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-07	Temperature	96	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	14-JUL-10 12:30	14-JUL-10 13:45	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min HCL Reflux: 15min

Review

Reviewed by: _____ Date: _____

Columbia Analytical Services
Metals Digestion Sheet

Service Request Number(s): K6615, 6636 - Redigest
Star Lims Run No.:
Method: EPA 3050B 115366R
Analysis for: ICP ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K6615 Blank			x		100	16% HNO_3/10% HCl
-LCS	1.00					
K6615 - 1	1.02					
-2	1.02					
-3	1.02					
-4	1.01					
-5	1.20					
-6	1.00					
-6D	1.00					
-6S	1.02					
-7	1.02					
-8	1.00					
-9	1.00					
6636 - 1	1.00					
-2	1.02					
-3	1.01					
-5	1.00					
-6	1.01					
-7	1.01					

LWS 7/19/10

Balance I.D.: 2 Date Balance Checked 7/19/10
Lot # Acids Used: HNO3 J10036 HCl 20101001 H_2O_2 50095020 HF
Hot Block Temp: 96
LCSS (circle appropriate) ERA CLP Soil Lot # D065-540 Other:

GFAA LCSW = GFLCSW, ID#18987, ____ mls. added
ICP LCSW = QCP-CICV-1, ID#18109, ____ mls. added
QCP CICV-2, ID#12778, ____ mls. added
QCP CICV-3, ID#14972, ____ mls. added
SS4, ID#16626, ____ mls. Added

Time Digestion Started: 1:60
Initial Reflux Time: 15 min.
Secondary Reflux Time: 30 min.
HCL Reflux Time (if needed): 15 min.

SPIKE INFO
K-METSS1 ID#17544 2.00 mls added K-METSS2 ID#16643 ____ mls added K-METSS5 ID#18003 1.00 mls added
K-MET SS3 ID#15299 1.00 mls added 200.8 1000ppb Stock ID#17425 ____ mls added
K-MET SS4 ID#16626 1.20 mls added Ag 1000ppb Stock ID#11605 ____ mls added
Additional spikes:
Comments:

Analyst [signature] Date 7/19/10
Reviewer [signature] Date 7/19/10

metdig_3050B.xls

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

ICP

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	1.00
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 207632

Cal. STD/CCV Source: HG1-93-M

Service Request Numbers:

K1006615 K1006636 K1006511 K1006532 K1006561

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: KOK 7/7/10 (initials)

Primary Reviewed By: KOK Date: 7/7/10

Secondary Reviewed By: JDS Date: 7/7/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K1006615 K1006636 K1006470 K1006511 K1006532 K1006561
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.00		100%
2	ICB1	~	~	~	-0.01		< 0.2
3	CRA1	~	~	~	0.18		90%
4	CCV1	~	~	~	5.00		100%
5	CCB1	~	~	~	-0.01		< 0.2
6	K1006470-MB	0.564	50	~	-0.01	-0.001	
7	~~LCSS K1006470 1710~~ LCSW	0.509	50	~	5.30		106%
8	K1006470-001	0.535	50	~	0.00	0.000	
9	K1006470-001A		50	~	4.60		92%
10	K1006470-001D	0.517	50	~	0.01	0.001	
11	K1006470-001S	0.531	50	~	5.00	0.471	100%
12	K1006470-002	0.525	50	~	0.00	0.000	
13	K1006470-003	0.508	50	~	0.00	0.000	
14	K1006470-004	0.517	50	~	0.02	0.002	
15	K1006470-005	0.541	50	~	0.01	0.001	
16	CCV2	~	~	~	5.20		104%
17	CCB2	~	~	~	-0.01		< 0.2
18	K1006470-006	0.560	50	~	0.18	0.016	
19	K1006470-007	0.558	50	~	0.00	0.000	
20	K1006470-008	0.508	50	~	0.02	0.002	
21	K1006470-009	0.502	50	~	0.04	0.004	
22	K1006470-010	0.528	50	~	0.02	0.002	
23	K1006511-003	0.506	50	~	-0.01	-0.001	
24	K1006532-007	0.563	50	~	0.35	0.031	
25	K1006532-007D	0.561	50	~	0.41	0.037	

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1006470-001S=0.471mg/Kg

Post Spike Level: x @ 5 µg/L

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
	7/7/10	1

[Controlled - HgSoilRunForm 2-18-10] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K1006532-007S	0.557	50	~	5.20	0.467	97%
27	K1006561-001	0.524	50	~	-0.01	-0.001	
28	CCV3	~	~	~	5.10		102%
29	CCB3	~	~	~	0.00		< 0.2
30	K1006561-001D	0.513	50	~	0.01	0.001	
31	K1006561-001S	0.516	50	~	4.70	0.455	94%
32	K1006561-002	0.502	50	~	-0.01	-0.001	
33	K1006561-003	0.511	50	~	0.00	0.000	
34	K1006561-004	0.508	50	~	0.00	0.000	
35	K1006561-005	0.517	50	~	0.00	0.000	
36	K1006615-MB	0.561	50	~	0.01	0.001	
37	LCSS K1006615 1/10	0.255	50	10	3.6	7.059	104%
38	K1006615-001	0.518	50	~	0.17	0.016	
39	K1006615-002	0.521	50	~	0.11	0.011	
40	CCV4	~	~	~	5.10		102%
41	CCB4	~	~	~	-0.01		< 0.2
42	K1006615-003	0.554	50	~	0.15	0.014	
43	K1006615-004	0.545	50	~	0.18	0.017	
44	K1006615-005	0.537	50	~	0.13	0.012	
45	K1006615-006	0.509	50	~	0.10	0.010	
46	K1006615-006A		50	~	4.90		96%
47	K1006615-006D	0.524	50	~	0.08	0.008	
48	K1006615-006S	0.520	50	~	5.30	0.510	104%
49	K1006615-007	0.523	50	~	0.15	0.014	
50	K1006615-008	0.522	50	~	0.07	0.007	

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1006532-007S=0.449mg/Kg K1006561-001S=0.484mg/Kg

Soil/Tissue Spike Level: K1006615-006S=0.481mg/Kg

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
	7/7/10	2

[Controlled - HgSoilRunForm 2-18-10] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	K1006615-009	0.556	50	~	0.11	0.010	
52	CCV5	~	~	~	5.00		100%
53	CCB5	~	~	~	-0.01		< 0.2
54	K1006636-001	0.501	50	~	0.23	0.023	
55	K1006636-002	0.503	50	~	0.13	0.013	
56	K1006636-003	0.565	50	~	0.14	0.012	
57	K1006636-005	0.567	50	~	0.18	0.016	
58	K1006636-006	0.567	50	~	0.15	0.013	
59	K1006636-007	0.501	50	~	0.35	0.035	
60	CCV6	~	~	~	5.10		102%
61	CCB6	~	~	~	-0.01		< 0.2
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							

Comments: Reporting Levels:
Soil/Tissue Spike Level:
Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
	7/7/10	3

[Controlled - HgSoilRunForm 2-18-10] HG3.XLS

Columbia Analytical Services K-CVAA-02

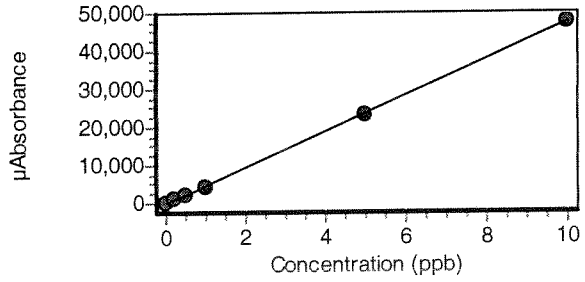
Report Generated By CETAC QuickTrace
Analyst: ACQMET18
Worksheet file: C:\Program Files\QuickTrace\Worksheets\070710A.wsz
Date Started: 7/7/2010 9:19:53 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	07/07/10 09:59:03 am	0.00	139	18.96	
Replicates	145.0	145.9	102.2	164.7					
Standard #1				STD	07/07/10 10:00:39 am	0.20	951	1.42	
Replicates	958.3	953.6	959.7	930.7					
Standard #2				STD	07/07/10 10:02:16 am	0.50	2225	0.86	
Replicates	2214.9	2215.2	2215.5	2253.6					
Standard #3				STD	07/07/10 10:03:54 am	1.00	4536	0.91	
Replicates	4492.9	4509.9	4572.8	4570.3					
Standard #4				STD	07/07/10 10:05:32 am	5.00	23503	0.48	
Replicates	23349.8	23492.6	23565.7	23605.2					
Standard #5				STD	07/07/10 10:07:10 am	10.00	47502	0.76	
Replicates	47043.9	47399.2	47703.1	47861.5					

Calibration

Equation: A = 139.447 + 4719.663C
R2: 0.99982
SEE: 305.2528
Flags:



ICV1				ICV	07/07/10 10:08:49 am	5.00	23646	0.46	
Replicates	23488.0	23673.4	23696.5	23726.7					
% Recovery	99.61								

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB1					ICB	07/07/10 10:10:25 am	-0.01	72	39.68	
	Replicates	106.1	40.4	58.9	83.2					
CRA1					CRDL	07/07/10 10:12:01 am	0.18	968	0.82	
	Replicates	974.8	960.9	960.9	974.5					
	% Recovery	87.75								
CCV1					CCV	07/07/10 10:13:39 am	5.00	23781	0.30	
	Replicates	23676.0	23789.4	23821.0	23836.5					
	% Recovery	100.18								
CCB1					CCB	07/07/10 10:15:15 am	-0.01	69	7.77	
	Replicates	75.0	64.3	65.2	73.0					
K1006470-MB					UNK	07/07/10 10:16:51 am	-0.01	114	14.67	
	Replicates	124.1	115.1	126.8	90.1					
LCSS K1006470 1/10					UNK	07/07/10 10:18:27 am	5.30	25383	0.31	
	Replicates	25281.8	25359.7	25434.8	25456.9					
K1006470-001					UNK	07/07/10 10:20:03 am	0.00	157	16.83	
	Replicates	122.0	160.2	159.7	186.2					
K1006470-001A					UNK	07/07/10 10:21:39 am	4.60	21981	0.41	
	Replicates	21847.4	21995.9	22042.0	22037.0					
K1006470-001D					UNK	07/07/10 10:23:16 am	0.01	163	7.27	
	Replicates	175.7	157.8	149.1	169.3					
K1006470-001S					UNK	07/07/10 10:24:53 am	5.00	23821	4.62	
	Replicates	22618.3	23199.6	24475.0	24991.3					
K1006470-002					UNK	07/07/10 10:26:30 am	0.00	146	12.18	
	Replicates	166.1	154.1	124.8	140.3					
K1006470-003					UNK	07/07/10 10:28:08 am	0.00	157	7.40	
	Replicates	150.3	144.2	162.6	169.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006470-004				UNK	07/07/10 10:29:46 am	0.02	242	6.39	
Replicates	251.3	218.7	250.5	246.0					
K1006470-005				UNK	07/07/10 10:31:24 am	0.01	172	7.53	
Replicates	176.8	184.8	154.2	172.2					
CCV2				CCV	07/07/10 10:33:02 am	5.20	24783	0.24	
Replicates	24860.5	24738.3	24737.4	24794.5					
% Recovery	104.43								
CCB2				CCB	07/07/10 10:34:38 am	-0.01	98	13.52	
Replicates	78.7	107.7	105.6	98.4					
K1006470-006				UNK	07/07/10 10:36:16 am	0.18	968	2.25	
Replicates	977.3	969.3	937.0	987.4					
K1006470-007				UNK	07/07/10 10:37:55 am	0.00	153	9.58	
Replicates	166.8	161.7	151.0	133.6					
K1006470-008				UNK	07/07/10 10:39:31 am	0.02	236	4.00	
Replicates	247.5	224.5	234.7	236.0					
K1006470-009				UNK	07/07/10 10:41:06 am	0.04	309	3.76	
Replicates	305.9	294.1	321.2	313.7					
K1006470-010				UNK	07/07/10 10:42:42 am	0.02	229	2.55	
Replicates	236.7	223.2	229.0	225.9					
K1006511-003				UNK	07/07/10 10:44:18 am	-0.01	97	20.33	
Replicates	96.4	76.1	91.1	123.2					
K1006532-007				UNK	07/07/10 10:45:55 am	0.35	1803	1.47	
Replicates	1767.6	1812.2	1800.8	1830.8					
K1006532-007D				UNK	07/07/10 10:47:31 am	0.41	2055	0.70	
Replicates	2065.2	2039.1	2047.3	2069.3					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006532-007S				UNK	07/07/10 10:49:08 am	5.20	24787	0.36	
Replicates	24922.8	24744.1	24738.2	24743.7					
K1006561-001				UNK	07/07/10 10:50:46 am	-0.01	102	11.29	
Replicates	100.7	107.3	114.3	87.1					
CCV3				CCV	07/07/10 10:52:24 am	5.10	24248	0.55	
Replicates	24434.2	24253.0	24161.5	24143.0					
% Recovery	102.16								
CCB3				CCB	07/07/10 10:53:59 am	0.00	119	12.63	
Replicates	132.1	130.8	102.7	109.2					
K1006561-001D				UNK	07/07/10 10:55:37 am	0.01	167	17.82	
Replicates	168.6	182.6	191.3	124.4					
K1006561-001S				UNK	07/07/10 10:57:15 am	4.70	22115	0.36	
Replicates	22216.6	22133.1	22032.6	22079.6					
K1006561-002				UNK	07/07/10 10:58:53 am	-0.01	114	10.37	
Replicates	112.7	121.6	125.1	98.4					
K1006561-003				UNK	07/07/10 11:00:31 am	0.00	138	7.21	
Replicates	143.9	126.9	132.7	148.5					
K1006561-004				UNK	07/07/10 11:02:07 am	0.00	156	15.98	
Replicates	166.2	180.0	157.5	121.5					
K1006561-005				UNK	07/07/10 11:03:42 am	0.00	144	13.27	
Replicates	136.0	164.5	154.0	121.3					
K1006615-MB				UNK	07/07/10 11:05:18 am	0.01	184	17.13	
Replicates	172.7	230.7	163.7	168.1					
LCSS K1006615 1/10				UNK	07/07/10 11:06:54 am	3.60	17248	0.54	
Replicates	17139.6	17216.3	17272.2	17362.0					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006615-001				UNK	07/07/10 11:08:31 am	0.17	943	2.04	
Replicates	934.9	923.0	968.4	943.8					
K1006615-002				UNK	07/07/10 11:10:07 am	0.11	643	2.37	
Replicates	656.3	652.6	641.7	622.3					
CCV4				CCV	07/07/10 11:11:45 am	5.10	24436	0.57	
Replicates	24596.9	24508.0	24316.7	24322.2					
% Recovery	102.96								
CCB4				CCB	07/07/10 11:13:21 am	-0.01	70	18.21	
Replicates	68.8	86.5	55.3	69.5					
K1006615-003				UNK	07/07/10 11:14:58 am	0.15	848	2.00	
Replicates	854.4	863.9	851.0	824.2					
K1006615-004				UNK	07/07/10 11:16:35 am	0.18	987	1.26	
Replicates	1003.5	984.7	973.7	984.3					
K1006615-005				UNK	07/07/10 11:18:13 am	0.13	759	2.24	
Replicates	738.3	769.8	776.0	753.1					
K1006615-006				UNK	07/07/10 11:19:51 am	0.10	633	3.77	
Replicates	644.2	605.9	660.3	622.6					
K1006615-006A				UNK	07/07/10 11:21:29 am	4.90	23079	0.13	
Replicates	23097.5	23099.7	23082.6	23034.7					
K1006615-006D				UNK	07/07/10 11:23:07 am	0.08	513	5.69	
Replicates	502.6	556.4	497.1	495.4					
K1006615-006S				UNK	07/07/10 11:24:43 am	5.30	25223	0.12	
Replicates	25215.5	25246.7	25246.5	25183.9					
K1006615-007				UNK	07/07/10 11:26:19 am	0.15	868	1.48	
Replicates	882.6	874.0	855.0	859.2					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006615-008				UNK	07/07/10 11:27:55 am	0.07	465	3.18	
Replicates	463.0	485.8	451.0	460.0					
K1006615-009				UNK	07/07/10 11:29:31 am	0.11	671	3.09	
Replicates	669.4	644.2	677.7	693.9					
CCV5				CCV	07/07/10 11:31:09 am	5.00	23558	6.48	
Replicates	21762.6	22858.1	24520.5	25092.3					
% Recovery	99.24								
CCB5				CCB	07/07/10 11:32:45 am	-0.01	95	17.39	
Replicates	85.4	103.2	112.9	76.7					
K1006636-001				UNK	07/07/10 11:34:21 am	0.23	1207	2.07	
Replicates	1206.8	1176.0	1237.1	1208.7					
K1006636-002				UNK	07/07/10 11:35:58 am	0.13	762	1.80	
Replicates	753.3	757.3	755.1	782.5					
K1006636-003				UNK	07/07/10 11:37:35 am	0.14	785	3.16	
Replicates	749.6	802.0	786.3	802.3					
K1006636-005				UNK	07/07/10 11:39:12 am	0.18	1002	1.97	
Replicates	990.0	1031.0	994.1	991.1					
K1006636-006				UNK	07/07/10 11:40:50 am	0.15	859	0.78	
Replicates	854.2	859.1	853.6	868.1					
K1006636-007				UNK	07/07/10 11:42:27 am	0.35	1791	0.40	
Replicates	1789.0	1797.3	1781.9	1796.1					
CCV6				CCV	07/07/10 01:10:48 pm	5.10	23989	0.47	
Replicates	23834.7	23982.4	24048.8	24090.0					
% Recovery	101.06								
CCB6				CCB	07/07/10 01:12:24 pm	-0.01	91	4.29	
Replicates	96.9	91.4	88.3	88.9					

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114740 **Prep Workflow**: HgDigS **Status**: Prepped **Prep Date**: 07/02/2010 12:00
Team: Metals **Prep Method**: Method, **Current Step**: Digestion **Due Date**: 07/05/2010
Analyst: KKLEIN **Rush/NPDES**: NPDES

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006529-01	Method Blank		0.564 g	wet weight	50 mL			
KQ1006529-03	Lab Control Sample		0.509 g	wet weight	50 mL	0.25 mL	19170	
K1006470-001	Sample #1	.01	0.535 g	wet weight	50 mL			
K1006470-001: KQ1006529-05	Duplicate	.01	0.517 g	wet weight	50 mL			
K1006470-001: KQ1006529-06	Matrix Spike	.01	0.531 g	wet weight	50 mL	0.25mL	19172	
K1006470-002	Sample #2	.01	0.525 g	wet weight	50 mL			
K1006470-003	Sample #3	.01	0.508 g	wet weight	50 mL			
K1006470-004	Sample #4	.01	0.517 g	wet weight	50 mL			
K1006470-005	Sample #5	.01	0.541 g	wet weight	50 mL			
K1006470-006	Sample #6	.01	0.560 g	wet weight	50 mL			
K1006470-007	Sample #7	.01	0.558 g	wet weight	50 mL			
K1006470-008	Sample #8	.01	0.508 g	wet weight	50 mL			
K1006470-009	Sample #9	.01	0.502 g	wet weight	50 mL			
K1006470-010	Sample #10	.01	0.528 g	wet weight	50 mL			
K1006511-003	2724	.01	0.506 g	wet weight	50 mL			
K1006532-007	Composite	.03	0.563 g	wet weight	50 mL			
K1006532-007: KQ1006529-09	Duplicate	.03	0.561 g	wet weight	50 mL			
K1006532-007: KQ1006529-10	Matrix Spike	.03	0.557 g	wet weight	50 mL	0.25mL	19172	
K1006561-001	10032	.01	0.524 g	wet weight	50 mL			
K1006561-001: KQ1006529-07	Duplicate	.01	0.513 g	wet weight	50 mL			
K1006561-001: KQ1006529-08	Matrix Spike	.01	0.516 g	wet weight	50 mL	0.25mL	19172	
K1006561-002	10027	.01	0.502 g	wet weight	50 mL			
K1006561-003	10064	.01	0.511 g	wet weight	50 mL			

K1006561-004	10065	.01	0.508 g	wet weight	50 mL			
K1006561-005	10040	.01	0.517 g	wet weight	50 mL			

25 Total Samples consisting of 17 Client Samples, 6 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Soil/TCLP 1000 ug/L		19172	8/1/2010

Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET SnCl Hg	18000

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/1/2010	

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	02-JUL-10 12:00	02-JUL-10 12:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-M

Review

Reviewed by: JOB Date: 7/9/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114742 **Prep Workflow**: HgDigS **Status**: Prepped **Prep Date**: 07/02/2010 12:00
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 07/12/2010
Analyst: KKLEIN **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006531-03	Method Blank		0.561 g	wet weight	50 mL			
KQ1006531-04	Lab Control Sample		0.255 g	wet weight	50 mL	0.25 mL	19170	
K1006615-001	BG-5 0-2 COMP	.01	0.623 g	wet weight	50 mL			
K1006615-002	BG-5 2-12 COMP	.01	0.623 g	wet weight	50 mL			
K1006615-003	BG-5 2-18 COMP	.01	0.649 g	wet weight	50 mL			
K1006615-004	BG-9 0-2 COMP	.01	0.627 g	wet weight	50 mL			
K1006615-005	BG-9 2-12 COMP	.01	0.674 g	wet weight	50 mL			
K1006615-006	BG-9 12-18 COMP	.01	0.597 g	wet weight	50 mL			
K1006615-006: KQ1006531-05	Duplicate	.01	0.614 g	wet weight	50 mL			
K1006615-006: KQ1006531-06	Matrix Spike	.01	0.610 g	wet weight	50 mL	0.25mL	19172	
K1006615-007	BG-13 0-2 COMP	.01	0.625 g	wet weight	50 mL			
K1006615-008	BG-13 2-12 COMP	.01	0.589 g	wet weight	50 mL			
K1006615-009	BG-13 12-18 COMP	.01	0.646 g	wet weight	50 mL			
K1006636-001	BG-10 0-2 COMP	.01	0.594 g	wet weight	50 mL			
K1006636-002	BG-10 2-12 COMP	.01	0.596 g	wet weight	50 mL			
K1006636-003	BG-10 12-18 COMP	.01	0.676 g	wet weight	50 mL			
K1006636-005	BG-14 0-2 COMP	.01	0.648 g	wet weight	50 mL			
K1006636-006	BG-14-2-12 COMP	.01	0.645 g	wet weight	50 mL			
K1006636-007	BG-14 12-18 COMP	.01	0.583 g	wet weight	50 mL			

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires

K-MET Hg Source Soil/TCLP 1000 ug/L		19172	8/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET SnCl Hg	18000

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/1/2010	

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	02-JUL-10 12:00	02-JUL-10 12:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-M

Review

Reviewed by: JDS Date: 7/9/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114740 **Prep Workflow:** HgDigS **Status:** Draft **Prep Date:** 07/01/2010 12:54
Team: Metals **Prep Method:** Method, **Current Step:** Digestion **Due Date:** 07/05/2010
Analyst: BSHELDON **Rush/NPDES:** NPDES

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006529-01	Method Blank		0.5 g	0.564					
KQ1006529-02	Method Blank		0.5 g						
KQ1006529-03	Lab Control Sample		0.5 g	0.609					
KQ1006529-04	Lab Control Sample		0.5 g						
K1006470-001	Sample #1	.01	0.5 g	.535					
K1006470-001: KQ1006529-05	Duplicate	.01	0.5 g	.517					
K1006470-001: KQ1006529-06	Matrix Spike	.01	0.5 g	.531					
K1006470-002	Sample #2	.01	0.5 g	.525					
K1006470-003	Sample #3	.01	0.5 g	.508					
K1006470-004	Sample #4	.01	0.5 g	.517					
K1006470-005	Sample #5	.01	0.5 g	.541					
K1006470-006	Sample #6	.01	0.5 g	.560					
K1006470-007	Sample #7	.01	0.5 g	.558					
K1006470-008	Sample #8	.01	0.5 g	.508					
K1006470-009	Sample #9	.01	0.5 g	.502					
K1006470-010	Sample #10	.01	0.5 g	.528					
K1006511-003	2724	.01	0.5 g	.506					
K1006532-007	Composite	.03	0.5 g	.563					
K1006532-007: KQ1006529-09	Duplicate	.03	0.5 g	.561					
K1006532-007: KQ1006529-10	Matrix Spike	.03	0.5 g	.557					
K1006561-001	10032	.01	0.5 g	.524					
K1006561-001: KQ1006529-07	Duplicate	.01	0.5 g	.513					
K1006561-001: KQ1006529-08	Matrix Spike	.01	0.5 g	.516					
K1006561-002	10027	.01	0.5 g	.502					

K1006561-003	10064	.01	0.5 g	.511					
K1006561-004	10065	.01	0.5 g	.504					
K1006561-005	10040	.01	0.5 g	.517					

27 Total Samples consisting of 17 Client Samples, 6 Client QC Samples, 4 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114742 **Prep Workflow:** HgDigS **Status:** Draft **Prep Date:** 07/01/2010 13:05
Team: Metals **Prep Method:** Method **Current Step:** Digestion
Analyst: BSHELDON **Rush/NPDES:** N/A **Due Date:** 07/12/2010

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006531-03	Method Blank		0.5 g	.561					
KQ1006531-04	Lab Control Sample		0.5 g	.255					
K1006615-001	BG-5 0-2 COMP	.01	0.60 g	.623					
K1006615-002	BG-5 2-12 COMP	.01	0.60 g	.623					
K1006615-003	BG-5 2-18 COMP	.01	0.59 g	.649					
K1006615-004	BG-9 0-2 COMP	.01	0.57 g	.627					
K1006615-005	BG-9 2-12 COMP	.01	0.63 g	.674					
K1006615-006	BG-9 12-18 COMP	.01	0.59 g	.597					
K1006615-006: KQ1006531-05	Duplicate	.01	0.5 g	.614					
K1006615-006: KQ1006531-06	Matrix Spike	.01	0.5 g	.610					
K1006615-007	BG-13 0-2 COMP	.01	0.60 g	.625					
K1006615-008	BG-13 2-12 COMP	.01	0.56 g	.589					
K1006615-009	BG-13 12-18 COMP	.01	0.58 g	.646					
K1006636-001	BG-10 0-2 COMP	.01	0.59 g	.594					
K1006636-002	BG-10 2-12 COMP	.01	0.59 g	.596					
K1006636-003	BG-10 12-18 COMP	.01	0.60 g	.676					
K1006636-005	BG-14 0-2 COMP	.01	0.57 g	.648					
K1006636-006	BG-14-2-12 COMP	.01	0.57 g	.645					
K1006636-007	BG-14 12-18 COMP	.01	0.58 g	.583					

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Service Request	Wet Weight	Solids	Dry Weight
K1006615-001	0.623	83.1	0.518
K1006615-002	0.623	83.6	0.521
K1006615-003	0.649	85.4	0.554
K1006615-004	0.627	87.0	0.545
K1006615-005	0.674	79.6	0.537
K1006615-006	0.597	85.3	0.509
K1006615-006D	0.614	85.3	0.524
K1006615-006S	0.610	85.3	0.520
K1006615-007	0.625	83.6	0.523
K1006615-008	0.589	88.6	0.522
K1006615-009	0.646	86.1	0.556
K1006636-001	0.594	84.3	0.501
K1006636-002	0.596	84.4	0.503
K1006636-003	0.676	83.6	0.565
K1006636-005	0.648	87.5	0.567
K1006636-006	0.645	87.9	0.567
K1006636-007	0.583	85.9	0.501
			0.000
			0.000
			0.000
			0.000
			0.000

Service Request # K1006636 (Soil)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits		✓
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 071610BICP02
Star Lims: 208725
BQC: 244% mn Spike Recovery/ mg/K out of control/
42% RPD mn, High RPD Ba
ICSS: Pb out of control (Being redigested for Ba, Pb/K, mn)

Primary Review by JC Date 7/16/10

Secondary Review by [signature] Date 7/20/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/16/10 09:20 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1511	.0097	.0069	.00005
Stddev	.0177	.0137	.0137	.00002
%RSD	11.73	141.4	198.0	46.512
#1	.1636	.0194	-.0028	.00006
#2	.1385	.0000	.0166	.00003

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00284	.3548	.0002	.3818
Stddev	.00024	.0159	.0000	.0223
%RSD	8.6038	4.476	2.434	5.847
#1	-.00266	.3660	.0002	.3660
#2	-.00301	.3435	.0002	.3976

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0663	-.0002	.0006	.0235
Stddev	.0587	.0001	.0002	.0020
%RSD	88.40	28.96	33.19	8.303
#1	-.1078	-.0001	.0007	.0221
#2	-.0249	-.0002	.0004	.0249

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0015	.0008	.0002	.0055
Stddev	.0000	.0007	.0000	.0157
%RSD	2.213	88.40	3.718	282.7
#1	.0015	.0013	.0002	.0166
#2	.0015	.0003	.0002	-.0055

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.01935	.00108	.0000	.0003
Stddev	.01564	.00029	.0000	.0001
%RSD	80.822	27.189	46.47	41.95
#1	.03041	.00129	.0000	.0004
#2	.00829	.00087	.0000	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.1770	-.0374	.0249
Stddev	.0002	.2307	.0098	.0039
%RSD	141.4	130.4	26.13	15.70
#1	-.0003	.3401	-.0305	.0221
#2	.0000	.0138	-.0443	.0276

Sample Name: Blank Run Time: 07/16/10 09:20

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0047	.0004	.0082	.0003
Stddev	.0005	.0000	.0001	.0001
%RSD	11.59	5.901	1.020	40.81
#1	.0051	.0004	.0082	.0002
#2	.0043	.0004	.0083	.0004

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0347	.1912	.00414	.0001
Stddev	.0373	.0040	.00026	.0000
%RSD	107.5	2.106	6.2425	16.41
#1	.0610	.1941	.00432	.0001
#2	.0083	.1884	.00396	.0002

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.06773	-.00171
Stddev	.05279	.00011
%RSD	77.939	6.6134
#1	.10506	-.00163
#2	.03040	-.00179

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	175.50
Stddev	1.34
%RSD	.76562
#1	176.45
#2	174.55

7/16/10

7/16/10

Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/16/10 09:23 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.36	3.4423	.53175	40.47
Stddev	.06	.0324	.00177	.34
%RSD	.3186	.94075	.33377	.8315
#1	20.31	3.4194	.53300	40.23
#2	20.40	3.4652	.53049	40.70

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.8630	58.83	.7825	196.3
Stddev	.0043	.33	.0016	.0
%RSD	.4992	.5605	.2027	.0028
#1	.8599	58.60	.7814	196.3
#2	.8660	59.07	.7836	196.3

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.407	47.23	99.12	361.54
Stddev	.011	.18	.51	.94
%RSD	.2443	.3827	.5110	.25986
#1	4.414	47.10	98.77	362.20
#2	4.399	47.36	99.48	360.87

Elem	Sr4077
Line	407.771 { 82}
Avg	9.1932
Stddev	.0046
%RSD	.04960
#1	9.1900
#2	9.1964

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	173.17
Stddev	.15
%RSD	.08918
#1	173.06
#2	173.28

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/16/10 09:26 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	17.16	11.73	48.00	.3449
Stddev	.10	.07	.14	.0003
%RSD	.5706	.5591	.3017	.0980
#1	17.09	11.69	47.90	.3446
#2	17.23	11.78	48.10	.3451

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	35.08	.1378	.2247	18.00
Stddev	.21	.0000	.0004	.04
%RSD	.5968	.0092	.1613	.2058
#1	34.93	.1378	.2249	18.03
#2	35.23	.1378	.2244	17.97

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4871	.1101	1522.7	3.6195
Stddev	.0058	.0002	1.5	.0094
%RSD	1.182	.1960	.10129	.26031
#1	.4912	.1102	1521.6	3.6261
#2	.4830	.1099	1523.8	3.6128

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1790	.2055	11.14	19.23
Stddev	.0022	.0006	.02	.02
%RSD	1.211	.3147	.1580	.1225
#1	.1775	.2050	11.12	19.22
#2	.1805	.2059	11.15	19.25

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.1079	.1742	.1846	.19654
Stddev	.0002	.0005	.0013	.00100
%RSD	.2141	.2982	.6873	.50932
#1	.1081	.1745	.1855	.19725
#2	.1078	.1738	.1837	.19584

Elem	Tl1908
Line	190.864 {176}
Avg	.0916
Stddev	.0002
%RSD	.1731
#1	.0915
#2	.0918

Sample Name: STDA Run Time: 07/16/10 09:26

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	176.14
Stddev	.12
%RSD	.06932
#1	176.06
#2	176.23

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 07/16/10 09:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.135	2.480	2.513	5.1596	.12581	.0047
Stddev	.001	.007	.023	.0186	.00016	.0003
%RSD	.0235	.2828	.9182	.36050	.12861	6.611
#1	5.134	2.485	2.496	5.1464	.12570	.0044
#2	5.136	2.475	2.529	5.1727	.12593	.0049
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	5.000%	5.000%	5.000%	5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.238	12.61	.5062	1.241	.6242	2.533
Stddev	.006	.08	.0059	.004	.0074	.066
%RSD	.4546	.6250	1.173	.2810	1.186	2.619
#1	1.234	12.55	.5020	1.238	.6294	2.580
#2	1.242	12.66	.5104	1.243	.6189	2.486
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	12.65	1.1923	1.992	1.237	12.91
Stddev	.008	.02	.0026	.017	.007	.06
%RSD	.3106	.1228	.21554	.8494	.5418	.4969
#1	2.465	12.66	1.1905	1.980	1.232	12.96
#2	2.476	12.64	1.1942	2.004	1.242	12.87
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	5.000%	5.000%	5.0000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.487	.6290	12.53	.0094	1.247	1.244
Stddev	.006	.0140	.05	.0018	.002	.008
%RSD	.2512	2.232	.4008	19.45	.1795	.6704
#1	2.483	.6190	12.57	.0107	1.246	1.238
#2	2.492	.6389	12.50	.0081	1.249	1.250
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 07/16/10 09:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0402	-.1370	2.0084	2.510	.00054	.00671
Stddev	.0043	.0007	.0036	.006	.00022	.00005
%RSD	10.81	.5186	.17811	.2578	41.414	.75505
#1	-.0433	-.1365	2.0059	2.505	.00069	.00675
#2	-.0371	-.1375	2.0109	2.514	.00038	.00668
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	175.91
Stddev	.15
%RSD	.08428
#1	175.80
#2	176.01

Method: 2010A Sample Name: ICVB1 ICP7-56-C Operator:
Comment:
Run Time: 07/16/10 09:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.027	.0158	-.0005	.00501	.00018	1.987
Stddev	.008	.0217	.0021	.00074	.00002	.005
%RSD	.7583	137.7	389.0	14.824	8.4887	.2635
#1	1.021	.0311	-.0020	.00554	.00017	1.984
#2	1.032	.0004	.0009	.00449	.00019	1.991
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	5.173	.0037	.0012	.0023	9.902
Stddev	.0003	.037	.0001	.0006	.0002	.138
%RSD	20.47	.7185	3.044	54.06	9.768	1.394
#1	.0018	5.147	.0038	.0016	.0021	9.804
#2	.0014	5.199	.0036	.0007	.0024	10.000
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	4.9422	9.984	.0131	.0021	.0551
Stddev	.0015	.0016	.029	.0066	.0000	.0193
%RSD	155.1	.03300	.2878	50.84	.5569	35.08
#1	.0020	4.9433	9.964	.0178	.0021	.0414
#2	-.0001	4.9410	10.00	.0084	.0021	.0688
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		5.0000%	5.000%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	-.0001	.0781	4.867	.0043	.0054
Stddev	.0061	.0004	.0022	.041	.0003	.0005
%RSD	51.87	292.9	2.779	.8423	6.415	9.726
#1	.0161	.0002	.0766	4.838	.0041	.0051
#2	.0075	-.0004	.0797	4.896	.0045	.0058
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVB1 Run Time: 07/16/10 09:32

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.051	5.153	.00503	.0167	2.0736	2.0163
Stddev	.029	.017	.00019	.0156	.0051	.0056
%RSD	.5643	.3324	3.6840	93.48	.24384	.27883
#1	5.031	5.141	.00490	.0278	2.0701	2.0123
#2	5.071	5.165	.00516	.0057	2.0772	2.0202
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	176.97
Stddev	.47
%RSD	.26700
#1	177.30
#2	176.63

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/16/10 09:35 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0004	-.0012	.00010	.00006	.0020
Stddev	.0000	.0057	.0075	.00037	.00002	.0004
%RSD	.0539	1398.	637.2	372.55	36.659	21.83
#1	.0103	-.0036	-.0065	.00036	.00007	.0017
#2	.0103	.0044	.0041	-.00016	.00004	.0023
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0014	.0013	-.0006	.0017	.0036
Stddev	.0002	.0019	.0017	.0005	.0025	.0046
%RSD	173.9	141.6	133.3	79.47	147.7	127.4
#1	.0003	.0028	.0001	-.0009	-.0001	.0068
#2	.0000	.0000	.0025	-.0003	.0035	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.00016	.00079	.0008	.0004	.0168
Stddev	.0010	.00010	.00100	.0001	.0012	.0070
%RSD	76.96	59.756	126.96	9.517	288.5	41.56
#1	.0021	.00023	.00149	.0008	.0012	.0119
#2	.0006	.00009	.00008	.0007	-.0004	.0217
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0001	.0203	.0054	.0041	.0015
Stddev	.0044	.0004	.0029	.0077	.0036	.0011
%RSD	29.47	280.7	14.19	141.7	86.06	73.20
#1	.0118	-.0004	.0183	.0108	.0016	.0023
#2	.0180	.0001	.0223	.0000	.0066	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: ICB Run Time: 07/16/10 09:35

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0087	-.0009	.00253	-.0121	.00012	.00014
Stddev	.0039	.0006	.00063	.0074	.00053	.00002
%RSD	45.50	61.65	24.949	61.25	447.03	17.016
#1	-.0059	-.0005	.00298	-.0173	-.00026	.00015
#2	-.0115	-.0013	.00209	-.0068	.00049	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.84
Stddev	.32
%RSD	.18360
#1	173.61
#2	174.06

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 09:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.067	.0158	.0076	2.4872	.05101	.0087
Stddev	.029	.0079	.0094	.0076	.00046	.0005
%RSD	.5775	49.77	124.1	.30630	.90586	6.172
#1	5.045	.0148	.0198	2.4782	.05077	.0089
#2	5.041	.0132	-.0014	2.4836	.05063	.0094
#3	5.100	.0084	.0021	2.4927	.05099	.0083
#4	5.084	.0269	.0098	2.4943	.05167	.0083
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	5.000%			5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.20	.0027	-.0016	-.0006	25.45
Stddev	.0001	.25	.0012	.0006	.0017	.13
%RSD	8.541	.9869	46.03	34.43	288.3	.4943
#1	.0012	24.85	.0028	-.0014	.0015	25.29
#2	.0012	25.20	.0038	-.0019	-.0020	25.42
#3	.0010	25.42	.0031	-.0023	.0001	25.49
#4	.0010	25.33	.0009	-.0010	-.0020	25.59
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	25.11	5.077	-.0003	-.0017	10.10
Stddev	.0108	.19	.022	.0004	.0003	.02
%RSD	141.2	.7702	.4338	124.3	18.96	.1859
#1	-.0027	24.85	5.050	.0002	-.0019	10.10
#2	-.0045	25.25	5.071	-.0003	-.0020	10.11
#3	.0002	25.26	5.087	-.0005	-.0017	10.07
#4	-.0236	25.10	5.102	-.0007	-.0013	10.11
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		5.000%	5.000%			5.000%

Sample Name: CCVB Run Time: 07/16/10 09:39

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	.0001	10.04	.0041	.0045	.0024
Stddev	.0060	.0025	.04	.0047	.0016	.0015
%RSD	60.57	3689.	.3869	113.2	35.36	61.63
#1	.0148	-.0022	10.05	.0019	.0028	.0026
#2	.0012	.0001	10.08	-.0007	.0035	.0028
#3	.0124	-.0013	9.991	.0102	.0055	.0004
#4	.0111	.0036	10.04	.0050	.0061	.0040
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			5.000%			

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.979	2.511	.00427	.0276	.50464	.51185
Stddev	.030	.006	.00029	.0105	.00224	.00113
%RSD	.2967	.2362	6.7612	37.88	.44363	.22114
#1	9.975	2.502	.00400	.0249	.50466	.51095
#2	10.02	2.513	.00415	.0425	.50701	.51236
#3	9.947	2.514	.00467	.0180	.50163	.51088
#4	9.977	2.515	.00427	.0251	.50525	.51320
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	172.13
Stddev	.36
%RSD	.21149
#1	172.29
#2	172.41
#3	172.23
#4	171.60

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 09:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4741	2.453	2.408	.45815	.53409	.4977
Stddev	.0173	.013	.004	.00162	.00140	.0006
%RSD	3.654	.5456	.1713	.35265	.26130	.1129
#1	.4594	2.469	2.413	.45701	.53395	.4978
#2	.4923	2.446	2.409	.46014	.53510	.4982
#3	.4592	2.438	2.406	.45668	.53216	.4978
#4	.4856	2.459	2.404	.45879	.53514	.4969
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		5.000%	5.000%			5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4872	2.490	.4876	.4888	.4948	.4891
Stddev	.0023	.012	.0026	.0047	.0029	.0021
%RSD	.4751	.4943	.5434	.9527	.5767	.4199
#1	.4864	2.490	.4844	.4870	.4925	.4894
#2	.4906	2.491	.4909	.4958	.4990	.4915
#3	.4856	2.475	.4873	.4864	.4939	.4865
#4	.4861	2.505	.4879	.4861	.4939	.4892
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.430	2.0513	.95032	.9808	.4900	5.134
Stddev	.016	.0053	.00418	.0045	.0037	.027
%RSD	.6489	.25797	.43974	.4601	.7573	.5314
#1	2.427	2.0448	.94853	.9819	.4871	5.174
#2	2.445	2.0502	.95588	.9864	.4929	5.117
#3	2.439	2.0527	.94608	.9758	.4866	5.132
#4	2.409	2.0575	.95079	.9791	.4936	5.115
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	5.000%	5.0000%	5.0000%	5.000%	5.000%	

Sample Name: CCVA Run Time: 07/16/10 09:49

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4905	2.414	.4917	.4883
Stddev	.012	.0032	.0055	.022	.0044	.0013
%RSD	.4936	.6470	1.128	.9186	.8950	.2692
#1	2.423	.4956	.4935	2.416	.4867	.4867
#2	2.433	.4970	.4851	2.441	.4969	.4898
#3	2.418	.4907	.4968	2.387	.4899	.4887
#4	2.404	.4979	.4867	2.409	.4932	.4878
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	5.000%	5.000%		5.000%	5.000%	5.000%

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0381	.2905	.48907	4.850	.51560	.50227
Stddev	.0082	.0025	.00483	.012	.00227	.00103
%RSD	21.44	.8483	.98725	.2533	.43937	.20557
#1	-.0439	.2876	.48241	4.865	.51604	.50204
#2	-.0399	.2913	.48879	4.838	.51353	.50181
#3	-.0261	.2934	.49167	4.843	.51860	.50377
#4	-.0426	.2896	.49339	4.854	.51422	.50144
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.36
Stddev	.44
%RSD	.24721
#1	178.39
#2	177.79
#3	178.87
#4	178.37

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0075	.0093	-.0006	.00015	.00007
Stddev	.0117	.0057	.0084	.00002	.00001
%RSD	154.8	61.80	1417.	16.005	12.520
#1	.0007	.0133	-.0065	.00017	.00008
#2	-.0158	.0052	.0053	.00013	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0002	-.0055	.0008	-.0006
Stddev	.0003	.0001	.0011	.0002	.0010
%RSD	24.74	79.39	20.30	32.21	162.0
#1	.0014	-.0003	-.0063	.0009	.0001
#2	.0010	-.0001	-.0047	.0006	-.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0004	.0013	.00015	.00052
Stddev	.0008	.0001	.0013	.00002	.00000
%RSD	49.45	28.61	100.8	13.514	.45673
#1	.0010	.0005	.0004	.00017	.00053
#2	.0021	.0004	.0022	.00014	.00052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0008	.0028	.0068	.0003
Stddev	.0024	.0011	.0040	.0140	.0006
%RSD	155.9	127.7	141.1	205.9	211.9
#1	.0032	.0001	.0000	.0167	-.0001
#2	-.0002	.0016	.0056	-.0031	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 09:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0052	.0027	.0020	.0078
Stddev	.0009	.0061	.0008	.0013	.0026
%RSD	13.86	116.9	30.98	63.80	33.02
#1	.0059	.0096	.0021	.0029	.0059
#2	.0072	.0009	.0033	.0011	.0096
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.00175	-.0120	.00022	.00013
Stddev	.0012	.00041	.0000	.00003	.00011
%RSD	50.39	23.571	.0070	12.117	81.533
#1	-.0016	.00204	-.0120	.00020	.00021
#2	-.0033	.00145	-.0120	.00024	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	172.29
Stddev	.36
%RSD	.20910
#1	172.03
#2	172.54

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/16/10 09:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0454	.0475	.0766	.00502	.00475	.0503
Stddev	.0088	.0017	.0029	.00012	.00008	.0003
%RSD	19.29	3.616	3.804	2.3534	1.6790	.6351
#1	.0516	.0487	.0745	.00510	.00469	.0500
#2	.0392	.0463	.0786	.00494	.00481	.0505
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0517	.0057	.0086	.0106	.0244
Stddev	.0009	.0053	.0002	.0003	.0021	.0002
%RSD	19.56	10.25	3.523	3.841	19.51	.6377
#1	.0051	.0480	.0058	.0084	.0091	.0243
#2	.0038	.0555	.0055	.0088	.0121	.0245
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0432	.01931	.00484	.0092	.0196	.4180
Stddev	.0089	.00006	.00004	.0004	.0015	.0151
%RSD	20.68	.30475	.82107	4.002	7.572	3.619
#1	.0369	.01935	.00487	.0094	.0185	.4073
#2	.0495	.01926	.00482	.0089	.0206	.4287
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0788	.0075	.2170	.0387	.0106	.0108
Stddev	.0053	.0010	.0012	.0075	.0003	.0017
%RSD	6.693	13.64	.5425	19.40	3.229	15.99
#1	.0825	.0068	.2178	.0440	.0104	.0096
#2	.0750	.0082	.2161	.0334	.0109	.0121
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/16/10 09:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1826	.4003	.01126	.1461	.01011	.00955
Stddev	.0003	.0045	.00097	.0013	.00005	.00001
%RSD	.1540	1.128	8.5901	.9074	.49316	.10288
#1	.1828	.3971	.01058	.1452	.01015	.00956
#2	.1824	.4035	.01195	.1471	.01008	.00954
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.27
Stddev	.14
%RSD	.08174
#1	175.37
#2	175.17

Method: 2010A Sample Name: ICSA ICPM64-B Operator:
Comment:
Run Time: 07/16/10 10:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	.0458	-.0015	-.00032	.00012	.0233
Stddev	1.5	.0006	.0232	.00020	.00008	.0019
%RSD	.2919	1.207	1553.	63.196	65.547	8.378
#1	503.2	.0455	.0149	-.00047	.00017	.0219
#2	505.2	.0462	-.0179	-.00018	.00006	.0246
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	495.6	-.0003	-.0011	.0013	197.8
Stddev	.0007	3.6	.0002	.0002	.0014	.0
%RSD	7.723	.7265	50.36	20.40	105.1	.0020
#1	.0086	493.1	-.0002	-.0009	.0003	197.8
#2	.0096	498.2	-.0005	-.0013	.0023	197.8
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	516.5	.00334	.0029	-.0032	-.0361
Stddev	.0125	2.3	.00009	.0008	.0023	.0108
%RSD	6417.	.4440	2.6661	29.47	71.64	29.81
#1	.0091	514.9	.00328	.0035	-.0048	-.0437
#2	-.0087	518.1	.00341	.0023	-.0016	-.0285
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254	.0007	.0611	-.0159	.0029	.0084
Stddev	.0124	.0004	.0011	.0156	.0008	.0011
%RSD	48.72	57.00	1.855	98.24	27.16	13.11
#1	.0166	.0010	.0619	-.0049	.0035	.0076
#2	.0341	.0004	.0603	-.0270	.0023	.0092
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/16/10 10:02

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	-.0186	.01410	.1130	.01358	.01489
Stddev	.0017	.0039	.00118	.0172	.00001	.00086
%RSD	6.897	20.79	8.3447	15.26	.11044	5.7891
#1	.0254	-.0159	.01493	.1252	.01359	.01550
#2	.0230	-.0213	.01327	.1008	.01357	.01428
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.23
Stddev	.23
%RSD	.14471
#1	160.07
#2	160.40

Method: 2010A Sample Name: ICSAB ICP7618 Operator:
Comment:
Run Time: 07/16/10 10:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	500.7	1.028	-.0059	.45165	.52762	.0269
Stddev	3.4	.015	.0088	.00281	.00080	.0017
%RSD	.6784	1.491	149.4	.62165	.15243	6.467
#1	498.3	1.018	.0003	.44966	.52706	.0281
#2	503.1	1.039	-.0121	.45364	.52819	.0256
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9298	494.8	.4712	.4648	.4603	192.9
Stddev	.0066	1.2	.0013	.0034	.0058	1.8
%RSD	.7068	.2526	.2859	.7259	1.252	.9585
#1	.9252	493.9	.4702	.4624	.4644	191.6
#2	.9345	495.7	.4721	.4672	.4562	194.2
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9477	515.0	.43614	.0013	.9086	-.0740
Stddev	.0230	2.0	.00328	.0015	.0058	.0273
%RSD	2.427	.3901	.75319	115.3	.6356	36.89
#1	.9314	513.6	.43382	.0002	.9045	-.0933
#2	.9640	516.5	.43846	.0023	.9127	-.0547
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0325	.9556	.0219	-.0112	.4886	.9021
Stddev	.0187	.0070	.0030	.0013	.0068	.0000
%RSD	57.59	.7362	13.56	11.81	1.388	.0034
#1	.0193	.9606	.0198	-.0103	.4838	.9021
#2	.0458	.9506	.0240	-.0121	.4934	.9021
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0196	.01449	.1134	.01330	.01509
Stddev	.0015	.0015	.00139	.0349	.00030	.00009
%RSD	120.0	7.646	9.6152	30.80	2.2760	.57856
#1	-.0023	-.0185	.01351	.1381	.01309	.01503
#2	-.0002	-.0206	.01548	.0887	.01352	.01515
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	162.65
Stddev	.48
%RSD	.29211
#1	162.98
#2	162.31

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/16/10 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	1.040	-.0113	.46135	.53582	.0233
Stddev	.3	.005	.0102	.00058	.00183	.0031
%RSD	.0628	.4386	90.77	.12540	.34084	13.29
#1	504.0	1.043	-.0040	.46094	.53712	.0255
#2	504.5	1.037	-.0185	.46176	.53453	.0211
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9469	497.0	.4814	.4713	.4693	197.3
Stddev	.0046	3.1	.0001	.0045	.0014	1.5
%RSD	.4908	.6307	.0202	.9557	.3029	.7546
#1	.9436	494.8	.4815	.4681	.4703	196.2
#2	.9502	499.2	.4814	.4745	.4683	198.3
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9623	515.9	.44586	-.0022	.9284	-.0468
Stddev	.0146	3.9	.00050	.0005	.0006	.0000
%RSD	1.518	.7597	.11256	21.26	.0667	.0112
#1	.9520	518.6	.44551	-.0019	.9279	-.0468
#2	.9727	513.1	.44622	-.0025	.9288	-.0468
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0361	.9571	.0192	-.0090	.4968	.9173
Stddev	.0019	.0028	.0002	.0020	.0082	.0088
%RSD	5.173	.2929	1.218	22.74	1.654	.9541
#1	.0348	.9551	.0191	-.0104	.5026	.9111
#2	.0374	.9591	.0194	-.0076	.4910	.9234
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	-.0170	.01303	.1197	.01304	.01584
Stddev	.0271	.0060	.00397	.0109	.00022	.00045
%RSD	1182.	35.52	30.453	9.123	1.6844	2.8688
#1	-.0215	-.0213	.01023	.1274	.01319	.01616
#2	.0169	-.0127	.01584	.1120	.01288	.01552
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.52
Stddev	.41
%RSD	.25788
#1	160.23
#2	160.81

2C 7/16/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.082	.0087	.0044	2.4549	.05063	.0100
Stddev	.071	.0017	.0067	.0118	.00004	.0004
%RSD	1.392	19.11	150.4	.48018	.07161	3.560
#1	5.132	.0099	.0092	2.4465	.05066	.0103
#2	5.032	.0075	-.0003	2.4632	.05060	.0098
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.21	.0028	-.0015	-.0003	24.95
Stddev	.0008	.06	.0014	.0003	.0021	.12
%RSD	70.55	.2424	50.83	19.08	781.6	.4828
#1	.0017	25.17	.0038	-.0013	.0012	24.87
#2	.0006	25.26	.0018	-.0017	-.0017	25.04
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0030	25.46	4.997	-.0028	-.0014	10.06
Stddev	.0018	.19	.045	.0012	.0003	.01
%RSD	58.58	.7583	.9019	42.65	24.75	.1187
#1	-.0018	25.60	4.965	-.0036	-.0016	10.07
#2	-.0042	25.33	5.028	-.0019	-.0011	10.05
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0001	9.824	.0047	.0053	.0031
Stddev	.0018	.0004	.048	.0025	.0001	.0011
%RSD	15.77	293.1	.4901	53.24	1.115	34.16
#1	.0123	-.0001	9.790	.0029	.0053	.0039
#2	.0099	.0004	9.858	.0064	.0052	.0024
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.532	.00450	.0147	.50632	.50398
Stddev	.00	.010	.00016	.0157	.00026	.00350
%RSD	.0183	.3991	3.6208	106.5	.05213	.69421
#1	10.08	2.539	.00438	.0259	.50613	.50150
#2	10.08	2.525	.00461	.0036	.50650	.50645
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.61
Stddev	1.11
%RSD	.63334
#1	176.40
#2	174.82

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4894	2.406	2.426	.46016	.53833	.4951
Stddev	.0154	.002	.014	.00200	.00027	.0020
%RSD	3.148	.0969	.5713	.43467	.04999	.3964
#1	.5003	2.404	2.416	.45874	.53852	.4937
#2	.4785	2.408	2.435	.46157	.53814	.4965
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4883	2.490	.4889	.4904	.4958	.5058
Stddev	.0002	.014	.0029	.0013	.0009	.0089
%RSD	.0425	.5480	.5986	.2608	.1743	1.769
#1	.4881	2.499	.4868	.4913	.4952	.5121
#2	.4884	2.480	.4910	.4895	.4964	.4995
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.429	2.0626	.94991	.9708	.4898	5.067
Stddev	.001	.0034	.00680	.0091	.0010	.032
%RSD	.0451	.16291	.71607	.9346	.1972	.6366
#1	2.429	2.0602	.94510	.9644	.4892	5.045
#2	2.430	2.0650	.95472	.9773	.4905	5.090
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4809	2.429	.4971	.4911
Stddev	.015	.0041	.0061	.001	.0004	.0030
%RSD	.6359	.8217	1.260	.0549	.0904	.6157
#1	2.409	.4924	.4766	2.430	.4968	.4889
#2	2.431	.4982	.4852	2.428	.4975	.4932
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0327	.2902	.49291	4.788	.51238	.50477
Stddev	.0153	.0004	.00209	.015	.00070	.00076
%RSD	46.90	.1525	.42322	.3187	.13758	.15093
#1	-.0219	.2899	.49144	4.777	.51188	.50531
#2	-.0436	.2905	.49439	4.799	.51288	.50423
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	177.72
Stddev	.54
%RSD	.30510
#1	177.33
#2	178.10

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.0165	.0041	.00005	.00007	.0015
Stddev	.0019	.0046	.0067	.00031	.00006	.0003
%RSD	24.97	27.76	161.6	610.78	84.271	21.68
#1	.0062	.0197	-.0006	.00027	.00011	.0018
#2	.0089	.0132	.0089	-.00017	.00003	.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0002	.0010	-.0006	-.0008	.0027
Stddev	.0003	.0025	.0016	.0003	.0011	.0015
%RSD	453.6	1259.	155.8	51.53	129.1	53.07
#1	.0003	.0020	.0021	-.0004	-.0001	.0038
#2	-.0001	-.0016	-.0001	-.0008	-.0016	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.00044	.00079	.0009	.0007	.0128
Stddev	.0023	.00004	.00012	.0017	.0004	.0038
%RSD	474.4	9.3437	15.468	182.0	57.59	29.70
#1	-.0011	.00041	.00087	.0021	.0004	.0155
#2	.0021	.00046	.00070	-.0003	.0009	.0101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0009	-.0038	.0063	.0024	.0000
Stddev	.0000	.0006	.0043	.0077	.0013	.003
%RSD	.1319	70.37	114.0	123.0	54.92	6057.
#1	.0056	-.0013	-.0068	.0117	.0034	-.0019
#2	.0056	-.0004	-.0007	.0008	.0015	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 10:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	-.0012	.00189	.0063	.00050	.00025
Stddev	.0041	.0026	.00136	.0061	.00010	.00001
%RSD	52.74	214.9	71.771	96.95	20.766	3.4199
#1	-.0106	-.0030	.00093	.0020	.00057	.00025
#2	-.0048	.0006	.00285	.0107	.00042	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.02
Stddev	.26
%RSD	.15301
#1	172.83
#2	173.21

Method: 2010A Sample Name: K1006615-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	-.0053	.0044	-.00013	.00010	.0014
#1	-.0007	-.0037	-.0030	-.00020	.00016	.0011
#2	.0089	-.0068	.0118	-.00007	.00003	.0017

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0059	.0002	-.0013	.0012	.0064
#1	.0001	.0031	.0011	-.0016	.0005	.0069
#2	.0006	.0087	-.0007	-.0011	.0019	.0060

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.00045	.00009	-.0015	.0000	.0240
#1	.0024	.00021	.00000	-.0021	.0004	.0240
#2	.0143	.00069	.00018	-.0010	-.0004	.0240

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0010	-.0019	.0107	-.0001	.0026
#1	.0093	-.0007	-.0023	.0130	-.0003	.0009
#2	.0217	-.0013	-.0015	.0084	.0001	.0043

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	.0047	.00165	-.0016	.00018	.00012
#1	.0159	.0042	.00082	.0002	.00029	.00017
#2	.0190	.0053	.00248	-.0034	.00006	.00008

Int. Std.	Sc3572
Units	Cts/S
Avg	174.26
#1	173.70
#2	174.81

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 K1006615 (208725) (071610B)
Run Time: 07/16/10 10:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.48	.5328	.4510	2.2625	.33853	.5651
#1	46.36	.5320	.4554	2.2615	.33827	.5632
#2	46.60	.5336	.4465	2.2636	.33878	.5669

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4587	50.72	.7589	.9958	1.218	97.83
#1	.4583	50.36	.7562	.9908	1.219	97.35
#2	.4591	51.07	.7617	1.001	1.218	98.31

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029	20.39	2.5512	.3146	1.010	21.57
#1	1.021	20.35	2.5422	.3133	1.006	21.55
#2	1.037	20.42	2.5603	.3160	1.013	21.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9892	.3948	3.444	.7082	.9429	1.466
#1	.9837	.3959	3.440	.7080	.9427	1.459
#2	.9947	.3936	3.448	.7085	.9432	1.473

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.389	10.62	2.4679	1.288	.04772	.76087
#1	4.361	10.59	2.4659	1.274	.04752	.76102
#2	4.417	10.66	2.4699	1.303	.04793	.76072

Int. Std.	Sc3572
Units	Cts/S
Avg	175.92
#1	176.03
#2	175.82

Method: 2010A Sample Name: K1006615-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.34	.0277	.0066	.50064	.00202	.0312
#1	44.23	.0221	-.0023	.49852	.00203	.0314
#2	44.44	.0334	.0154	.50276	.00202	.0309

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029 *	23.18	.0299	.0215	.0456	73.67
#1	.0028	23.03	.0298	.0220	.0443	73.48
#2	.0031	23.32	.0300	.0211	.0469	73.86

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	15.77	1.6685	.0015	.0124	11.82
#1	.0141	15.75	1.6808	.0009	.0128	11.85
#2	.0200	15.80	1.6561	.0022	.0120	11.80

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0003	1.052	.0234	.1718	.1196
#1	.0076	.0009	1.057	.0262	.1714	.1184
#2	-.0085	-.0014	1.046	.0205	.1722	.1207

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.608	9.924	2.5512	.0317	.04235	.24879
#1	2.599	9.872	2.5538	.0429	.04267	.24961
#2	2.617	9.975	2.5487	.0206	.04203	.24797

Int. Std.	Sc3572
Units	Cts/S
Avg	178.07
#1	177.57
#2	178.57

* 0.0029 Cd − 73.67 Fe $\left(\frac{0.0021\ Cd}{197.8\ Fe}\right)$ = −0.0005 Cd

Method: 2010A Sample Name: K1006615-006D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:29 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.59	.0198	-.0021	.71640	.00209	.0314
#1	43.50	.0270	-.0001	.71378	.00209	.0309
#2	43.68	.0126	-.0042	.71901	.00208	.0320

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	20.98	.0351	.0226	.0483	72.15
#1	.0033	20.81	.0354	.0233	.0501	72.23
#2	.0037	21.15	.0348	.0219	.0465	72.07

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0238	16.21	2.5676	.0011	.0121	12.06
#1	.0178	16.09	2.5667	.0021	.0118	12.07
#2	.0297	16.33	2.5685	.0001	.0125	12.05

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	-.0018	.9550	.0112	.1637	.1230
#1	.0261	-.0017	.9583	.0068	.1613	.1215
#2	.0112	-.0020	.9518	.0157	.1661	.1245

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.491	8.715	2.5083	.0262	.04372	.21948
#1	2.483	9.102	2.5160	.0169	.04392	.22062
#2	2.499	8.328	2.5007	.0355	.04352	.21833

Int. Std.	Sc3572
Units	Cts/S
Avg	178.39
#1	178.06
#2	178.72

* 0.00018 Cd

Method: 2010A Sample Name: K1006615-006L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 10:32 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.675	-.0049	-.0011	.09959	.00041	.0081
#1	8.635	.0020	-.0053	.09771	.00040	.0090
#2	8.716	-.0117	.0030	.10147	.00043	.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005 *	4.548	.0070	.0035	.0081	14.07
#1	.0001	4.521	.0062	.0041	.0084	13.85
#2	.0008	4.574	.0077	.0029	.0078	14.28

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	3.0786	.31221	-.0019	.0012	2.325
#1	.0054	3.0705	.30675	-.0017	.0014	2.318
#2	-.0042	3.0868	.31767	-.0022	.0010	2.332

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0021	.2157	-.0016	.0345	.0231
#1	.0094	.0027	.2090	-.0048	.0348	.0235
#2	.0069	.0015	.2224	.0016	.0342	.0227

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4848	1.784	.49346	.0007	.00850	.04709
#1	.4961	1.784	.48412	.0131	.00840	.04631
#2	.4735	1.784	.50280	-.0118	.00860	.04788

Int. Std.	Sc3572
Units	Cts/S
Avg	178.54
#1	181.47
#2	175.61

* -0.00015 cd

Method: 2010A Sample Name: K1006615-006S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.16	.3127	.4871	2.6718	.05402	.5021
#1	58.95	.3094	.4877	2.6800	.05397	.5010
#2	59.37	.3160	.4865	2.6635	.05407	.5033

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0526	33.16	.2350	.5280	.3002	80.28
#1	.0524	33.05	.2357	.5260	.3021	80.25
#2	.0529	33.27	.2343	.5300	.2982	80.32

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5262	25.66	2.8918	.4704	.5112	19.99
#1	.5217	25.57	2.8811	.4663	.5109	20.03
#2	.5307	25.75	2.9025	.4744	.5116	19.94

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4879	.0476	6.335	.0128	.6815	.6627
#1	.4718	.0491	6.360	.0143	.6794	.6629
#2	.5040	.0460	6.309	.0113	.6835	.6626

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.837	5.300	2.5991	.4861	.05335	.26066
#1	2.815	5.289	2.6026	.4758	.05369	.26175
#2	2.860	5.311	2.5956	.4963	.05302	.25956

Int. Std.	Sc3572
Units	Cts/S
Avg	178.13
#1	177.84
#2	178.42

* 0.0489 Cd

Method: 2010A Sample Name: K1006615-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.98	.0246	.0849	.70489	.00197	.0312
#1	53.67	.0262	.0922	.69840	.00195	.0312
#2	54.29	.0229	.0776	.71139	.00198	.0312

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044 X	15.08	.0365	.0246	.0976	70.88
#1	.0048	15.06	.0358	.0243	.0969	70.25
#2	.0040	15.11	.0372	.0249	.0982	71.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0431	13.26	2.3859	.0013	.0167	13.38
#1	.0397	13.19	2.3756	.0027	.0172	13.39
#2	.0464	13.33	2.3963	.0000	.0161	13.37

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	-.0001	.3834	.0148	.1522	.1834
#1	.0105	-.0019	.3805	.0170	.1512	.1819
#2	.0180	.0016	.3864	.0126	.1532	.1850

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.566	10.48	3.5491	.0356	.04815	.22587
#1	2.556	10.48	3.5395	.0430	.04814	.22479
#2	2.576	10.49	3.5586	.0282	.04816	.22696

Int. Std.	Sc3572
Units	Cts/S
Avg	179.47
#1	180.04
#2	178.90

X 0.0011 Cd

Method: 2010A Sample Name: K1006615-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.73	.0254	.0182	.72261	.00243	.0345
#1	63.52	.0189	.0172	.71925	.00243	.0351
#2	63.94	.0318	.0191	.72597	.00242	.0338

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	20.59	.0341	.0300	.0495	87.11
#1	.0032	20.53	.0347	.0295	.0502	86.71
#2	.0035	20.66	.0334	.0305	.0489	87.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	20.03	2.1571	.0011	.0203	16.46
#1	.0220	19.95	2.1487	.0011	.0214	16.48
#2	.0210	20.11	2.1655	.0012	.0191	16.43

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183	-.0020	.4148	.0163	.1729	.1582
#1	.0046	-.0016	.4177	.0177	.1719	.1579
#2	.0320	-.0025	.4118	.0149	.1739	.1584

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.134	10.94	4.3713	.0468	.05614	.26015
#1	3.145	10.89	4.3646	.0492	.05668	.26068
#2	3.123	11.00	4.3780	.0444	.05560	.25962

Int. Std.	Sc3572
Units	Cts/S
Avg	181.86
#1	181.87
#2	181.86

x -0.00071 Cd

Method: 2010A Sample Name: K1006615-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.12	.0314	.0112	.72832	.00242	.0346
#1	59.95	.0374	.0153	.72724	.00243	.0350
#2	60.28	.0254	.0071	.72940	.00241	.0343

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048 *	21.52	.0384	.0415	.0553	94.24
#1	.0050	21.38	.0391	.0413	.0570	94.01
#2	.0047	21.66	.0376	.0418	.0536	94.48

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	22.66	2.5092	.0013	.0228	14.61
#1	.0167	22.62	2.5232	.0008	.0225	14.61
#2	.0208	22.70	2.4952	.0018	.0232	14.62

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	-.0005	.3390	.0184	.2064	.1452
#1	.0135	-.0017	.3412	.0212	.2085	.1447
#2	.0086	.0006	.3369	.0155	.2042	.1458

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.415	10.10	4.4449	.0367	.05498	.27201
#1	2.406	10.08	4.4562	.0325	.05515	.27321
#2	2.424	10.11	4.4336	.0408	.05480	.27081

Int. Std.	Sc3572
Units	Cts/S
Avg	182.47
#1	182.10
#2	182.84

* 0.0005Cd

Method: 2010A Sample Name: K1006615-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.91	.0259	.1046	.42565	.00154	.0366
#1	43.88	.0339	.1034	.42618	.00154	.0363
#2	43.94	.0179	.1058	.42512	.00154	.0368

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061 *	14.82	.0554	.0407	.1017	119.1
#1	.0052	14.80	.0554	.0405	.1057	118.8
#2	.0069	14.84	.0554	.0409	.0976	119.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0470	12.22	1.7540	-.0007	.0136	10.85
#1	.0439	12.22	1.7571	-.0014	.0139	10.86
#2	.0502	12.21	1.7510	.0000	.0134	10.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0020	.3354	.0217	.3004	.1660
#1	.0190	-.0020	.3370	.0221	.2986	.1658
#2	.0016	-.0020	.3338	.0213	.3022	.1663

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.461	9.635	2.6020	.0576	.03453	.17458
#1	2.462	9.596	2.6043	.0576	.03461	.17481
#2	2.459	9.674	2.5996	.0576	.03446	.17435

Int. Std.	Sc3572
Units	Cts/S
Avg	178.84
#1	178.67
#2	179.00

* 0.0006 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:50 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.142	.0087	-.0029	2.4625	.05066	.0086
Stddev	.006	.0040	.0121	.0017	.00063	.0008
%RSD	.1205	45.38	415.0	.06865	1.2357	9.607
#1	5.138	.0115	.0056	2.4614	.05022	.0080
#2	5.146	.0059	-.0115	2.4637	.05110	.0092
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	25.83	.0037	-.0026	-.0006	25.19
Stddev	.0007	.19	.0002	.0004	.0004	.12
%RSD	57.69	.7492	6.526	15.93	67.02	.4738
#1	.0007	25.69	.0035	-.0023	-.0003	25.10
#2	.0018	25.97	.0039	-.0029	-.0010	25.27
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	25.45	5.005	-.0013	-.0027	10.06
Stddev	.0018	.11	.029	.0008	.0006	.01
%RSD	52.66	.4407	.5857	62.75	21.41	.0757
#1	-.0046	25.37	4.984	-.0019	-.0022	10.05
#2	-.0021	25.53	5.026	-.0007	-.0031	10.07
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	-.0004	9.873	.0032	.0039	.0024
Stddev	.0210	.0037	.001	.0025	.0003	.0005
%RSD	154.6	840.8	.0078	78.62	6.517	20.75
#1	.0285	.0022	9.873	.0050	.0037	.0028
#2	-.0013	-.0030	9.874	.0014	.0041	.0021
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:50

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23	2.549	.00461	.0361	.51205	.50473
Stddev	.09	.001	.00006	.0026	.00050	.00449
%RSD	.8688	.0223	1.2888	7.075	.09754	.88984
#1	10.17	2.549	.00457	.0343	.51170	.50155
#2	10.30	2.549	.00466	.0379	.51241	.50790
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.00
Stddev	.43
%RSD	.24299
#1	177.31
#2	176.70

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:53 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4732	2.421	2.446	.46430	.54039	.5017
Stddev	.0117	.016	.011	.00498	.00224	.0032
%RSD	2.483	.6779	.4680	1.0722	.41436	.6326
#1	.4649	2.410	2.454	.46078	.53881	.4994
#2	.4815	2.433	2.438	.46782	.54197	.5039
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4938	2.488	.4937	.4939	.5015	.5168
Stddev	.0058	.015	.0059	.0050	.0010	.0071
%RSD	1.183	.6226	1.197	1.006	.1988	1.383
#1	.4897	2.477	.4895	.4904	.5022	.5219
#2	.4979	2.499	.4979	.4975	.5008	.5118
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404	2.0776	.95446	.9784	.4931	5.132
Stddev	.021	.0024	.00929	.0151	.0032	.011
%RSD	.8521	.11432	.97381	1.544	.6450	.2220
#1	2.390	2.0759	.94789	.9677	.4908	5.124
#2	2.419	2.0792	.96103	.9891	.4953	5.140
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.463	.5018	.4909	2.394	.4954	.4894
Stddev	.021	.0038	.0013	.011	.0028	.0044
%RSD	.8304	.7670	.2734	.4382	.5566	.8947
#1	2.449	.4991	.4918	2.387	.4934	.4863
#2	2.478	.5045	.4899	2.401	.4973	.4925
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:53

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0379	.2992	.49569	4.867	.52430	.50700
Stddev	.0032	.0008	.01203	.039	.00079	.00073
%RSD	8.402	.2608	2.4265	.7950	.14985	.14431
#1	-.0401	.2997	.48719	4.840	.52486	.50648
#2	-.0356	.2986	.50420	4.895	.52374	.50752
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.35
Stddev	.74
%RSD	.41224
#1	178.87
#2	177.83

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0121	.0044	.00027	.00006
Stddev	.0087	.0074	.0021	.00021	.00002
%RSD	638.3	61.30	47.04	78.411	32.353
#1	.0048	.0174	.0059	.00042	.00007
#2	-.0075	.0069	.0030	.00012	.00004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0001	.0033	-.0003	-.0005
Stddev	.0002	.0006	.0053	.0005	.0004
%RSD	10.00	420.1	158.1	189.8	82.09
#1	.0021	.0006	-.0004	-.0006	-.0002
#2	.0019	-.0003	.0071	.0001	-.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0040	.0025	.00141	.00097
Stddev	.0032	.0012	.0113	.00006	.00006
%RSD	128.1	29.84	460.5	4.3494	6.2405
#1	.0002	.0048	.0105	.00137	.00101
#2	.0047	.0031	-.0056	.00145	.00092
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0004	.0175	.0025	-.0033
Stddev	.0021	.0001	.0032	.0131	.0004
%RSD	70.90	16.14	18.20	530.9	12.32
#1	.0044	-.0003	.0152	-.0068	-.0036
#2	.0015	-.0004	.0197	.0118	-.0030
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 10:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0080	.0031	.0007	.0099
Stddev	.0018	.0035	.0005	.0007	.0068
%RSD	66.94	43.56	14.63	99.84	68.71
#1	.0014	.0056	.0034	.0011	.0147
#2	.0039	.0105	.0028	.0002	.0051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00207	-.0009	.00000	.00032
Stddev	.0017	.00187	.0109	.00017	.00009
%RSD	290.2	90.164	1177.	794400.	28.371
#1	.0018	.00339	.0068	.00012	.00039
#2	-.0006	.00075	-.0086	-.00012	.00026
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	175.96
Stddev	.77
%RSD	.43509
#1	176.50
#2	175.42

Method: 2010A Sample Name: K1006615-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.48	.0214	.0154	.52349	.00332	.0300
#1	73.44	.0198	.0109	.52276	.00334	.0300
#2	73.53	.0230	.0199	.52422	.00330	.0301

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	22.92	.0322	.0259	.0594	88.25
#1	.0041	22.86	.0314	.0255	.0584	87.57
#2	.0042	22.99	.0331	.0263	.0604	88.92

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	20.85	2.3946	.0023	.0157	14.78
#1	.0264	20.82	2.3918	.0035	.0151	14.78
#2	.0266	20.89	2.3973	.0011	.0163	14.78

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0171	-.0015	.8786	.0126	.1558	.1743
#1	.0152	-.0012	.8762	.0211	.1578	.1747
#2	.0190	-.0018	.8811	.0042	.1538	.1738

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	9.780	3.0236	.0109	.05177	.19679
#1	2.389	9.805	3.0279	.0141	.05199	.19771
#2	2.381	9.755	3.0194	.0077	.05155	.19587

Int. Std.	Sc3572
Units	Cts/S
Avg	183.07
#1	182.82
#2	183.32

* 0.00042 Cd

Method: 2010A Sample Name: K1006615-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.25	.0193	.0672	.61612	.00205	.0286
#1	49.06	.0214	.0648	.61333	.00207	.0282
#2	49.43	.0173	.0696	.61891	.00204	.0290

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	12.74	.0471	.0228	.0831	80.16
#1	.0037	12.71	.0457	.0221	.0821	79.74
#2	.0037	12.78	.0484	.0234	.0840	80.58

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0316	11.44	2.5266	.0022	.0205	9.252
#1	.0285	11.41	2.5174	.0033	.0203	9.302
#2	.0348	11.47	2.5358	.0011	.0208	9.202

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0032	.3416	.0114	.1769	.1654
#1	.0021	.0024	.3451	.0084	.1733	.1644
#2	-.0115	.0041	.3380	.0145	.1806	.1664

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.145	6.396	2.4644	.0469	.04187	.14439
#1	2.137	6.416	2.4650	.0493	.04225	.14469
#2	2.154	6.376	2.4637	.0445	.04150	.14409

Int. Std.	Sc3572
Units	Cts/S
Avg	181.52
#1	181.59
#2	181.44

* 0.000001 Cd

Method: 2010A Sample Name: K1006615-008 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.27	.0268	.0106	.44051	.00196	.0267
#1	47.40	.0220	.0062	.44253	.00193	.0273
#2	47.15	.0317	.0150	.43850	.00199	.0260

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033 *	15.88	.0534	.0233	.0502	91.62
#1	.0031	15.98	.0539	.0238	.0512	91.55
#2	.0035	15.79	.0529	.0229	.0492	91.70

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169	15.84	1.9717	.0023	.0233	9.267
#1	.0171	15.92	1.9739	.0008	.0238	9.315
#2	.0167	15.76	1.9695	.0037	.0228	9.219

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0006	.9084	.0191	.2115	.1349
#1	.0015	-.0015	.9125	.0175	.2140	.1348
#2	.0039	.0003	.9043	.0207	.2089	.1349

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.521	8.127	2.5770	.0206	.04091	.14681
#1	2.549	8.155	2.5939	.0189	.04165	.14792
#2	2.493	8.100	2.5601	.0223	.04018	.14571

Int. Std.	Sc3572
Units	Cts/S
Avg	179.71
#1	179.84
#2	179.58

* -0.00096d

Method: 2010A Sample Name: K1006615-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.37	.0263	.0200	.79884	.00207	.0308
#1	47.36	.0190	.0206	.79507	.00199	.0309
#2	47.39	.0335	.0194	.80261	.00215	.0308

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	61.45	.0438	.0193	.0585	75.27
#1	.0032	61.38	.0437	.0197	.0568	75.13
#2	.0031	61.52	.0438	.0190	.0603	75.41

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158	18.75	3.262	.0012	.0285	9.083
#1	.0109	18.79	3.245	.0009	.0279	9.156
#2	.0207	18.71	3.279	.0016	.0290	9.009

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0309	-.0002	1.553	.0127	.1699	.1260
#1	.0240	.0014	1.559	.0080	.1718	.1262
#2	.0377	-.0018	1.547	.0175	.1679	.1258

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.569	9.341	2.2714	.0307	.04697	.23280
#1	2.540	9.335	2.2650	.0340	.04694	.23349
#2	2.598	9.346	2.2779	.0274	.04699	.23211

Int. Std.	Sc3572
Units	Cts/S
Avg	180.20
#1	180.69
#2	179.70

x - 0.00026 Cd

Method: 2010A Sample Name: K1006636-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.14	.0113	.1450	.59000	.00202	.0409
#1	50.08	.0069	.1429	.59034	.00202	.0400
#2	50.20	.0157	.1470	.58965	.00202	.0418

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	9.371	.0506	.0259	.1373	112.7
#1	.0064	9.339	.0508	.0263	.1391	112.9
#2	.0070	9.403	.0505	.0254	.1356	112.5

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0512	12.09	2.8142	.0008	.0190	12.30
#1	.0494	12.04	2.8216	.0015	.0196	12.32
#2	.0530	12.13	2.8068	.0001	.0185	12.27

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0013	.1904	.0090	.2364	.2302
#1	-.0021	-.0028	.1908	.0079	.2386	.2299
#2	.0066	.0001	.1899	.0102	.2342	.2305

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.388	6.956	3.1709	.0529	.05027	.09025
#1	2.377	6.941	3.1827	.0539	.05010	.09047
#2	2.398	6.971	3.1590	.0519	.05043	.09003

Int. Std.	Sc3572
Units	Cts/S
Avg	179.97
#1	179.51
#2	180.44

$$\times\ 0.0067Cd - 112.7Fe\left(\frac{0.0091Cd}{197.8Fe}\right) = 0.0015Cd$$

Method: 2010A Sample Name: K1006636-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.22	.0213	.0186	.61476	.00255	.0414
#1	57.36	.0294	.0142	.61371	.00255	.0415
#2	57.07	.0133	.0230	.61581	.00255	.0413

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042 *	11.42	.0418	.0256	.0523	101.1
#1	.0042	11.37	.0425	.0262	.0489	101.2
#2	.0043	11.47	.0410	.0251	.0557	101.1

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313	14.07	2.3335	.0017	.0207	13.36
#1	.0249	14.14	2.3356	.0020	.0210	13.41
#2	.0378	14.01	2.3314	.0014	.0204	13.31

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	.0001	.2498	.0073	.2061	.1631
#1	.0101	.0011	.2500	.0076	.2063	.1649
#2	.0138	-.0009	.2497	.0069	.2060	.1612

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.188	8.077	3.4186	.0343	.05075	.10967
#1	2.181	8.052	3.4305	.0285	.05068	.11008
#2	2.194	8.103	3.4067	.0401	.05082	.10925

Int. Std.	Sc3572
Units	Cts/S
Avg	180.99
#1	181.01
#2	180.98

* -0.00045Cd

Method: 2010A Sample Name: K1006636-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.37	.0206	.0114	.65393	.00318	.0422
#1	58.96	.0174	.0137	.64798	.00312	.0423
#2	59.78	.0238	.0092	.65987	.00324	.0420

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	14.94	.0356	.0316	.0537	97.01
#1	.0042	14.85	.0348	.0318	.0523	96.13
#2	.0040	15.03	.0364	.0314	.0551	97.89

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0405	21.68	2.6445	-.0009	.0236	17.59
#1	.0365	21.63	2.6351	-.0005	.0236	17.58
#2	.0445	21.74	2.6540	-.0013	.0236	17.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124	-.0013	.3395	.0134	.1839	.1819
#1	.0049	-.0012	.3384	.0107	.1849	.1814
#2	.0200	-.0015	.3406	.0160	.1828	.1824

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.185	5.844	3.7983	.0602	.05993	.13642
#1	2.174	5.801	3.7947	.0517	.05996	.13623
#2	2.196	5.887	3.8018	.0687	.05989	.13662

Int. Std.	Sc3572
Units	Cts/S
Avg	182.66
#1	182.66
#2	182.67

x 0.00036Cd

Method: 2010A Sample Name: K1006636-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.68	.0229	.1221	.53458	.00201	.0375
#1	44.88	.0253	.1275	.53702	.00200	.0365
#2	44.48	.0205	.1167	.53214	.00202	.0385

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	10.26	.0413	.0223	.1707	90.21
#1	.0069	10.27	.0411	.0214	.1755	90.81
#2	.0064	10.25	.0415	.0232	.1660	89.61

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0965	11.88	2.0542	.0013	.0173	10.92
#1	.1033	11.99	2.0494	.0019	.0171	11.02
#2	.0897	11.77	2.0589	.0007	.0175	10.82

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0016	.2366	.0131	.1881	.2743
#1	.0248	-.0009	.2407	.0161	.1891	.2770
#2	.0061	-.0023	.2324	.0101	.1871	.2716

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.323	9.318	3.0358	.0450	.04505	.09704
#1	2.320	9.358	3.0671	.0394	.04583	.09808
#2	2.325	9.278	3.0046	.0506	.04427	.09600

Int. Std.	Sc3572
Units	Cts/S
Avg	180.23
#1	179.74
#2	180.71

x 0.00266 d

Method: 2010A Sample Name: K1006636-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.36	.0132	.0218	.43378	.00203	.0344
#1	46.52	.0092	.0230	.43467	.00203	.0337
#2	46.21	.0173	.0206	.43288	.00203	.0352

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	9.646	.0376	.0235	.0581	83.12
#1	.0044	9.647	.0388	.0248	.0578	83.45
#2	.0036	9.645	.0364	.0222	.0584	82.80

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0228	15.63	1.8617	.0011	.0195	12.91
#1	.0301	15.55	1.8660	.0001	.0204	12.97
#2	.0154	15.70	1.8573	.0021	.0185	12.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189	-.0011	.4816	.0117	.1576	.1568
#1	.0183	.0004	.4822	.0077	.1589	.1602
#2	.0195	-.0025	.4810	.0157	.1562	.1535

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.911	8.124	3.2195	.0357	.05250	.09920
#1	1.900	8.141	3.2394	.0417	.05320	.09991
#2	1.921	8.106	3.1995	.0297	.05180	.09849

Int. Std.	Sc3572
Units	Cts/S
Avg	181.35
#1	180.95
#2	181.74

x 0.0002 Cd

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.24	.0197	-.0075	.99659	.00256	.0454
#1	52.14	.0149	-.0152	.99145	.00252	.0447
#2	52.35	.0245	.0003	1.0017	.00259	.0460

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	16.63	.0341	.0218	.0544	92.51
#1	.0032	16.49	.0334	.0206	.0557	92.05
#2	.0036	16.76	.0348	.0229	.0531	92.96

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0202	20.87	2.0106	.0012	.0231	16.26
#1	.0168	20.87	2.0046	.0022	.0227	16.34
#2	.0236	20.86	2.0166	.0002	.0234	16.19

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	-.0015	1.028	.0181	.1707	.1575
#1	.0167	-.0038	1.030	.0179	.1700	.1543
#2	.0279	.0008	1.025	.0182	.1713	.1607

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.535	9.274	4.1630	.0398	.05509	.21326
#1	2.524	9.277	4.1677	.0463	.05475	.21403
#2	2.547	9.272	4.1582	.0332	.05543	.21249

Int. Std.	Sc3572
Units	Cts/S
Avg	184.37
#1	183.99
#2	184.76

x - 0.0009 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 11:28 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.076	.0023	-.0023	2.5026	.05011	.0079
Stddev	.004	.0063	.0071	.0093	.00020	.0012
%RSD	.0787	275.7	313.2	.37032	.40191	15.10
#1	5.074	-.0022	.0027	2.4961	.04997	.0070
#2	5.079	.0067	-.0073	2.5092	.05025	.0087
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	26.70	.0036	-.0016	-.0013	25.75
Stddev	.0002	.08	.0011	.0004	.0000	.16
%RSD	23.61	.2939	30.52	27.24	.2374	.6401
#1	.0012	26.65	.0044	-.0019	-.0013	25.64
#2	.0009	26.76	.0029	-.0013	-.0012	25.87
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0032	25.48	4.957	-.0027	-.0015	9.904
Stddev	.0015	.08	.027	.0001	.0004	.009
%RSD	47.33	.3077	.5402	2.113	27.04	.0917
#1	-.0043	25.42	4.938	-.0027	-.0012	9.911
#2	-.0021	25.53	4.976	-.0027	-.0018	9.898
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0019	9.809	.0070	.0010	.0032
Stddev	.0035	.0008	.010	.0007	.0004	.0028
%RSD	94.81	43.62	.0988	9.689	36.01	86.46
#1	.0012	.0013	9.816	.0075	.0013	.0052
#2	.0062	.0024	9.802	.0065	.0008	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 11:28

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.530	.00558	.0190	.50014	.49379
Stddev	.02	.006	.00066	.0074	.00461	.00076
%RSD	.2186	.2446	11.860	38.84	.92110	.15478
#1	10.26	2.525	.00511	.0138	.50340	.49434
#2	10.29	2.534	.00605	.0242	.49688	.49325
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.61
Stddev	.60
%RSD	.33538
#1	178.03
#2	177.19

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 11:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4955	2.436	2.483	.46375	.52631	.4971
Stddev	.0263	.027	.000	.00207	.00127	.0033
%RSD	5.308	1.091	.0009	.44536	.24137	.6677
#1	.4769	2.417	2.483	.46229	.52542	.4947
#2	.5141	2.454	2.483	.46521	.52721	.4994
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4966	2.453	.4943	.4904	.5160	.5074
Stddev	.0017	.012	.0065	.0003	.0004	.0058
%RSD	.3350	.4850	1.312	.0701	.0815	1.136
#1	.4954	2.461	.4897	.4902	.5163	.5115
#2	.4978	2.444	.4989	.4907	.5157	.5033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.382	2.0714	.95313	.9671	.4903	5.050
Stddev	.032	.0056	.00223	.0048	.0009	.025
%RSD	1.334	.26935	.23431	.4972	.1840	.4998
#1	2.359	2.0753	.95155	.9637	.4909	5.033
#2	2.404	2.0674	.95471	.9705	.4896	5.068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.419	.5019	.4815	2.313	.4808	.4928
Stddev	.016	.0008	.0019	.011	.0034	.0009
%RSD	.6685	.1595	.4001	.4716	.7108	.1814
#1	2.408	.5025	.4829	2.305	.4784	.4922
#2	2.430	.5013	.4802	2.321	.4832	.4935
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 11:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0249	.2982	.49099	4.796	.50906	.49060
Stddev	.0232	.0021	.00180	.039	.00139	.00020
%RSD	93.11	.6918	.36717	.8097	.27337	.04114
#1	-.0413	.2967	.48972	4.769	.50808	.49046
#2	-.0085	.2996	.49227	4.824	.51005	.49074
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.23
Stddev	.08
%RSD	.04453
#1	181.17
#2	181.29

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 11:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144	.0097	-.0047	.00052	.00013	.0007
Stddev	.0078	.0086	.0017	.00004	.00008	.0003
%RSD	53.87	88.70	35.35	7.2979	60.118	41.17
#1	.0199	.0158	-.0035	.00049	.00007	.0005
#2	.0089	.0036	-.0059	.00055	.00018	.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0041	-.0003	-.0011	.0035	.0048
Stddev	.0004	.0058	.0012	.0003	.0024	.0002
%RSD	183.8	141.6	400.3	24.00	69.03	3.910
#1	.0005	.0000	-.0011	-.0009	.0018	.0047
#2	-.0001	.0083	.0005	-.0013	.0052	.0050
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.00248	.00123	.0018	.0008	-.0023
Stddev	.0018	.00010	.00010	.0028	.0010	.0128
%RSD	176.8	3.9162	7.9132	152.6	118.3	566.6
#1	-.0003	.00241	.00129	.0038	.0015	-.0113
#2	.0023	.00255	.00116	-.0001	.0001	.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0014	-.0038	.0046	.0020	.0012
Stddev	.0009	.0006	.0027	.0017	.0030	.0015
%RSD	70.86	42.33	71.23	37.18	150.7	124.6
#1	.0019	-.0019	-.0057	.0058	.0041	.0022
#2	.0006	-.0010	-.0019	.0034	-.0001	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 11:34

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0021	.00123	-.0087	-.00007	.00039
Stddev	.0093	.0012	.00009	.0218	.00035	.00001
%RSD	1077.	56.78	7.1726	249.8	477.00	3.4821
#1	-.0057	-.0012	.00117	.0067	.00017	.00038
#2	.0075	-.0029	.00129	-.0241	-.00032	.00040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	176.85
Stddev	.72
%RSD	.40503
#1	177.36
#2	176.34

Service Request # K1006636 (Redigest) (Ba, Pb, Mn, K)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 072010AICP02
Star Lims: 209074
Don't report 200.7

Primary Review by SC Date 7/20/10

Secondary Review by [illegible] Date 7/20/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/20/10 09:46 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1275	.0610	.0153	.00015
Stddev	.0157	.0118	.0137	.00001
%RSD	12.29	19.28	90.00	7.1133
#1	.1165	.0527	.0250	.00015
#2	.1386	.0693	.0055	.00014

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00238	.4034	.0002	.3972
Stddev	.00027	.0196	.0000	.0167
%RSD	11.195	4.852	6.528	4.203
#1	-.00219	.3896	.0003	.4090
#2	-.00257	.4173	.0002	.3854

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0539	-.0007	.0004	.0235
Stddev	.0254	.0002	.0001	.0059
%RSD	47.09	20.76	34.76	25.01
#1	-.0718	-.0009	.0005	.0193
#2	-.0360	-.0006	.0003	.0277

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0024	.0009	.0000	.0846
Stddev	.0001	.0001	.0000	.0255
%RSD	5.043	6.078	47.48	30.15
#1	.0023	.0010	.0001	.1026
#2	.0024	.0009	.0000	.0665

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.30823	.00153	-.0001	.0002
Stddev	.00994	.00014	.0001	.0000
%RSD	3.2260	9.2201	47.42	16.09
#1	.30120	.00143	-.0002	.0002
#2	.31526	.00163	-.0001	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0002	.4160	.0069	.0746
Stddev	.0000	.2833	.0137	.0195
%RSD	.3803	68.09	198.0	26.14
#1	-.0002	.6164	.0166	.0884
#2	-.0002	.2157	-.0028	.0608

Sample Name: Blank Run Time: 07/20/10 09:46

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0044	.0006	.0072	.0009
Stddev	.0000	.0000	.0001	.0001
%RSD	.3177	6.453	1.039	8.192
#1	.0044	.0006	.0072	.0009
#2	.0044	.0005	.0073	.0010

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0652	.2038	.00336	.0001
Stddev	.0118	.0412	.00011	.0000
%RSD	18.05	20.21	3.2275	14.52
#1	.0568	.2329	.00344	.0002
#2	.0735	.1747	.00328	.0001

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.22946	.00454
Stddev	.02749	.00068
%RSD	11.979	14.969
#1	.21002	.00406
#2	.24889	.00502

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	199.94
Stddev	.75
%RSD	.37293
#1	199.41
#2	200.47

7/20/10

7/20/10

Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/20/10 09:49 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	19.78	2.9518	.45988	38.92
Stddev	.02	.0242	.00247	.26
%RSD	.1056	.81943	.53635	.6788
#1	19.77	2.9347	.45814	38.74
#2	19.80	2.9690	.46163	39.11

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.7373	57.75	.6636	195.9
Stddev	.0064	.42	.0034	.3
%RSD	.8706	.7228	.5162	.1387
#1	.7328	57.46	.6611	196.1
#2	.7419	58.05	.6660	195.7

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	3.926	46.38	96.12	370.68
Stddev	.003	.29	.53	1.09
%RSD	.0640	.6241	.5471	.29313
#1	3.924	46.18	95.75	369.91
#2	3.927	46.59	96.49	371.45

Elem	Sr4077
Line	407.771 { 82}
Avg	8.0498
Stddev	.0055
%RSD	.06858
#1	8.0459
#2	8.0537

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	197.23
Stddev	.26
%RSD	.13274
#1	197.41
#2	197.04

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/20/10 09:52 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	16.41	11.29	46.94	.2833
Stddev	.15	.03	.23	.0016
%RSD	.9019	.2966	.4801	.5533
#1	16.30	11.27	46.78	.2822
#2	16.51	11.32	47.10	.2844

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	32.95	.1132	.1842	17.90
Stddev	.13	.0003	.0005	.01
%RSD	.3839	.2962	.2752	.0698
#1	32.86	.1129	.1838	17.89
#2	33.04	.1134	.1845	17.91

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4004	.0882	1438.4	2.9604
Stddev	.0068	.0000	2.7	.0302
%RSD	1.708	.0252	.18472	1.0191
#1	.4052	.0881	1436.5	2.9391
#2	.3956	.0882	1440.2	2.9818

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1476	.1679	10.73	18.56
Stddev	.0012	.0001	.01	.09
%RSD	.8351	.0383	.0602	.5098
#1	.1467	.1679	10.74	18.50
#2	.1485	.1678	10.73	18.63

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0861	.1426	.1487	.16467
Stddev	.0003	.0004	.0008	.00034
%RSD	.3439	.3100	.5612	.20473
#1	.0859	.1423	.1481	.16491
#2	.0864	.1429	.1492	.16443

Elem	Tl1908
Line	190.864 {176}
Avg	.0755
Stddev	.0004
%RSD	.5680
#1	.0752
#2	.0758

Sample Name: STDA Run Time: 07/20/10 09:52

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	206.37
Stddev	.74
%RSD	.35853
#1	205.84
#2	206.89

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 07/20/10 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.156	2.509	2.575	5.0516	.12282	.0036
Stddev	.010	.011	.026	.0002	.00004	.0004
%RSD	.1964	.4425	1.015	.00383	.03643	10.46
#1	5.149	2.517	2.556	5.0517	.12279	.0038
#2	5.163	2.501	2.593	5.0515	.12285	.0033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	10.00%	10.00%	10.00%	10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.265	12.77	.5159	1.267	.6267	2.518
Stddev	.000	.08	.0042	.001	.0026	.018
%RSD	.0305	.6301	.8178	.0443	.4213	.6973
#1	1.265	12.71	.5129	1.267	.6249	2.506
#2	1.265	12.82	.5189	1.268	.6286	2.530
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.550	12.60	1.2382	2.020	1.262	12.68
Stddev	.001	.03	.0006	.011	.001	.07
%RSD	.0363	.2304	.04525	.5228	.0825	.5399
#1	2.551	12.58	1.2386	2.012	1.262	12.73
#2	2.550	12.62	1.2378	2.027	1.263	12.64
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	10.00%	10.00%	10.000%	10.00%	10.00%	10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.505	.6335	12.09	.0064	1.268	1.272
Stddev	.004	.0095	.14	.0155	.003	.003
%RSD	.1484	1.505	1.133	241.3	.2515	.2498
#1	2.503	.6268	12.19	.0174	1.266	1.274
#2	2.508	.6403	11.99	-.0045	1.270	1.270
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	10.00%	10.00%	10.00%		10.00%	10.00%

Sample Name: ICV1 Run Time: 07/20/10 09:56

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0408	-.1416	2.0302	2.542	.00064	.00674
Stddev	.0057	.0030	.0003	.023	.00056	.00006
%RSD	13.91	2.151	.01711	.9113	87.135	.83458
#1	-.0448	-.1437	2.0300	2.526	.00104	.00670
#2	-.0367	-.1394	2.0305	2.558	.00025	.00678
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	204.70
Stddev	.69
%RSD	.33782
#1	204.21
#2	205.19

Method: 2010A Sample Name: ICVB1 ICP7-56-C Operator:
Comment:
Run Time: 07/20/10 09:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.024	.0142	.0074	.00582	.00012	2.003
Stddev	.003	.0085	.0004	.00031	.00002	.007
%RSD	.2948	59.59	5.928	5.3153	14.172	.3454
#1	1.022	.0202	.0071	.00604	.00011	1.998
#2	1.026	.0082	.0077	.00560	.00014	2.008
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	5.181	.0087	.0016	.0031	9.945
Stddev	.0001	.065	.0052	.0006	.0000	.012
%RSD	4.431	1.260	58.96	36.43	.0824	.1192
#1	.0025	5.135	.0051	.0020	.0031	9.937
#2	.0024	5.227	.0124	.0012	.0031	9.953
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107	4.9767	9.906	.0072	.0027	.0682
Stddev	.0014	.0083	.043	.0039	.0008	.0085
%RSD	12.58	.16576	.4298	54.91	30.20	12.46
#1	.0098	4.9709	9.876	.0099	.0021	.0622
#2	.0117	4.9826	9.936	.0044	.0032	.0743
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		10.000%	10.00%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123	.0021	.0643	4.991	.0003	.0041
Stddev	.0009	.0015	.0016	.034	.0001	.0014
%RSD	7.461	70.92	2.562	.6858	30.90	34.90
#1	.0116	.0032	.0655	4.967	.0004	.0051
#2	.0129	.0010	.0632	5.016	.0003	.0031
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				10.00%		

Sample Name: ICVB1 Run Time: 07/20/10 09:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.096	5.147	.00029	.0256	2.0414	1.9772
Stddev	.027	.029	.00139	.0026	.0066	.0155
%RSD	.5323	.5574	479.51	10.15	.32365	.78257
#1	5.076	5.127	-.00069	.0274	2.0367	1.9662
#2	5.115	5.167	.00127	.0238	2.0460	1.9881
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	203.01
Stddev	.21
%RSD	.10505
#1	202.86
#2	203.16

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/20/10 10:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	-.0093	.0058	-.00019	.00010
Stddev	.0030	.0048	.0065	.00001	.00000
%RSD	138.8	51.75	111.8	7.4664	4.0475
#1	-.0042	-.0059	.0105	-.00020	.00010
#2	.0000	-.0127	.0012	-.00018	.00010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0004	-.0063	.0016	-.0002
Stddev	.0010	.0000	.0015	.0007	.0008
%RSD	83.39	1.698	23.47	45.26	319.0
#1	.0019	.0004	-.0073	.0011	-.0008
#2	.0005	.0004	-.0052	.0021	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0055	.0086	.00216	.00195
Stddev	.0009	.0050	.0121	.00038	.00165
%RSD	49.21	90.69	141.5	17.595	84.612
#1	.0024	.0090	.0000	.00243	.00312
#2	.0012	.0020	.0171	.00189	.00078
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0010	.0208	.0000	-.0016
Stddev	.0013	.0003	.0060	.0027	.0030
%RSD	280.4	32.99	28.97	1120000.	180.1
#1	.0014	-.0008	.0165	.0019	.0004
#2	-.0004	-.0013	.0251	-.0019	-.0037
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: ICB Run Time: 07/20/10 10:02

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	.0023	-.0021	-.0004	-.0080
Stddev	.0025	.0056	.0013	.0006	.0030
%RSD	119.6	248.9	60.34	158.4	38.22
#1	-.0038	.0062	-.0012	.0000	-.0058
#2	-.0003	-.0017	-.0030	-.0008	-.0101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.00121	.0045	.00043	.00023
Stddev	.0020	.00034	.0040	.00011	.00008
%RSD	740.1	27.832	89.63	25.922	34.691
#1	.0012	-.00097	.0073	.00035	.00028
#2	-.0017	-.00145	.0016	.00051	.00017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	200.91
Stddev	1.05
%RSD	.52465
#1	200.17
#2	201.66

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 10:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.090	-.0023	.0127	2.4373	.04956	.0071
Stddev	.034	.0018	.0117	.0059	.00024	.0003
%RSD	.6687	79.11	92.07	.24082	.47860	4.826
#1	5.066	-.0010	.0210	2.4331	.04972	.0073
#2	5.114	-.0035	.0044	2.4414	.04939	.0069
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	25.60	.0043	-.0010	-.0010	25.19
Stddev	.0000	.23	.0006	.0005	.0011	.17
%RSD	.7282	.8854	14.68	50.99	113.0	.6648
#1	.0010	25.44	.0048	-.0014	-.0002	25.07
#2	.0010	25.77	.0039	-.0007	-.0017	25.31
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	25.28	4.976	-.0003	-.0028	10.02
Stddev	.0036	.00	.009	.0001	.0002	.03
%RSD	464.5	.0142	.1880	19.50	8.430	.2510
#1	-.0033	25.28	4.982	-.0004	-.0026	10.01
#2	.0018	25.28	4.969	-.0003	-.0029	10.04
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0118	-.0006	9.825	-.0030	.0028	.0005
Stddev	.0073	.0006	.003	.0046	.0036	.0009
%RSD	62.27	106.0	.0283	156.2	130.1	166.9
#1	-.0169	-.0010	9.827	.0003	.0002	-.0001
#2	-.0066	-.0001	9.823	-.0062	.0053	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 10:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.01	2.527	-.00025	.0125	.49922	.49564
Stddev	.03	.007	.00199	.0155	.00163	.00199
%RSD	.2956	.2693	797.10	124.5	.32594	.40193
#1	9.994	2.522	-.00166	.0015	.49806	.49423
#2	10.04	2.532	.00116	.0234	.50037	.49705
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	200.72
Stddev	.57
%RSD	.28596
#1	200.31
#2	201.12

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4934	2.491	2.475	.45736	.53068	.4993
Stddev	.0010	.020	.001	.00142	.00153	.0010
%RSD	.1927	.8036	.0298	.31066	.28746	.2060
#1	.4941	2.477	2.476	.45636	.52960	.4986
#2	.4927	2.505	2.475	.45837	.53176	.5001
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5118	2.508	.5089	.5096	.5038	.5236
Stddev	.0016	.003	.0043	.0004	.0001	.0079
%RSD	.3079	.1034	.8474	.0705	.0167	1.507
#1	.5107	2.506	.5059	.5094	.5039	.5292
#2	.5129	2.510	.5120	.5099	.5037	.5180
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.531	2.0612	.99946	1.010	.5094	5.030
Stddev	.010	.0890	.00748	.012	.0045	.026
%RSD	.3775	4.3164	.74795	1.204	.8772	.5105
#1	2.538	2.1241	.99417	1.001	.5062	5.011
#2	2.525	1.9983	1.0047	1.018	.5125	5.048
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.436	.4976	.4619	2.495	.5125	.5108
Stddev	.004	.0013	.0033	.022	.0031	.0043
%RSD	.1562	.2634	.7092	.8858	.6038	.8384
#1	2.433	.4967	.4596	2.480	.5103	.5078
#2	2.439	.4985	.4642	2.511	.5147	.5139
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 10:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0368	.2921	.50079	4.956	.50313	.49405
Stddev	.0034	.0022	.00363	.058	.00533	.00303
%RSD	9.331	.7471	.72472	1.167	1.0597	.61419
#1	-.0344	.2936	.49822	4.915	.49936	.49191
#2	-.0393	.2905	.50336	4.997	.50690	.49620
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	203.76
Stddev	.16
%RSD	.07906
#1	203.88
#2	203.65

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 10:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0205	.0081	-.0006	-.00026	.00006
Stddev	.0010	.0078	.0061	.00013	.00009
%RSD	4.907	97.48	983.9	47.545	164.02
#1	-.0212	.0136	-.0049	-.00017	.00012
#2	-.0198	.0025	.0037	-.00035	-.00001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0001	-.0054	-.0002	-.0001
Stddev	.0000	.0000	.0050	.0044	.0006
%RSD	3.502	64.62	92.46	2818.	692.6
#1	.0012	.0000	-.0090	-.0033	.0003
#2	.0012	.0001	-.0019	.0030	-.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0034	-.0023	.0012	-.00054	-.00028
Stddev	.0014	.0007	.0039	.00001	.00008
%RSD	41.83	31.67	335.1	1.0189	30.496
#1	.0024	-.0018	-.0016	-.00054	-.00022
#2	.0044	-.0028	.0039	-.00053	-.00034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0007	.0071	-.0090	-.0042
Stddev	.0033	.0005	.0014	.0046	.0036
%RSD	134.5	70.01	19.95	50.47	85.98
#1	.0048	.0011	.0061	-.0058	-.0016
#2	.0001	.0004	.0081	-.0123	-.0067
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/20/10 10:11

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.0008	.0007	-.0008	-.0006
Stddev	.0054	.0022	.0008	.0015	.0037
%RSD	218.1	297.0	108.9	189.9	577.4
#1	.0013	.0023	.0013	.0003	.0020
#2	-.0063	-.0008	.0002	-.0019	-.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.00211	.0008	-.00031	-.00002
Stddev	.0009	.00171	.0013	.00013	.00004
%RSD	114.4	81.043	171.9	40.358	168.14
#1	-.0015	-.00332	-.0002	-.00022	-.00005
#2	-.0002	-.00090	.0017	-.00040	.00000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	201.39
Stddev	.27
%RSD	.13462
#1	201.59
#2	201.20

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/20/10 10:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0438	.0482	.0842	.00486	.00458	.0505
Stddev	.0059	.0000	.0018	.00057	.00002	.0002
%RSD	13.50	.0607	2.140	11.672	.43948	.3351
#1	.0396	.0482	.0855	.00526	.00459	.0504
#2	.0479	.0481	.0829	.00445	.00456	.0507
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0503	.0050	.0097	.0106	.0250
Stddev	.0004	.0039	.0012	.0007	.0002	.0002
%RSD	8.409	7.679	25.03	7.546	2.084	.8262
#1	.0049	.0475	.0059	.0092	.0104	.0251
#2	.0055	.0530	.0041	.0102	.0108	.0248
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0525	.02119	.00495	.0090	.0216	.4340
Stddev	.0063	.00001	.00001	.0004	.0015	.0245
%RSD	12.04	.04852	.24752	4.613	7.008	5.649
#1	.0569	.02118	.00496	.0087	.0205	.4513
#2	.0480	.02120	.00495	.0093	.0227	.4166
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0833	.0100	.2297	.0360	.0088	.0103
Stddev	.0019	.0004	.0003	.0101	.0003	.0006
%RSD	2.263	4.229	.1100	28.07	3.377	5.929
#1	.0847	.0097	.2296	.0289	.0090	.0107
#2	.0820	.0103	.2299	.0432	.0086	.0099
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/20/10 10:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1660	.4040	.00893	.1692	.00994	.00931
Stddev	.0145	.0037	.00358	.0263	.00070	.00005
%RSD	8.738	.9222	40.106	15.52	7.0396	.56931
#1	.1762	.4013	.00640	.1506	.01044	.00928
#2	.1557	.4066	.01146	.1878	.00945	.00935
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	199.95
Stddev	.39
%RSD	.19714
#1	200.23
#2	199.67

Method: 2010A Sample Name: ICSA ICP7-64-B Operator:
Comment:
Run Time: 07/20/10 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	511.4	.0523	-.0093	-.00079	.00003	.0093
Stddev	.4	.0096	.0120	.00007	.00002	.0006
%RSD	.0756	18.36	129.3	9.2116	56.915	6.086
#1	511.1	.0591	-.0008	-.00074	.00004	.0089
#2	511.6	.0455	-.0178	-.00085	.00002	.0097
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	492.7	-.0006	-.0003	.0023	201.4
Stddev	.0005	3.9	.0023	.0005	.0016	.8
%RSD	5.364	.7818	362.0	189.5	69.93	.3814
#1	.0095	490.0	-.0022	-.0007	.0035	200.9
#2	.0103	495.5	.0010	.0001	.0012	202.0
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	517.8	.00446	.0016	-.0021	.0080
Stddev	.0171	.8	.00036	.0024	.0016	.0138
%RSD	1239.	.1534	7.9604	150.6	77.77	173.1
#1	.0134	517.3	.00421	.0033	-.0009	-.0018
#2	-.0107	518.4	.00472	-.0001	-.0033	.0178
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0176	-.0013	.1535	-.0149	-.0005	.0069
Stddev	.0036	.0008	.0176	.0049	.0010	.0009
%RSD	20.40	62.77	11.48	33.20	185.4	12.94
#1	.0201	-.0019	.1410	-.0114	.0002	.0075
#2	.0150	-.0007	.1659	-.0183	-.0012	.0063
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/20/10 10:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0246	-.0168	.01085	.1183	.01197	.01635
Stddev	.0139	.0002	.00014	.0058	.00001	.00003
%RSD	56.65	1.018	1.3099	4.915	.12188	.19588
#1	.0344	-.0167	.01095	.1141	.01196	.01637
#2	.0147	-.0169	.01075	.1224	.01198	.01633
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	184.73
Stddev	.12
%RSD	.06591
#1	184.64
#2	184.81

Method: 2010A Sample Name: ICSAB ICP7-61-B Operator:
Comment:
Run Time: 07/20/10 10:20 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.6	1.058	.0014	.45373	.52281	.0124
Stddev	2.8	.002	.0175	.00158	.00113	.0003
%RSD	.5486	.2254	1278.	.34882	.21656	2.229
#1	505.6	1.060	-.0110	.45261	.52201	.0126
#2	509.5	1.056	.0137	.45485	.52361	.0122
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9807	489.2	.4941	.4863	.4723	198.4
Stddev	.0088	.7	.0030	.0036	.0016	1.3
%RSD	.8989	.1480	.6059	.7350	.3488	.6438
#1	.9745	488.7	.4920	.4837	.4734	197.5
#2	.9870	489.7	.4962	.4888	.4711	199.3
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.003	519.2	.46405	-.0007	.9551	-.0556
Stddev	.016	.3	.00324	.0015	.0038	.0052
%RSD	1.559	.0636	.69878	212.6	.3952	9.358
#1	.9922	519.4	.46176	.0004	.9524	-.0593
#2	1.014	518.9	.46634	-.0017	.9578	-.0519
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096	.9754	.0258	-.0195	.5125	.9659
Stddev	.0061	.0004	.0013	.0034	.0032	.0088
%RSD	63.77	.0365	5.174	17.65	.6319	.9086
#1	.0140	.9751	.0268	-.0219	.5148	.9596
#2	.0053	.9757	.0249	-.0171	.5102	.9721
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/20/10 10:20

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0286	-.0148	.01162	.1029	.01221	.01690
Stddev	.0020	.0041	.00202	.0045	.00018	.00032
%RSD	6.875	27.76	17.402	4.342	1.5065	1.8808
#1	-.0300	-.0119	.01019	.0997	.01208	.01667
#2	-.0273	-.0177	.01304	.1060	.01234	.01712
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	186.49
Stddev	.42
%RSD	.22771
#1	186.79
#2	186.19

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/20/10 10:23 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.7	1.072	-.0011	.45801	.52784	.0090
Stddev	3.2	.008	.0022	.00071	.00035	.0026
%RSD	.6233	.7174	192.6	.15610	.06681	28.68
#1	505.5	1.077	.0004	.45751	.52760	.0072
#2	510.0	1.066	-.0026	.45852	.52809	.0108
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9890	488.0	.5029	.4900	.4695	200.7
Stddev	.0018	1.0	.0032	.0015	.0023	.3
%RSD	.1836	.1974	.6312	.2980	.4862	.1486
#1	.9877	487.3	.5051	.4889	.4712	200.5
#2	.9903	488.7	.5007	.4910	.4679	200.9
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.015	519.5	.46846	-.0013	.9629	-.0839
Stddev	.009	.2	.00041	.0000	.0010	.0124
%RSD	.8671	.0309	.08811	2.376	.1072	14.79
#1	1.021	519.6	.46817	-.0013	.9636	-.0926
#2	1.008	519.4	.46875	-.0013	.9622	-.0751
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.9763	.0256	-.0161	.5108	.9724
Stddev	.0157	.0059	.0021	.0031	.0064	.0071
%RSD	265.7	.6058	8.184	19.32	1.259	.7297
#1	-.0052	.9805	.0270	-.0183	.5062	.9673
#2	.0170	.9722	.0241	-.0139	.5153	.9774
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

BC 7/20/10

Sample Name: ICSAB Run Time: 07/20/10 10:23

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0178	.01280	.1486	.01218	.01803
Stddev	.0075	.0010	.00187	.0084	.00005	.00035
%RSD	592.0	5.521	14.580	5.666	.39024	1.9311
#1	-.0040	-.0171	.01412	.1426	.01215	.01828
#2	.0066	-.0185	.01148	.1546	.01222	.01779
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	184.51
Stddev	.15
%RSD	.08093
#1	184.40
#2	184.61

3C 7/20/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 10:26 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.211	.0058	.0029	2.4758	.05037	.0070
Stddev	.067	.0095	.0161	.0040	.00025	.0011
%RSD	1.278	165.3	546.2	.16369	.49535	16.22
#1	5.258	-.0010	.0143	2.4729	.05055	.0062
#2	5.164	.0125	-.0084	2.4787	.05019	.0078
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.66	.0043	-.0010	.0007	25.56
Stddev	.0002	.01	.0006	.0007	.0027	.00
%RSD	14.93	.0262	13.01	64.32	409.2	.0135
#1	.0014	25.66	.0039	-.0015	.0026	25.56
#2	.0017	25.65	.0047	-.0006	-.0013	25.55
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0053	25.44	5.034	.0001	-.0023	10.02
Stddev	.0000	.05	.008	.0001	.0009	.00
%RSD	.1023	.1844	.1549	80.35	36.99	.0428
#1	-.0053	25.48	5.029	.0000	-.0017	10.02
#2	-.0053	25.41	5.040	.0001	-.0029	10.03
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	.0004	9.868	-.0019	.0028	.0005
Stddev	.0100	.0025	.046	.0040	.0019	.0007
%RSD	74.63	566.5	.4673	215.1	68.41	130.6
#1	.0206	.0022	9.901	-.0047	.0041	.0010
#2	.0064	-.0013	9.835	.0010	.0014	.0000
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 10:26

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.10	2.543	.00106	.0257	.49908	.50340
Stddev	.05	.006	.00414	.0235	.00172	.00066
%RSD	.4912	.2531	390.84	91.48	.34379	.13182
#1	10.06	2.548	-.00187	.0091	.50029	.50387
#2	10.13	2.538	.00399	.0424	.49787	.50293
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	198.89
Stddev	.01
%RSD	.00399
#1	198.90
#2	198.88

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 10:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4844	2.486	2.479	.46378	.53883	.5008
Stddev	.0019	.041	.015	.00130	.00052	.0015
%RSD	.3880	1.644	.5918	.27934	.09597	.2998
#1	.4831	2.457	2.469	.46286	.53920	.4998
#2	.4858	2.515	2.490	.46470	.53847	.5019
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5143	2.531	.5177	.5163	.5034	.5358
Stddev	.0022	.013	.0010	.0019	.0012	.0103
%RSD	.4361	.5185	.2006	.3688	.2353	1.913
#1	.5127	2.522	.5185	.5150	.5043	.5431
#2	.5158	2.540	.5170	.5177	.5026	.5286
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.588	2.1282	1.0106	1.024	.5170	5.046
Stddev	.016	.0076	.0082	.014	.0036	.056
%RSD	.6146	.35858	.80786	1.343	.7043	1.114
#1	2.576	2.1228	1.0048	1.015	.5144	5.086
#2	2.599	2.1336	1.0163	1.034	.5196	5.006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.441	.5007	.4699	2.542	.5171	.5170
Stddev	.011	.0091	.0016	.004	.0042	.0011
%RSD	.4336	1.810	.3302	.1483	.8113	.2167
#1	2.449	.5071	.4710	2.544	.5141	.5162
#2	2.434	.4943	.4688	2.539	.5200	.5178
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 10:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0342	.2909	.51272	5.025	.50719	.50415
Stddev	.0082	.0022	.00168	.068	.00621	.00056
%RSD	23.86	.7555	.32712	1.345	1.2241	.11130
#1	-.0285	.2925	.51390	4.978	.51158	.50455
#2	-.0400	.2894	.51153	5.073	.50280	.50375
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	201.42
Stddev	.10
%RSD	.04733
#1	201.35
#2	201.48

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 10:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0064	.0127	.0024	-.00009	.00004
Stddev	.0089	.0084	.0017	.00012	.00007
%RSD	140.2	66.13	70.74	126.97	173.49
#1	-.0127	.0186	.0012	-.00018	.00009
#2	-.0001	.0067	.0037	-.00001	-.00001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0004	-.0054	.0037	.0003
Stddev	.0006	.0001	.0062	.0000	.0002
%RSD	73.34	20.34	114.3	.9505	90.34
#1	.0004	.0004	-.0010	.0036	.0004
#2	.0012	.0005	-.0098	.0037	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0003	.0044	-.00042	-.00012
Stddev	.0008	.0016	.0078	.00004	.00023
%RSD	248.2	474.2	178.9	9.2003	195.83
#1	.0008	.0008	-.0012	-.00044	.00004
#2	-.0002	-.0014	.0099	-.00039	-.00027
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0000	.0007	-.0174	-.0037
Stddev	.0004	.0003	.0168	.0000	.0030
%RSD	14.48	918.5	2400.	.0385	79.18
#1	.0031	.0002	.0126	-.0174	-.0058
#2	.0025	-.0002	-.0112	-.0174	-.0016
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/20/10 10:32

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.0069	-.0012	-.0006	-.0069
Stddev	.0045	.0054	.0029	.0007	.0081
%RSD	277.8	77.67	252.2	115.3	117.6
#1	-.0048	.0108	-.0032	-.0001	-.0012
#2	.0016	.0031	.0009	-.0011	-.0126
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.00049	-.0036	-.00051	-.00003
Stddev	.0005	.00149	.0077	.00020	.00004
%RSD	20.36	304.89	216.2	39.484	109.64
#1	-.0028	-.00056	-.0090	-.00037	-.00001
#2	-.0021	.00154	.0019	-.00065	-.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.64
Stddev	2.22
%RSD	1.1241
#1	196.07
#2	199.21

Method: 2010A Sample Name: K1006615-MB Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0025	.0021	.00011	.00000	.0009
#1	.0070	.0050	.0000	.00022	-.00001	.0018
#2	.0056	.0000	.0043	.00000	.00001	.0000

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0008	.0017	-.0006	-.0005	.0016
#1	-.0002	.0019	.0018	-.0007	-.0002	.0016
#2	.0001	-.0036	.0015	-.0004	-.0007	.0017

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	.00012	-.00030	.0005	.0003	.0083
#1	.0111	-.00019	-.00024	.0006	.0009	-.0143
#2	.0051	.00043	-.00035	.0004	-.0004	.0310

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	-.0027	.0027	.0168	-.0007	.0005
#1	.0019	-.0043	.0024	.0151	-.0026	.0006
#2	.0032	-.0010	.0029	.0186	.0011	.0005

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0122	.0069	-.00083	.0037	-.00004	-.00005
#1	.0107	.0071	-.00116	.0020	.00005	-.00005
#2	.0137	.0067	-.00050	.0054	-.00013	-.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	199.63
#1	198.65
#2	200.61

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.22	.4291	.4560	2.2823	.35026	.5729
#1	40.16	.4316	.4326	2.2877	.35091	.5748
#2	40.29	.4266	.4794	2.2769	.34961	.5711

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5328	53.46	.8384	1.125	1.302	84.07
#1	.5311	53.15	.8359	1.125	1.306	83.55
#2	.5345	53.77	.8410	1.126	1.298	84.59

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5444	19.70	2.7698	.3642	1.187	20.34
#1	.5401	19.69	2.7785	.3613	1.184	20.36
#2	.5488	19.72	2.7611	.3670	1.189	20.32

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.023	.4167	3.414	.7320	.9883	1.626
#1	1.037	.4169	3.424	.7379	.9904	1.622
#2	1.009	.4164	3.405	.7260	.9861	1.629

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.194	8.006	2.2229	1.392	.04231	.69523
#1	4.160	8.018	2.2265	1.392	.04200	.69807
#2	4.228	7.994	2.2193	1.392	.04262	.69239

Int. Std.	Sc3572
Units	Cts/S
Avg	201.58
#1	201.02
#2	202.15

Method: 2010A Sample Name: 500 ppm Fe Operator: JC
Comment: (209074) (072010A)
Run Time: 07/20/10 10:41 Type: Unk Mode: CONC Corr. Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4002	.0245	-.0093	.00342	.00005	.0615
#1	.4266	.0152	-.0064	.00352	.00011	.0627
#2	.3739	.0337	-.0122	.00332	-.00002	.0602

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0150	-.0348	.0000	-.0015	.0058	535.8
#1	.0158	-.0388	-.0032	-.0014	.0061	534.5
#2	.0141	-.0308	.0032	-.0016	.0056	537.1

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.00230	.00292	.0004	-.0005	-.1730
#1	.0052	.00239	.00313	.0008	-.0003	-.1830
#2	-.0035	.00220	.00271	.0000	-.0007	-.1631

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0130	-.0031	-.0008	.0016	-.0057	.0033
#1	.0043	-.0019	-.0018	.0046	-.0082	.0027
#2	-.0304	-.0043	.0002	-.0014	-.0032	.0039

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0335	-.0664	.01210	.0604	-.00052	-.00008
#1	.0366	-.0650	.01127	.0463	-.00040	-.00004
#2	.0304	-.0678	.01293	.0745	-.00063	-.00011

Int. Std.	Sc3572
Units	Cts/S
Avg	200.38
#1	199.79
#2	200.97

SC 7/20/10

Method: 2010A Sample Name: K1006615-006 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.12	.0051	.0209	.44153	.00196	.0178
#1	37.21	.0025	.0160	.44353	.00197	.0177
#2	37.03	.0076	.0258	.43953	.00195	.0178

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	30.75	.0276	.0190	.0410	54.77
#1	.0035	30.43	.0273	.0189	.0419	55.04
#2	.0026	31.07	.0280	.0191	.0401	54.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0258	15.43	1.7076	.0003	.0135	11.08
#1	.0216	15.47	1.7205	-.0003	.0141	11.08
#2	.0300	15.39	1.6947	.0009	.0129	11.09

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0022	1.272	.0149	.1123	.1152
#1	.0113	-.0033	1.272	.0109	.1124	.1153
#2	-.0055	-.0011	1.271	.0189	.1121	.1151

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.467	7.317	2.2043	.0336	.03694	.24792
#1	2.477	7.376	2.2235	.0250	.03701	.24962
#2	2.457	7.257	2.1851	.0421	.03687	.24622

Int. Std.	Sc3572
Units	Cts/S
Avg	208.89
#1	207.83
#2	209.96

Method: 2010A Sample Name: K1006615-006D Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.22	.0102	.0211	.47673	.00213	.0138
#1	38.17	.0052	.0294	.47589	.00209	.0135
#2	38.27	.0153	.0128	.47757	.00217	.0140

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	42.15	.0213	.0178	.0424	53.36
#1	.0027	41.98	.0207	.0173	.0434	53.29
#2	.0018	42.32	.0220	.0183	.0413	53.43

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0295	15.15	1.7098	.0012	.0126	10.36
#1	.0208	15.15	1.7153	.0009	.0127	10.42
#2	.0383	15.16	1.7044	.0016	.0124	10.30

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0055	-.0014	1.804	.0105	.1126	.1082
#1	.0035	-.0003	1.813	.0110	.1111	.1091
#2	-.0146	-.0024	1.794	.0100	.1141	.1073

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.542	6.526	1.8725	.0223	.03458	.34288
#1	2.529	6.559	1.8757	.0224	.03502	.34347
#2	2.556	6.492	1.8692	.0222	.03414	.34229

Int. Std.	Sc3572
Units	Cts/S
Avg	208.70
#1	208.24
#2	209.16

Method: 2010A Sample Name: K1006615-006L Operator: JC
Comment: 1/10 RD (209074) (072010A)
Run Time: 07/20/10 10:50 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.195	-.0017	-.0032	.08638	.00037	.0032
#1	7.199	-.0025	-.0028	.08652	.00035	.0032
#2	7.190	-.0008	-.0035	.08624	.00038	.0032

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	5.361	.0040	.0026	.0081	10.87
#1	.0004	5.361	.0035	.0023	.0076	10.90
#2	.0006	5.361	.0045	.0030	.0085	10.84

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	2.9304	.31928	.0003	.0013	2.176
#1	-.0016	2.9299	.31976	.0004	.0006	2.180
#2	.0056	2.9310	.31881	.0002	.0020	2.172

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0060	-.0006	.2661	.0000	.0144	.0212
#1	-.0099	.0002	.2654	-.0003	.0148	.0210
#2	-.0022	-.0013	.2668	.0004	.0140	.0214

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4369	1.406	.41887	.0111	.00735	.04614
#1	.4395	1.407	.41775	.0147	.00747	.04626
#2	.4343	1.405	.41999	.0075	.00722	.04602

Int. Std.	Sc3572
Units	Cts/S
Avg	207.90
#1	207.54
#2	208.26

Method: 2010A Sample Name: K1006615-006S Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.32	.2229	.4862	2.5365	.04819	.4314
#1	49.39	.2267	.4880	2.5401	.04849	.4317
#2	49.26	.2191	.4843	2.5329	.04790	.4311

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0528	52.76	.2280	.5091	.3011	57.54
#1	.0527	52.63	.2289	.5085	.3022	57.65
#2	.0528	52.89	.2272	.5098	.3000	57.43

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5205	23.16	2.4137	.4508	.4999	16.79
#1	.5164	23.16	2.4181	.4517	.5025	16.83
#2	.5246	23.16	2.4093	.4498	.4974	16.75

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4485	.0441	6.618	.0088	.5946	.6353
#1	.4401	.0423	6.648	.0147	.5950	.6375
#2	.4569	.0459	6.588	.0028	.5943	.6331

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.788	5.032	2.0224	.4924	.03931	.43962
#1	2.787	5.051	2.0344	.4973	.03962	.44149
#2	2.789	5.013	2.0104	.4876	.03900	.43775

Int. Std.	Sc3572
Units	Cts/S
Avg	208.08
#1	207.55
#2	208.62

Method: 2010A Sample Name: K1006615-001 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.63	.0048	.0833	.62917	.00182	.0137
#1	42.80	.0061	.0892	.63198	.00186	.0135
#2	42.46	.0035	.0774	.62635	.00178	.0138

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	14.55	.0312	.0257	.0916	62.14
#1	.0036	14.57	.0322	.0250	.0928	62.56
#2	.0034	14.53	.0301	.0263	.0903	61.72

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0360	13.18	2.5206	.0037	.0169	12.37
#1	.0333	13.25	2.5221	.0043	.0168	12.43
#2	.0387	13.11	2.5192	.0030	.0170	12.30

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.0023	.2250	.0039	.1155	.1719
#1	.0108	-.0023	.2274	.0013	.1150	.1739
#2	.0030	-.0022	.2225	.0065	.1160	.1699

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.649	7.444	3.2944	.0314	.04009	.15789
#1	2.676	7.563	3.3222	.0369	.04074	.15904
#2	2.622	7.325	3.2666	.0259	.03945	.15674

Int. Std.	Sc3572
Units	Cts/S
Avg	207.60
#1	207.16
#2	208.05

Method: 2010A Sample Name: K1006615-002 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.40	.0089	.0192	.59890	.00215	.0141
#1	49.10	.0144	.0145	.59539	.00217	.0151
#2	49.70	.0034	.0238	.60242	.00214	.0131

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	19.40	.0338	.0307	.0486	73.68
#1	.0024	19.30	.0327	.0304	.0485	73.56
#2	.0029	19.49	.0348	.0310	.0488	73.81

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0329	17.26	1.9580	.0013	.0198	14.02
#1	.0289	17.22	1.9530	.0019	.0195	13.99
#2	.0369	17.29	1.9630	.0006	.0202	14.06

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	-.0057	.2798	.0002	.1425	.1410
#1	.0054	-.0033	.2782	.0099	.1417	.1405
#2	-.0010	-.0081	.2815	-.0094	.1434	.1416

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.827	7.720	3.5410	.0278	.04440	.21025
#1	2.811	7.681	3.5344	.0321	.04453	.21013
#2	2.844	7.760	3.5477	.0235	.04427	.21036

Int. Std.	Sc3572
Units	Cts/S
Avg	209.58
#1	209.76
#2	209.39

Method: 2010A Sample Name: K1006615-003 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.81	.0021	.0031	.55437	.00182	.0132
#1	43.83	.0000	.0011	.54291	.00174	.0147
#2	43.79	.0043	.0051	.56583	.00189	.0117

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	20.88	.0288	.0253	.0400	69.08
#1	.0024	20.97	.0280	.0253	.0413	67.57
#2	.0022	20.80	.0296	.0252	.0387	70.60

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120	18.43	1.6559	.0008	.0172	12.22
#1	.0065	18.51	1.6210	-.0005	.0172	12.23
#2	.0175	18.36	1.6907	.0021	.0172	12.20

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0113	-.0038	.3119	.0066	.1370	.1182
#1	-.0185	-.0045	.3021	.0054	.1318	.1158
#2	-.0042	-.0031	.3217	.0077	.1423	.1206

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.148	7.020	3.5723	.0310	.04239	.20598
#1	2.143	7.048	3.4883	.0247	.04240	.20135
#2	2.152	6.992	3.6562	.0372	.04239	.21061

Int. Std.	Sc3572
Units	Cts/S
Avg	214.49
#1	219.47
#2	209.52

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 11:04 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.200	.0049	.0083	2.4886	.04914	.0033
Stddev	.018	.0060	.0113	.0123	.00005	.0003
%RSD	.3417	121.7	136.4	.49511	.10304	10.34
#1	5.187	.0091	.0163	2.4798	.04911	.0036
#2	5.212	.0007	.0003	2.4973	.04918	.0031
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	27.06	.0016	-.0012	-.0004	26.67
Stddev	.0004	.00	.0008	.0004	.0010	.01
%RSD	29.72	.0011	51.54	34.98	250.6	.0271
#1	.0011	27.06	.0010	-.0009	-.0011	26.67
#2	.0017	27.06	.0022	-.0015	.0003	26.68
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	25.35	4.974	-.0023	-.0033	9.917
Stddev	.0075	.07	.009	.0005	.0011	.120
%RSD	315.3	.2644	.1731	22.86	33.68	1.213
#1	.0077	25.39	4.968	-.0027	-.0025	10.00
#2	-.0029	25.30	4.980	-.0019	-.0040	9.832
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0022	9.863	-.0049	.0010	.0018
Stddev	.0055	.0034	.055	.0018	.0000	.0001
%RSD	434.3	150.7	.5613	37.22	4.107	5.885
#1	.0051	-.0046	9.903	-.0061	.0009	.0018
#2	-.0026	.0001	9.824	-.0036	.0010	.0017
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 11:04

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.527	.00237	.0174	.48063	.48480
Stddev	.01	.000	.00028	.0012	.00348	.00067
%RSD	.0686	.0019	12.005	6.917	.72471	.13816
#1	10.08	2.528	.00257	.0183	.48309	.48433
#2	10.09	2.527	.00217	.0166	.47816	.48528
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	200.20
Stddev	.68
%RSD	.33999
#1	200.68
#2	199.71

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 11:07 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5048	2.478	2.497	.45841	.51772	.4972
Stddev	.0448	.021	.009	.00101	.00044	.0017
%RSD	8.869	.8296	.3455	.22127	.08413	.3509
#1	.4732	2.463	2.491	.45770	.51803	.4960
#2	.5365	2.492	2.503	.45913	.51742	.4985
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5143	2.485	.5166	.5073	.5201	.5367
Stddev	.0001	.010	.0011	.0007	.0063	.0117
%RSD	.0222	.3956	.2188	.1378	1.204	2.179
#1	.5143	2.478	.5174	.5078	.5245	.5450
#2	.5144	2.492	.5158	.5068	.5156	.5284
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.486	1.9871	1.0135	1.007	.5096	5.031
Stddev	.011	.0060	.0020	.009	.0026	.012
%RSD	.4472	.30308	.19457	.8880	.5111	.2371
#1	2.478	1.9828	1.0121	1.001	.5077	5.039
#2	2.494	1.9913	1.0149	1.014	.5114	5.022
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404	.4966	.4680	2.417	.5095	.5126
Stddev	.047	.0019	.0022	.003	.0028	.0032
%RSD	1.957	.3808	.4707	.1292	.5581	.6307
#1	2.371	.4952	.4695	2.415	.5115	.5104
#2	2.437	.4979	.4664	2.420	.5075	.5149
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 11:07

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0176	.2880	.50013	5.008	.49174	.48184
Stddev	.0107	.0011	.00064	.063	.00304	.00093
%RSD	60.84	.3860	.12736	1.249	.61915	.19249
#1	-.0100	.2888	.49968	4.964	.49389	.48249
#2	-.0251	.2872	.50058	5.053	.48959	.48118
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	204.07
Stddev	.68
%RSD	.33379
#1	203.58
#2	204.55

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 11:10 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134	.0089	-.0009	.00017	.00002	.0010
Stddev	.0149	.0030	.0004	.00036	.00001	.0003
%RSD	111.5	33.93	46.69	204.20	51.013	34.00
#1	.0028	.0110	-.0012	-.00008	.00002	.0007
#2	.0239	.0067	-.0006	.00043	.00001	.0012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	-.0061	.0015	-.0003	-.0009	.0008
Stddev	.0001	.0071	.0004	.0001	.0011	.0006
%RSD	25.27	116.9	29.74	49.50	128.2	69.43
#1	.0002	-.0111	.0012	-.0002	-.0016	.0012
#2	.0003	-.0011	.0018	-.0004	-.0001	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00195	.00000	.0023	.0004	-.0033
Stddev	.0031	.00003	.00012	.0009	.0013	.0200
%RSD	488.7	1.5369	2553.0	37.96	299.2	613.3
#1	.0028	.00192	.00009	.0030	.0013	.0109
#2	-.0016	.00197	-.00008	.0017	-.0005	-.0174
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0049	-.0027	.0033	-.0007	-.0006
Stddev	.0201	.0000	.0033	.0090	.0031	.0004
%RSD	3137.	.0229	120.2	272.8	424.5	70.82
#1	.0136	-.0049	-.0051	.0097	.0014	-.0003
#2	-.0149	-.0049	-.0004	-.0031	-.0029	-.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/20/10 11:10

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0094	-.0040	-.00006	.0096	-.00015	.00003
Stddev	.0039	.0006	.00037	.0264	.00011	.00003
%RSD	41.53	16.16	566.80	275.5	76.486	93.896
#1	-.0121	-.0044	.00019	.0283	-.00022	.00001
#2	-.0066	-.0035	-.00032	-.0091	-.00007	.00005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.25
Stddev	.18
%RSD	.08931
#1	197.13
#2	197.38

Method: 2010A Sample Name: K1006615-004 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:13 Type: Unk Mode: CONC Cor.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.68	.0162	.1423	.45984	.00186	.0167
#1	40.82	.0153	.1424	.46121	.00190	.0163
#2	40.53	.0170	.1421	.45848	.00182	.0171

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	13.70	.0322	.0246	.1125	69.97
#1	.0047	13.60	.0319	.0248	.1140	70.32
#2	.0039	13.80	.0325	.0244	.1109	69.62

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0453	12.76	2.3054	.0025	.0129	11.86
#1	.0436	12.79	2.3134	.0014	.0125	11.97
#2	.0470	12.73	2.2974	.0035	.0133	11.76

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0076	.0001	.3471	.0125	.1515	.1819
#1	-.0199	.0015	.3514	.0086	.1548	.1819
#2	.0046	-.0012	.3429	.0165	.1481	.1819

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.398	9.767	2.6777	.0495	.03613	.13474
#1	2.368	9.863	2.7001	.0573	.03648	.13600
#2	2.428	9.670	2.6552	.0418	.03578	.13348

Int. Std.	Sc3572
Units	Cts/S
Avg	200.78
#1	199.68
#2	201.88

Method: 2010A Sample Name: K1006615-005 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	66.31	.0098	.0195	.55288	.00328	.0195
#1	66.06	.0027	.0198	.55238	.00325	.0193
#2	66.57	.0170	.0192	.55339	.00330	.0196

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	25.34	.0317	.0297	.0600	79.45
#1	.0038	25.25	.0302	.0296	.0576	79.38
#2	.0033	25.43	.0331	.0297	.0624	79.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0379	20.91	2.5599	.0024	.0181	16.04
#1	.0452	20.89	2.5492	.0015	.0176	15.98
#2	.0305	20.94	2.5706	.0033	.0186	16.10

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0061	-.0022	.8996	.0107	.1465	.1793
#1	-.0023	-.0012	.9029	.0230	.1453	.1776
#2	-.0100	-.0033	.8963	-.0017	.1477	.1810

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.729	7.402	3.0566	.0481	.05340	.21198
#1	2.733	7.388	3.0668	.0464	.05292	.21217
#2	2.726	7.416	3.0465	.0498	.05388	.21178

Int. Std.	Sc3572
Units	Cts/S
Avg	204.29
#1	203.88
#2	204.71

Method: 2010A Sample Name: K1006615-007 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.45	.0139	.0902	.50713	.00178	.0184
#1	41.29	.0118	.0794	.50516	.00176	.0187
#2	41.61	.0161	.1010	.50910	.00180	.0181

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	11.49	.0446	.0237	.0831	65.80
#1	.0038	11.42	.0465	.0239	.0846	65.65
#2	.0042	11.57	.0427	.0235	.0815	65.95

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0358	10.61	2.2829	.0027	.0187	8.716
#1	.0453	10.64	2.2768	.0024	.0187	8.738
#2	.0262	10.57	2.2891	.0030	.0187	8.693

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0110	-.0009	.3591	.0141	.1436	.1615
#1	-.0175	-.0051	.3643	.0158	.1450	.1598
#2	-.0046	.0033	.3540	.0125	.1423	.1633

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.883	9.199	2.2324	.0467	.03449	.12638
#1	1.871	9.820	2.2366	.0695	.03488	.12645
#2	1.894	8.579	2.2283	.0239	.03410	.12631

Int. Std.	Sc3572
Units	Cts/S
Avg	201.53
#1	201.35
#2	201.72

Method: 2010A Sample Name: K1006615-008 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.15	.0066	.0260	.40861	.00163	.0173
#1	34.99	.0100	.0245	.40830	.00168	.0174
#2	35.31	.0033	.0276	.40892	.00158	.0172

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031	13.85	.0494	.0213	.0414	62.22
#1	.0031	13.76	.0502	.0198	.0409	62.05
#2	.0030	13.93	.0487	.0228	.0420	62.39

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207	12.05	1.6432	.0030	.0225	7.378
#1	.0197	11.99	1.6448	.0037	.0215	7.378
#2	.0216	12.10	1.6415	.0023	.0236	7.377

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0097	-.0020	.8122	.0126	.1514	.1115
#1	-.0220	-.0022	.8154	.0109	.1541	.1111
#2	.0026	-.0019	.8090	.0143	.1487	.1119

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.917	7.079	1.9856	.0255	.03083	.17572
#1	1.920	7.072	1.9923	.0355	.03103	.17682
#2	1.913	7.086	1.9790	.0155	.03064	.17462

Int. Std.	Sc3572
Units	Cts/S
Avg	203.36
#1	202.87
#2	203.85

Method: 2010A Sample Name: K1006615-009 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	31.49	.0171	.0161	.93923	.00175	.0181
#1	31.38	.0079	.0241	.93752	.00165	.0167
#2	31.60	.0264	.0082	.94095	.00185	.0194

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	70.55	.0330	.0160	.0384	51.14
#1	.0030	70.03	.0319	.0157	.0391	50.98
#2	.0030	71.07	.0341	.0164	.0377	51.29

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	14.59	3.586	.0006	.0213	6.997
#1	.0138	14.55	3.582	.0007	.0218	6.999
#2	.0161	14.63	3.591	.0005	.0209	6.995

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	-.0003	1.406	.0138	.1251	.0974
#1	.0004	-.0003	1.409	.0119	.1253	.0969
#2	.0069	-.0003	1.403	.0158	.1248	.0979

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.036	9.828	1.8106	.0153	.03355	.22579
#1	2.034	9.800	1.8078	.0225	.03359	.22654
#2	2.037	9.856	1.8134	.0080	.03351	.22504

Int. Std.	Sc3572
Units	Cts/S
Avg	202.74
#1	202.43
#2	203.05

Method: 2010A Sample Name: K1006636-001 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.65	.0237	.1528	.50545	.00175	.0193
#1	37.57	.0152	.1498	.50710	.00176	.0192
#2	37.73	.0321	.1559	.50380	.00174	.0194

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	9.282	8.827	.0457	.0248	.1362
#1	.0054	9.307	8.828	.0469	.0250	.1381
#2	.0053	9.257	8.827	.0445	.0247	.1343

Elem	Fe2714	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	95.52	.0537	10.99	2.7612	.0033	.0175
#1	95.73	.0509	10.93	2.7634	.0028	.0188
#2	95.32	.0566	11.04	2.7589	.0038	.0162

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.65	.0041	-.0027	.1571	.0088	.1957
#1	10.65	.0099	-.0024	.1580	.0098	.1982
#2	10.66	-.0018	-.0030	.1562	.0079	.1931

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2095	2.285	7.047	2.7064	.0386	.03733
#1	.2106	2.310	7.060	2.7143	.0477	.03722
#2	.2083	2.260	7.035	2.6986	.0296	.03744

Elem	Sr4077
Units	ppm
Avg	.07660
#1	.07670
#2	.07651

Int. Std.	Sc3572
Units	Cts/S
Avg	206.21
#1	205.50
#2	206.92

Method: 2010A Sample Name: K1006636-002 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.18	.0178	.0307	.66544	.00275	.0225
#1	53.05	.0170	.0310	.66509	.00274	.0241
#2	53.30	.0186	.0305	.66578	.00277	.0208

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	13.04	.0480	.0285	.0551	97.76
#1	.0043	13.05	.0463	.0276	.0539	97.11
#2	.0043	13.02	.0497	.0294	.0562	98.41

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0345	13.83	2.8880	.0041	.0231	12.93
#1	.0294	13.83	2.8852	.0036	.0216	12.97
#2	.0396	13.82	2.8909	.0046	.0246	12.90

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0036	.2496	.0074	.1977	.1716
#1	.0096	-.0048	.2513	.0089	.1968	.1701
#2	-.0071	-.0024	.2478	.0059	.1986	.1732

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.287	7.406	3.1256	.0423	.04655	.10727
#1	2.263	7.456	3.1282	.0360	.04609	.10753
#2	2.311	7.356	3.1231	.0486	.04702	.10701

Int. Std.	Sc3572
Units	Cts/S
Avg	207.69
#1	207.69
#2	207.69

Method: 2010A Sample Name: K1006636-003 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	62.62	.0125	.0092	.64858	.00364	.0253
#1	62.69	.0079	.0086	.64781	.00370	.0236
#2	62.55	.0171	.0098	.64935	.00357	.0271

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	16.73	.0369	.0412	.0678	101.2
#1	.0045	16.73	.0377	.0413	.0699	101.4
#2	.0045	16.73	.0361	.0411	.0657	101.0

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0432	26.89	3.636	.0020	.0347	22.18
#1	.0419	26.87	3.640	.0027	.0342	22.22
#2	.0446	26.91	3.632	.0013	.0352	22.14

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0056	.3539	.0064	.1773	.2330
#1	.0040	-.0044	.3543	.0097	.1779	.2335
#2	-.0038	-.0067	.3535	.0030	.1766	.2324

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.684	6.485	4.1354	.0324	.07505	.12458
#1	2.707	6.505	4.1500	.0414	.07528	.12503
#2	2.662	6.465	4.1208	.0235	.07482	.12413

Int. Std.	Sc3572
Units	Cts/S
Avg	206.68
#1	206.66
#2	206.70

Method: 2010A Sample Name: K1006636-005 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	32.83	.0106	.1116	.47165	.00167	.0172
#1	32.74	.0169	.1091	.47126	.00166	.0170
#2	32.91	.0043	.1141	.47203	.00168	.0175

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054	9.096	8.783	.0328	.0190	.1175
#1	.0054	9.123	8.775	.0331	.0198	.1159
#2	.0054	9.069	8.790	.0325	.0183	.1190

Elem	Fe2714	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	67.52	.0675	10.47	2.1662	.0028	.0142
#1	67.36	.0710	10.43	2.1592	.0022	.0143
#2	67.67	.0641	10.50	2.1733	.0034	.0140

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.761	.0105	-.0023	.2037	.0136	.1363
#1	9.753	.0118	-.0032	.2029	.0181	.1341
#2	9.769	.0092	-.0014	.2045	.0090	.1385

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2221	1.962	6.955	2.5008	.0252	.03576
#1	.2240	1.946	6.981	2.5001	.0243	.03538
#2	.2202	1.978	6.928	2.5015	.0262	.03614

Elem	Sr4077
Units	ppm
Avg	.08038
#1	.08038
#2	.08037

Int. Std.	Sc3572
Units	Cts/S
Avg	203.75
#1	203.69
#2	203.80

Method: 2010A Sample Name: K1006636-006 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 11:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	40.33	.0131	.0345	.48326	.00213	.0205
#1	40.40	.0177	.0414	.48556	.00217	.0204
#2	40.26	.0085	.0277	.48097	.00210	.0206

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	10.84	.0335	.0236	.0543	73.38
#1	.0037	10.83	.0356	.0240	.0552	73.82
#2	.0042	10.86	.0314	.0233	.0533	72.94

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0382	14.42	1.9559	.0010	.0172	12.30
#1	.0375	14.43	1.9665	.0017	.0175	12.25
#2	.0388	14.41	1.9454	.0003	.0170	12.35

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0035	-.0046	.4842	.0160	.1394	.1510
#1	-.0003	-.0046	.4868	.0134	.1423	.1521
#2	-.0068	-.0046	.4816	.0186	.1365	.1500

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.937	6.842	3.1731	.0365	.04353	.10616
#1	1.928	6.863	3.1815	.0323	.04331	.10636
#2	1.947	6.820	3.1646	.0408	.04376	.10595

Int. Std.	Sc3572
Units	Cts/S
Avg	204.86
#1	204.23
#2	205.49

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 11:43 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.243	.0054	.0015	2.5152	.05066	.0050
Stddev	.012	.0065	.0061	.0024	.00029	.0005
%RSD	.2298	121.3	395.8	.09626	.57251	9.229
#1	5.235	.0008	-.0028	2.5135	.05046	.0053
#2	5.252	.0100	.0058	2.5169	.05087	.0047
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	26.70	.0041	-.0015	-.0010	26.72
Stddev	.0006	.02	.0001	.0004	.0027	.00
%RSD	29.44	.0841	2.136	23.15	271.2	.0084
#1	.0025	26.71	.0040	-.0013	.0009	26.72
#2	.0016	26.68	.0041	-.0018	-.0029	26.72
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.45	5.126	.0004	-.0024	10.02
Stddev	.0017	.02	.005	.0024	.0016	.00
%RSD	158.1	.0847	.0915	658.2	66.98	.0043
#1	.0023	25.47	5.123	.0021	-.0013	10.02
#2	-.0001	25.44	5.129	-.0014	-.0035	10.02
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0020	-.0004	10.04	-.0084	.0049	.0011
Stddev	.0009	.0051	.00	.0018	.0012	.0001
%RSD	46.61	1130.	.0169	20.77	24.03	9.126
#1	-.0013	.0031	10.04	-.0072	.0040	.0010
#2	-.0026	-.0040	10.04	-.0097	.0057	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 11:43

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.13	2.547	.00250	.0199	.48991	.50265
Stddev	.00	.001	.00111	.0040	.00136	.00069
%RSD	.0046	.0237	44.448	19.98	.27674	.13717
#1	10.13	2.547	.00171	.0227	.48895	.50313
#2	10.13	2.548	.00328	.0171	.49087	.50216
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	196.21
Stddev	.02
%RSD	.00871
#1	196.20
#2	196.22

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 11:46 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4935	2.471	2.477	.47020	.53884	.5001
Stddev	.0210	.024	.013	.00210	.00011	.0009
%RSD	4.249	.9732	.5262	.44559	.02040	.1748
#1	.4787	2.454	2.486	.46872	.53876	.4995
#2	.5083	2.488	2.468	.47169	.53892	.5007
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5241	2.518	.5273	.5236	.5106	Q .5553
Stddev	.0016	.002	.0020	.0029	.0032	.0076
%RSD	.3037	.0916	.3805	.5626	.6176	1.372
#1	.5229	2.516	.5259	.5216	.5083	.5607
#2	.5252	2.519	.5288	.5257	.5128	.5500
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.596	2.1295	1.0269	1.041	.5241	5.106
Stddev	.011	.0043	.0026	.011	.0053	.001
%RSD	.4383	.19969	.25122	1.060	1.016	.0209
#1	2.588	2.1265	1.0251	1.033	.5203	5.106
#2	2.604	2.1326	1.0287	1.048	.5279	5.107
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.434	.5043	.4817	2.558	.5248	.5255
Stddev	.008	.0015	.0004	.001	.0011	.0037
%RSD	.3388	.2952	.0824	.0219	.2021	.7133
#1	2.428	.5053	.4819	2.559	.5256	.5228
#2	2.440	.5032	.4814	2.558	.5241	.5281
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

7/23/10

Sample Name: CCVA Run Time: 07/20/10 11:46

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0271	.2973	.51655	5.100	.50320	.50630
Stddev	.0100	.0015	.00232	.025	.00279	.00086
%RSD	36.69	.5018	.44937	.4858	.55435	.17067
#1	-.0342	.2983	.51490	5.082	.50123	.50569
#2	-.0201	.2962	.51819	5.117	.50518	.50691
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	198.65
Stddev	.31
%RSD	.15589
#1	198.43
#2	198.87

Method: 2010A Sample Name: CCVA Perm Operator:
Comment:
Run Time: 07/20/10 11:54 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4845	2.471	2.505	.46836	.53450	.4984
Stddev	.0120	.006	.058	.00126	.00211	.0002
%RSD	2.478	.2561	2.315	.26966	.39414	.0441
#1	.4760	2.475	2.464	.46747	.53599	.4982
#2	.4930	2.466	2.546	.46925	.53301	.4985
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5249	2.443	.5254	.5200	.5140	.5125
Stddev	.0000	.002	.0010	.0014	.0075	.0009
%RSD	.0058	.0872	.1970	.2629	1.465	.1693
#1	.5249	2.444	.5262	.5190	.5087	.5131
#2	.5249	2.441	.5247	.5209	.5193	.5119
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.563	1.9655	1.0272	1.033	.5201	5.010
Stddev	.004	.0110	.0065	.004	.0018	.018
%RSD	.1585	.55806	.62972	.4364	.3541	.3538
#1	2.566	1.9577	1.0318	1.030	.5188	5.022
#2	2.560	1.9733	1.0226	1.036	.5214	4.997
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.417	.4962	.4778	2.504	.5203	.5208
Stddev	.006	.0040	.0081	.012	.0002	.0003
%RSD	.2328	.8077	1.692	.4902	.0472	.0609
#1	2.413	.4934	.4835	2.495	.5204	.5206
#2	2.421	.4990	.4721	2.512	.5201	.5211
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 11:54 Drum

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0190	.2847	.51836	5.086	.50058	.49814
Stddev	.0010	.0033	.00016	.043	.00195	.00188
%RSD	5.349	1.167	.03150	.8460	.38931	.37646
#1	-.0198	.2823	.51825	5.056	.50196	.49946
#2	-.0183	.2870	.51848	5.117	.49921	.49681
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	199.09
Stddev	1.24
%RSD	.62216
#1	198.22
#2	199.97

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 11:57 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0063	.0068	-.00033	-.00007	.0004
Stddev	.0020	.0042	.0026	.00006	.00004	.0001
%RSD	71.14	65.96	38.58	19.327	61.125	28.06
#1	.0042	.0093	.0086	-.00029	-.00004	.0004
#2	.0014	.0034	.0049	-.00038	-.00009	.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0090	.0031	-.0004	.0003	-.0030
Stddev	.0003	.0065	.0014	.0007	.0005	.0008
%RSD	143.9	72.24	45.14	155.0	176.6	25.97
#1	.0000	-.0136	.0040	.0000	.0007	-.0036
#2	.0004	-.0044	.0021	-.0009	-.0001	-.0025
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.00055	-.00032	.0010	.0003	-.0069
Stddev	.0006	.00005	.00006	.0001	.0012	.0044
%RSD	146.1	8.9987	19.310	14.34	347.6	63.31
#1	-.0008	-.00058	-.00028	.0011	.0012	-.0038
#2	.0000	-.00051	-.00037	.0009	-.0005	-.0100
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0026	-.0013	-.0005	.0043	-.0011	.0003
Stddev	.0046	.0055	.0016	.0004	.0019	.0007
%RSD	176.9	408.8	326.9	9.194	172.3	218.2
#1	.0006	.0025	.0006	.0046	-.0025	-.0002
#2	-.0058	-.0052	-.0016	.0040	.0002	.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/20/10 11:57

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	-.0015	-.00225	.0011	-.00011	-.00006
Stddev	.0033	.0010	.00032	.0092	.00026	.00000
%RSD	140.5	69.46	14.356	856.3	236.27	5.5076
#1	-.0047	-.0008	-.00248	.0076	-.00030	-.00005
#2	.0000	-.0022	-.00202	-.0055	.00007	-.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	198.36
Stddev	.58
%RSD	.29444
#1	197.95
#2	198.77

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 12:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 42.38	k .0164	k .0087	k 1.0300	k .00258	.0251
#1	k 42.26	k .0168	k .0000	k 1.0242	k .00255	.0250
#2	k 42.51	k .0160	k .0174	k 1.0359	k .00262	.0252

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	15.82	k .0336	k .0337	k .0498	79.05
#1	.0035	15.69	k .0348	k .0330	k .0513	78.53
#2	.0034	15.95	k .0324	k .0344	k .0484	79.58

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0307	k 19.56	2.915	k .0019	k .0273	15.49
#1	k .0264	k 19.53	2.927	k .0007	k .0266	15.45
#2	k .0349	k 19.60	2.903	k .0032	k .0280	15.53

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k -.0011	k -.0047	.9112	k .0146	k .1526	k .1508
#1	k .0002	k -.0059	.9128	k .0168	k .1534	k .1482
#2	k -.0023	k -.0035	.9096	k .0124	k .1518	k .1535

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.527	k 6.306	3.7174	k .0203	.05278	.18019
#1	k 2.515	k 6.300	3.7268	k .0148	.05247	.18042
#2	k 2.539	k 6.312	3.7080	k .0258	.05308	.17997

Int. Std.	Sc3572
Units	Cts/S
Avg	204.69
#1	204.64
#2	204.74

Sc mm Line Switch Change
SC 7/20/10

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 RD (209074) (072010A)
Run Time: 07/20/10 12:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.38	.0166	.0104	1.0303	.00233	.0251
#1	42.26	.0170	.0018	1.0244	.00230	.0250
#2	42.51	.0163	.0191	1.0362	.00236	.0252

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	15.82	.0328	.0337	.0500	79.05
#1	.0035	15.69	.0340	.0330	.0514	78.53
#2	.0034	15.95	.0317	.0344	.0485	79.58

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0357	19.55	2.915	.0028	.0273	15.49
#1	.0315	19.52	2.927	.0016	.0266	15.45
#2	.0400	19.59	2.903	.0040	.0280	15.53

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0047	.9112	.0146	.1526	.1513
#1	.0027	-.0059	.9128	.0168	.1534	.1487
#2	.0002	-.0035	.9096	.0124	.1518	.1539

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.540	6.313	3.7174	.0218	.05278	.18019
#1	2.528	6.307	3.7268	.0163	.05247	.18042
#2	2.552	6.319	3.7080	.0273	.05308	.17997

Int. Std.	Sc3572
Units	Cts/S
Avg	204.69
#1	204.64
#2	204.74

Method: 2010A Sample Name: RB Operator: JC
Comment: (209074) (072010A)
Run Time: 07/20/10 12:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	-.0160	.0055	-.00030	-.00003	-.0006
#1	.0282	-.0152	.0148	-.00036	.00001	-.0008
#2	-.0169	-.0169	-.0037	-.00025	-.00007	-.0004

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0098	.0023	-.0008	-.0005	.0264
#1	-.0001	-.0132	.0024	-.0005	.0005	.0480
#2	.0002	-.0065	.0022	-.0011	-.0016	.0049

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.00015	-.00005	-.0003	.0006	-.0208
#1	.0052	.00013	.00018	-.0009	.0005	-.0160
#2	.0048	-.00042	-.00028	.0003	.0007	-.0256

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	-.0046	-.0086	-.0036	-.0031	-.0002
#1	-.0084	-.0040	-.0063	-.0085	-.0044	-.0002
#2	-.0019	-.0052	-.0109	.0012	-.0018	-.0003

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0087	-.0039	-.00006	.0039	-.00006	-.00009
#1	-.0054	-.0007	.00044	.0113	-.00037	-.00012
#2	-.0121	-.0071	-.00057	-.0034	.00024	-.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	197.32
#1	198.23
#2	196.42

Method: 2010A Sample Name: K1007375-MB Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:07 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0078	-.0093	-.0012	-.00029	-.00008
#1	-.0127	-.0177	-.0080	-.00035	-.00005
#2	-.0028	-.0008	.0055	-.00024	-.00010

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0000	-.0029	-.0015	.0003
#1	.0009	-.0002	-.0057	-.0006	.0007
#2	.0006	.0001	-.0002	-.0023	-.0002

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0028	.0077	-.00052	-.00043
#1	.0013	.0033	.0075	-.00060	-.00043
#2	.0008	.0023	.0079	-.00043	-.00042

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0007	.0059	-.0013	-.0003
#1	-.0007	.0008	-.0024	-.0019	-.0031
#2	.0000	.0005	.0143	-.0006	.0025

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0046	.0095	-.0031	.0001	.0102
#1	.0067	.0137	-.0049	-.0006	.0091
#2	.0026	.0052	-.0013	.0009	.0114

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.00034	.0010	.00030	-.00005
#1	.0062	-.00088	.0000	.00048	-.00005
#2	.0076	.00156	.0019	.00012	-.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	199.13
#1	199.29
#2	198.98

Method: 2010A Sample Name: LCSW Operator: JC
Comment: 1/2 K1007375 (209074) (072010A)
Run Time: 07/20/10 12:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.074	.4641	.4719	2.1476	.05142	.5093
#1	2.070	.4633	.4578	2.1412	.05163	.5079
#2	2.078	.4649	.4860	2.1541	.05121	.5106

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0539	-.0048	.2270	.5527	.2547	1.092
#1	.0536	.0007	.2252	.5535	.2541	1.091
#2	.0543	-.0102	.2287	.5519	.2553	1.093

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5223	-.00029	.51766	.5292	.5524	.0007
#1	.5259	-.00035	.51706	.5295	.5533	-.0049
#2	.5188	-.00022	.51826	.5290	.5515	.0064

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4750	.0486	.0011	.0051	.5521	.5528
#1	.4705	.0486	.0002	.0082	.5536	.5507
#2	.4794	.0486	.0020	.0020	.5506	.5548

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0111	.0332	-.00016	.4553	-.00041	-.00004
#1	-.0093	.0335	-.00138	.4614	-.00068	-.00001
#2	-.0128	.0329	.00106	.4493	-.00013	-.00007

Int. Std.	Sc3572
Units	Cts/S
Avg	196.51
#1	195.58
#2	197.45

Method: 2010A Sample Name: K1007375-001 Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.02	.0046	.0153	.05107	.00010	.0085
#1	24.06	.0042	.0073	.05163	.00011	.0082
#2	23.98	.0050	.0233	.05052	.00010	.0087

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257	3.389	.0454	.0065	.0645	26.95
#1	.0254	3.389	.0455	.0053	.0656	27.02
#2	.0259	3.389	.0453	.0076	.0635	26.87

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3991	.61227	.18492	.0173	.0272	.8036
#1	.4081	.61275	.18535	.0180	.0273	.8024
#2	.3901	.61180	.18449	.0166	.0271	.8048

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0121	-.0023	1.010	.0284	.0054	13.74
#1	.0076	-.0020	1.019	.0236	.0052	13.77
#2	.0166	-.0026	1.001	.0333	.0055	13.72

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1321	1.384	.47838	.0434	.00328	.01669
#1	.1345	1.387	.48244	.0672	.00349	.01666
#2	.1296	1.382	.47431	.0196	.00307	.01672

Int. Std.	Sc3572
Units	Cts/S
Avg	194.16
#1	193.73
#2	194.60

Method: 2010A Sample Name: K1007375-001D Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.82	.0075	.0123	.05879	.00014	.0092
#1	24.75	-.0001	.0132	.05869	.00010	.0100
#2	24.89	.0151	.0114	.05888	.00017	.0084

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0246	3.394	.0638	.0058	.0682	25.09
#1	.0245	3.412	.0632	.0060	.0714	24.98
#2	.0247	3.377	.0645	.0056	.0649	25.21

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.070	.65166	.19669	.0212	.0321	.8910
#1	1.068	.65193	.19580	.0206	.0309	.8856
#2	1.071	.65140	.19759	.0217	.0333	.8964

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0138	-.0014	1.154	.0367	.0048	17.85
#1	-.0196	-.0011	1.160	.0377	.0049	17.79
#2	-.0079	-.0017	1.148	.0358	.0047	17.91

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1578	1.533	.55847	.0260	.00380	.01668
#1	.1599	1.543	.55404	.0327	.00413	.01669
#2	.1557	1.524	.56291	.0194	.00347	.01667

Int. Std.	Sc3572
Units	Cts/S
Avg	194.44
#1	194.12
#2	194.75

Method: 2010A Sample Name: K1007375-001S Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.72	.3683	.4936	2.1694	.05028	.5045
#1	26.73	.3576	.4825	2.1618	.05020	.5028
#2	26.71	.3789	.5047	2.1769	.05035	.5061

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0793	3.970	.2563	.5460	.3420	32.18
#1	.0793	3.937	.2534	.5424	.3403	32.04
#2	.0793	4.003	.2592	.5496	.3438	32.31

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.025	.72885	.75547	.5448	.5702	.8703
#1	1.040	.72965	.75526	.5404	.5694	.8549
#2	1.010	.72805	.75568	.5492	.5710	.8856

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4658	.0467	1.148	.0441	.5364	17.30
#1	.4580	.0421	1.149	.0461	.5370	17.18
#2	.4736	.0514	1.146	.0420	.5358	17.43

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1394	1.585	.63093	.5040	.00445	.01824
#1	.1432	1.590	.62966	.4945	.00442	.01837
#2	.1356	1.580	.63220	.5135	.00448	.01812

Int. Std.	Sc3572
Units	Cts/S
Avg	196.21
#1	196.23
#2	196.18

Method: 2010A Sample Name: K1007375-002 Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.868	k .0177	k .0084	2.5931	k .00001	k 1.851
#1	k 2.893	k .0160	k .0057	2.5851	k .00003	k 1.857
#2	k 2.843	k .0194	k .0112	2.6010	k .00000	k 1.846

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0169	102.0	k .0574	k .0028	k .6048	8.791
#1	k .0172	101.2	k .0575	k .0037	k .6040	8.756
#2	k .0166	102.8	k .0573	k .0019	k .6057	8.827

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.415	1.4047	k .10059	k .0011	k .0255	9.802
#1	k 2.398	1.4157	k .10029	k .0028	k .0261	9.839
#2	k 2.432	1.3937	k .10089	k -.0007	k .0249	9.765

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k -.0019	k -.0005	41.08	k .0414	k .0055	k 45.54
#1	k -.0071	k .0009	41.09	k .0363	k .0051	k 45.33
#2	k .0032	k -.0018	41.07	k .0465	k .0059	k 45.75

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .8728	k 2.273	.63363	k .3145	.01340	.12513
#1	k .8555	k 2.285	.63852	k .3098	.01381	.12587
#2	k .8902	k 2.261	.62874	k .3192	.01300	.12440

Int. Std.	Sc3572
Units	Cts/S
Avg	198.98
#1	199.03
#2	198.94

Std Fe line
Switch Point
Changed
JC 7/20/10

Method: 2010A Sample Name: K1007375-002 Operator: JC
Comment: 1/2 (209074) (072010A)
Run Time: 07/20/10 12:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.872	.0173	.0094	2.5931	.00000	1.843
#1	2.897	.0156	.0066	2.5851	.00002	1.849
#2	2.846	.0189	.0121	2.6010	-.00001	1.838

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0161	102.0	.0575	.0026	.6050	8.791
#1	.0164	101.2	.0576	.0035	.6042	8.756
#2	.0158	102.8	.0575	.0018	.6058	8.827

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.415	1.4047	.10050	.0012	.0261	9.802
#1	2.398	1.4157	.10020	.0029	.0267	9.839
#2	2.433	1.3937	.10080	-.0006	.0256	9.765

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0005	41.08	.0418	.0055	45.54
#1	-.0064	.0009	41.09	.0367	.0051	45.33
#2	.0040	-.0018	41.07	.0469	.0059	45.75

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9185	2.273	.63363	.3161	.01340	.12513
#1	.9011	2.285	.63852	.3114	.01381	.12587
#2	.9360	2.261	.62874	.3208	.01300	.12440

Int. Std.	Sc3572
Units	Cts/S
Avg	198.98
#1	199.03
#2	198.94

Method: 2010A Sample Name: RB Operator: JC
Comment: (209074) (072010A)
Run Time: 07/20/10 12:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	-.0080	.0080	-.00018	-.00016
#1	-.0085	-.0110	.0111	-.00005	-.00016
#2	.0042	-.0051	.0049	-.00032	-.00015

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0002	-.0027	.0035	-.0012
#1	.0001	.0000	-.0031	.0050	-.0008
#2	.0007	.0003	-.0023	.0021	-.0016

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0017	-.0012	-.00053	-.00040
#1	-.0002	-.0003	.0004	-.00050	-.00049
#2	.0004	-.0031	-.0028	-.00056	-.00031

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.0010	.0021	-.0084	-.0009
#1	-.0017	-.0009	.0123	-.0110	.0013
#2	.0012	-.0010	-.0081	-.0058	-.0031

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0086	-.0040	-.0014	.0034	-.0042
#1	-.0111	-.0034	-.0020	.0059	.0000
#2	-.0062	-.0046	-.0009	.0008	-.0084

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	-.00333	.0059	-.00048	-.00006
#1	-.0024	-.00290	-.0016	-.00024	-.00009
#2	-.0023	-.00375	.0134	-.00073	-.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	196.84
#1	197.04
#2	196.64

Method: 2010A Sample Name: K1007297-MB Operator: JC
Comment: Millipore (209074) (072010A)
Run Time: 07/20/10 12:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	-.0127	.0025	-.00037	-.00008	.0022
#1	.0057	-.0194	.0025	-.00049	-.00005	.0027
#2	.0028	-.0060	.0025	-.00025	-.00011	.0018

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0048	.0029	-.0005	-.0015	.0114
#1	-.0006	.0040	.0024	.0002	.0001	.0117
#2	.0003	.0057	.0034	-.0011	-.0032	.0110

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.00018	-.00026	-.0012	.0012	.0158
#1	.0157	-.00030	-.00038	-.0010	.0012	.0191
#2	-.0020	-.00007	-.00013	-.0014	.0012	.0126

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0123	-.0036	.0155	.0274	-.0024	.0002
#1	-.0136	-.0064	.0144	.0271	-.0018	.0004
#2	-.0110	-.0007	.0165	.0278	-.0030	.0000

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0226	.0222	.00014	-.0035	-.00020	-.00007
#1	.0233	.0229	-.00032	-.0052	.00002	-.00005
#2	.0219	.0214	.00059	-.0017	-.00043	-.00009

Int. Std.	Sc3572
Units	Cts/S
Avg	196.96
#1	195.41
#2	198.52

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/20/10 12:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.145	-.0043	.0050	2.5881	.05081	.0038
Stddev	.022	.0012	.0039	.0035	.00013	.0008
%RSD	.4268	28.27	78.62	.13632	.24628	19.70
#1	5.129	-.0052	.0078	2.5906	.05072	.0044
#2	5.160	-.0035	.0022	2.5856	.05090	.0033
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	27.40	.0030	-.0020	-.0035	27.24
Stddev	.0002	.02	.0008	.0002	.0000	.05
%RSD	9.157	.0612	28.02	8.161	.0601	.1810
#1	.0023	27.38	.0024	-.0019	-.0035	27.27
#2	.0026	27.41	.0036	-.0021	-.0036	27.20
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	25.52	5.169	.0000	-.0034	9.948
Stddev	.0042	.02	.021	.002	.0004	.081
%RSD	97.64	.0676	.3982	73920.	11.02	.8110
#1	-.0013	25.51	5.183	-.0014	-.0031	9.891
#2	-.0073	25.53	5.154	.0014	-.0036	10.01
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0018	10.09	-.0022	.0034	.0003
Stddev	.0064	.0006	.07	.0075	.0011	.0001
%RSD	989.1	35.38	.6967	337.4	31.94	46.32
#1	-.0052	-.0013	10.04	.0031	.0042	.0004
#2	.0039	-.0022	10.14	-.0076	.0026	.0002
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/20/10 12:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.20	2.553	.00197	.0078	.48388	.50098
Stddev	.01	.005	.00214	.0185	.00389	.00083
%RSD	.0778	.1964	108.54	237.3	.80420	.16526
#1	10.21	2.556	.00046	.0209	.48113	.50039
#2	10.20	2.549	.00348	-.0053	.48663	.50156
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	196.24
Stddev	.33
%RSD	.16879
#1	196.48
#2	196.01

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/20/10 12:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4852	2.502	2.534	.47885	.53897	.5019
Stddev	.0129	.032	.014	.00423	.00299	.0000
%RSD	2.653	1.277	.5560	.88239	.55441	.0058
#1	.4761	2.480	2.544	.47586	.53686	.5020
#2	.4943	2.525	2.524	.48184	.54109	.5019
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5389	2.513	.5370	.5295	.5218	.5318
Stddev	.0050	.018	.0018	.0057	.0012	.0070
%RSD	.9325	.7050	.3322	1.078	.2324	1.310
#1	.5353	2.501	.5358	.5254	.5227	.5368
#2	.5425	2.526	.5383	.5335	.5210	.5269
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.631	1.9911	1.0551	1.057	.5306	5.081
Stddev	.028	.0032	.0082	.019	.0043	.017
%RSD	1.067	.16257	.77414	1.791	.8172	.3367
#1	2.611	1.9934	1.0493	1.043	.5275	5.093
#2	2.651	1.9888	1.0609	1.070	.5337	5.069
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.431	.4990	.4915	2.562	.5289	.5364
Stddev	.037	.0034	.0039	.036	.0064	.0050
%RSD	1.518	.6777	.8023	1.395	1.207	.9241
#1	2.405	.5014	.4942	2.536	.5244	.5329
#2	2.457	.4966	.4887	2.587	.5334	.5399
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/20/10 12:34

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0236	.2876	.52207	5.227	.49816	.49975
Stddev	.0035	.0019	.00056	.081	.00193	.00280
%RSD	14.98	.6695	.10782	1.557	.38657	.56052
#1	-.0211	.2889	.52247	5.169	.49952	.49777
#2	-.0261	.2862	.52167	5.284	.49679	.50173
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	197.90
Stddev	1.18
%RSD	.59767
#1	198.74
#2	197.07

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/20/10 12:37 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	.0153	.0083	-.00017	.00001	.0001
Stddev	.0020	.0096	.0030	.00059	.00002	.0008
%RSD	35.30	62.88	36.71	349.52	196.52	938.1
#1	.0070	.0220	.0061	.00025	.00002	-.0005
#2	.0042	.0085	.0104	-.00059	.00000	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0069	-.0006	.0005	.0015	-.0020
Stddev	.0004	.0000	.0001	.0004	.0009	.0009
%RSD	468.3	.0003	10.03	72.78	59.47	43.72
#1	.0004	-.0069	-.0007	.0003	.0008	-.0014
#2	-.0002	-.0069	-.0006	.0008	.0021	-.0027
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	-.00043	-.00022	.0040	.0002	.0018
Stddev	.0071	.00001	.00004	.0028	.0004	.0032
%RSD	4705.	2.5041	17.246	71.49	183.6	174.4
#1	.0049	-.00043	-.00019	.0060	-.0001	-.0004
#2	-.0052	-.00044	-.00025	.0020	.0005	.0041
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	-.0007	.0032	-.0007	-.0001	-.0008
Stddev	.0064	.0000	.0013	.0052	.0034	.0005
%RSD	123.8	.3143	39.73	780.2	4186.	67.31
#1	-.0097	-.0007	.0023	.0030	.0023	-.0012
#2	-.0006	-.0007	.0041	-.0043	-.0025	-.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/20/10 12:37

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0086	-.0018	.00103	.0042	-.00045	.00000
Stddev	.0003	.0005	.00094	.0081	.00044	.00003
%RSD	4.051	25.19	91.641	191.2	98.946	549.85
#1	-.0083	-.0022	.00036	-.0015	-.00013	-.00001
#2	-.0088	-.0015	.00170	.0099	-.00076	.00002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	195.17
Stddev	.67
%RSD	.34427
#1	195.65
#2	194.70

Service Request # K1006636 (HNO3)_____
Calibration _____072710D_____
QC in calibration__072710D_____
QC Service Request K1006615_____
STARLIMS Batch # 210137_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments:

Primary Review by _____ Date 7/27/10
Secondary Review by JoB Date 7/28/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Blk	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	7	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	LCSW K1006615 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006615-006 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	LCSW K1006676 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	K1006676-018 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	3	5	145
43	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	1	3	6	145
44	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
45	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
46	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	3	145
55	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	1	4	4	145
56	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
57	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
58	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
67	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
68	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
69	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	LCSW K1006777 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006777-005 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
78	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	11	145
79	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
80	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
81	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	K1006777-013 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
90	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
91	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
92	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
93	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	CCV9	Unknown	0 kg	0 ml	1.00	0	1	2	145
97	CCB9	Unknown	0 kg	0 ml	1.00	0	1	1	145

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80

ExCell Mass Calibration Date: 7/27/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1297	0.715	-0.001	TRUE	
7.016	1550	0.766	0.005	TRUE	Li-7
9.012	2051	0.715	0.032	TRUE	Be-9
23.985	5871	0.715	-0.012	TRUE	Mg-24
24.986	6131	0.715	-0.033	TRUE	Co-59
25.983	6378	0.715	-0.007	TRUE	In-115
26.982	6638	0.715	-0.03	TRUE	Ce-140
43.956	10953	0.766	-0.013	TRUE	Pb-208
45.953	11460	0.766	-0.008	TRUE	Bi-209
51.94	12981	0.766	0.004	TRUE	U-238
53.949	13488	0.766	0.02	TRUE	
55.935	13950	0.409	0.191	FALSE	
56.935	14255	0.766	-0.007	TRUE	
57.934	14502	0.766	0.022	TRUE	
58.933	14762	0.766	-0.001	TRUE	
59.931	15009	0.766	0.027	TRUE	
65.926	16537	0.817	0.019	TRUE	
69.925	17557	0.766	0.012	TRUE	
75.92	19091	0.766	-0.018	TRUE	
112.904	28504	0.765	0.006	TRUE	
114.904	29011	0.765	0.015	TRUE	
118.903	30064	0.765	-0.119	FALSE	
139.905	35388	0.714	-0.011	TRUE	
141.908	35901	0.765	-0.021	TRUE	
155.923	39470	0.714	-0.008	TRUE	
205.974	52229	0.663	0.007	TRUE	
206.976	52489	0.663	-0.01	TRUE	
207.977	52743	0.713	-0.005	TRUE	
208.98	52996	0.663	0.007	TRUE	
238.051	60413	0.611	0.009	TRUE	

Excluded In Calib | Excluded In Results | Peak Top Defined | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	6Li	7Li	9Be	59Co	115In	208Pb
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)0.833	(P)39327.559	(P)9811.035	(P)67039.274	(P)76502.298	(P)33178.985
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)0.167	(P)39103.111	(P)9514.667	(P)66322.439	(P)76624.967	(P)33653.428
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)0.667	(P)38334.197	(P)9542.019	(P)65835.204	(P)76336.600	(P)33757.674
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)0.500	(P)37799.945	(P)9229.314	(P)65155.255	(P)76773.425	(P)34351.085
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)0.167	(P)38073.342	(P)9374.242	(P)64549.011	(P)76572.176	(P)33980.700
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)0.467	(P)38527.631	(P)9494.255	(P)65780.237	(P)76561.893	(P)33784.374
	SD of Stability 07-27-20		(P)0.298	(P)660.376	(P)216.590	(P)973.229	(P)160.576	(P)431.295
	%RSD of Stability 07		(P)63.888	(P)1.714	(P)2.281	(P)1.480	(P)0.210	(P)1.277

Run	Label	TimeStamp	209Bi	232Th	238U
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)51754.918	(P)0.000	(P)56579.869
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)51684.833	(P)0.167	(P)57396.617
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)52516.523	(P)0.167	(P)58113.671
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)52575.914	(P)0.167	(P)58425.955
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)52335.358	(P)0.333	(P)58743.726
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)52173.509	(P)0.167	(P)57851.968
	SD of Stability 07-27-20		(P)424.207	(P)0.118	(P)868.729
	%RSD of Stability 07		(P)0.813	(P)70.711	(P)1.502

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:16					
Arsenic	75	0.0043	0.0083	-0.0126	**0**	0.0111	0
Selenium	77	-0.0264	-0.0253	0.0517	**0**	0.0447	0
Selenium	78	-0.0267	-0.0503	0.077	**0**	0.0677	0
Selenium	82	-0.0399	0.0576	-0.0177	**0**	0.0511	0
Thallium	203	-0.0003	-0.0036	0.0038	**0**	0.0037	0
Thallium	205	-0.0003	-0.0011	0.0014	**0**	0.0013	0
Uranium	238	-0.0021	-0.0015	0.0036	**0**	0.0031	0

Internal Standard Factors:

Rhodium	103	1.016	0.992	0.992	**1.016**	n/a	n/a
Lutetium	175	1.017	0.99	0.994	**1.017**	n/a	n/a
Gold	197	1.011	1.007	0.982	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:26					
Arsenic	75	24.94	25.17	24.89	**25**	0.1484	0.5935
Selenium	77	24.6	25	25.39	**25**	0.3967	1.587
Selenium	78	24.9	25.09	25.02	**25**	0.0968	0.387
Selenium	82	25.34	25.15	24.51	**25**	0.4382	1.753
Thallium	203	24.81	24.75	25.45	**25**	0.3889	1.556
Thallium	205	24.79	24.84	25.37	**25**	0.3243	1.297
Uranium	238	25.09	24.67	25.24	**25**	0.2963	1.185

Internal Standard Factors:

Rhodium	103	0.966	0.964	0.957	**0.966**	n/a	n/a
Lutetium	175	0.976	0.963	0.972	**0.976**	n/a	n/a
Gold	197	0.973	0.97	0.968	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:28					
Arsenic	75	24.32	23.95	24.32	**24.2**	0.2139	0.884
Selenium	77	24.77	24.51	24.46	**24.58**	0.165	0.6714
Selenium	78	24.51	24.14	24.6	**24.41**	0.2432	0.9963
Selenium	82	24.21	24.21	24.55	**24.32**	0.194	0.7977
Thallium	203	25.82	25.7	25.53	**25.68**	0.1463	0.5695
Thallium	205	25.95	25.99	25.47	**25.8**	0.29	1.124
Uranium	238	24.27	24.17	24.28	**24.24**	0.0611	0.2519

Internal Standard Factors:

Rhodium	103	0.995	0.972	0.981	**0.995**	n/a	n/a
Lutetium	175	0.986	0.981	0.981	**0.986**	n/a	n/a
Gold	197	0.964	0.976	0.969	**0.964**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:31					
Arsenic	75	25.14	25.06	24.96	**25.06**	0.0902	0.3599
Selenium	77	25.34	25.44	25.59	**25.46**	0.1279	0.5023
Selenium	78	25.76	25.06	25.15	**25.32**	0.38	1.501
Selenium	82	25.62	25.42	25.07	**25.37**	0.2761	1.088
Thallium	203	24.37	24.86	26	**25.08**	0.8399	3.349
Thallium	205	24.45	24.67	26.12	**25.08**	0.9071	3.617
Uranium	238	25.75	24.63	25.03	**25.14**	0.5679	2.259

Internal Standard Factors:

Rhodium	103	0.976	0.964	0.961	**0.976**	n/a	n/a
Lutetium	175	1.001	0.97	0.969	**1.001**	n/a	n/a
Gold	197	0.976	0.966	0.975	**0.976**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:36					
Arsenic	75	0.0572	0.0112	0.0028	**0.0238**	0.0293	123.2
Selenium	77	-0.0437	-0.0148	-0.0973	**-0.0519**	0.0419	80.68
Selenium	78	0.0599	0.0219	0.1312	**0.071**	0.0555	78.15
Selenium	82	0.101	0.0188	-0.0547	**0.0217**	0.0779	358.9
Thallium	203	0.0023	0.001	-0.0007	**0.0009**	0.0015	175.1
Thallium	205	0.0032	0.0018	0.0007	**0.0019**	0.0012	65.54
Uranium	238	0.0009	-0.0006	-0.0011	**-0.0002**	0.0011	436.2

Internal Standard Factors:							
Rhodium	103	0.989	0.973	0.97	**0.989**	n/a	n/a
Lutetium	175	1.004	1.007	0.994	**1.004**	n/a	n/a
Gold	197	1.01	0.986	0.987	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:38					
Arsenic	75	0.0584	0.0304	-0.0052	**0.0279**	0.0319	114.3
Selenium	77	-0.2539	-0.1072	-0.0985	**-0.1532**	0.0874	57.01
Selenium	78	0.2177	0.2093	0.1286	**0.1852**	0.0492	26.57
Selenium	82	0.03	0.0576	-0.0661	**0.0072**	0.0649	902.5
Thallium	203	-0.0019	-0.0023	-0.0036	**-0.0026**	0.0009	33.62
Thallium	205	-0.0026	-0.0003	-0.0011	**-0.0014**	0.0012	84.61
Uranium	238	-0.0024	-0.0004	-0.0008	**-0.0012**	0.0011	90.58

Internal Standard Factors:

Rhodium	103	0.986	0.965	0.969	**0.986**	n/a	n/a
Lutetium	175	1.004	0.98	0.973	**1.004**	n/a	n/a
Gold	197	0.998	0.993	0.979	**0.998**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/27/10 17:44					
Arsenic	75	1.105	1.082	1.005	**1.064**	0.0522	4.905
Selenium	77	1.952	2.043	1.832	**1.942**	0.1057	5.441
Selenium	78	2.48	2.082	2.146	**2.236**	0.2136	9.552
Selenium	82	2.081	2.123	2.114	**2.106**	0.0224	1.064
Thallium	203	0.0394	0.042	0.0427	**0.0413**	0.0018	4.246
Thallium	205	0.0435	0.041	0.0406	**0.0417**	0.0016	3.763
Uranium	238	0.0397	0.0397	0.0405	**0.04**	0.0005	1.171

Internal Standard Factors:

Rhodium	103	0.974	0.954	0.94	**0.974**	n/a	n/a
Lutetium	175	0.993	0.965	0.972	**0.993**	n/a	n/a
Gold	197	0.983	0.98	0.971	**0.983**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/27/10 17:47					
Arsenic	75	-0.0246	0.0604	0.071	**0.0356**	0.0524	147
Selenium	77	2.831	2.798	2.591	**2.74**	0.13	4.744
Selenium	78	1.416	1.3	1.13	**1.282**	0.1438	11.22
Selenium	82	-0.0735	0.179	0.0907	**0.0654**	0.1281	195.9
Thallium	203	0.0215	0.0242	0.0192	**0.0216**	0.0025	11.69
Thallium	205	0.0232	0.0217	0.0208	**0.0219**	0.0012	5.537
Uranium	238	-0.0065	-0.0037	-0.0065	**-0.0056**	0.0016	29.29

Internal Standard Factors:

Rhodium	103	1.171	1.174	1.189	**1.171**	n/a	n/a
Lutetium	175	1.093	1.108	1.113	**1.093**	n/a	n/a
Gold	197	1.117	1.111	1.146	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/27/10 17:50					
Arsenic	75	26.33	26.08	26.48	**26.3**	0.1986	0.7554
Selenium	77	28.83	28.11	28.6	**28.52**	0.3672	1.288
Selenium	78	26.7	26.2	27.37	**26.76**	0.5914	2.21
Selenium	82	25.72	25.35	26.71	**25.93**	0.7072	2.728
Thallium	203	0.0259	0.031	0.0305	**0.0291**	0.0028	9.631
Thallium	205	0.0322	0.0312	0.0305	**0.0313**	0.0009	2.756
Uranium	238	0.0247	0.0245	0.0237	**0.0243**	0.0005	2.181

Internal Standard Factors:

Rhodium	103	1.194	1.202	1.22	**1.194**	n/a	n/a
Lutetium	175	1.11	1.135	1.138	**1.11**	n/a	n/a
Gold	197	1.141	1.156	1.167	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 17:53					
Arsenic	75	0.0073	-0.0133	0.0059	**0**	0.0115	38330
Selenium	77	-0.196	-0.1605	-0.0747	**-0.1437**	0.0623	43.38
Selenium	78	0.6472	0.5157	0.6149	**0.5926**	0.0685	11.57
Selenium	82	0.0027	-0.0084	0.1441	**0.0462**	0.085	184.2
Thallium	203	-0.0092	-0.0091	-0.0094	**-0.0092**	0.0001	1.375
Thallium	205	-0.008	-0.0084	-0.0085	**-0.0083**	0.0003	3.122
Uranium	238	-0.008	-0.0075	-0.0079	**-0.0078**	0.0003	3.324

Internal Standard Factors:

Rhodium	103	1.06	1.037	1.032	**1.06**	n/a	n/a
Lutetium	175	1.04	1.024	1.027	**1.04**	n/a	n/a
Gold	197	1.16	1.128	1.107	**1.16**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/27/10 17:56					
Arsenic	75	8.659	8.519	8.529	**8.569**	0.0778	0.9078
Selenium	77	19.58	19.12	19.35	**19.35**	0.2309	1.193
Selenium	78	18.81	19.19	19	**19**	0.1872	0.9853
Selenium	82	19.42	18.72	19.09	**19.08**	0.3482	1.825
Thallium	203	27.26	26.8	27.42	**27.16**	0.3243	1.194
Thallium	205	27.06	26.91	27.69	**27.22**	0.4172	1.533
Uranium	238	0.1566	0.1592	0.1626	**0.1595**	0.003	1.888

Internal Standard Factors:							
Rhodium	103	1.023	0.999	1.001	**1.023**	n/a	n/a
Lutetium	175	0.996	0.997	1.008	**0.996**	n/a	n/a
Gold	197	1.08	1.061	1.053	**1.08**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSW K1006615 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:00					
Arsenic	75	0.021	0.0095	0.0578	**0.0294**	0.0252	85.72
Selenium	77	-0.1221	-0.1885	-0.2303	**-0.1803**	0.0546	30.27
Selenium	78	0.4252	0.3059	0.2807	**0.3373**	0.0772	22.89
Selenium	82	0.1606	0.0461	0.2282	**0.145**	0.0921	63.53
Thallium	203	0.0111	0.0041	0.0058	**0.007**	0.0036	51.88
Thallium	205	0.01	0.0109	0.0086	**0.0098**	0.0011	11.7
Uranium	238	41.46	40.14	40.6	**40.73**	0.6724	1.651

Internal Standard Factors:							
Rhodium	103	0.992	0.974	0.971	**0.992**	n/a	n/a
Lutetium	175	1.018	0.987	0.995	**1.018**	n/a	n/a
Gold	197	1.089	1.08	1.067	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:02					
Arsenic	75	2.577	2.609	2.409	**2.532**	0.1078	4.256
Selenium	77	3.104	2.889	3.349	**3.114**	0.2301	7.389
Selenium	78	1.13	1.381	1.204	**1.238**	0.1291	10.43
Selenium	82	0.9723	1.096	0.9064	**0.9917**	0.0964	9.722
Thallium	203	0.4696	0.4714	0.4609	**0.4673**	0.0056	1.2
Thallium	205	0.4649	0.4748	0.4654	**0.4684**	0.0056	1.187
Uranium	238	1.593	1.602	1.536	**1.577**	0.0355	2.25

Internal Standard Factors:							
Rhodium	103	1.073	1.073	1.071	**1.073**	n/a	n/a
Lutetium	175	1.017	1.016	1.019	**1.017**	n/a	n/a
Gold	197	1.139	1.139	1.123	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/27/10 18:06					
Arsenic	75	2.141	2.183	2.179	**2.167**	0.023	1.062
Selenium	77	2.67	2.54	2.451	**2.553**	0.11	4.309
Selenium	78	1.295	0.8338	0.7712	**0.9667**	0.2862	29.61
Selenium	82	0.5902	0.655	0.6242	**0.6231**	0.0324	5.204
Thallium	203	0.42	0.4203	0.4029	**0.4144**	0.01	2.404
Thallium	205	0.4129	0.4219	0.415	**0.4166**	0.0047	1.124
Uranium	238	2.273	2.265	2.178	**2.239**	0.0525	2.344

Internal Standard Factors:

Rhodium	103	1.088	1.064	1.062	**1.088**	n/a	n/a
Lutetium	175	1.038	1.031	1.015	**1.038**	n/a	n/a
Gold	197	1.135	1.139	1.132	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-006 1/25L 7/27/10 18:09			Mean	SD	%RSD
Arsenic	75	0.4774	0.5267	0.4786	**0.4943**	0.0281	5.692
Selenium	77	0.5106	0.6208	0.5786	**0.57**	0.0556	9.753
Selenium	78	0.0168	0.3718	0.2728	**0.2205**	0.1832	83.08
Selenium	82	0.1112	0.2545	0.1516	**0.1724**	0.0739	42.85
Thallium	203	0.0854	0.0854	0.0842	**0.085**	0.0007	0.8289
Thallium	205	0.0876	0.0902	0.0864	**0.088**	0.002	2.227
Uranium	238	0.3152	0.2998	0.3025	**0.3059**	0.0082	2.685

Internal Standard Factors:

Rhodium	103	1.037	1.029	1.026	**1.037**	n/a	n/a
Lutetium	175	1.023	1.006	1.007	**1.023**	n/a	n/a
Gold	197	1.028	0.998	1.012	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 18:12					
Arsenic	75	51.84	52.65	51.63	**52.04**	0.5426	1.043
Selenium	77	51.97	51.45	51.09	**51.5**	0.4429	0.86
Selenium	78	49.29	49.65	49.45	**49.46**	0.1826	0.3692
Selenium	82	49.92	50.03	50.16	**50.04**	0.1196	0.2391
Thallium	203	53.5	51.95	52.09	**52.51**	0.8559	1.63
Thallium	205	53.4	53.3	52.64	**53.11**	0.412	0.7757
Uranium	238	56.53	54.38	54.64	**55.18**	1.171	2.122

Internal Standard Factors:							
Rhodium	103	1.045	1.06	1.058	**1.045**	n/a	n/a
Lutetium	175	1.01	0.988	0.997	**1.01**	n/a	n/a
Gold	197	1.087	1.099	1.076	**1.087**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 18:16					
Arsenic	75	41.95	41.82	42.27	**42.01**	0.2318	0.5518
Selenium	77	43.14	44.87	45.02	**44.34**	1.047	2.36
Selenium	78	43.59	43.52	44.57	**43.89**	0.5882	1.34
Selenium	82	43.1	44.66	44.67	**44.14**	0.9064	2.053
Thallium	203	42.94	42.15	42.82	**42.64**	0.4269	1.001
Thallium	205	43.37	42.96	42.95	**43.09**	0.2386	0.5536
Uranium	238	8.654	8.497	8.438	**8.53**	0.1113	1.305

Internal Standard Factors:							
Rhodium	103	1.036	1.03	1.034	**1.036**	n/a	n/a
Lutetium	175	1.013	0.998	1.007	**1.013**	n/a	n/a
Gold	197	1.015	1.018	1.004	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-001 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:20					
Arsenic	75	31.79	31.82	31.23	**31.61**	0.3333	1.054
Selenium	77	2.595	2.472	2.572	**2.546**	0.0652	2.56
Selenium	78	0.7473	0.4873	0.437	**0.5572**	0.1665	29.89
Selenium	82	0.3766	0.8106	0.9342	**0.7071**	0.2929	41.42
Thallium	203	0.4155	0.4468	0.4107	**0.4243**	0.0196	4.619
Thallium	205	0.4293	0.4269	0.415	**0.4237**	0.0077	1.813
Uranium	238	2.215	2.288	2.226	**2.243**	0.0394	1.758

Internal Standard Factors:

Rhodium	103	1.099	1.093	1.084	**1.099**	n/a	n/a
Lutetium	175	1.034	1.058	1.036	**1.034**	n/a	n/a
Gold	197	1.215	1.159	1.187	**1.215**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:24					
Arsenic	75	7.383	7.314	7.252	**7.316**	0.0653	0.8922
Selenium	77	2.906	2.752	2.717	**2.792**	0.1006	3.605
Selenium	78	0.6212	0.5264	0.5861	**0.5779**	0.0479	8.294
Selenium	82	0.6507	0.83	0.6773	**0.7193**	0.0967	13.45
Thallium	203	0.5732	0.5344	0.5414	**0.5497**	0.0207	3.762
Thallium	205	0.5552	0.5586	0.5357	**0.5498**	0.0124	2.254
Uranium	238	2.074	2.058	2.018	**2.05**	0.0288	1.404

Internal Standard Factors:

Rhodium	103	1.129	1.121	1.136	**1.129**	n/a	n/a
Lutetium	175	1.073	1.061	1.046	**1.073**	n/a	n/a
Gold	197	1.24	1.216	1.222	**1.24**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/27/10 18:27					
Arsenic	75	24.5	24.57	24.11	**24.39**	0.2479	1.016
Selenium	77	24.63	24.72	24.62	**24.66**	0.054	0.2191
Selenium	78	24.7	24.66	23.9	**24.42**	0.449	1.838
Selenium	82	25.05	24.89	24.32	**24.76**	0.3823	1.544
Thallium	203	25.06	25.51	26.04	**25.54**	0.4903	1.92
Thallium	205	24.91	25.85	25.89	**25.55**	0.5579	2.184
Uranium	238	25.46	25.29	24.92	**25.22**	0.2766	1.097

Internal Standard Factors:							
Rhodium	103	1.065	1.055	1.041	**1.065**	n/a	n/a
Lutetium	175	1.051	1.04	1.031	**1.051**	n/a	n/a
Gold	197	1.066	1.049	1.051	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/27/10 18:32					
Arsenic	75	0.0601	-0.04	0.0313	**0.0171**	0.0515	300.4
Selenium	77	-0.1632	-0.0593	-0.0527	**-0.0917**	0.062	67.56
Selenium	78	-0.1479	-0.0872	0.0936	**-0.0471**	0.1256	266.5
Selenium	82	0.1605	-0.1221	0.1332	**0.0572**	0.1559	272.7
Thallium	203	0.0018	-0.001	-0.0019	**-0.0004**	0.0019	543.7
Thallium	205	0.001	-0.0002	-0.0001	**0.0002**	0.0007	303.4
Uranium	238	-0.0001	0.0002	-0.0012	**-0.0004**	0.0007	204.9

Internal Standard Factors:							
Rhodium	103	1.073	1.049	1.05	**1.073**	n/a	n/a
Lutetium	175	1.046	1.043	1.038	**1.046**	n/a	n/a
Gold	197	1.096	1.051	1.062	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-003 1/5 7/27/10 18:34			Mean	SD	%RSD
Arsenic	75	2.583	2.497	2.582	**2.554**	0.0493	1.931
Selenium	77	2.448	2.542	2.177	**2.389**	0.1896	7.935
Selenium	78	0.5322	0.5897	0.2585	**0.4601**	0.177	38.46
Selenium	82	0.5444	0.5114	0.4028	**0.4862**	0.0741	15.23
Thallium	203	0.5607	0.5648	0.5726	**0.566**	0.0061	1.072
Thallium	205	0.5508	0.5513	0.5623	**0.5548**	0.0065	1.176
Uranium	238	1.74	1.728	1.749	**1.739**	0.0103	0.5908

Internal Standard Factors:

Rhodium	103	1.132	1.129	1.127	**1.132**	n/a	n/a
Lutetium	175	1.066	1.063	1.075	**1.066**	n/a	n/a
Gold	197	1.185	1.202	1.188	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-004 1/5 7/27/10 18:38			Mean	SD	%RSD
Arsenic	75	48.8	49.17	48.47	**48.81**	0.3508	0.7187
Selenium	77	2.075	1.914	2.048	**2.012**	0.0866	4.302
Selenium	78	0.5384	0.2598	0.4247	**0.4076**	0.1401	34.37
Selenium	82	0.2159	0.6316	0.3395	**0.3957**	0.2135	53.96
Thallium	203	0.3922	0.3881	0.3822	**0.3875**	0.005	1.3
Thallium	205	0.4046	0.3995	0.3963	**0.4001**	0.0042	1.042
Uranium	238	1.871	1.849	1.881	**1.867**	0.0164	0.8759

Internal Standard Factors:

Rhodium	103	1.138	1.126	1.124	**1.138**	n/a	n/a
Lutetium	175	1.082	1.068	1.063	**1.082**	n/a	n/a
Gold	197	1.25	1.219	1.225	**1.25**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:41					
Arsenic	75	5.626	5.502	5.724	**5.617**	0.1114	1.983
Selenium	77	3.275	3.054	2.813	**3.047**	0.2313	7.589
Selenium	78	0.733	0.7773	0.4452	**0.6518**	0.1803	27.66
Selenium	82	0.5661	0.5243	0.6969	**0.5957**	0.09	15.11
Thallium	203	0.5497	0.535	0.5524	**0.5457**	0.0093	1.71
Thallium	205	0.5391	0.5243	0.5518	**0.5384**	0.0137	2.551
Uranium	238	2.042	2.014	2.023	**2.026**	0.0144	0.7103

Internal Standard Factors:							
Rhodium	103	1.151	1.139	1.139	**1.151**	n/a	n/a
Lutetium	175	1.08	1.064	1.089	**1.08**	n/a	n/a
Gold	197	1.244	1.217	1.212	**1.244**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:45					
Arsenic	75	32.72	32.74	32.41	**32.62**	0.1852	0.5679
Selenium	77	2.415	2.246	2.158	**2.273**	0.131	5.763
Selenium	78	0.4436	0.3429	0.3665	**0.3843**	0.0526	13.69
Selenium	82	0.557	0.8241	0.6935	**0.6915**	0.1336	19.31
Thallium	203	0.3939	0.3783	0.3833	**0.3852**	0.008	2.071
Thallium	205	0.3811	0.3727	0.3795	**0.3777**	0.0044	1.176
Uranium	238	2.12	2.105	2.092	**2.106**	0.0143	0.6804

Internal Standard Factors:							
Rhodium	103	1.15	1.139	1.132	**1.15**	n/a	n/a
Lutetium	175	1.081	1.06	1.068	**1.081**	n/a	n/a
Gold	197	1.317	1.304	1.288	**1.317**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-008 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:49					
Arsenic	75	6.639	6.585	6.633	**6.619**	0.0297	0.4483
Selenium	77	2.792	2.541	2.599	**2.644**	0.1317	4.981
Selenium	78	0.4443	0.415	0.3836	**0.4143**	0.0303	7.32
Selenium	82	0.8092	0.6889	0.6666	**0.7216**	0.0767	10.63
Thallium	203	0.5657	0.5765	0.5554	**0.5658**	0.0106	1.866
Thallium	205	0.5692	0.5728	0.5564	**0.5661**	0.0086	1.522
Uranium	238	2.605	2.525	2.536	**2.555**	0.0435	1.703

Internal Standard Factors:

Rhodium	103	1.179	1.157	1.168	**1.179**	n/a	n/a
Lutetium	175	1.101	1.098	1.08	**1.101**	n/a	n/a
Gold	197	1.247	1.257	1.249	**1.247**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-009 1/5 7/27/10 18:52			Mean	SD	%RSD
Arsenic	75	4.769	4.618	4.649	**4.679**	0.0801	1.712
Selenium	77	2.315	2.434	2.25	**2.333**	0.0932	3.995
Selenium	78	0.4477	0.3993	0.3088	**0.3853**	0.0705	18.29
Selenium	82	0.7473	0.6611	0.7572	**0.7219**	0.0528	7.316
Thallium	203	0.3484	0.3537	0.3441	**0.3488**	0.0048	1.383
Thallium	205	0.3593	0.3558	0.3556	**0.3569**	0.002	0.5739
Uranium	238	1.445	1.434	1.454	**1.444**	0.0101	0.7021

Internal Standard Factors:

Rhodium	103	1.177	1.157	1.163	**1.177**	n/a	n/a
Lutetium	175	1.097	1.084	1.086	**1.097**	n/a	n/a
Gold	197	1.227	1.205	1.191	**1.227**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-001 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:56					
Arsenic	75	64.73	65.03	63.48	**64.41**	0.8236	1.279
Selenium	77	2.781	2.405	2.634	**2.607**	0.1893	7.261
Selenium	78	0.4298	0.3365	0.0915	**0.2859**	0.1747	61.1
Selenium	82	0.9812	0.7909	0.7042	**0.8254**	0.1417	17.16
Thallium	203	0.4726	0.4735	0.4635	**0.4698**	0.0055	1.179
Thallium	205	0.4557	0.474	0.4618	**0.4638**	0.0093	2.004
Uranium	238	4.464	4.59	4.465	**4.507**	0.0725	1.608

Internal Standard Factors:							
Rhodium	103	1.165	1.165	1.143	**1.165**	n/a	n/a
Lutetium	175	1.076	1.093	1.063	**1.076**	n/a	n/a
Gold	197	1.379	1.329	1.314	**1.379**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:59					
Arsenic	75	8.674	8.896	8.453	**8.674**	0.2215	2.554
Selenium	77	3.138	2.703	3.346	**3.063**	0.3283	10.72
Selenium	78	0.3035	0.4251	0.461	**0.3966**	0.0825	20.81
Selenium	82	0.7923	1.063	0.6151	**0.8234**	0.2254	27.38
Thallium	203	0.4945	0.5021	0.503	**0.4999**	0.0047	0.9381
Thallium	205	0.4934	0.4845	0.4986	**0.4922**	0.0072	1.453
Uranium	238	3.847	3.841	3.823	**3.837**	0.0126	0.3287

Internal Standard Factors:							
Rhodium	103	1.168	1.168	1.177	**1.168**	n/a	n/a
Lutetium	175	1.073	1.075	1.073	**1.073**	n/a	n/a
Gold	197	1.316	1.288	1.268	**1.316**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-003 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:03					
Arsenic	75	4.122	3.907	3.791	**3.94**	0.1678	4.26
Selenium	77	3.433	3.203	3.723	**3.453**	0.2607	7.549
Selenium	78	0.685	0.458	0.6241	**0.589**	0.1175	19.95
Selenium	82	0.8465	0.6373	0.8426	**0.7755**	0.1197	15.44
Thallium	203	0.591	0.5791	0.5841	**0.5847**	0.006	1.02
Thallium	205	0.6005	0.5803	0.5825	**0.5878**	0.0111	1.888
Uranium	238	5.989	5.647	5.712	**5.783**	0.1817	3.142

Internal Standard Factors:							
Rhodium	103	1.194	1.184	1.18	**1.194**	n/a	n/a
Lutetium	175	1.12	1.079	1.085	**1.12**	n/a	n/a
Gold	197	1.311	1.286	1.303	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:06					
Arsenic	75	45.11	43.82	44.35	**44.43**	0.6496	1.462
Selenium	77	2.549	2.401	2.397	**2.449**	0.0865	3.532
Selenium	78	0.4661	0.261	0.2849	**0.3373**	0.1121	33.23
Selenium	82	0.534	0.5841	0.5871	**0.5684**	0.0299	5.251
Thallium	203	0.4829	0.477	0.4729	**0.4776**	0.005	1.056
Thallium	205	0.4675	0.4815	0.489	**0.4793**	0.0109	2.269
Uranium	238	2.73	2.8	2.71	**2.747**	0.0473	1.721

Internal Standard Factors:							
Rhodium	103	1.185	1.16	1.166	**1.185**	n/a	n/a
Lutetium	175	1.081	1.1	1.085	**1.081**	n/a	n/a
Gold	197	1.422	1.387	1.366	**1.422**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/27/10 19:10					
Arsenic	75	24.48	24.32	24.32	**24.38**	0.0914	0.375
Selenium	77	24.52	24.65	24.61	**24.59**	0.0701	0.2852
Selenium	78	24.5	23.74	24.63	**24.29**	0.4799	1.975
Selenium	82	24.6	24.19	24.92	**24.57**	0.3667	1.492
Thallium	203	25.05	25.67	25.92	**25.55**	0.446	1.746
Thallium	205	25.12	25.91	25.74	**25.59**	0.4143	1.619
Uranium	238	24.85	25.84	24.86	**25.18**	0.5716	2.27

Internal Standard Factors:							
Rhodium	103	1.125	1.096	1.1	**1.125**	n/a	n/a
Lutetium	175	1.069	1.059	1.048	**1.069**	n/a	n/a
Gold	197	1.117	1.083	1.085	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/27/10 19:14					
Arsenic	75	0.0328	0.0294	0.0126	**0.0249**	0.0108	43.48
Selenium	77	-0.1703	-0.2089	-0.1632	**-0.1808**	0.0246	13.62
Selenium	78	-0.3883	-0.146	-0.1547	**-0.2296**	0.1375	59.85
Selenium	82	0.0351	-0.0037	0.0093	**0.0135**	0.0197	145.7
Thallium	203	-0.001	0.0024	0.0006	**0.0007**	0.0017	251.3
Thallium	205	0.0011	0.002	0.0003	**0.0011**	0.0008	72.54
Uranium	238	-0.001	-0.0004	0.0021	**0.0002**	0.0017	730.2

Internal Standard Factors:							
Rhodium	103	1.129	1.101	1.101	**1.129**	n/a	n/a
Lutetium	175	1.082	1.057	1.066	**1.082**	n/a	n/a
Gold	197	1.126	1.113	1.086	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:17					
Arsenic	75	11.62	11.41	11.45	**11.49**	0.1099	0.956
Selenium	77	2.342	2.269	2.366	**2.326**	0.0504	2.165
Selenium	78	0.5077	0.2358	0.2603	**0.3346**	0.1504	44.96
Selenium	82	0.8499	0.7231	0.9417	**0.8382**	0.1098	13.1
Thallium	203	0.4764	0.4729	0.4619	**0.4704**	0.0076	1.607
Thallium	205	0.4497	0.4641	0.461	**0.4582**	0.0076	1.651
Uranium	238	2.594	2.66	2.604	**2.619**	0.0353	1.349

Internal Standard Factors:							
Rhodium	103	1.15	1.137	1.144	**1.15**	n/a	n/a
Lutetium	175	1.06	1.087	1.067	**1.06**	n/a	n/a
Gold	197	1.212	1.214	1.219	**1.212**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:20					
Arsenic	75	4.529	4.392	4.539	**4.486**	0.0822	1.832
Selenium	77	3.822	3.707	3.793	**3.774**	0.0596	1.579
Selenium	78	0.6496	0.4499	0.4143	**0.5046**	0.1268	25.14
Selenium	82	1.244	1.047	1.085	**1.125**	0.1047	9.306
Thallium	203	0.7227	0.7432	0.7212	**0.7291**	0.0123	1.687
Thallium	205	0.7467	0.7138	0.7342	**0.7316**	0.0166	2.268
Uranium	238	3.543	3.54	3.501	**3.528**	0.0236	0.6693

Internal Standard Factors:

Rhodium	103	1.182	1.166	1.195	**1.182**	n/a	n/a
Lutetium	175	1.077	1.074	1.071	**1.077**	n/a	n/a
Gold	197	1.256	1.252	1.233	**1.256**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:24					
Arsenic	75	0.0294	-0.0131	-0.0013	**0.005**	0.022	440.9
Selenium	77	-0.2038	-0.2605	-0.2584	**-0.2409**	0.0322	13.35
Selenium	78	-0.2079	-0.1046	-0.2302	**-0.1809**	0.067	37.03
Selenium	82	0.1315	-0.0597	0.0623	**0.0447**	0.0968	216.7
Thallium	203	-0.01	-0.0102	-0.0102	**-0.0101**	0.0001	1.354
Thallium	205	-0.0097	-0.0097	-0.0098	**-0.0097**	0.0001	0.6004
Uranium	238	-0.0075	-0.008	-0.008	**-0.0078**	0.0003	3.734

Internal Standard Factors:

Rhodium	103	1.155	1.133	1.119	**1.155**	n/a	n/a
Lutetium	175	1.11	1.075	1.09	**1.11**	n/a	n/a
Gold	197	1.248	1.227	1.253	**1.248**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		LCSS K1006676 1/100 7/27/10 19:26			Mean	SD	%RSD
Arsenic	75	8.219	8.339	8.217	**8.258**	0.07	0.8475
Selenium	77	19.25	19.14	19.23	**19.21**	0.0603	0.314
Selenium	78	18.18	18.11	18.58	**18.29**	0.2504	1.369
Selenium	82	18.56	18.45	18.5	**18.5**	0.0524	0.283
Thallium	203	27.15	27.58	27.31	**27.34**	0.2197	0.8034
Thallium	205	27.87	27.78	27.7	**27.78**	0.083	0.2989
Uranium	238	0.1785	0.1806	0.1763	**0.1785**	0.0021	1.202

Internal Standard Factors:

Rhodium	103	1.104	1.101	1.095	**1.104**	n/a	n/a
Lutetium	175	1.07	1.073	1.061	**1.07**	n/a	n/a
Gold	197	1.195	1.148	1.145	**1.195**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSW K1006676 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:30					
Arsenic	75	0.0264	-0.0122	-0.0076	**0.0022**	0.0211	963.2
Selenium	77	-0.1986	-0.1581	-0.208	**-0.1882**	0.0265	14.09
Selenium	78	-0.1173	-0.0441	-0.3058	**-0.1557**	0.1351	86.74
Selenium	82	0.1294	0.0097	0.0404	**0.0598**	0.0622	103.9
Thallium	203	0.0101	0.0124	0.0098	**0.0108**	0.0014	13.08
Thallium	205	0.0118	0.0108	0.0103	**0.011**	0.0008	7.078
Uranium	238	40.58	41.17	39.13	**40.29**	1.046	2.597

Internal Standard Factors:							
Rhodium	103	1.122	1.094	1.087	**1.122**	n/a	n/a
Lutetium	175	1.072	1.05	1.039	**1.072**	n/a	n/a
Gold	197	1.193	1.185	1.169	**1.193**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-018 1/5 7/27/10 19:33			Mean	SD	%RSD
Arsenic	75	57.88	57.14	56.65	**57.22**	0.617	1.078
Selenium	77	1.76	1.633	1.543	**1.645**	0.1093	6.644
Selenium	78	0.2098	0.234	0.3229	**0.2556**	0.0595	23.29
Selenium	82	0.3346	0.4906	0.6277	**0.4843**	0.1466	30.28
Thallium	203	0.5704	0.5822	0.5606	**0.5711**	0.0108	1.891
Thallium	205	0.5753	0.5612	0.5818	**0.5727**	0.0106	1.842
Uranium	238	3.701	3.549	3.603	**3.618**	0.0769	2.125

Internal Standard Factors:

Rhodium	103	1.16	1.144	1.154	**1.16**	n/a	n/a
Lutetium	175	1.088	1.079	1.085	**1.088**	n/a	n/a
Gold	197	1.296	1.286	1.283	**1.296**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/5D			Mean	SD	%RSD
TimeStamp		7/27/10 19:36					
Arsenic	75	53.04	53.46	52.94	**53.15**	0.2764	0.5201
Selenium	77	1.953	1.572	1.475	**1.666**	0.2525	15.15
Selenium	78	-0.0406	0.3299	0.0962	**0.1285**	0.1874	145.8
Selenium	82	0.2974	0.3736	0.5011	**0.3907**	0.1029	26.34
Thallium	203	0.5611	0.5548	0.5544	**0.5568**	0.0037	0.6691
Thallium	205	0.5737	0.5621	0.5661	**0.5673**	0.0059	1.037
Uranium	238	3.477	3.454	3.454	**3.462**	0.013	0.3754

Internal Standard Factors:							
Rhodium	103	1.159	1.167	1.172	**1.159**	n/a	n/a
Lutetium	175	1.095	1.077	1.077	**1.095**	n/a	n/a
Gold	197	1.348	1.324	1.302	**1.348**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/25L			Mean	SD	%RSD
TimeStamp		7/27/10 19:40					
Arsenic	75	12.61	12.54	12.7	**12.62**	0.0766	0.607
Selenium	77	0.1891	0.1574	0.1816	**0.1761**	0.0166	9.42
Selenium	78	-0.1291	-0.1567	-0.1194	**-0.1351**	0.0194	14.35
Selenium	82	0.2312	0.0487	0.1114	**0.1304**	0.0927	71.12
Thallium	203	0.108	0.108	0.1198	**0.1119**	0.0068	6.081
Thallium	205	0.1137	0.1181	0.1174	**0.1164**	0.0023	2.012
Uranium	238	0.7463	0.7443	0.7481	**0.7463**	0.0019	0.2568

Internal Standard Factors:							
Rhodium	103	1.146	1.127	1.122	**1.146**	n/a	n/a
Lutetium	175	1.083	1.072	1.097	**1.083**	n/a	n/a
Gold	197	1.238	1.239	1.208	**1.238**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 19:43					
Arsenic	75	103	103.1	100.9	**102.3**	1.247	1.219
Selenium	77	50	50.54	50.49	**50.34**	0.3015	0.5988
Selenium	78	49.26	48.42	49.34	**49.01**	0.5127	1.046
Selenium	82	50.01	49.76	49.31	**49.69**	0.3556	0.7157
Thallium	203	54.21	54.02	53.22	**53.82**	0.5283	0.9817
Thallium	205	54.47	53.76	52.76	**53.66**	0.8635	1.609
Uranium	238	59.16	58.42	57.67	**58.42**	0.7448	1.275

Internal Standard Factors:							
Rhodium	103	1.125	1.127	1.123	**1.125**	n/a	n/a
Lutetium	175	1.059	1.05	1.037	**1.059**	n/a	n/a
Gold	197	1.237	1.189	1.221	**1.237**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 19:47					
Arsenic	75	51.51	51.66	51.38	**51.51**	0.1394	0.2707
Selenium	77	44.59	43.49	44.44	**44.18**	0.5938	1.344
Selenium	78	43.98	43.92	44.17	**44.02**	0.1306	0.2966
Selenium	82	44.75	44.62	44.24	**44.54**	0.2666	0.5987
Thallium	203	43.25	44.98	44.01	**44.08**	0.868	1.969
Thallium	205	44.15	43.95	44.22	**44.11**	0.1359	0.3082
Uranium	238	9.474	9.745	9.404	**9.541**	0.1801	1.888

Internal Standard Factors:							
Rhodium	103	1.127	1.108	1.105	**1.127**	n/a	n/a
Lutetium	175	1.056	1.064	1.052	**1.056**	n/a	n/a
Gold	197	1.211	1.192	1.204	**1.211**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/27/10 19:51					
Arsenic	75	24.49	24.17	24.76	**24.47**	0.2967	1.212
Selenium	77	24.84	24.69	24.42	**24.65**	0.2119	0.8597
Selenium	78	24.88	24.9	25.11	**24.96**	0.1297	0.5194
Selenium	82	25.14	25.27	25.12	**25.17**	0.0819	0.3252
Thallium	203	25.58	25.73	26.2	**25.84**	0.3229	1.25
Thallium	205	25.13	26.04	26.02	**25.73**	0.5179	2.013
Uranium	238	25.52	25.36	25.47	**25.45**	0.0863	0.3392

Internal Standard Factors:							
Rhodium	103	1.106	1.088	1.083	**1.106**	n/a	n/a
Lutetium	175	1.054	1.049	1.039	**1.054**	n/a	n/a
Gold	197	1.116	1.099	1.091	**1.116**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/27/10 19:55					
Arsenic	75	0.0993	-0.0207	-0.0497	**0.0097**	0.079	817.7
Selenium	77	-0.3474	-0.0417	-0.2408	**-0.2099**	0.1552	73.91
Selenium	78	-0.2831	-0.2504	-0.2039	**-0.2458**	0.0398	16.2
Selenium	82	0.1339	0.0223	-0.2351	**-0.0263**	0.1892	719.9
Thallium	203	0.003	-0.0005	0.0027	**0.0017**	0.0019	111.7
Thallium	205	0.0042	0.0029	0.0002	**0.0025**	0.002	82.8
Uranium	238	0.001	0.0013	0.0015	**0.0013**	0.0003	19.96

Internal Standard Factors:

Rhodium	103	1.124	1.104	1.112	**1.124**	n/a	n/a
Lutetium	175	1.08	1.068	1.064	**1.08**	n/a	n/a
Gold	197	1.125	1.102	1.086	**1.125**	n/a	n/a

Service Request # K1006636 (HCl)_____
Calibration _____072810D_____
QC in calibration__072810D_____
QC Service Request K1006615_____
STARLIMS Batch # 210314_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Report Ag-109.

Primary Review by _____ Date 7/29/15
Secondary Review by _____ Date 7/29/15
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	4	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006285-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006285 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	K1006285-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006285-001 1/5D	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006285-001 1/25L	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006285-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006285-001 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006285-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006285-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006285-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006285-005 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006285-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006285-006 1/5D	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006285-006 1/25S	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006285-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006285-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006285-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006285-010 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006285-011 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006285-012 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006285-013 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006285-014 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006285-015 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	K1006285-016 1/5	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	K1006285-017 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006285-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006285-019 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006285-020 1/5	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
43	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
44	K105734-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	145
45	LCSW K1005734 1/25	Unknown	0 kg	0 ml	1.00	1	3	6	145
46	K1005734-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1005734-001 1/5D	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1005734-001 1/25S	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006453-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	LCSS K1006453 1/100	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006453-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006453-001 1/5D	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006453-001 1/25L	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
55	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
56	K1006453-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	4	3	145
57	K1006453-001 1/25S	Unknown	0 kg	0 ml	1.00	1	4	4	145
58	K1006453-002 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006453-003 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006453-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006453-005 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006453-006 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006453-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006453-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006453-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
67	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
68	K1006453-010 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
69	K1006453-011 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	K1006453-012 1/5	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	K1006453-013 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006453-014 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006453-015 1/5	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006804-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006804-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006804-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
78	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
79	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
80	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	5	11	145
81	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006615-006 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
90	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
91	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
92	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
93	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	2	2	1	145
97	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	2	2	2	145
98	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	2	2	3	145
99	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	2	2	4	145

100	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	2	2	5	145
101	CCV9	Unknown	0 kg	0 ml	1.00	0	1	7	145
102	CCB9	Unknown	0 kg	0 ml	1.00	0	1	8	145
103	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	2	2	6	145
104	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	2	2	7	145
105	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	2	2	8	145
106	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	2	2	9	145
107	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	2	2	10	145
108	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	2	2	11	145
109	K1006676-018 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	2	12	145
110	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	2	3	1	145
111	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	2	3	2	145
112	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	2	3	3	145
113	CCV10	Unknown	0 kg	0 ml	1.00	0	1	7	145
114	CCB10	Unknown	0 kg	0 ml	1.00	0	1	8	145
115	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	2	3	4	145
116	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	2	3	5	145
117	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	2	3	6	145
118	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	2	3	7	145
119	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	2	3	8	145
120	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	2	3	9	145
121	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	2	3	10	145
122	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	2	3	11	145
123	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	2	3	12	145
124	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	2	4	1	145
125	CCV11	Unknown	0 kg	0 ml	1.00	0	1	7	145
126	CCB11	Unknown	0 kg	0 ml	1.00	0	1	8	145
127	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	2	4	2	145
128	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	2	4	3	145
129	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	2	4	4	145
130	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	2	4	5	145
131	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	2	4	6	145
132	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	2	4	7	145
133	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	2	4	8	145
134	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	2	4	9	145
135	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	2	4	10	145
136	CCV12	Unknown	0 kg	0 ml	1.00	0	1	7	145
137	CCB12	Unknown	0 kg	0 ml	1.00	0	1	8	145
138	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	2	4	11	145
139	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	2	4	12	145
140	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	2	5	1	145
141	K1006777-005 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	5	2	145
142	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	2	5	3	145
143	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	2	5	4	145
144	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	2	5	5	145
145	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	2	5	6	145
146	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	5	7	145
147	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	5	8	145
148	CCV13	Unknown	0 kg	0 ml	1.00	0	1	7	145
149	CCB13	Unknown	0 kg	0 ml	1.00	0	1	8	145
150	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	5	9	145

151	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	5	10	145
152	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	5	11	145
153	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	5	12	145
154	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	3	1	1	145
155	K1006777-0131/5	Unknown	0 kg	0 ml	1.00	3	1	2	145
156	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	3	1	3	145
157	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	3	1	4	145
158	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	3	1	5	145
159	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	3	1	6	145
160	CCV14	Unknown	0 kg	0 ml	1.00	0	1	7	145
161	CCB14	Unknown	0 kg	0 ml	1.00	0	1	8	145

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	acqmet11	7:45:18 7/28/10

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 7:45:18 7/28/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-500.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

ExCell Mass Calibration Date: 7/28/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1298	0.715	0.003	TRUE	
7.016	1558	0.715	-0.018	TRUE	Li-7
9.012	2058	0.766	0.012	TRUE	Be-9
23.985	5872	0.715	-0.007	TRUE	Mg-24
24.986	6132	0.715	-0.028	TRUE	Co-59
25.983	6379	0.715	-0.002	TRUE	In-115
26.982	6632	0.766	0.002	TRUE	Ce-140
43.956	10955	0.766	-0.012	TRUE	Pb-208
45.953	11456	0.715	0.017	TRUE	Bi-209
50.944	12730	0.715	0.003	TRUE	U-238
51.94	12983	0.766	0.005	TRUE	
53.949	13497	0.817	-0.005	TRUE	
55.935	13997	0.766	0.016	TRUE	
56.935	14257	0.766	-0.005	TRUE	
57.934	14511	0.817	-0.004	TRUE	
58.933	14764	0.766	0.001	TRUE	
69.925	17559	0.766	0.014	TRUE	
75.92	19080	0.766	0.036	TRUE	
112.904	28508	0.765	0.005	TRUE	
114.904	29015	0.765	0.014	TRUE	
118.903	30068	0.765	-0.119	FALSE	
139.905	35392	0.714	-0.008	TRUE	
141.908	35905	0.663	-0.018	TRUE	
155.923	39480	0.663	-0.027	TRUE	
205.974	52240	0.612	-0.006	TRUE	
206.976	52493	0.663	0.004	TRUE	
207.977	52753	0.663	-0.015	TRUE	
208.98	53007	0.612	-0.006	TRUE	
238.051	60417	0.611	0.029	TRUE	

Excluded In Calib | Excluded In Results | Peak Top Selected | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	6Li	7Li	9Be	59Co	115In	208Pb
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)0.000	(P)24428.035	(P)6899.499	(P)45309.250	(P)50755.843	(P)21934.332
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)0.000	(P)24748.921	(P)6993.212	(P)45460.390	(P)51236.885	(P)22352.481
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)0.167	(P)24481.798	(P)6897.665	(P)45473.095	(P)51369.028	(P)22254.657
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)0.333	(P)24662.608	(P)7024.727	(P)45043.069	(P)51126.994	(P)22314.086
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)0.167	(P)24508.006	(P)6833.467	(P)44691.469	(P)51035.002	(P)22241.303
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)0.133	(P)24565.873	(P)6929.714	(P)45195.455	(P)51104.751	(P)22219.372
	SD of Stability 07-28-20		(P)0.139	(P)134.425	(P)77.883	(P)330.699	(P)231.516	(P)165.577
	%RSD of Stability 07		(P)104.583	(P)0.547	(P)1.124	(P)0.732	(P)0.453	(P)0.745

Run	Label	TimeStamp	209Bi	232Th	238U
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)33849.903	(P)0.000	(P)37051.522
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)34233.310	(P)0.000	(P)37714.241
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)34624.094	(P)0.000	(P)38361.799
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)34381.159	(P)0.000	(P)38348.598
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)34239.158	(P)0.000	(P)38481.961
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)34265.525	(P)0.000	(P)37991.624
	SD of Stability 07-28-20		(P)281.255	(P)0.000	(P)605.315
	%RSD of Stability 07		(P)0.821	(P)0.000	(P)1.593

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/28/10 15:50					
Antimony	121	0.0054	-0.0035	-0.0019	**0**	0.0047	0
Antimony	123	0.0049	-0.0042	-0.0006	**0**	0.0046	0
Silver	107	0	-0.0002	0.0002	**0**	0.0002	0
Silver	109	-0.0001	0.0007	-0.0006	**0**	0.0007	0

Internal Standard Factors:

Rhodium	103	1.012	1.002	0.986	**1.012**	n/a	n/a
Indium	115	1.018	0.991	0.991	**1.018**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		7/28/10 15:52					
Antimony	121	25.11	24.84	25.05	**25**	0.1438	0.5751
Antimony	123	25.36	24.35	25.29	**25**	0.5612	2.245
Silver	107	25.05	24.91	25.04	**25**	0.0796	0.3183
Silver	109	25.16	24.86	24.99	**25**	0.1502	0.6009

Internal Standard Factors:

Rhodium	103	0.974	0.966	0.971	**0.974**	n/a	n/a
Indium	115	0.973	0.948	0.96	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:54					
Antimony	121	24.6	24.61	24.59	**24.6**	0.0078	0.0318
Antimony	123	24.56	24.63	24.35	**24.51**	0.1477	0.6024
Silver	107	12.8	12.71	12.9	**12.8**	0.0943	0.7367
Silver	109	12.78	12.75	12.76	**12.76**	0.0176	0.1381

Internal Standard Factors:

Rhodium	103	0.997	0.986	0.98	**0.997**	n/a	n/a
Indium	115	0.977	0.968	0.969	**0.977**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:56					
Antimony	121	25.28	25.19	26.06	**25.51**	0.4765	1.868
Antimony	123	25.28	24.73	25.75	**25.25**	0.5124	2.029
Silver	107	24.97	24.75	24.77	**24.83**	0.1205	0.4852
Silver	109	24.83	25.17	24.99	**25**	0.1689	0.6755

Internal Standard Factors:

Rhodium	103	0.987	0.987	0.988	**0.987**	n/a	n/a
Indium	115	0.982	0.968	0.982	**0.982**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:03					
Antimony	121	-0.0014	-0.0061	-0.0135	**-0.007**	0.0061	86.42
Antimony	123	-0.0083	0.0029	-0.0114	**-0.0056**	0.0075	134.7
Silver	107	0.0145	0.0136	0.0112	**0.0131**	0.0017	12.99
Silver	109	0.0148	0.0107	0.0121	**0.0126**	0.0021	16.49

Internal Standard Factors:							
Rhodium	103	1.024	1.015	1.018	**1.024**	n/a	n/a
Indium	115	1.027	1.015	1.006	**1.027**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:06					
Antimony	121	-0.0125	-0.0127	-0.0096	**-0.0116**	0.0017	14.87
Antimony	123	-0.0071	-0.011	-0.0099	**-0.0093**	0.0021	22.04
Silver	107	0.0104	0.0097	0.0073	**0.0091**	0.0016	17.91
Silver	109	0.0083	0.0074	0.0079	**0.0079**	0.0005	5.836

Internal Standard Factors:

Rhodium	103	1.026	1.016	1.01	**1.026**	n/a	n/a
Indium	115	1.021	1.004	1.013	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/28/10 16:08					
Antimony	121	0.0981	0.101	0.098	**0.099**	0.0017	1.755
Antimony	123	0.0884	0.0943	0.0797	**0.0875**	0.0073	8.401
Silver	107	0.0536	0.0513	0.0564	**0.0538**	0.0026	4.765
Silver	109	0.0523	0.0544	0.0561	**0.0542**	0.0019	3.445

Internal Standard Factors:							
Rhodium	103	1.024	1.009	1.01	**1.024**	n/a	n/a
Indium	115	1.005	1.001	1.01	**1.005**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/28/10 16:10					
Antimony	121	0.0927	0.0885	0.0833	**0.0882**	0.0047	5.341
Antimony	123	0.0783	0.0901	0.0854	**0.0846**	0.0059	7.024
Silver	107	0.0884	0.0829	0.0832	**0.0848**	0.0031	3.617
Silver	109	0.0801	0.0759	0.0815	**0.0792**	0.0029	3.656

Internal Standard Factors:

Rhodium	103	1.262	1.256	1.245	**1.262**	n/a	n/a
Indium	115	1.185	1.194	1.191	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/28/10 16:12					
Antimony	121	0.1155	0.1123	0.115	**0.1143**	0.0017	1.492
Antimony	123	0.0993	0.1083	0.0959	**0.1011**	0.0064	6.338
Silver	107	12.48	12.61	12.55	**12.55**	0.0652	0.5197
Silver	109	12.42	12.53	12.5	**12.49**	0.0566	0.4532

Internal Standard Factors:

Rhodium	103	1.25	1.245	1.251	**1.25**	n/a	n/a
Indium	115	1.171	1.176	1.169	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:16					
Antimony	121	-0.0271	-0.0258	-0.0251	**-0.026**	0.001	4.036
Antimony	123	-0.0253	-0.02	-0.0277	**-0.0243**	0.0039	16.14
Silver	107	0.0265	0.0252	0.0259	**0.0259**	0.0006	2.415
Silver	109	0.0247	0.0252	0.0239	**0.0246**	0.0006	2.526

Internal Standard Factors:

Rhodium	103	1.128	1.106	1.114	**1.128** n/a		n/a
Indium	115	1.099	1.099	1.086	**1.099** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		LCSS K1006285 1/100 7/28/10 16:19			Mean	SD	%RSD
Antimony	121	8.715	8.741	8.759	**8.738**	0.0224	0.2558
Antimony	123	8.697	8.546	8.567	**8.603**	0.0817	0.9499
Silver	107	7.833	7.852	7.831	**7.839**	0.0116	0.1478
Silver	109	7.89	7.797	7.869	**7.852**	0.0486	0.6184

Internal Standard Factors:							
Rhodium	103	1.055	1.057	1.05	**1.055**	n/a	n/a
Indium	115	1.041	1.032	1.035	**1.041**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:25					
Antimony	121	1.097	1.107	1.119	**1.108**	0.0111	0.9973
Antimony	123	1.091	1.111	1.111	**1.104**	0.0112	1.012
Silver	107	0.3393	0.3354	0.3315	**0.3354**	0.0039	1.167
Silver	109	0.2519	0.2478	0.2402	**0.2467**	0.0059	2.408

Internal Standard Factors:

Rhodium	103	1.16	1.157	1.156	**1.16**	n/a	n/a
Indium	115	1.109	1.112	1.111	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 16:29					
Antimony	121	2.22	2.223	2.309	**2.251**	0.0505	2.244
Antimony	123	2.276	2.249	2.276	**2.267**	0.0154	0.6804
Silver	107	0.34	0.3332	0.3312	**0.3348**	0.0046	1.374
Silver	109	0.2387	0.24	0.2409	**0.2399**	0.0011	0.4543

Internal Standard Factors:

Rhodium	103	1.178	1.172	1.168	**1.178**	n/a	n/a
Indium	115	1.122	1.118	1.126	**1.122**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 16:32					
Antimony	121	0.1786	0.1822	0.1786	**0.1798**	0.0021	1.177
Antimony	123	0.1846	0.1756	0.19	**0.1834**	0.0073	3.979
Silver	107	0.0598	0.0642	0.0628	**0.0623**	0.0022	3.589
Silver	109	0.0435	0.0434	0.0478	**0.0449**	0.0025	5.62

Internal Standard Factors:

Rhodium	103	1.096	1.089	1.1	**1.096**	n/a	n/a
Indium	115	1.063	1.071	1.065	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 16:35					
Antimony	121	51.82	51.77	50.92	**51.5**	0.5044	0.9794
Antimony	123	51.09	51.53	50.04	**50.89**	0.7693	1.512
Silver	107	9.961	9.917	9.956	**9.945**	0.024	0.241
Silver	109	9.716	9.741	9.822	**9.76**	0.0555	0.5687

Internal Standard Factors:

Rhodium	103	1.164	1.144	1.159	**1.164**	n/a	n/a
Indium	115	1.089	1.092	1.083	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 16:39					
Antimony	121	20.86	20.57	20.88	**20.77**	0.1759	0.8469
Antimony	123	20.47	20.32	20.69	**20.49**	0.1901	0.9278
Silver	107	4.159	4.159	4.174	**4.164**	0.0087	0.2079
Silver	109	4.165	4.082	4.116	**4.121**	0.0414	1.004

Internal Standard Factors:

Rhodium	103	1.1	1.088	1.091	**1.1**	n/a	n/a
Indium	115	1.071	1.064	1.077	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:45					
Antimony	121	1.065	1.05	1.053	**1.056**	0.0078	0.7423
Antimony	123	1.06	1.058	1.027	**1.048**	0.0186	1.77
Silver	107	0.3849	0.3649	0.3756	**0.3752**	0.01	2.67
Silver	109	0.0864	0.0832	0.0848	**0.0848**	0.0016	1.895

Internal Standard Factors:

Rhodium	103	1.202	1.194	1.192	**1.202**	n/a	n/a
Indium	115	1.14	1.137	1.136	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:48					
Antimony	121	0.2803	0.2865	0.2729	**0.2799**	0.0068	2.44
Antimony	123	0.2591	0.289	0.269	**0.2723**	0.0152	5.591
Silver	107	0.1235	0.1213	0.1162	**0.1204**	0.0037	3.115
Silver	109	0.0652	0.0662	0.0652	**0.0655**	0.0006	0.8399

Internal Standard Factors:

Rhodium	103	1.191	1.18	1.197	**1.191** n/a		n/a
Indium	115	1.134	1.136	1.13	**1.134** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-004 1/5 7/28/10 16:51			Mean	SD	%RSD
Antimony	121	1.586	1.595	1.632	**1.604**	0.0248	1.546
Antimony	123	1.533	1.545	1.537	**1.539**	0.0062	0.4019
Silver	107	0.3254	0.3286	0.3099	**0.3213**	0.01	3.122
Silver	109	0.0893	0.0874	0.0957	**0.0908**	0.0044	4.811
Internal Standard Factors:							
Rhodium	103	1.186	1.186	1.191	**1.186**	n/a	n/a
Indium	115	1.137	1.139	1.13	**1.137**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/28/10 16:54					
Antimony	121	25.79	25.48	25.19	**25.48**	0.2988	1.172
Antimony	123	25.65	25.42	25.21	**25.42**	0.2187	0.8601
Silver	107	24.58	25.01	25.05	**24.88**	0.2619	1.052
Silver	109	24.89	25.17	25.14	**25.07**	0.1542	0.6149

Internal Standard Factors:							
Rhodium	103	1.037	1.029	1.037	**1.037**	n/a	n/a
Indium	115	1.027	1.019	1.012	**1.027**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/28/10 17:00					
Antimony	121	-0.0344	-0.0349	-0.0317	**-0.0337**	0.0017	5.093
Antimony	123	-0.0326	-0.0394	-0.0347	**-0.0356**	0.0035	9.719
Silver	107	0.0101	0.0093	0.0084	**0.0092**	0.0009	9.583
Silver	109	0.0104	0.0095	0.0119	**0.0106**	0.0012	11.62

Internal Standard Factors:							
Rhodium	103	1.022	1.028	1.026	**1.022**	n/a	n/a
Indium	115	1.033	1.018	1.017	**1.033**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-005 1/5 7/28/10 17:02			Mean	SD	%RSD
Antimony	121	0.139	0.1335	0.146	**0.1395**	0.0063	4.504
Antimony	123	0.149	0.1529	0.1543	**0.1521**	0.0028	1.827
Silver	107	0.0986	0.092	0.0881	**0.0929**	0.0053	5.73
Silver	109	0.0448	0.0476	0.0434	**0.0453**	0.0021	4.701

Internal Standard Factors:

Rhodium	103	1.188	1.198	1.186	**1.188**	n/a	n/a
Indium	115	1.141	1.112	1.131	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/5 7/28/10 17:05			Mean	SD	%RSD
Antimony	121	4.583	4.504	4.377	**4.488**	0.1037	2.31
Antimony	123	4.572	4.458	4.42	**4.484**	0.079	1.763
Silver	107	0.2809	0.277	0.2657	**0.2745**	0.0079	2.87
Silver	109	0.1218	0.116	0.117	**0.1183**	0.0031	2.602

Internal Standard Factors:

Rhodium	103	1.173	1.154	1.162	**1.173**	n/a	n/a
Indium	115	1.128	1.125	1.113	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-006 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 17:08					
Antimony	121	8.676	8.813	8.85	**8.779**	0.0918	1.045
Antimony	123	8.404	8.557	8.581	**8.514**	0.0958	1.125
Silver	107	0.2635	0.2607	0.2417	**0.2553**	0.0119	4.654
Silver	109	0.0993	0.0945	0.1029	**0.0989**	0.0042	4.254

Internal Standard Factors:

Rhodium	103	1.151	1.151	1.15	**1.151** n/a		n/a
Indium	115	1.102	1.103	1.11	**1.102** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-006 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 17:12					
Antimony	121	32.05	32.44	32.11	**32.2**	0.2113	0.6562
Antimony	123	31.48	32.34	31.59	**31.8**	0.4708	1.481
Silver	107	4.161	4.134	4.188	**4.161**	0.0269	0.6461
Silver	109	4.132	4.127	4.172	**4.144**	0.0245	0.5923

Internal Standard Factors:

Rhodium	103	1.094	1.073	1.075	**1.094**	n/a	n/a
Indium	115	1.065	1.07	1.061	**1.065**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:17					
Antimony	121	13.04	13.19	13.03	**13.09**	0.0913	0.6974
Antimony	123	12.91	12.79	13.03	**12.91**	0.118	0.9139
Silver	107	0.198	0.1904	0.1899	**0.1928**	0.0046	2.366
Silver	109	0.1207	0.1125	0.1072	**0.1134**	0.0068	5.997

Internal Standard Factors:

Rhodium	103	1.203	1.196	1.203	**1.203**	n/a	n/a
Indium	115	1.152	1.15	1.161	**1.152**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-008 1/5 7/28/10 17:20			Mean	SD	%RSD
Antimony	121	0.1263	0.1032	0.1124	**0.114**	0.0116	10.22
Antimony	123	0.1127	0.113	0.1044	**0.11**	0.0049	4.475
Silver	107	0.106	0.105	0.0993	**0.1035**	0.0036	3.482
Silver	109	0.0407	0.0483	0.0391	**0.0427**	0.0049	11.54

Internal Standard Factors:							
Rhodium	103	1.238	1.205	1.215	**1.238** n/a		n/a
Indium	115	1.151	1.161	1.157	**1.151** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:23					
Antimony	121	0.0877	0.0784	0.0873	**0.0845**	0.0052	6.205
Antimony	123	0.0973	0.1048	0.106	**0.1027**	0.0047	4.602
Silver	107	0.082	0.0836	0.0829	**0.0829**	0.0008	0.9431
Silver	109	0.038	0.0356	0.0361	**0.0366**	0.0013	3.451

Internal Standard Factors:

Rhodium	103	1.226	1.217	1.205	**1.226**	n/a	n/a
Indium	115	1.159	1.146	1.15	**1.159**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:26					
Antimony	121	0.0646	0.0629	0.0703	**0.0659**	0.0039	5.846
Antimony	123	0.0889	0.0761	0.073	**0.0793**	0.0084	10.62
Silver	107	0.128	0.1236	0.1135	**0.1217**	0.0074	6.115
Silver	109	0.0768	0.0767	0.0717	**0.0751**	0.0029	3.9

Internal Standard Factors:

Rhodium	103	1.205	1.202	1.198	**1.205**	n/a	n/a
Indium	115	1.15	1.15	1.159	**1.15**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:29					
Antimony	121	0.2351	0.2499	0.2314	**0.2388**	0.0098	4.115
Antimony	123	0.229	0.25	0.2268	**0.2353**	0.0128	5.444
Silver	107	0.1524	0.1626	0.1676	**0.1609**	0.0078	4.831
Silver	109	0.0778	0.0788	0.0845	**0.0804**	0.0036	4.496

Internal Standard Factors:

Rhodium	103	1.237	1.224	1.233	**1.237**	n/a	n/a
Indium	115	1.167	1.176	1.165	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-012 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:32					
Antimony	121	0.717	0.7121	0.735	**0.7214**	0.0121	1.674
Antimony	123	0.707	0.6963	0.6516	**0.685**	0.0294	4.284
Silver	107	0.2411	0.2515	0.2422	**0.2449**	0.0057	2.342
Silver	109	0.035	0.0413	0.0389	**0.0384**	0.0032	8.304

Internal Standard Factors:

Rhodium	103	1.218	1.211	1.214	**1.218**	n/a	n/a
Indium	115	1.163	1.159	1.145	**1.163**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/28/10 17:35					
Antimony	121	25.83	25.48	26.02	**25.77**	0.2734	1.061
Antimony	123	25.3	25	25.83	**25.38**	0.4181	1.648
Silver	107	25.29	24.97	25.08	**25.11**	0.1644	0.6548
Silver	109	25.28	25.08	25.06	**25.14**	0.1218	0.4846

Internal Standard Factors:

Rhodium	103	1.062	1.055	1.047	**1.062**	n/a	n/a
Indium	115	1.062	1.038	1.037	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/28/10 17:41					
Antimony	121	-0.0357	-0.0362	-0.0338	**-0.0353**	0.0013	3.572
Antimony	123	-0.0312	-0.0369	-0.0408	**-0.0363**	0.0048	13.35
Silver	107	0.0088	0.0087	0.0079	**0.0084**	0.0005	5.837
Silver	109	0.0101	0.0088	0.0072	**0.0087**	0.0014	16.13

Internal Standard Factors:

Rhodium	103	1.053	1.044	1.04	**1.053**	n/a	n/a
Indium	115	1.033	1.037	1.034	**1.033**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-013 1/5 7/28/10 17:43			Mean	SD	%RSD
Antimony	121	0.3565	0.357	0.3831	**0.3655**	0.0152	4.167
Antimony	123	0.3744	0.3734	0.3451	**0.3643**	0.0166	4.555
Silver	107	0.1647	0.1527	0.1511	**0.1562**	0.0074	4.749
Silver	109	0.0417	0.0418	0.0392	**0.0409**	0.0015	3.648

Internal Standard Factors:

Rhodium	103	1.169	1.178	1.168	**1.169**	n/a	n/a
Indium	115	1.133	1.129	1.133	**1.133**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-014 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:46					
Antimony	121	1.062	1.01	0.9777	**1.017**	0.0426	4.195
Antimony	123	1.031	1.002	0.9829	**1.005**	0.0243	2.416
Silver	107	0.454	0.5066	0.4807	**0.4804**	0.0263	5.467
Silver	109	0.037	0.0362	0.0343	**0.0359**	0.0014	3.842

Internal Standard Factors:

Rhodium	103	1.181	1.181	1.187	**1.181**	n/a	n/a
Indium	115	1.14	1.129	1.124	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:50					
Antimony	121	0.5675	0.5865	0.6019	**0.5853**	0.0172	2.944
Antimony	123	0.5897	0.5596	0.5632	**0.5708**	0.0165	2.882
Silver	107	0.5162	0.5277	0.5335	**0.5258**	0.0088	1.674
Silver	109	0.0341	0.034	0.0347	**0.0343**	0.0004	1.147

Internal Standard Factors:

Rhodium	103	1.159	1.171	1.162	**1.159**	n/a	n/a
Indium	115	1.116	1.106	1.112	**1.116**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-016 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:53					
Antimony	121	0.9052	0.8857	0.8943	**0.8951**	0.0098	1.095
Antimony	123	0.8855	0.8969	0.8361	**0.8728**	0.0323	3.702
Silver	107	0.3826	0.3794	0.35	**0.3707**	0.018	4.841
Silver	109	0.0637	0.0623	0.0672	**0.0644**	0.0025	3.896

Internal Standard Factors:

Rhodium	103	1.196	1.17	1.187	**1.196**	n/a	n/a
Indium	115	1.126	1.134	1.113	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-017 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:56					
Antimony	121	0.7407	0.7663	0.759	**0.7553**	0.0132	1.746
Antimony	123	0.7242	0.7885	0.7628	**0.7585**	0.0324	4.27
Silver	107	0.2087	0.2313	0.2173	**0.2191**	0.0114	5.202
Silver	109	0.0196	0.0192	0.02	**0.0196**	0.0004	2.127

Internal Standard Factors:

Rhodium	103	1.16	1.16	1.154	**1.16**	n/a	n/a
Indium	115	1.097	1.116	1.12	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-018 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:59					
Antimony	121	0.9514	0.9345	0.9302	**0.9387**	0.0112	1.193
Antimony	123	0.9733	0.901	0.9251	**0.9331**	0.0368	3.946
Silver	107	0.3126	0.2952	0.3213	**0.3097**	0.0133	4.296
Silver	109	0.0348	0.034	0.0331	**0.034**	0.0008	2.462

Internal Standard Factors:

Rhodium	103	1.171	1.166	1.168	**1.171**	n/a	n/a
Indium	115	1.135	1.108	1.125	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-019 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:02					
Antimony	121	4.027	3.997	3.946	**3.99**	0.041	1.028
Antimony	123	4.016	3.93	3.923	**3.956**	0.0518	1.31
Silver	107	0.3871	0.3596	0.3523	**0.3664**	0.0184	5.01
Silver	109	0.0523	0.0569	0.0563	**0.0552**	0.0025	4.544

Internal Standard Factors:

Rhodium	103	1.25	1.24	1.245	**1.25**	n/a	n/a
Indium	115	1.187	1.17	1.176	**1.187**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-020 1/5 7/28/10 18:05			Mean	SD	%RSD
Antimony	121	1.361	1.362	1.412	**1.378**	0.0292	2.12
Antimony	123	1.349	1.377	1.343	**1.356**	0.0182	1.34
Silver	107	0.4161	0.386	0.4004	**0.4008**	0.015	3.751
Silver	109	0.0479	0.0413	0.0471	**0.0454**	0.0036	7.94

Internal Standard Factors:

Rhodium	103	1.246	1.225	1.236	**1.246**	n/a	n/a
Indium	115	1.167	1.173	1.155	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/28/10 18:08					
Antimony	121	25.62	25.24	25.63	**25.5**	0.2204	0.8645
Antimony	123	25.17	25.25	25.02	**25.15**	0.116	0.4612
Silver	107	24.95	24.84	25.17	**24.98**	0.1672	0.6694
Silver	109	24.61	24.98	25.1	**24.9**	0.2522	1.013

Internal Standard Factors:

Rhodium	103	1.082	1.066	1.072	**1.082**	n/a	n/a
Indium	115	1.054	1.053	1.039	**1.054**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/28/10 18:14					
Antimony	121	-0.0403	-0.0415	-0.0396	**-0.0405**	0.001	2.411
Antimony	123	-0.0319	-0.0429	-0.0475	**-0.0408**	0.0081	19.78
Silver	107	0.0087	0.009	0.0086	**0.0088**	0.0002	2.829
Silver	109	0.0087	0.0089	0.0094	**0.009**	0.0003	3.541

Internal Standard Factors:							
Rhodium	103	1.071	1.05	1.057	**1.071**	n/a	n/a
Indium	115	1.06	1.047	1.031	**1.06**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		**K105734-MB 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/28/10 18:16**					
Antimony	121	-0.0571	-0.05	-0.0574	**-0.0548**	0.0042	7.68
Antimony	123	-0.0543	-0.0589	-0.0548	**-0.056**	0.0025	4.508
Silver	107	0.0114	0.0099	0.0073	**0.0096**	0.002	21.4
Silver	109	0.0084	0.0078	0.0079	**0.008**	0.0004	4.377

Internal Standard Factors:

Rhodium	103	1.039	1.017	1.029	**1.039**	n/a	n/a
Indium	115	1.016	1.016	1.012	**1.016**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSW K1005734 1/25			Mean	SD	%RSD
TimeStamp		7/28/10 18:18					
Antimony	121	42.05	42.05	40.88	**41.66**	0.6731	1.616
Antimony	123	41.04	41.67	40.63	**41.11**	0.5235	1.273
Silver	107	4.004	4.04	4.039	**4.028**	0.0202	0.5017
Silver	109	3.933	4.043	4.057	**4.011**	0.0682	1.7

Internal Standard Factors:							
Rhodium	103	0.987	0.99	0.997	**0.987**	n/a	n/a
Indium	115	0.989	0.996	0.977	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1005734-001 1/5 7/28/10 18:23			Mean	SD	%RSD
Antimony	121	0.0549	0.0518	0.0693	**0.0586**	0.0094	15.96
Antimony	123	0.0601	0.0539	0.0591	**0.0577**	0.0033	5.699
Silver	107	0.0576	0.0564	0.0569	**0.057**	0.0006	1.091
Silver	109	0.0427	0.0418	0.0406	**0.0417**	0.0011	2.583

Internal Standard Factors:							
Rhodium	103	1.12	1.119	1.107	**1.12**	n/a	n/a
Indium	115	1.111	1.088	1.088	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		**K1005734-001 1/5D**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/28/10 18:26**					
Antimony	121	0.0739	0.0719	0.0822	**0.076**	0.0054	7.161
Antimony	123	0.0654	0.0745	0.0905	**0.0768**	0.0127	16.5
Silver	107	0.0418	0.0493	0.0425	**0.0446**	0.0041	9.266
Silver	109	0.0332	0.0314	0.0331	**0.0326**	0.001	3.126

Internal Standard
Factor %

Rhodium	103	1.088	1.082	1.087	**1.088**	n/a	n/a
Indium	115	1.071	1.061	1.068	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: pg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1005734-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 18:29					
Antimony	121	39.37	38.13	39.21	**38.9**	0.677	1.74
Antimony	123	38.7	37.15	38.45	**38.1**	0.8349	2.191
Silver	107	4.064	3.937	4.049	**4.017**	0.0696	1.733
Silver	109	4.087	3.897	4.108	**4.031**	0.1164	2.888

Internal Standard Factors:							
Rhodium	103	1.048	1.02	1.045	**1.048** n/a		n/a
Indium	115	1.037	1.013	1.027	**1.037** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-MB 1/5 7/28/10 18:33			Mean	SD	%RSD
Antimony	121	0.0675	0.0502	0.0432	**0.0536**	0.0126	23.4
Antimony	123	0.053	0.0546	0.0444	**0.0507**	0.0055	10.87
Silver	107	0.0117	0.0102	0.011	**0.011**	0.0007	6.829
Silver	109	0.0127	0.0113	0.0084	**0.0108**	0.0022	20.4

Internal Standard Factors:							
Rhodium	103	1.072	1.052	1.06	**1.072**	n/a	n/a
Indium	115	1.048	1.057	1.032	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006453 1/100			Mean	SD	%RSD
TimeStamp		7/28/10 18:36					
Antimony	121	8.672	8.82	8.626	**8.706**	0.1016	1.167
Antimony	123	8.629	8.635	8.393	**8.553**	0.138	1.613
Silver	107	7.713	7.743	7.692	**7.716**	0.0255	0.331
Silver	109	7.683	7.816	7.748	**7.749**	0.0661	0.8535

Internal Standard Factors:

Rhodium	103	1.044	1.046	1.051	**1.044**	n/a	n/a
Indium	115	1.034	1.033	1.012	**1.034**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:41					
Antimony	121	0.6511	0.6318	0.6277	**0.6369**	0.0125	1.963
Antimony	123	0.6353	0.5939	0.6324	**0.6205**	0.0231	3.721
Silver	107	0.2921	0.3078	0.2834	**0.2944**	0.0124	4.197
Silver	109	0.171	0.1711	0.1653	**0.1691**	0.0034	1.985

Internal Standard Factors:

Rhodium	103	1.139	1.13	1.138	**1.139**	n/a	n/a
Indium	115	1.105	1.088	1.094	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 18:44					
Antimony	121	0.5303	0.5203	0.5322	**0.5276**	0.0064	1.215
Antimony	123	0.5456	0.5309	0.5379	**0.5381**	0.0074	1.368
Silver	107	0.2506	0.2645	0.251	**0.2554**	0.0079	3.088
Silver	109	0.1317	0.1316	0.1281	**0.1305**	0.002	1.561

Internal Standard Factors:

Rhodium	103	1.13	1.141	1.135	**1.13**	n/a	n/a
Indium	115	1.113	1.093	1.089	**1.113**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 18:47					
Antimony	121	0.0634	0.0652	0.0744	**0.0676**	0.0059	8.716
Antimony	123	0.058	0.0534	0.0657	**0.059**	0.0062	10.48
Silver	107	0.0503	0.0511	0.0516	**0.051**	0.0007	1.295
Silver	109	0.0287	0.0292	0.0322	**0.03**	0.0019	6.311

Internal Standard Factors:							
Rhodium	103	1.095	1.091	1.09	**1.095** n/a		n/a
Indium	115	1.062	1.06	1.074	**1.062** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/28/10 18:51					
Antimony	121	25.45	25.65	26.13	**25.74**	0.3492	1.357
Antimony	123	25.21	25.19	25.66	**25.35**	0.2642	1.042
Silver	107	25.13	25.05	25.13	**25.1**	0.0443	0.1764
Silver	109	24.92	25.01	24.98	**24.97**	0.0434	0.1738

Internal Standard Factors:							
Rhodium	103	1.029	1.029	1.015	**1.029**	n/a	n/a
Indium	115	1.01	1.006	1.014	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/28/10 18:57					
Antimony	121	-0.0259	-0.0236	-0.0231	**-0.0242**	0.0014	5.986
Antimony	123	-0.0292	-0.0265	-0.0275	**-0.0277**	0.0013	4.78
Silver	107	0.0113	0.0111	0.0114	**0.0113**	0.0002	1.605
Silver	109	0.0114	0.0095	0.0078	**0.0096**	0.0018	18.99

Internal Standard Factors:

Rhodium	103	1.028	1.022	1.018	**1.028** n/a		n/a
Indium	115	1.013	1.014	1.004	**1.013** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 18:59					
Antimony	121	52.05	50.51	51.74	**51.44**	0.8128	1.58
Antimony	123	51.65	50.56	50.71	**50.97**	0.5931	1.164
Silver	107	10.12	10.01	10.09	**10.08**	0.0588	0.5832
Silver	109	9.951	9.795	9.89	**9.879**	0.0788	0.7973

Internal Standard Factors:							
Rhodium	103	1.094	1.09	1.092	**1.094**	n/a	n/a
Indium	115	1.045	1.033	1.05	**1.045**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 19:03					
Antimony	121	21	21	20.92	**20.98**	0.0476	0.2271
Antimony	123	20.4	21	20.72	**20.71**	0.2998	1.448
Silver	107	4.244	4.179	4.177	**4.2**	0.0379	0.9023
Silver	109	4.234	4.128	4.221	**4.195**	0.0577	1.376

Internal Standard Factors:

Rhodium	103	1.083	1.07	1.065	**1.083** n/a		n/a
Indium	115	1.054	1.053	1.046	**1.054** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:08					
Antimony	121	2.698	2.725	2.746	**2.723**	0.0241	0.8841
Antimony	123	2.699	2.692	2.64	**2.677**	0.0321	1.2
Silver	107	0.4406	0.4282	0.4381	**0.4356**	0.0065	1.501
Silver	109	0.3521	0.3476	0.3647	**0.3548**	0.0089	2.496

Internal Standard Factors:

Rhodium	103	1.134	1.129	1.134	**1.134**	n/a	n/a
Indium	115	1.066	1.074	1.072	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-003 1/5 7/28/10 19:11			Mean	SD	%RSD
Antimony	121	2.044	1.986	1.998	**2.01**	0.0306	1.524
Antimony	123	2.063	1.959	1.98	**2**	0.0552	2.757
Silver	107	0.47	0.4767	0.4678	**0.4715**	0.0046	0.9792
Silver	109	0.3048	0.2945	0.2984	**0.2993**	0.0052	1.736

Internal Standard Factors:

Rhodium	103	1.159	1.144	1.159	**1.159**	n/a	n/a
Indium	115	1.103	1.103	1.099	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-004 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:14					
Antimony	121	2.829	2.809	2.837	**2.825**	0.0147	0.5212
Antimony	123	2.774	2.674	2.845	**2.764**	0.0855	3.094
Silver	107	1.833	1.801	1.794	**1.809**	0.0205	1.131
Silver	109	1.685	1.677	1.689	**1.684**	0.0065	0.3886

Internal Standard Factors:

Rhodium	103	1.169	1.161	1.148	**1.169**	n/a	n/a
Indium	115	1.092	1.068	1.1	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:18					
Antimony	121	0.115	0.0996	0.0928	**0.1025**	0.0114	11.13
Antimony	123	0.1111	0.122	0.1073	**0.1134**	0.0076	6.727
Silver	107	0.2964	0.2939	0.2741	**0.2881**	0.0122	4.248
Silver	109	0.0938	0.0895	0.084	**0.0891**	0.0049	5.519

Internal Standard Factors:

Rhodium	103	1.162	1.147	1.148	**1.162**	n/a	n/a
Indium	115	1.097	1.091	1.088	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-006 1/5 7/28/10 19:21			Mean	SD	%RSD
Antimony	121	0.4525	0.4536	0.4557	**0.4539**	0.0016	0.362
Antimony	123	0.4439	0.4577	0.442	**0.4479**	0.0085	1.906
Silver	107	0.2507	0.2339	0.2434	**0.2427**	0.0084	3.479
Silver	109	0.0849	0.0786	0.0801	**0.0812**	0.0033	4.112

Internal Standard Factors:

Rhodium	103	1.166	1.144	1.155	**1.166**	n/a	n/a
Indium	115	1.097	1.105	1.098	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:24					
Antimony	121	51.86	51.02	50.59	**51.16**	0.6434	1.258
Antimony	123	51.53	51.28	49.85	**50.89**	0.9091	1.787
Silver	107	0.2001	0.1846	0.195	**0.1932**	0.0079	4.097
Silver	109	0.1087	0.1083	0.1068	**0.1079**	0.001	0.8916

Internal Standard Factors:

Rhodium	103	1.187	1.182	1.181	**1.187** n/a		n/a
Indium	115	1.096	1.093	1.072	**1.096** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-008 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:27					
Antimony	121	3.211	3.175	3.098	**3.161**	0.0576	1.821
Antimony	123	3.124	3.171	3.067	**3.12**	0.052	1.668
Silver	107	0.4981	0.5029	0.4943	**0.4984**	0.0043	0.869
Silver	109	0.3065	0.3051	0.2999	**0.3039**	0.0035	1.138

Internal Standard Factors:

Rhodium	103	1.211	1.176	1.192	**1.211**	n/a	n/a
Indium	115	1.126	1.123	1.107	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006453-009 1/5 7/28/10 19:31			Mean	SD	%RSD
Antimony	121	6.295	6.296	6.053	**6.215**	0.14	2.252
Antimony	123	6.176	6.153	5.993	**6.108**	0.0995	1.63
Silver	107	0.6276	0.6318	0.6209	**0.6268**	0.0055	0.8768
Silver	109	0.4761	0.4599	0.464	**0.4667**	0.0084	1.799

Internal Standard Factors:

Rhodium	103	1.185	1.17	1.188	**1.185**	n/a	n/a
Indium	115	1.115	1.126	1.112	**1.115**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		7/28/10 19:34					
Antimony	121	25.52	25.4	25.52	**25.48**	0.0728	0.2856
Antimony	123	25.5	24.77	25.11	**25.13**	0.3641	1.449
Silver	107	24.89	25.12	24.8	**24.94**	0.1663	0.6667
Silver	109	24.88	25.17	24.9	**24.98**	0.1664	0.6659

Internal Standard Factors:

Rhodium	103	1.032	1.038	1.026	**1.032**	n/a	n/a
Indium	115	1.026	1.007	1.009	**1.026**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		7/28/10 19:40					
Antimony	121	-0.032	-0.0342	-0.0364	**-0.0342**	0.0022	6.41
Antimony	123	-0.0388	-0.0457	-0.045	**-0.0432**	0.0038	8.837
Silver	107	0.0138	0.0099	0.0103	**0.0113**	0.0021	18.68
Silver	109	0.0131	0.0125	0.0096	**0.0117**	0.0018	15.74

Internal Standard Factors:							
Rhodium	103	1.013	1.008	1.005	**1.013**	n/a	n/a
Indium	115	1.015	1.002	0.996	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:42					
Antimony	121	0.4643	0.4904	0.499	**0.4845**	0.0181	3.729
Antimony	123	0.4398	0.4419	0.4849	**0.4555**	0.0255	5.589
Silver	107	0.1764	0.1897	0.183	**0.183**	0.0066	3.615
Silver	109	0.0775	0.0766	0.0795	**0.0778**	0.0015	1.929

Internal Standard Factors:

Rhodium	103	1.1	1.115	1.127	**1.1**	n/a	n/a
Indium	115	1.05	1.082	1.088	**1.05**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:45					
Antimony	121	13.5	13.45	13.38	**13.44**	0.0604	0.449
Antimony	123	13.58	13.06	13.39	**13.34**	0.2628	1.97
Silver	107	0.4706	0.4678	0.4682	**0.4689**	0.0015	0.3175
Silver	109	0.3588	0.3766	0.3725	**0.3693**	0.0093	2.531

Internal Standard Factors:							
Rhodium	103	1.139	1.154	1.147	**1.139**	n/a	n/a
Indium	115	1.029	1.01	1.026	**1.029**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-012 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:48					
Antimony	121	0.5581	0.5704	0.5808	**0.5698**	0.0114	1.995
Antimony	123	0.5592	0.5638	0.5558	**0.5596**	0.004	0.7203
Silver	107	0.309	0.293	0.2971	**0.2997**	0.0083	2.771
Silver	109	0.193	0.1963	0.1972	**0.1955**	0.0022	1.123

Internal Standard Factors:							
Rhodium	103	1.168	1.167	1.16	**1.168**	n/a	n/a
Indium	115	1.11	1.098	1.11	**1.11**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-013 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:52					
Antimony	121	0.6264	0.6336	0.6075	**0.6225**	0.0135	2.165
Antimony	123	0.6332	0.5911	0.6074	**0.6106**	0.0212	3.476
Silver	107	0.3977	0.3886	0.3869	**0.3911**	0.0058	1.493
Silver	109	0.2298	0.2353	0.2337	**0.2329**	0.0028	1.205

Internal Standard Factors:

Rhodium	103	1.165	1.174	1.17	**1.165**	n/a	n/a
Indium	115	1.123	1.11	1.11	**1.123**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-014 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:55					
Antimony	121	0.1451	0.1263	0.1299	**0.1338**	0.01	7.464
Antimony	123	0.1293	0.1329	0.1236	**0.1286**	0.0047	3.64
Silver	107	0.1231	0.1208	0.1143	**0.1194**	0.0045	3.805
Silver	109	0.037	0.0367	0.0352	**0.0363**	0.001	2.654

Internal Standard Factors:							
Rhodium	103	1.156	1.14	1.154	**1.156**	n/a	n/a
Indium	115	1.108	1.105	1.101	**1.108**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:58					
Antimony	121	0.8102	0.8245	0.8203	**0.8183**	0.0073	0.896
Antimony	123	0.818	0.7715	0.785	**0.7915**	0.0239	3.022
Silver	107	0.2763	0.2598	0.2722	**0.2694**	0.0086	3.179
Silver	109	0.0992	0.0939	0.0982	**0.0971**	0.0028	2.894

Internal Standard							
Factors:							
Rhodium	103	1.174	1.145	1.149	**1.174**	n/a	n/a
Indium	115	1.103	1.107	1.092	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:01					
Antimony	121	0.0088	0.0074	0.0199	**0.012**	0.0068	56.59
Antimony	123	0.0175	0.0085	0.0157	**0.0139**	0.0047	34.16
Silver	107	0.1462	0.1469	0.1418	**0.145**	0.0028	1.937
Silver	109	0.0675	0.0677	0.0674	**0.0675**	0.0002	0.2383

Internal Standard Factors:

Rhodium	103	1.26	1.255	1.25	**1.26**	n/a	n/a
Indium	115	1.205	1.192	1.18	**1.205**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:04					
Antimony	121	0.2534	0.2525	0.2322	**0.246**	0.012	4.869
Antimony	123	0.2602	0.2692	0.2456	**0.2584**	0.0119	4.607
Silver	107	0.2558	0.2438	0.2523	**0.2507**	0.0062	2.46
Silver	109	0.1845	0.181	0.1898	**0.1851**	0.0044	2.383

Internal Standard
Factor :

Rhodium	103	1.249	1.219	1.232	**1.249** n/a		n/a
Indium	115	1.178	1.187	1.166	**1.178** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:07					
Antimony	121	0.032	0.025	0.0319	**0.0296**	0.0041	13.68
Antimony	123	0.0348	0.032	0.0341	**0.0336**	0.0015	4.423
Silver	107	0.1921	0.1831	0.1884	**0.1879**	0.0045	2.405
Silver	109	0.1197	0.1226	0.1191	**0.1205**	0.0019	1.563

Internal Standard							
Factor:							
Rhenium	103	1.234	1.217	1.213	**1.234**	n/a	n/a
Indium	115	1.156	1.156	1.159	**1.156**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV7			Mean	SD	%RSD
TimeStamp		7/28/10 20:10					
Antimony	121	25.52	25.59	25.96	**25.69**	0.2398	0.9333
Antimony	123	25.72	25.46	25.46	**25.55**	0.1491	0.5836
Silver	107	24.97	25	25	**24.99**	0.0189	0.0758
Silver	109	24.99	25.12	24.85	**24.99**	0.134	0.5365

Internal Standard							
Factor:							
Rhodium	103	1.093	1.095	1.09	**1.093** n/a		n/a
Indium	115	1.073	1.066	1.058	**1.073** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB7			Mean	SD	%RSD
TimeStamp		7/28/10 20:16					
Antimony	121	-0.0395	-0.0453	-0.0403	**-0.0417**	0.0032	7.571
Antimony	123	-0.0425	-0.0391	-0.0418	**-0.0411**	0.0018	4.427
Silver	107	0.0137	0.0132	0.0142	**0.0137**	0.0005	3.705
Silver	109	0.0132	0.0122	0.0111	**0.0121**	0.001	8.53

Internal Standard
Factors:

Rhodium	103	1.099	1.095	1.09	**1.099** n/a		n/a
Indium	115	1.073	1.067	1.065	**1.073** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-MB 1/5 7/28/10 20:18			Mean	SD	%RSD
Antimony	121	-0.054	-0.057	-0.0538	**-0.0549**	0.0018	3.229
Antimony	123	-0.0545	-0.0563	-0.0559	**-0.0556**	0.001	1.71
Silver	107	0.0094	0.0081	0.0067	**0.0081**	0.0014	17.13
Silver	109	0.009	0.0072	0.0043	**0.0069**	0.0024	34.77

Internal Standard / Factor:							
Rhodium	103	1.088	1.066	1.074	**1.088** n/a		n/a
Indium	115	1.063	1.048	1.044	**1.063** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/28/10 20:20					
Antimony	121	9.607	9.595	9.622	**9.608**	0.0132	0.1378
Antimony	123	9.469	9.461	9.479	**9.47**	0.0092	0.0972
Silver	107	8.386	8.104	8.259	**8.25**	0.1413	1.713
Silver	109	8.389	8.191	8.235	**8.272**	0.1039	1.257
Internal Standard							
Factor							
Rhodium	103	1.038	1.028	1.02	**1.038**	n/a	n/a
Indium	115	1.01	0.987	1.004	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:27					
Antimony	121	0.1454	0.1532	0.1486	**0.1491**	0.0039	2.599
Antimony	123	0.1656	0.1669	0.141	**0.1578**	0.0146	9.261
Silver	107	0.1825	0.186	0.1765	**0.1817**	0.0048	2.659
Silver	109	0.0906	0.087	0.0819	**0.0865**	0.0044	5.091

Internal Standard
Factor:

Rhodium	103	1.154	1.137	1.152	**1.154** n/a		n/a
Indium	115	1.098	1.101	1.089	**1.098** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 20:30					
Antimony	121	0.1617	0.1494	0.1598	**0.157**	0.0066	4.205
Antimony	123	0.152	0.1595	0.1601	**0.1572**	0.0045	2.881
Silver	107	0.1714	0.1671	0.1736	**0.1707**	0.0033	1.955
Silver	109	0.0652	0.0701	0.0678	**0.0677**	0.0024	3.59

Internal Standard							
Factors:							
Rhodium	103	1.163	1.167	1.159	**1.163**	n/a	n/a
Indium	115	1.128	1.107	1.114	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-006 1/25L 7/28/10 20:33			Mean	SD	%RSD
Antimony	121	-0.0295	-0.0331	-0.0257	**-0.0294**	0.0037	12.61
Antimony	123	-0.0283	-0.0325	-0.0328	**-0.0312**	0.0025	8.104
Silver	107	0.0253	0.0291	0.0299	**0.0281**	0.0025	8.844
Silver	109	0.012	0.0131	0.0132	**0.0128**	0.0007	5.31

Internal Standard
Factor:

Rhodium	103	1.101	1.11	1.114	**1.101**	n/a	n/a
Indium	115	1.089	1.072	1.077	**1.089**	n/a	n/a

Instrument ID: P-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-006 1/5 +10/50A 7/28/10 20:36			Mean	SD	%RSD
Antimony	121	51.57	51.24	51.82	**51.54**	0.2882	0.5591
Antimony	123	51.43	50.41	50.26	**50.7**	0.6369	1.256
Silver	107	9.857	9.942	9.894	**9.897**	0.0427	0.4318
Silver	109	9.663	9.842	9.75	**9.752**	0.0897	0.9195

Internal Standard Factors:							
Rhodium	103	1.131	1.145	1.145	**1.131** n/a		n/a
Indium	115	1.075	1.065	1.063	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 20:39					
Antimony	121	21.14	21.48	21.5	**21.37**	0.2005	0.9383
Antimony	123	21.21	20.93	20.86	**21**	0.1886	0.8979
Silver	107	4.038	4.154	4.094	**4.096**	0.0582	1.422
Silver	109	3.996	4.099	4.115	**4.07**	0.0646	1.588

Internal Standard
Factor:

Rhodium	103	1.117	1.11	1.119	**1.117** n/a		n/a
Indium	115	1.075	1.08	1.078	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:44					
Antimony	121	0.7826	0.7803	0.7377	**0.7669**	0.0253	3.298
Antimony	123	0.7709	0.7817	0.7607	**0.7711**	0.0105	1.36
Silver	107	0.3584	0.3395	0.3431	**0.347**	0.0101	2.903
Silver	109	0.248	0.2273	0.226	**0.2338**	0.0124	5.287

Internal Standard							
Factor:							
Rhodium	103	1.173	1.153	1.153	**1.173** n/a		n/a
Indium	115	1.107	1.101	1.094	**1.107** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:48					
Antimony	121	0.2075	0.219	0.2136	**0.2134**	0.0058	2.705
Antimony	123	0.2137	0.2133	0.2179	**0.215**	0.0026	1.191
Silver	107	0.2167	0.2197	0.2155	**0.2173**	0.0022	1.001
Silver	109	0.1089	0.1061	0.1071	**0.1074**	0.0014	1.324

Internal Standard
Factor:

Rhodium	103	1.166	1.17	1.166	**1.166**	n/a	n/a
Indium	115	1.106	1.101	1.109	**1.106**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:51					
Antimony	121	0.1622	0.1721	0.1557	**0.1633**	0.0082	5.049
Antimony	123	0.1827	0.148	0.1473	**0.1593**	0.0203	12.71
Silver	107	0.2114	0.1983	0.2002	**0.2033**	0.0071	3.474
Silver	109	0.0594	0.0626	0.0604	**0.0608**	0.0017	2.771

Internal Standard							
Factor:							
Rhodium	103	1.18	1.174	1.178	**1.18** n/a		n/a
Indium	115	1.14	1.115	1.116	**1.14** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV8			Mean	SD	%RSD
TimeStamp		7/28/10 20:54					
Antimony	121	25.55	25.86	25.64	**25.68**	0.1588	0.6185
Antimony	123	25.3	25.92	25.36	**25.53**	0.3446	1.35
Silver	107	24.68	24.8	25.14	**24.87**	0.2399	0.9644
Silver	109	24.76	24.73	25.02	**24.84**	0.1625	0.6542

Internal Standard							
Factor:							
Rhodium	103	1.051	1.031	1.029	**1.051**	n/a	n/a
Indium	115	1.011	1.013	1.01	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB8			Mean	SD	%RSD
TimeStamp		7/28/10 21:00					
Antimony	121	-0.0435	-0.0411	-0.0421	**-0.0423**	0.0012	2.864
Antimony	123	-0.0416	-0.0453	-0.0459	**-0.0443**	0.0023	5.287
Silver	107	0.014	0.0132	0.0131	**0.0134**	0.0005	3.677
Silver	109	0.0148	0.0125	0.0144	**0.0139**	0.0012	8.96

Internal Standard							
Factor:							
Rhodium	103	1.05	1.034	1.024	**1.05** n/a		n/a
Indium	115	1.026	1.013	1.017	**1.026** n/a		n/a

Instrument ID: X-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-004 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:02					
Antimony	121	0.7282	0.7291	0.737	**0.7314**	0.0048	0.6628
Antimony	123	0.7119	0.7536	0.727	**0.7308**	0.0211	2.888
Silver	107	0.2744	0.2777	0.2694	**0.2738**	0.0042	1.536
Silver	109	0.1829	0.176	0.1722	**0.177**	0.0054	3.066

Internal Standard							
Factor:							
Rhodium	103	1.121	1.116	1.111	**1.121**	n/a	n/a
Indium	115	1.075	1.069	1.075	**1.075**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:05					
Antimony	121	0.2534	0.2584	0.2549	**0.2556**	0.0025	0.9952
Antimony	123	0.2492	0.2438	0.2452	**0.2461**	0.0028	1.149
Silver	107	0.2681	0.2552	0.2594	**0.2609**	0.0066	2.527
Silver	109	0.0696	0.0749	0.0782	**0.0742**	0.0043	5.813

Internal Standard							
Factor:							
Rhodium	103	1.155	1.16	1.152	**1.155**	n/a	n/a
Indium	115	1.108	1.101	1.095	**1.108**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:09					
Antimony	121	0.6036	0.5814	0.5765	**0.5872**	0.0145	2.462
Antimony	123	0.5799	0.5582	0.5576	**0.5653**	0.0127	2.248
Silver	107	0.2573	0.2691	0.2684	**0.265**	0.0067	2.51
Silver	109	0.1351	0.1512	0.1442	**0.1435**	0.0081	5.639

Internal Standard							
Factor:							
Rhodium	103	1.138	1.146	1.146	**1.138**	n/a	n/a
Indium	115	1.095	1.08	1.09	**1.095**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		**K1006615-008 1/5**			**Mean**	**SD**	**%RSD**
TimeStamp		**7/28/10 21:12**					
Antimony	121	0.2453	0.2365	0.2344	**0.2387**	0.0058	2.433
Antimony	123	0.2218	0.2244	0.2261	**0.2241**	0.0022	0.9601
Silver	107	0.1792	0.1667	0.1602	**0.1687**	0.0096	5.715
Silver	109	0.0857	0.088	0.0877	**0.0871**	0.0013	1.441

Internal Standard							
Factor:							
Rhodium	103	1.141	1.142	1.135	**1.141**	n/a	n/a
Indium	115	1.09	1.075	1.081	**1.09**	n/a	n/a

I[illegible]ment ID: K-ICP-MS-02
E[illegible]iment: 07-28-10D
U[illegible]: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-009 1/5 7/28/10 21:15			Mean	SD	%RSD
Antimony	121	0.3505	0.338	0.3422	**0.3436**	0.0064	1.853
Antimony	123	0.34	0.3688	0.3171	**0.342**	0.0259	7.571
Silver	107	0.2693	0.2716	0.2614	**0.2675**	0.0054	2.001
Silver	109	0.1658	0.166	0.1714	**0.1677**	0.0032	1.907

Int[illegible] Standard
Fa[illegible]:

R[illegible]um	103	1.215	1.199	1.2	**1.215** n/a		n/a
Ind[illegible]	115	1.135	1.145	1.126	**1.135** n/a		n/a

ment ID: K-ICP-MS-02
periment: 07-28-10D
: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-001 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:18					
Antimony	121	0.9161	0.9397	0.9415	**0.9324**	0.0142	1.523
Antimony	123	0.912	0.9326	0.8968	**0.9138**	0.0179	1.964
Silver	107	0.3393	0.3326	0.3597	**0.3438**	0.0141	4.097
Silver	109	0.2174	0.2162	0.2269	**0.2201**	0.0059	2.667

Internal Standard Factor:							
Rhenium	103	1.154	1.145	1.15	**1.154** n/a		n/a
Indium	115	1.09	1.093	1.09	**1.09** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:21					
Antimony	121	0.2132	0.2321	0.2279	**0.2244**	0.0099	4.414
Antimony	123	0.2467	0.2274	0.2234	**0.2325**	0.0125	5.363
Silver	107	0.3089	0.308	0.3035	**0.3068**	0.0029	0.9423
Silver	109	0.1226	0.115	0.1168	**0.1181**	0.004	3.367
Internal Standard							
Factor:							
Rhodium	103	1.159	1.162	1.142	**1.159** n/a		n/a
Indium	115	1.112	1.102	1.1	**1.112** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:24					
Antimony	121	0.188	0.1821	0.1824	**0.1842**	0.0034	1.819
Antimony	123	0.1867	0.1777	0.1862	**0.1835**	0.0051	2.759
Silver	107	0.335	0.3172	0.3214	**0.3246**	0.0093	2.876
Silver	109	0.1197	0.1248	0.122	**0.1222**	0.0026	2.1

Internal Standard							
Factor:							
Rhodium	103	1.17	1.175	1.171	**1.17**	n/a	n/a
Indium	115	1.121	1.106	1.099	**1.121**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:27					
Antimony	121	1.136	1.125	1.114	**1.125**	0.0107	0.9534
Antimony	123	1.103	1.117	1.131	**1.117**	0.0138	1.234
Silver	107	0.4152	0.4121	0.4	**0.4091**	0.008	1.965
Silver	109	0.295	0.2785	0.2825	**0.2853**	0.0086	3.016

Internal Standard							
Factor:							
Rhodium	103	1.163	1.158	1.142	**1.163**	n/a	n/a
Indium	115	1.098	1.081	1.079	**1.098**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: pg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-006 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:31					
Antimony	121	0.3177	0.3059	0.2932	**0.3056**	0.0122	4.001
Antimony	123	0.3106	0.2919	0.3055	**0.3027**	0.0097	3.195
Silver	107	0.2768	0.2588	0.2707	**0.2688**	0.0091	3.403
Silver	109	0.1208	0.1193	0.1179	**0.1193**	0.0015	1.223

Internal Standard
Factor:

Rhodium	103	1.16	1.148	1.163	**1.16**	n/a	n/a
Indium	115	1.109	1.099	1.084	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV9			Mean	SD	%RSD
TimeStamp		7/28/10 21:34					
Antimony	121	25.88	26.25	25.56	**25.9**	0.3454	1.333
Antimony	123	25.39	25.63	25.56	**25.53**	0.125	0.4898
Silver	107	24.87	24.99	24.96	**24.94**	0.0615	0.2467
Silver	109	24.85	25.07	25.06	**24.99**	0.1221	0.4887

Internal Standard							
Factor:							
Rhenium	103	1.054	1.046	1.032	**1.054**	n/a	n/a
Indium	115	1.03	1.022	1.019	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB9			Mean	SD	%RSD
Time Stamp		7/28/10 21:39					
Antimony	121	-0.0537	-0.0534	-0.0539	**-0.0536**	0.0002	0.4556
Antimony	123	-0.0527	-0.0544	-0.0545	**-0.0538**	0.001	1.809
Silver	107	0.0064	0.0068	0.0036	**0.0056**	0.0017	30.66
Silver	109	0.0062	0.0048	0.0053	**0.0054**	0.0007	12.73

Internal Standard
Element:

Rhodium	103	1.063	1.05	1.042	**1.063** n/a		n/a
Indium	115	1.048	1.022	1.009	**1.048** n/a		n/a

ment ID: K-ICP-MS-02
iment: 07-28-10D
: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:42					
Antimony	121	0.1731	0.1664	0.1775	**0.1723**	0.0056	3.238
Antimony	123	0.1751	0.1849	0.1897	**0.1832**	0.0074	4.064
Silver	107	0.316	0.295	0.3084	**0.3065**	0.0106	3.471
Silver	109	0.1265	0.1229	0.1241	**0.1245**	0.0018	1.479

Internal Standard
Factor:

Rhodium	103	1.162	1.164	1.162	**1.162**	n/a	n/a
Indium	115	1.111	1.09	1.109	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / Time Stamp		K1006676-MB 1/5 7/28/10 21:45			Mean	SD	%RSD
Antimony	121	-0.053	-0.0523	-0.0482	**-0.0512**	0.0026	5.105
Antimony	123	-0.0499	-0.0592	-0.0593	**-0.0561**	0.0054	9.546
Silver	107	0.0053	0.0068	0.0038	**0.0053**	0.0015	27.95
Silver	109	0.0027	0.0024	0.0024	**0.0025**	0.0002	7.666

Internal Standard Factors:

Rhodium	103	1.062	1.046	1.038	**1.062**	n/a	n/a
Indium	115	1.03	1.015	1.022	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006676 1/100			Mean	SD	%RSD
Time Stamp		7/28/10 21:47					
Antimony	121	8.447	8.322	8.501	**8.424**	0.0919	1.091
Antimony	123	8.353	8.097	8.231	**8.227**	0.1281	1.557
Silver	107	7.739	7.674	7.666	**7.693**	0.0399	0.5184
Silver	109	7.613	7.65	7.668	**7.644**	0.0284	0.3713

Internal Standard Factors:

Rhodium	103	1.038	1.045	1.051	**1.038** n/a		n/a
Indium	115	1.007	0.987	1	**1.007** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:53					
Antimony	121	1.066	1.101	1.063	**1.077**	0.0212	1.972
Antimony	123	1.067	1.06	1.064	**1.064**	0.0034	0.3239
Silver	107	0.329	0.3334	0.332	**0.3315**	0.0022	0.6747
Silver	109	0.3163	0.3054	0.3007	**0.3075**	0.008	2.598

Internal Standard Factors:							
Rhodium	103	1.151	1.137	1.15	**1.151** n/a		n/a
Indium	115	1.077	1.095	1.073	**1.077** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 21:56					
Antimony	121	0.9835	0.967	0.9706	**0.9737**	0.0087	0.8911
Antimony	123	0.9508	0.9523	0.9619	**0.955**	0.006	0.6275
Silver	107	0.2958	0.2901	0.3003	**0.2954**	0.0051	1.725
Silver	109	0.2618	0.2631	0.2745	**0.2665**	0.007	2.633

Internal Standard Factors:

Rhodium	103	1.147	1.136	1.142	**1.147** n/a		n/a
Indium	115	1.086	1.094	1.089	**1.086** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 22:00					
Antimony	121	0.1735	0.1853	0.181	**0.1799**	0.006	3.325
Antimony	123	0.1816	0.1826	0.1833	**0.1825**	0.0009	0.4925
Silver	107	0.0637	0.0605	0.0675	**0.0639**	0.0035	5.431
Silver	109	0.0602	0.0643	0.0635	**0.0626**	0.0022	3.455

Internal Standard Factors:

Rhodium	103	1.1	1.102	1.096	**1.1**	n/a	n/a
Indium	115	1.064	1.06	1.066	**1.064**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-018 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 22:03					
Antimony	121	53.93	53.1	53.91	**53.65**	0.471	0.878
Antimony	123	53.69	52.75	52.65	**53.03**	0.5714	1.077
Silver	107	10.34	10.43	10.34	**10.37**	0.0521	0.5026
Silver	109	10.19	10.38	10.18	**10.25**	0.112	1.092

Internal Standard Factors:

Rhodium	103	1.134	1.146	1.137	**1.134**	n/a	n/a
Indium	115	1.067	1.052	1.053	**1.067**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-018 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 22:06					
Antimony	121	21.76	21.65	22.25	**21.89**	0.3189	1.457
Antimony	123	21.26	21.53	21.56	**21.45**	0.1632	0.761
Silver	107	4.186	4.181	4.235	**4.201**	0.0296	0.7043
Silver	109	4.171	4.194	4.227	**4.197**	0.0281	0.6687

Internal Standard Factors:

Rhodium	103	1.123	1.115	1.112	**1.123** n/a		n/a
Indium	115	1.067	1.076	1.085	**1.067** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:11					
Antimony	121	0.6879	0.6539	0.705	**0.6823**	0.026	3.812
Antimony	123	0.7017	0.6666	0.6442	**0.6708**	0.029	4.318
Silver	107	0.3098	0.3009	0.306	**0.3056**	0.0045	1.468
Silver	109	0.1562	0.1591	0.1594	**0.1582**	0.0018	1.134

Internal Standard Factors:

Rhodium	103	1.143	1.139	1.145	**1.143**	n/a	n/a
Indium	115	1.084	1.073	1.097	**1.084**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:14					
Antimony	121	0.2456	0.2484	0.2408	**0.245**	0.0039	1.576
Antimony	123	0.2674	0.2451	0.25	**0.2542**	0.0117	4.613
Silver	107	0.3284	0.3343	0.3532	**0.3386**	0.013	3.824
Silver	109	0.1223	0.1208	0.1228	**0.122**	0.001	0.8382

Internal Standard Factors:

Rhodium	103	1.166	1.178	1.189	**1.166**	n/a	n/a
Indium	115	1.112	1.113	1.122	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV10			Mean	SD	%RSD
TimeStamp		7/28/10 22:17					
Antimony	121	25.79	25.96	25.88	**25.88**	0.0881	0.3403
Antimony	123	24.98	25.22	24.99	**25.06**	0.1353	0.5397
Silver	107	25.07	25.2	25.08	**25.12**	0.0742	0.2954
Silver	109	25.31	25.4	25.16	**25.29**	0.119	0.4707

Internal Standard Factors:

Rhodium	103	1.035	1.038	1.032	**1.035**	n/a	n/a
Indium	115	1.009	1.003	0.999	**1.009**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB10			Mean	SD	%RSD
TimeStamp		7/28/10 22:23					
Antimony	121	-0.0514	-0.0541	-0.0542	**-0.0532**	0.0016	2.945
Antimony	123	-0.0538	-0.0572	-0.0516	**-0.0542**	0.0028	5.236
Silver	107	0.0089	0.0082	0.0085	**0.0086**	0.0003	3.889
Silver	109	0.0071	0.0062	0.0052	**0.0061**	0.0009	15.17

Internal Standard Factors:

Rhodium	103	1.024	1.03	1.027	**1.024**	n/a	n/a
Indium	115	1.015	1	1.006	**1.015**	n/a	n/a

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow Plant Background
Project No.: 26-46-0006.13-2010-400

Service Request: K1006636

Sample Name:	Lab Code:
Batch QCD1	K1005981-001D
Batch QCS1	K1005981-001S
Batch QCD2	K1006579-001D
Batch QCS2	K1006579-001S
Batch QCD3	K1006579-002D
Batch QCS3	K1006579-002S
BG-121 COMP	K1006636-004
BG-122 COMP	K1006636-008
Method Blank	K1006636-MB

Comments:

Approved By: _____ **Date:** 7/20/10

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	6/26/2010
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: BG-121 COMP **Lab Code:** K1006636-004

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	0.02	1.0	07/21/10	07/26/10	0.02	U	
Arsenic	6020	0.50	0.07	1.0	07/21/10	07/26/10	0.07	U	
Barium	6010B	5.0	0.6	1.0	07/21/10	07/22/10	0.6	U	
Beryllium	6010B	5.0	0.05	1.0	07/21/10	07/22/10	0.05	U	
Cadmium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Calcium	6010B	50.0	6.0	1.0	07/21/10	07/22/10	12.1	J	
Chromium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	5.8		
Cobalt	6010B	10	2.0	1.0	07/21/10	07/22/10	2.0	U	
Copper	6010B	10.0	2.0	1.0	07/21/10	07/22/10	2.5	J	
Iron	6010B	20.0	0.8	1.0	07/21/10	07/22/10	30.1		
Lead	6010B	50.0	20.0	1.0	07/21/10	07/22/10	20.0	U	
Magnesium	6010B	20.0	0.3	1.0	07/21/10	07/22/10	1.1	J	
Manganese	6010B	5.00	0.20	1.0	07/21/10	07/22/10	0.70	J	
Mercury	7470A	0.20	0.02	1.0	06/30/10	07/02/10	0.02	U	
Nickel	6010B	20.0	2.0	1.0	07/21/10	07/22/10	2.5	J	
Potassium	6010B	400	40	1.0	07/21/10	07/22/10	40	U	
Selenium	6020	1.0	0.3	1.0	07/21/10	07/26/10	0.3	U	
Silver	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Sodium	6010B	100	20	1.0	07/21/10	07/22/10	20	U	
Thallium	6020	0.020	0.002	1.0	07/21/10	07/26/10	0.002	U	
Uranium	6020	0.020	0.003	1.0	07/21/10	07/26/10	0.003	U	
Vanadium	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Zinc	6010B	10.0	0.8	1.0	07/21/10	07/22/10	0.8	U	

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	6/26/2010
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: BG-122 COMP **Lab Code:** K1006636-008

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	0.02	1.0	07/21/10	07/26/10	0.02	U	
Arsenic	6020	0.50	0.07	1.0	07/21/10	07/26/10	0.07	U	
Barium	6010B	5.0	0.6	1.0	07/21/10	07/22/10	0.6	U	
Beryllium	6010B	5.0	0.05	1.0	07/21/10	07/22/10	0.05	U	
Cadmium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Calcium	6010B	50.0	6.0	1.0	07/21/10	07/22/10	6.0	U	
Chromium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Cobalt	6010B	10	2.0	1.0	07/21/10	07/22/10	2.0	U	
Copper	6010B	10.0	2.0	1.0	07/21/10	07/22/10	3.3	J	
Iron	6010B	20.0	0.8	1.0	07/21/10	07/22/10	4.5	J	
Lead	6010B	50.0	20.0	1.0	07/21/10	07/22/10	20.0	U	
Magnesium	6010B	20.0	0.3	1.0	07/21/10	07/22/10	0.3	J	
Manganese	6010B	5.00	0.20	1.0	07/21/10	07/22/10	0.25	J	
Mercury	7470A	0.20	0.02	1.0	06/30/10	07/02/10	0.02	U	
Nickel	6010B	20.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Potassium	6010B	400	40	1.0	07/21/10	07/22/10	40	U	
Selenium	6020	1.0	0.3	1.0	07/21/10	07/26/10	0.3	U	
Silver	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Sodium	6010B	100	20	1.0	07/21/10	07/22/10	20	U	
Thallium	6020	0.020	0.002	1.0	07/21/10	07/26/10	0.002	U	
Uranium	6020	0.020	0.003	1.0	07/21/10	07/26/10	0.003	U	
Vanadium	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Zinc	6010B	10.0	0.8	1.0	07/21/10	07/22/10	0.8	U	

% Solids: 0.0

Comments:

METALS

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INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project No.: 26-46-0006.13-2010-400
Project Name: Rhodia Silver Bow Plant Backgrou
Matrix: WATER

Service Request: K1006636
Date Collected:
Date Received:
Units: ug/L
Basis: N/A

Sample Name: Method Blank
Lab Code: K1006636-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	0.02	1.0	07/21/10	07/26/10	0.02	U	
Arsenic	6020	0.50	0.07	1.0	07/21/10	07/26/10	0.07	U	
Barium	6010B	5.0	0.6	1.0	07/21/10	07/22/10	0.6	U	
Beryllium	6010B	5.0	0.05	1.0	07/21/10	07/22/10	0.05	J	
Cadmium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Calcium	6010B	50.0	6.0	1.0	07/21/10	07/22/10	7.5	J	
Chromium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Cobalt	6010B	10	2.0	1.0	07/21/10	07/22/10	2.0	U	
Copper	6010B	10.0	2.0	1.0	07/21/10	07/22/10	3.3	J	
Iron	6010B	20.0	0.8	1.0	07/21/10	07/22/10	0.8	U	
Lead	6010B	50.0	20.0	1.0	07/21/10	07/22/10	20.0	U	
Magnesium	6010B	20.0	0.3	1.0	07/21/10	07/22/10	0.3	U	
Manganese	6010B	5.00	0.20	1.0	07/21/10	07/22/10	0.20	U	
Mercury	7470A	0.20	0.02	1.0	06/30/10	07/02/10	0.02	U	
Nickel	6010B	20.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Potassium	6010B	400	40	1.0	07/21/10	07/22/10	40	U	
Selenium	6020	1.0	0.3	1.0	07/21/10	07/26/10	0.3	U	
Silver	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Sodium	6010B	100	20	1.0	07/21/10	07/22/10	20	U	
Thallium	6020	0.020	0.002	1.0	07/21/10	07/26/10	0.002	U	
Uranium	6020	0.020	0.003	1.0	07/21/10	07/26/10	0.003	U	
Vanadium	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Zinc	6010B	10.0	0.8	1.0	07/21/10	07/22/10	0.8	U	

% Solids: 0.0

Comments:

METALS

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	23.7	95	25.0	24.9	100	25.2	101	6020
Arsenic	25.0	24.7	99	25.0	25.0	100	24.9	100	6020
Barium	5000	5080	102	2500	2402	96	2395	96	6010B
Beryllium	125	124	99	50	50	100	50	100	6010B
Cadmium	1250	1287	103	500	513	103	504	101	6010B
Calcium	5000	5148	103	2500	2499	100	2467	99	6010B
Calcium	12500	12653	101	25000	25159	101	25306	101	6010B
Chromium	500	521	104	500	509	102	502	100	6010B
Cobalt	1250	1291	103	500	512	102	506	101	6010B
Copper	625	635	102	500	506	101	515	103	6010B
Iron	2500	2536	101	500	505	101	515	103	6010B
Iron	10000	9723	97	25000	24909	100	24953	100	6010B
Lead	2500	2570	103	2500	2542	102	2492	100	6010B
Magnesium	5000	4903	98	2000	1972	99	1966	98	6010B
Magnesium	12500	12485	100	25000	25062	100	25070	100	6010B
Manganese	1250	1253	100	1000	1002	100	993	99	6010B
Manganese	10000	9806	98	5000	4936	99	4908	98	6010B
Mercury	5.00	5.10	102	5.00	4.90	98	5.00	100	7470A
Nickel	1250	1282	103	500	513	103	504	101	6010B
Potassium	12500	12809	102	10000	9989	100	10133	101	6010B
Selenium	25.0	24.4	98	25.0	25.1	100	25.4	102	6020
Silver	625	635	102	500	500	100	503	101	6010B
Sodium	12500	12460	100	10000	9816	98	9955	100	6010B
Thallium	25.0	26.9	108	25.0	25.7	103	25.5	102	6020
Uranium	25.0	24.6	98	25.0	24.6	98	25.2	101	6020
Vanadium	1250	1282	103	500	509	102	502	100	6010B
Zinc	1250	1295	104	500	511	102	500	100	6010B

METALS

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.1	100	24.7	99	6020
Arsenic				25.0	24.8	99	24.1	96	6020
Barium				2500	2432	97	2434	97	6010B
Beryllium				50	50	100	49	98	6010B
Cadmium				500	518	104	518	104	6010B
Calcium				2500	2469	99	2461	98	6010B
Calcium				25000	25527	102	26255	105	6010B
Chromium				500	511	102	511	102	6010B
Cobalt				500	514	103	509	102	6010B
Copper				500	517	103	518	104	6010B
Iron				500	519	104	520	104	6010B
Iron				25000	24978	100	25334	101	6010B
Lead				2500	2518	101	2503	100	6010B
Magnesium				2000	1979	99	1981	99	6010B
Magnesium				25000	25106	100	25174	101	6010B
Manganese				1000	1010	101	1010	101	6010B
Manganese				5000	4951	99	4921	98	6010B
Mercury				5.00	5.00	100	5.00	100	7470A
Nickel				500	511	102	511	102	6010B
Potassium				10000	10015	100	9820	98	6010B
Selenium				25.0	25.5	102	24.8	99	6020
Silver				500	498	100	503	101	6010B
Sodium				10000	9871	99	9661	97	6010B
Thallium				25.0	26.1	104	25.8	103	6020
Uranium				25.0	25.9	104	25.8	103	6020
Vanadium				500	496	99	493	99	6010B
Zinc				500	516	103	511	102	6010B

METALS

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	24.7	99			6020
Arsenic				25.0	24.2	97			6020
Barium				2500	2419	97	2466	99	6010B
Beryllium				50	49	98	50	100	6010B
Cadmium				500	511	102	503	101	6010B
Calcium				2500	2486	99	2473	99	6010B
Calcium				25000	25646	103	25997	104	6010B
Chromium				500	509	102	501	100	6010B
Cobalt				500	508	102	506	101	6010B
Copper				500	515	103	509	102	6010B
Iron				500	522	104	531	106	6010B
Iron				25000	25216	101	25190	101	6010B
Lead				2500	2502	100	2515	101	6010B
Magnesium				2000	1971	99	1964	98	6010B
Magnesium				25000	25027	100	25289	101	6010B
Manganese				1000	1002	100	992	99	6010B
Manganese				5000	4889	98	5000	100	6010B
Mercury				5.00	5.00	100	5.10	102	7470A
Nickel				500	508	102	505	101	6010B
Potassium				10000	10066	101	10438	104	6010B
Selenium				25.0	25.3	101			6020
Silver				500	493	99	499	100	6010B
Sodium				10000	10021	100	10370	104	6010B
Thallium				25.0	25.9	104			6020
Uranium				25.0	26.3	105			6020
Vanadium				500	500	100	508	102	6010B
Zinc				500	508	102	499	100	6010B

METALS

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Barium				2500	2407	96			6010B
Beryllium				50	49	98			6010B
Cadmium				500	504	101			6010B
Calcium				2500	2493	100			6010B
Calcium				25000	25711	103			6010B
Chromium				500	507	101			6010B
Cobalt				500	505	101			6010B
Copper				500	509	102			6010B
Iron				500	532	106			6010B
Iron				25000	25185	101			6010B
Lead				2500	2501	100			6010B
Magnesium				2000	2088	104			6010B
Magnesium				25000	25023	100			6010B
Manganese				1000	996	100			6010B
Manganese				5000	4905	98			6010B
Mercury				5.00	5.10	102	5.10	102	7470A
Nickel				500	504	101			6010B
Potassium				10000	10228	102			6010B
Silver				500	497	99			6010B
Sodium				10000	10159	102			6010B
Vanadium				500	509	102			6010B
Zinc				500	501	100			6010B

METALS

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Mercury				5.00	5.10	102	5.20	104	7470A

METALS

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.00	4.90	98			7470A

METALS
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05	0.04	80		
Arsenic				0.50	0.55	110		
Barium				5.00	4.75	95		
Beryllium				5.00	4.71	94		
Cadmium				5.00	4.43	89		
Calcium				50.00	62.10	124		
Chromium				5.00	7.71	154		
Cobalt				10.00	10.25	102		
Copper				10.00	11.45	114		
Iron				20.00	29.52	148		
Lead				50.00	50.73	101		
Magnesium				20.00	23.95	120		
Manganese				5.00	5.73	115		
Mercury				0.20	0.20	100		
Nickel				20.00	21.31	107		
Potassium				400.00	462.84	116		
Selenium				1.0	0.9	90		
Silver				10.00	8.39	84		
Sodium				200.00	262.94	131		
Thallium				0.020	0.025	125		
Uranium				0.02	0.02	100		
Vanadium				10.00	9.00	90		
Zinc				10.00	9.27	93		

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.020	U	0.020	U	-0.023	J	-0.024	J	6020
Arsenic	0.07	U	0.07	U	0.07	U	0.07	U	6020
Barium	0.6	U	0.6	U	0.6	U	0.6	U	6010B
Beryllium	0.05	U	0.05	U	0.09	J	0.12	J	6010B
Cadmium	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Calcium	6.0	U	6.0	U	6.0	U	6.0	U	6010B
Chromium	4.6	J	2.0	U	2.1	J	2.0	U	6010B
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Copper	2.0	U	2.0	U	2.0	U	3.0	J	6010B
Iron	5.1	J	2.2	J	4.3	J	3.5	J	6010B
Lead	20	U	20	U	20	U	20	U	6010B
Magnesium	0.3	U	0.3	U	0.4	J	2.0	J	6010B
Manganese	1.0	J	0.6	J	0.8	J	0.9	J	6010B
Mercury	0.02	U	0.02	U	0.02	U	0.02	U	7470A
Nickel	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Potassium	40	U	40	U	40	U	40	U	6010B
Selenium	0.3	U	0.3	U	0.3	U	0.3	U	6020
Silver	5.0	U	5.0	U	5.0	U	5.0	U	6010B
Sodium	20	U	20	U	20	U	20	U	6010B
Thallium	0.006	J	0.003	J	0.006	J	0.006	J	6020
Uranium	0.003	U	0.003	U	0.003	J	0.004	J	6020
Vanadium	5.0	U	5.0	U	5.0	U	5.0	U	6010B
Zinc	0.8	U	0.8	U	0.8	U	0.8	U	6010B

METALS

BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.022	J	0.020	U			6020
Arsenic			0.07	U	0.07	U			6020
Barium			0.6	U	0.6	U	0.6	U	6010B
Beryllium			0.12	J	0.19	J	0.26	J	6010B
Cadmium			2.0	U	2.0	U	2.0	U	6010B
Calcium			6.0	U	7.3	J	6.0	U	6010B
Chromium			2.0	U	3.8	J	2.0	U	6010B
Cobalt			2.0	U	2.0	U	2.0	U	6010B
Copper			2.9	J	2.6	J	2.0	U	6010B
Iron			4.3	J	6.3	J	6.3	J	6010B
Lead			20	U	20	U	20	U	6010B
Magnesium			2.7	J	3.7	J	3.5	J	6010B
Manganese			1.1	J	1.2	J	1.3	J	6010B
Mercury			0.02	U	0.02	U	0.02	U	7470A
Nickel			2.0	U	2.0	U	2.0	U	6010B
Potassium			40	U	40	U	40	U	6010B
Selenium			0.3	U	0.3	U			6020
Silver			5.0	U	5.0	U	5.0	U	6010B
Sodium			20	U	20	U	48	J	6010B
Thallium			0.007	J	0.007	J			6020
Uranium			0.004	J	0.006	J			6020
Vanadium			5.0	U	5.0	U	5.0	U	6010B
Zinc			0.8	U	0.8	U	0.8	U	6010B

METALS

BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Barium			0.6	U					6010B
Beryllium			0.32	J					6010B
Cadmium			2.0	U					6010B
Calcium			7.9	J					6010B
Chromium			2.0	U					6010B
Cobalt			2.0	U					6010B
Copper			3.1	J					6010B
Iron			5.9	J					6010B
Lead			20	U					6010B
Magnesium			4.0	J					6010B
Manganese			1.5	J					6010B
Mercury			0.02	U	0.02	U	0.02	U	7470A
Nickel			2.0	U					6010B
Potassium			40	U					6010B
Silver			5.0	U					6010B
Sodium			26	J					6010B
Vanadium			5.0	U					6010B
Zinc			0.8	U					6010B

METALS

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Mercury			0.10	J	0.02	U			7470A

METALS

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony			0.04	0.03				
Arsenic		25	0.64	26.1	104			
Selenium		25	-0.13	25.2	101			
Thallium			0.05	0.03				
Uranium			0.01	0.00				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

METALS

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	0	448.6	89.7			
Beryllium		500	0	518.0	103.6			
Cadmium		1000	12	984.0	98.4			
Calcium	500000	500000	484643	481689.4	96.3			
Chromium		500	-1	493.9	98.8			
Cobalt		500	1	488.0	97.6			
Copper		500	4	489.7	97.9			
Iron	200000	200000	202073	197213.3	98.6			
Lead		1000	1	1003.0	100.3			
Magnesium	500000	500000	516485	514251.2	102.9			
Manganese		500	5	464.3	92.9			
Nickel		1000	-4	955.8	95.6			
Potassium			3	-34.9				
Silver		1000	1	975.9	97.6			
Sodium			147	40.6				
Vanadium		500	3	504.5	100.9			
Zinc		1000	7	955.4	95.5			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

METALS

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SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCS1 Lab Code: K1005981-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	76 - 126	1.10		0.04	J	1.00	106.0		7470A

An empty field in the Control Limit column indicates the control limit is not applicable

METALS

- 5A -

SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCS2 Lab Code: K1006579-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	66 - 133	22.4		2.46		20.00	99.7		6020
Arsenic	72 - 129	28.4		7.17		20.00	106.2		6020
Selenium	47 - 150	24.3		4.2		20.00	100.5		6020
Thallium	75 - 121	20.0		0.018	J	20.00	99.9		6020
Uranium	75 - 125	24.2		1.220		20.00	114.9		6020

An empty field in the Control Limit column indicates the control limit is not applicable

METALS

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SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCS3 Lab Code: K1006579-002S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Barium	80 - 124	2320		487		2000.00	91.6		6010B
Beryllium	87 - 114	47		0.05	U	50.00	94.0		6010B
Cadmium	71 - 142	47		2.0	U	50.00	94.0		6010B
Chromium	89 - 117	193		2.0	U	200.00	96.5		6010B
Cobalt	88 - 117	473		2.0	U	500.00	94.6		6010B
Copper	86 - 113	234		2.0	U	250.00	93.6		6010B
Iron		11800		11800		1000.00	0.0		6010B
Lead	75 - 130	462		20.0	U	500.00	92.4		6010B
Manganese	84 - 121	589		153		500.00	87.2		6010B
Nickel	86 - 120	472		3.0	J	500.00	93.8		6010B
Silver	79 - 120	47.0		5.0	U	50.00	94.0		6010B
Vanadium	89 - 115	492		5.0	U	500.00	98.4		6010B
Zinc	87 - 113	469		4.3	J	500.00	92.9		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

METALS

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POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400 **Units:** UG/L

Project Name: Rhodia Silver Bow Plant Backgrou **Basis:** N/A

Matrix: WATER

Sample Name: Batch QCA1 **Lab Code:** K1005981-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	85 - 115	1.10		0.04	J	1.0	106		7470A

METALS

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POST SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project No.:	26-46-0006.13-2010-400	**Units:**	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	**Basis:**	N/A
Matrix:	WATER		

Sample Name: Batch QCA2 **Lab Code:** K1006579-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	22.46		2.46		20	100		6020
Arsenic	75 - 125	27.74		7.17		20	103		6020
Selenium	75 - 125	23.9		4.2		20	98		6020
Thallium	75 - 125	19.700		0.018	J	20	98		6020
Uranium	75 - 125	23.99		1.22		20	114		6020

METALS

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DUPLICATES

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCD1 Lab Code: K1005981-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.04	J	0.04	J	0.0		7470A

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

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DUPLICATES

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCD2 Lab Code: K1006579-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	2.46		2.47		0.4		6020
Arsenic	20	7.17		7.11		0.8		6020
Selenium		4.2		3.5		18.2		6020
Thallium		0.018	J	0.006	J	100.0		6020
Uranium	20	1.220		1.230		0.8		6020

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

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DUPLICATES

Client:	Barr Engineering Company	Service Request:	K1006636
Project No.:	26-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: Batch QCD3 Lab Code: K1006579-002D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Barium	20	487		465		4.6		6010B
Beryllium		0.05	U	0.05	U			6010B
Cadmium		2.0	U	2.0	U			6010B
Calcium	20	103000		98000		5.0		6010B
Chromium		2.0	U	2.0	U			6010B
Cobalt		2.0	U	2.0	U			6010B
Copper		2.0	U	2.0	U			6010B
Iron	20	11800		11200		5.2		6010B
Lead		20.0	U	20.0	U			6010B
Magnesium	20	35500		34300		3.4		6010B
Manganese	20	153		146		4.7		6010B
Nickel		3.0	J	2.7	J	10.5		6010B
Potassium	20	11700		11400		2.6		6010B
Silver		5.0	U	5.0	U			6010B
Sodium	20	193000		180000		7.0		6010B
Vanadium		5.0	U	5.0	U			6010B
Zinc		4.3	J	2.3	J	60.6		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony	20	20.4	102.0					
Arsenic	20	20.0	100.0					
Barium	5000	5140	102.8					
Beryllium	125	125	100.0					
Cadmium	1250	1330	106.4					
Calcium	12500	13000	104.0					
Chromium	500	536	107.2					
Cobalt	1250	1310	104.8					
Copper	625	652	104.3					
Iron	2500	2550	102.0					
Lead	2500	2610	104.4					
Magnesium	12500	12700	101.6					
Manganese	1250	1330	106.4					
Mercury	5	5.80	116.0					
Nickel	1250	1300	104.0					
Potassium	12500	13100	104.8					
Selenium	20	20.5	102.5					
Silver	625	642	102.7					
Sodium	12500	12900	103.2					
Thallium	20	22.1	110.5					
Uranium	20	21.0	105.0					
Vanadium	1250	1290	103.2					
Zinc	1250	1300	104.0					

METALS

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company
Service Request: K1006636

Project No.: 26-46-0006.13-2010-400
Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Sample Name: Batch QCL2
Lab Code: K1006579-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	2.460		2.422		2		MS
Arsenic	7.17		7.10		1		MS
Selenium	4.2		3.7	J	12		MS
Thallium	0.018	J	0.043	J	139		MS
Uranium	1.216		1.060		13	E	MS

METALS

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400 Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Sample Name: BG-121 COMPL Lab Code: K1006636-004L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Barium	0.60	U	3.00	U			P
Beryllium	0.05	U	0.25	U			P
Cadmium	2.00	U	10.00	U			P
Calcium	12.10	J	30.00	U	100.0		P
Chromium	5.78		12.20	J	111.1		P
Cobalt	2.00	U	10.00	U			P
Copper	2.49	J	10.00	U	100.0		P
Iron	30.10		29.00	J	3.7		P
Lead	20.00	U	100.00	U			P
Magnesium	1.12	J	1.50	U	100.0		P
Manganese	0.70	J	1.00	U	100.0		P
Nickel	2.46	J	10.00	U	100.0		P
Potassium	40	U	200	U			P
Silver	5.00	U	25.00	U			P
Sodium	20.00	U	100.00	U			P
Vanadium	5.00	U	25.00	U			P
Zinc	0.80	U	10.55	J	100.0		P

METALS

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Barium	233.5		5	0.6	P
Beryllium	313.04		5.0	0.05	P
Cadmium	226.50		5	2.0	P
Calcium	211.2		50	6.0	P
Chromium	267.72		5	2.0	P
Cobalt	228.62		10	2.0	P
Copper	324.75		10	2.0	P
Iron	259.90		20	0.8	P
Lead	220.35		50	20.0	P
Magnesium	202.5		20	0.3	P
Manganese	257.61		5	0.2	P
Nickel	231.60		20	2.0	P
Potassium	766.49		400	40.0	P
Silver	328.07		10	5.0	P
Sodium	330.23		100	20.0	P
Vanadium	310.2		10	5.0	P
Zinc	206.2		10	0.8	P

Comments:

METALS

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.05	0.02	MS
Arsenic	75		0.5	0.07	MS
Selenium	82		1.0	0.3	MS
Thallium	205		0.02	0.002	MS
Uranium	238		0.02	0.003	MS

Comments:

METALS

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #:

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.7		0.20	0.02	CV

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

METALS

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

METALS

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
Aluminum	308.215					
Antimony	206.838					
Arsenic	189.042					
Barium	493.409					
Beryllium	313.042					
Boron	249.678					
Cadmium	228.802					
Calcium	211.2					
Chromium	267.716					
Cobalt	228.616					
Copper	324.754					
Iron	271.4					
Lead	220.353					
Magnesium	202.5					
Manganese	293.9					
Molybdenum	202.03					
Nickel	231.604					
Phosphorus	214.9					
Potassium	766.491					
Selenium	196.026					
Silicon	228.158					
Silver	328.068					
Sodium	588.995					
Strontium	421.552					
Thallium	190.864					
Tin	189.989					
Titanium	334.941					
Vanadium	292.402					
Zinc	213.856					

Comments:

METALS
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Barium	5.000	45000	6010B
Beryllium	5.000	9000	6010B
Cadmium	5.000	90000	6010B
Calcium	5.000	1800000	6010B
Chromium	5.000	90000	6010B
Cobalt	5.000	90000	6010B
Copper	5.000	90000	6010B
Iron	5.000	900000	6010B
Lead	5.000	90000	6010B
Magnesium	5.000	900000	6010B
Manganese	5.000	180000	6010B
Nickel	5.000	90000	6010B
Potassium	5.000	450000	6010B
Silver	5.000	9000	6010B
Sodium	5.000	180000	6010B
Vanadium	5.000	90000	6010B
Zinc	5.000	90000	6010B

Comments:

METALS
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	900	6020
Arsenic	15.000	900	6020
Selenium	15.000	900	6020
Thallium	15.000	450	6020
Uranium	15.000	450	6020

Comments:

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: ~~MS~~ CV

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1005981-001D	6/30/2010	20.0	20.0
K1005981-001S	6/30/2010	20.0	20.0
K1006636-004	6/30/2010	20.0	20.0
K1006636-008	6/30/2010	20.0	20.0
K1006636-MB	6/30/2010	20.0	20.0
LCSW	6/30/2010	20.0	20.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1006579-001D	7/21/2010	50.0	50.0
K1006579-001S	7/21/2010	50.0	50.0
K1006636-004	7/21/2010	50.0	50.0
K1006636-008	7/21/2010	50.0	50.0
K1006636-MB	7/21/2010	50.0	50.0
LCSW	7/21/2010	50.0	50.0

METALS
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1006579-002D	7/21/2010	50.0	50.0
K1006579-002S	7/21/2010	50.0	50.0
K1006636-004	7/21/2010	50.0	50.0
K1006636-008	7/21/2010	50.0	50.0
K1006636-MB	7/21/2010	50.0	50.0
LCSW	7/21/2010	50.0	50.0

METALS
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/22/2010 **End Date:** 7/22/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Blank	1	07:45					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
STDB	1	07:48					X	X		X				X		X	X			X			X							
STDA	1	07:51							X	X	X	X	X	X	X	X	X		X			X			X	X			
ICV1	1	07:55					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
ICV1	1	07:58								X				X		X	X													
ICB1	1	08:01					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
CCV1	1	08:10					X	X		X				X		X	X			X			X							
CCV1	1	08:15							X	X	X	X	X	X	X	X	X		X			X			X	X			
CCB1	1	08:21					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
CRDL1	1	08:24					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
ICS-A1	1	08:27					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
ICS-AB1	1	08:30					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
ZZZZZZ	1	08:33																												
CCV2	1	08:36					X	X		X				X		X	X			X			X							
CCV2	1	08:39							X	X	X	X	X	X	X	X	X		X			X			X	X			
CCB2	1	08:42					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
ZZZZZZ	1	08:45																												
ZZZZZZ	1	08:48																												
ZZZZZZ	1	08:51																												
ZZZZZZ	1	08:54																												
ZZZZZZ	1	08:57																												
ZZZZZZ	1	09:00																												
ZZZZZZ	1	09:03																												
ZZZZZZ	1	09:06																												
ZZZZZZ	1	09:09																												
ZZZZZZ	1	09:12																												
CCV3	1	09:15					X	X		X				X		X	X			X			X							
CCV3	1	09:18							X	X	X	X	X	X	X	X	X		X			X			X	X			
CCB3	1	09:21					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X			
ZZZZZZ	1	09:31																												
ZZZZZZ	1	09:34																												
ZZZZZZ	5	09:37																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/22/2010 **End Date:** 7/22/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	09:40																												
ZZZZZZ	1	09:43																												
ZZZZZZ	1	09:46																												
ZZZZZZ	1	09:49																												
ZZZZZZ	1	09:52																												
ZZZZZZ	1	09:55																												
ZZZZZZ	1	09:58																												
CCV4	1	10:01					X	X		X				X		X	X			X			X							
CCV4	1	10:04							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB4	1	10:07					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006636-MB	1	10:10					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
LCSW	1	10:13					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	10:16																												
K1006579-002D	1	10:19					X	X	X	X	X	X	X	X	X	X	X		X	X		X			X	X				
K1006579-002S	1	10:22					X	X	X		X	X	X	X	X		X		X			X			X	X				
ZZZZZZ	1	10:25																												
ZZZZZZ	1	10:27																												
ZZZZZZ	1	10:30																												
ZZZZZZ	1	10:33																												
ZZZZZZ	1	10:36																												
CCV5	1	10:39					X	X		X				X		X	X			X			X							
CCV5	1	10:42							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB5	1	10:45					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	10:58																												
ZZZZZZ	1	11:01																												
K1006636-004	1	11:04					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006636-004L	5	11:08					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006636-008	1	11:11					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	11:14																												
ZZZZZZ	1	11:17																												
ZZZZZZ	1	11:20																												
ZZZZZZ	1	11:23																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 7/22/2010 **End Date:** 7/22/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	11:26																												
CCV6	1	11:29					X	X		X				X		X	X			X			X							
CCV6	1	11:32							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB6	1	11:35					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	5	11:47																												
K1006579-002D	5	11:50																					X							
ZZZZZZ	5	11:53																												
ZZZZZZ	1	11:56																												
ZZZZZZ	1	11:59																												
ZZZZZZ	1	12:02																												
ZZZZZZ	1	12:05																												
ZZZZZZ	1	12:08																												
ZZZZZZ	1	12:11																												
ZZZZZZ	1	12:14																												
CCV7	1	12:18					X	X		X				X		X	X			X			X							
CCV7	1	12:20							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB7	1	12:23					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	12:26																												
ZZZZZZ	1	12:30																												
ZZZZZZ	1	12:33																												
ZZZZZZ	1	12:43																												
ZZZZZZ	1	12:46																												
ZZZZZZ	1	12:49																												
ZZZZZZ	1	12:52																												
ZZZZZZ	1	12:55																												
ZZZZZZ	1	12:58																												
ZZZZZZ	1	13:01																												
ZZZZZZ	1	13:18																												
ZZZZZZ	1	13:21																												
ZZZZZZ	1	13:24																												
ZZZZZZ	1	13:27																												
ZZZZZZ	1	13:30																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/26/2010 **End Date:** 7/26/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	15:34			X	X															X			X				*
Cal. Stn	1	15:37			X	X															X			X				*
ICV1	1	15:41			X	X															X			X				*
CCV1	1	15:44			X	X															X			X				*
ICB1	1	15:53			X	X															X			X				*
CCB1	1	15:57			X	X															X			X				*
CRDL1	1	16:00			X	X															X			X				*
ICS-A1	1	16:04			X	X															X			X				*
ICS-AB1	1	16:16			X	X															X			X				*
ZZZZZZ	1	16:20																												
ZZZZZZ	1	16:24																												
ZZZZZZ	1	16:29																												
ZZZZZZ	1	16:33																												
ZZZZZZ	5	16:36																												
ZZZZZZ	1	16:40																												
ZZZZZZ	1	16:49																												
ZZZZZZ	1	16:53																												
ZZZZZZ	1	16:57																												
ZZZZZZ	1	17:01																												
CCV2	1	17:05			X	X															X			X				*
CCB2	1	17:13			X	X															X			X				*
ZZZZZZ	1	17:16																												
ZZZZZZ	1	17:20																												
ZZZZZZ	1	17:24																												
ZZZZZZ	1	17:28																												
ZZZZZZ	1	17:31																												
ZZZZZZ	1	17:34																												
ZZZZZZ	1	17:37																												
ZZZZZZ	1	17:41																												
ZZZZZZ	1	17:44																												
ZZZZZZ	1	17:48																												
CCV3	1	17:51			X	X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 Method: MS
Start Date: 7/26/2010 End Date: 7/26/2010

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
Cal. Blk	1.00	15:34															X										
Cal. Stn	1.00	15:37															X										
ICV1	1.00	15:41															X										
CCV1	1.00	15:44															X										
ICB1	1.00	15:53															X										
CCB1	1.00	15:57															X										
CRDL1	1.00	16:00															X										
ICS-A1	1.00	16:04															X										
ICS-AB1	1.00	16:16															X										
ZZZZZZ	1.00	16:20																									
ZZZZZZ	1.00	16:24																									
ZZZZZZ	1.00	16:29																									
ZZZZZZ	1.00	16:33																									
ZZZZZZ	5.00	16:36																									
ZZZZZZ	1.00	16:40																									
ZZZZZZ	1.00	16:49																									
ZZZZZZ	1.00	16:53																									
ZZZZZZ	1.00	16:57																									
ZZZZZZ	1.00	17:01																									
CCV2	1.00	17:05															X										
CCB2	1.00	17:13															X										
ZZZZZZ	1.00	17:16																									
ZZZZZZ	1.00	17:20																									
ZZZZZZ	1.00	17:24																									
ZZZZZZ	1.00	17:28																									
ZZZZZZ	1.00	17:31																									
ZZZZZZ	1.00	17:34																									
ZZZZZZ	1.00	17:37																									
ZZZZZZ	1.00	17:41																									
ZZZZZZ	1.00	17:44																									
ZZZZZZ	1.00	17:48																									
CCV3	1.00	17:51															X										
CCB3	1.00	17:58															X										
K1006636-MB	1.00	18:01															X										

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 7/26/2010 **End Date:** 7/26/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB3	1	17:58			X	X															X			X				*
K1006636-MB	1	18:01			X	X															X			X				*
LCSW	1	18:05			X	X															X			X				*
ZZZZZZ	1	18:10																												
K1006579-001S	1	18:14			X	X															X			X				*
K1006579-001L	5	18:19			X	X															X			X				*
K1006579-001A	1	18:23			X	X															X			X				*
K1006579-001D	1	18:29			X	X															X			X				*
ZZZZZZ	1	18:33																												
ZZZZZZ	1	18:37																												
ZZZZZZ	1	18:42																												
CCV4	1	18:46			X	X															X			X				*
CCB4	1	18:53			X	X															X			X				*
ZZZZZZ	1	18:56																												
ZZZZZZ	1	19:00																												
ZZZZZZ	1	19:04																												
ZZZZZZ	1	19:08																												
K1006636-004	1	19:13			X	X															X			X				*
K1006636-008	1	19:16			X	X															X			X				*
ZZZZZZ	1	19:19																												
ZZZZZZ	1	19:23																												
ZZZZZZ	1	19:28																												
ZZZZZZ	1	19:32																												
CCV5	1	19:36			X	X															X			X				*
CCB5	1	19:43			X	X															X			X				*
ZZZZZZ	1	19:46																												
ZZZZZZ	1	19:50																												
ZZZZZZ	1	19:54																												
ZZZZZZ	1	19:59																												
ZZZZZZ	1	20:03																												
ZZZZZZ	1	20:07																												
ZZZZZZ	1	20:11																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 Method: MS
Start Date: 7/26/2010 End Date: 7/26/2010

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
LCSW	1.00	18:05															X										
ZZZZZZ	1.00	18:10																									
K1006579-001S	1.00	18:14															X										
K1006579-001L	5.00	18:19															X										
K1006579-001A	1.00	18:23															X										
K1006579-001D	1.00	18:29															X										
ZZZZZZ	1.00	18:33																									
ZZZZZZ	1.00	18:37																									
ZZZZZZ	1.00	18:42																									
CCV4	1.00	18:46															X										
CCB4	1.00	18:53															X										
ZZZZZZ	1.00	18:56																									
ZZZZZZ	1.00	19:00																									
ZZZZZZ	1.00	19:04																									
ZZZZZZ	1.00	19:08																									
K1006636-004	1.00	19:13															X										
K1006636-008	1.00	19:16															X										
ZZZZZZ	1.00	19:19																									
ZZZZZZ	1.00	19:23																									
ZZZZZZ	1.00	19:28																									
ZZZZZZ	1.00	19:32																									
CCV5	1.00	19:36															X										
CCB5	1.00	19:43															X										
ZZZZZZ	1.00	19:46																									
ZZZZZZ	1.00	19:50																									
ZZZZZZ	1.00	19:54																									
ZZZZZZ	1.00	19:59																									
ZZZZZZ	1.00	20:03																									
ZZZZZZ	1.00	20:07																									
ZZZZZZ	1.00	20:11																									
ZZZZZZ	1.00	20:16																									
ZZZZZZ	1.00	20:20																									
ZZZZZZ	1.00	20:25																									
ZZZZZZ	1.00	20:29																									

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/2/2010 **End Date:** 7/2/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CalibrationBlank	1	10:32																X									
Standard#1	1	10:33																X									
Standard#2	1	10:35																X									
Standard#3	1	10:36																X									
Standard#4	1	10:38																X									
Standard#5	1	10:40																X									
ICV1	1	10:41																X									
ICB1	1	10:43																X									
CRDL1	1	10:45																X									
CCV1	1	10:46																X									
CCB1	1	10:48																X									
ZZZZZZ	1	10:49																									
ZZZZZZ	1	10:51																									
ZZZZZZ	1	10:53																									
ZZZZZZ	1	10:54																									
ZZZZZZ	1	10:56																									
ZZZZZZ	1	10:57																									
ZZZZZZ	1	10:59																									
ZZZZZZ	1	11:01																									
ZZZZZZ	1	11:02																									
ZZZZZZ	1	11:04																									
CCV2	1	11:06																X									
CCB2	1	11:07																X									
ZZZZZZ	1	11:09																									
ZZZZZZ	1	11:10																									
ZZZZZZ	1	11:12																									
ZZZZZZ	1	11:14																									
ZZZZZZ	1	11:15																									
ZZZZZZ	1	11:17																									
ZZZZZZ	1	11:18																									
ZZZZZZ	1	11:20																									
ZZZZZZ	1	11:22																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services

METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/2/2010 **End Date:** 7/2/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	11:23																												
CCV3	1	11:25																X												
CCB3	1	11:27																X												
ZZZZZZ	1	11:28																												
ZZZZZZ	1	11:30																												
ZZZZZZ	1	11:31																												
ZZZZZZ	1	11:33																												
ZZZZZZ	1	11:36																												
ZZZZZZ	1	11:43																												
ZZZZZZ	1	11:45																												
ZZZZZZ	1	11:46																												
ZZZZZZ	1	11:48																												
ZZZZZZ	1	11:50																												
CCV4	1	11:51																X												
CCB4	1	11:53																X												
ZZZZZZ	1	11:55																												
ZZZZZZ	1	11:56																												
ZZZZZZ	1	11:58																												
ZZZZZZ	1	11:59																												
ZZZZZZ	1	12:01																												
ZZZZZZ	1	12:03																												
ZZZZZZ	1	12:04																												
ZZZZZZ	1	12:06																												
ZZZZZZ	1	12:07																												
ZZZZZZ	1	12:09																												
CCV5	1	12:11																X												
CCB5	1	12:12																X												
ZZZZZZ	1	12:14																												
ZZZZZZ	1	12:16																												
ZZZZZZ	1	12:17																												
ZZZZZZ	1	12:19																												
ZZZZZZ	1	12:20																												

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/2/2010 **End Date:** 7/2/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	12:22																												
ZZZZZZ	1	12:24																												
ZZZZZZ	1	12:25																												
ZZZZZZ	1	12:27																												
ZZZZZZ	1	12:28																												
CCV6	1	12:30																X												
CCB6	1	12:32																X												
ZZZZZZ	1	12:37																												
ZZZZZZ	1	12:38																												
ZZZZZZ	1	12:40																												
ZZZZZZ	1	12:41																												
ZZZZZZ	1	12:43																												
ZZZZZZ	1	12:45																												
ZZZZZZ	1	12:46																												
ZZZZZZ	1	12:48																												
ZZZZZZ	1	12:50																												
ZZZZZZ	1	12:51																												
CCV7	1	12:53																X												
CCB7	1	12:54																X												
ZZZZZZ	1	12:56																												
ZZZZZZ	1	12:58																												
ZZZZZZ	1	12:59																												
ZZZZZZ	1	13:01																												
ZZZZZZ	1	13:02																												
ZZZZZZ	1	13:04																												
ZZZZZZ	1	13:06																												
ZZZZZZ	1	13:07																												
ZZZZZZ	1	13:09																												
ZZZZZZ	1	13:11																												
CCV8	1	13:12																X												
CCB8	1	13:14																X												
ZZZZZZ	1	13:15																												

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/2/2010 **End Date:** 7/2/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006636-MB	1	14:07																X									
LCSW	1	14:09																X									
ZZZZZZ	1	14:11																									
ZZZZZZ	1	14:12																									
ZZZZZZ	1	14:14																									
ZZZZZZ	1	14:16																									
ZZZZZZ	1	14:17																									
ZZZZZZ	1	14:19																									
ZZZZZZ	1	14:20																									
CCV9	1	14:22																X									
CCB9	1	14:24																X									
ZZZZZZ	1	14:25																									
ZZZZZZ	1	14:27																									
ZZZZZZ	1	14:29																									
ZZZZZZ	1	14:30																									
ZZZZZZ	1	14:32																									
ZZZZZZ	1	14:33																									
ZZZZZZ	1	14:35																									
ZZZZZZ	1	14:37																									
K1006636-004	1	14:38																X									
K1006636-008	1	14:40																X									
CCV10	1	14:41																X									
CCB10	1	14:43																X									
ZZZZZZ	1	14:45																									
K1005981-001A	1	14:46																X									
K1005981-001D	1	14:48																X									
K1005981-001S	1	14:50																X									
ZZZZZZ	1	14:51																									
ZZZZZZ	1	14:53																									
ZZZZZZ	1	14:54																									
ZZZZZZ	1	14:56																									
ZZZZZZ	1	14:58																									

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METALS
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006636

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 7/2/2010 **End Date:** 7/2/2010

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	14:59																												
ZZZZZZ	1	15:01																												
CCV11	1	15:34																X												
CCB11	1	15:36																X												
ZZZZZZ	1	15:37																												
ZZZZZZ	1	15:39																												
ZZZZZZ	1	15:40																												
ZZZZZZ	1	15:42																												
ZZZZZZ	1	15:44																												
ZZZZZZ	1	15:45																												
ZZZZZZ	1	15:47																												
ZZZZZZ	1	15:49																												
ZZZZZZ	1	15:50																												
ZZZZZZ	1	15:52																												
ZZZZZZ	1	15:53																												
ZZZZZZ	1	15:55																												
ZZZZZZ	1	15:57																												
ZZZZZZ	1	15:58																												
ZZZZZZ	1	16:00																												
ZZZZZZ	1	16:02																												
ZZZZZZ	1	16:03																												
ZZZZZZ	1	16:05																												
ZZZZZZ	1	16:06																												
ZZZZZZ	1	16:08																												
ZZZZZZ	1	16:10																												
ZZZZZZ	1	16:11																												
ZZZZZZ	1	16:13																												
ZZZZZZ	1	16:15																												
ZZZZZZ	1	16:16																												
ZZZZZZ	1	16:18																												
ZZZZZZ	1	16:21																												
ZZZZZZ	1	16:23																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115804
Team: Metals
Analyst: WSchumann

Prep Workflow: MetDigAqICP
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 07/21/2010 12:40
Due Date: 07/12/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007197-01	Method Blank		50 mL	50 mL			Metals D, Metals T	1% HNO3 5% HCL
KQ1007197-02	Lab Control Sample		50 mL	50 mL	0.25 mL 0.25 mL 0.25 mL 0.5 mL	12778 14972 18109 18980	Metals D, Metals T	1% HNO3 5% HCL
K1006579-001	FDMW-6A	.04	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006579-001	FDMW-6A	.03	50 mL	50 mL			Metals T	1% HNO3 5% HCL
K1006579-002	FDMW-2	.04	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006579-002	FDMW-2	.03	50 mL	50 mL			Metals T	1% HNO3 5% HCL
K1006579-002: KQ1007197-05	Duplicate	.03	50 mL	50 mL			Metals T	1% HNO3 5% HCL
K1006579-002: KQ1007197-06	Matrix Spike	.03	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL	17544 18837 18980 19543	Metals T	1% HNO3 5% HCL
K1006579-003	FDMW-3	.04	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006579-003	FDMW-3	.03	50 mL	50 mL			Metals T	1% HNO3 5% HCL
K1006579-004	FDMW-5	.04	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006579-004	FDMW-5	.03	50 mL	50 mL			Metals T	1% HNO3 5% HCL
K1006636-004	BG-121 COMP	.01	50 mL	50 mL			Metals T	1% HNO3 5% HCL
K1006636-008	BG-122 COMP	.01	50 mL	50 mL			Metals T	1% HNO3 5% HCL

10 Total Samples consisting of 6 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET QCP-CICV-1	Spike	18109	6/1/2011
K-MET QCP-CICV-2	Spike	12778	12/1/2010
K-MET QCP-CICV-3	Spike	14972	1/28/2011
K-MET SS1	Spike	17544	9/11/2010

Name	Type	ID	Expires
K-MET SS3	Spike	18837	12/1/2010
K-MET SS4	Spike	18980	12/16/2010
K-MET SS5	Spike	19543	2/25/2011

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET HCL	18676

Step	Name	ID
Digestion	K-MET HNO3	18888

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-08	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	21-JUL-10 12:40	21-JUL-10 15:40	WSchumann		N	

Comments

Review

Reviewed by: _____ Date: 7/22/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	0.50
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	0.50
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	0.50
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	0.50
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	0.50
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	0.25
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	0.25
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	0.25
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115802
Team: Metals
Analyst: WSchumann

Prep Workflow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 07/21/2010 12:40
Due Date: 07/12/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007196-01	Method Blank		50 mL	50 mL			Metals D, Metals T	1% HNO3
KQ1007196-02	Lab Control Sample		50 mL	50 mL	1 mL 1 mL	11605 19309	Metals D, Metals T	1% HNO3
K1006579-001	FDMW-6A	.04	50 mL	50 mL			Metals D	1% HNO3
K1006579-001	FDMW-6A	.03	50 mL	50 mL			Metals T	1% HNO3
K1006579-001: KQ1007196-03	Duplicate	.03	50 mL	50 mL			Metals T	1% HNO3
K1006579-001: KQ1007196-04	Matrix Spike	.03	50 mL	50 mL	1 mL 1 mL	11605 19309	Metals T	1% HNO3
K1006579-002	FDMW-2	.04	50 mL	50 mL			Metals D	1% HNO3
K1006579-002	FDMW-2	.03	50 mL	50 mL			Metals T	1% HNO3
K1006579-003	FDMW-3	.04	50 mL	50 mL			Metals D	1% HNO3
K1006579-003	FDMW-3	.03	50 mL	50 mL			Metals T	1% HNO3
K1006579-004	FDMW-5	.04	50 mL	50 mL			Metals D	1% HNO3
K1006579-004	FDMW-5	.03	50 mL	50 mL			Metals T	1% HNO3
K1006636-004	BG-121 COMP	.01	50 mL	50 mL			Metals T	1% HNO3
K1006636-008	BG-122 COMP	.01	50 mL	50 mL			Metals T	1% HNO3

10 Total Samples consisting of 6 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET 200.8 1000ug/L Stock	Spike	19309	1/5/2011	K-MET Ag 1000 ppb Stock	Spike	11605	8/17/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-08	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	21-JUL-10 12:40	21-JUL-10 15:40	WSchumann		N	

Comments

Review

Reviewed by: _____ Date: 7/22/10

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 207265

Cal. STD/CCV Source: HG1-93-I

Service Request Numbers:

K1005913 K1006103 K1006091 K1006421 K1006489 K1005976 K1006635 K1006636
K1005981 K1005956 K1005959 K1005989 K1006003 K1006518 K1006557 K1006549

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: MC 7/6/10 (initials)

Primary Reviewed By: KDK Date: 7/6/10

Secondary Reviewed By: JDB Date: 7/6/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	K1005913 K1006103 K1006091 K1006421 K1006489 K1005976 K1006635 K1006636 K1005981 K1005956 K1005959 K1005989 K1006003 K1006518 K1006557 K1006549

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.10		102%
2	ICB1	~	~	~	-0.01		< 0.2
3	CRA1	~	~	~	0.20		100%
4	CCV1	~	~	~	4.90		98%
5	CCB1	~	~	~	-0.01		< 0.2
6	K1005913-MB	20	20	~	0.01		0.01
7	LCSW K1005913	20	20	~	4.90		98%
8	K1005913-002	20	20	~	0.01		0.01
9	K1005913-003	20	20	~	0.01		0.01
10	K1005913-004	20	20	~	0.00		0.00
11	K1005913-005	20	20	~	0.01		0.01
12	K1005913-006	20	20	~	0.01		0.01
13	K1005913-007	20	20	~	0.01		0.01
14	K1005913-008	20	20	~	0.00		0.00
15	K1005913-009	20	20	~	0.00		0.00
16	CCV2	~	~	~	5.00		100%
17	CCB2	~	~	~	-0.01		< 0.2
18	K1005913-011	20	20	~	0.01		0.01
19	K1005913-012	20	20	~	0.01		0.01
20	K1005913-013	20	20	~	0.01		0.01
21	K1005913-014	20	20	~	0.00		0.00
22	K1005913-015	20	20	~	0.00		0.00
23	K1005913-016	20	20	~	0.00		0.00
24	K1005913-017	20	20	~	0.02		0.02
25	K1005913-020	20	20	~	0.01		0.01

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level: 1.0 ppb

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A / 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K1005913-024	20	20	~	0.00		0.00
27	K1005913-024D	20	20	~	0.01		0.01
28	CCV3	~	~	~	5.00		100%
29	CCB3	~	~	~	0.00		< 0.2
30	K1005913-024S	20	20	~	1.10		110%
31	K1005913-025	20	20	~	0.01		0.01
32	K1005913-026	20	20	~	0.00		0.00
33	K1006113-025	20	20	~	-0.01		-0.01
34	K1005913-024A	20	20	~	0.97		97%
35	K1006103-MB	20	20	~	-0.01		-0.01
36	LCSW K1006103	20	20	~	5.40		108%
37	K1006103-001	20	20	~	-0.01		-0.01
38	K1006103-001D	20	20	~	0.01		0.01
39	K1006103-001S	20	20	~	1.10		110%
40	CCV4	~	~	~	5.00		100%
41	CCB4	~	~	~	-0.01		< 0.2
42	K1006103-001A	20	20	~	1.00		100%
43	K1006103-002	20	20	~	0.00		0.00
44	K1006103-003	20	20	~	0.01		0.01
45	K1006103-004	20	20	~	0.00		0.00
46	K1006103-005	20	20	~	0.00		0.00
47	K1006103-006	20	20	~	0.00		0.00
48	K1006103-007	20	20	~	0.00		0.00
49	K1006103-008	20	20	~	0.01		0.01
50	K1006103-009	20	20	~	0.00		0.00

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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[Controlled - HgWaterRunForm 2-18-10] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	K1006103-015	20	20	~	0.00		0.00
52	CCV5	~	~	~	5.00		100%
53	CCB5	~	~	~	0.00		< 0.2
54	K1006103-016	20	20	~	0.00		0.00
55	K1006091-001	20	20	~	0.00		0.00
56	K1006091-002	20	20	~	0.00		0.00
57	K1006091-003	20	20	~	0.00		0.00
58	K1006091-004	20	20	~	-0.01		-0.01
59	K1006091-005	20	20	~	0.00		0.00
60	K1006091-006	20	20	~	0.01		0.01
61	K1006091-007	20	20	~	0.00		0.00
62	K1006091-008	20	20	~	0.00		0.00
63	K1006091-009	20	20	~	0.01		0.01
64	CCV6	~	~	~	5.10		102%
65	CCB6	~	~	~	0.00		< 0.2
66	K1006091-MB	20	20	~	0.01		0.01
67	LCSW K1006091	20	20	~	5.20		104%
68	K1006091-010	20	20	~	0.00		0.00
69	K1006091-010A	20	20	~	1.10		110%
70	K1006091-010D	20	20	~	0.00		0.00
71	K1006091-010S	20	20	~	1.00		100%
72	K1006091-011	20	20	~	0.00		0.00
73	K1006091-012	20	20	~	-0.01		-0.01
74	K1006421-001	20	20	~	0.01		0.01
75	K1006421-002	20	20	~	0.00		0.00

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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[Controlled - HgWaterRunForm 2-18-10] HG3.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
76	CCV7	~	~	~	5.10		102%
77	CCB7	~	~	~	-0.01		< 0.2
78	K1006421-003	20	20	~	0.00		0.00
79	K1006421-004	20	20	~	0.00		0.00
80	K1006421-005	20	20	~	0.00		0.00
81	K1006421-006	20	20	~	0.00		0.00
82	K1006421-007	20	20	~	0.00		0.00
83	K1006421-008	20	20	~	0.00		0.00
84	K1006421-009	20	20	~	0.00		0.00
85	K1006421-010	20	20	~	0.00		0.00
86	K1006421-011	20	20	~	0.00		0.00
87	K1006489-001	20	20	~	0.00		0.00
88	CCV8	~	~	~	5.10		102%
89	CCB8	~	~	~	0.00		< 0.2
90	K1006489-002	20	20	~	0.00		0.00
91	K1005976-MB	20	20	~	0.00		0.00
92	LCSW K1005976	20	20	~	5.80		116%
93	K1005976-001	20	20	~	0.05		0.05
94	K1005976-002	20	20	~	0.04		0.04
95	K1005976-003	20	20	~	0.00		0.00
96	K1005976-004	20	20	~	0.00		0.00
97	K1005976-005	20	20	~	0.01		0.01
98	K1005976-006	20	20	~	0.01		0.01
99	K1005976-007	20	20	~	0.00		0.00
100	CCV9	~	~	~	5.10		102%

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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[Controlled - HgWaterRunForm 2-18-10] HG4.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
~~Analysis~~ For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
101	CCB9	~	~	~	0.01		< 0.2
102	K1005976-001 DISS	20	20	~	0.01		0.01
103	K1005976-002 DISS	20	20	~	0.00		0.00
104	K1005976-003 DISS	20	20	~	0.00		0.00
105	K1005976-004 DISS	20	20	~	0.00		0.00
106	K1005976-005 DISS	20	20	~	0.00		0.00
107	K1005976-006 DISS	20	20	~	0.00		0.00
108	K1005976-007 DISS	20	20	~	0.00		0.00
109	K1006635-014	20	20	~	0.06		0.06
110	K1006636-004	20	20	~	0.00		0.00
111	K1006636-008	20	20	~	0.00		0.00
112	CCV10	~	~	~	5.20		104%
113	CCB10	~	~	~	0.10		< 0.2
114	K1005981-001	20	20	~	0.04		0.04
115	K1005981-001A	20	20	~	1.10		106%
116	K1005981-001D	20	20	~	0.04		0.04
117	K1005981-001S	20	20	~	1.10		106%
118	K1005956-MB	20	20	~	0.00		0.00
119	LCSW K1005956	20	20	~	5.40		108%
120	K1005956-001 DISS	20	20	~	0.00		0.00
121	K1005956-002 DISS	20	20	~	0.00		0.00
122	K1005959-001	20	20	~	0.03		0.03
123	K1005959-002	20	20	~	0.04		0.04
124	~~CCV11~~	~	~	~	~~6.60~~	Solution Bad 7/6/10	~~132%~~
125	CCV11	~	~	~	4.90		98%

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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[Controlled - HgWaterRunForm 2-18-10] HG5.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
101	CCB11	~	~	~	0.00		< 0.2
102	K1005959-003	20	20	~	0.06		0.06
103	K1005989-001	20	20	~	0.01		0.01
104	K1006003-001 DISS	20	20	~	0.00		0.00
105	K1006003-001 DISSD	20	20	~	0.00		0.00
106	K1006003-001 DISSS	20	20	~	1.20		120%
107	K1006003-002 DISS	20	20	~	0.00		0.00
108	K1006003-003 DISS	20	20	~	0.00		0.00
109	K1006003-004 DISS	20	20	~	0.00		0.00
110	K1006518-003	20	20	~	0.00		0.00
111	K1006518-004	20	20	~	-0.01		-0.01
112	CCV12	~	~	~	4.80		96%
113	CCB12	~	~	~	0.00		< 0.2
114	K1006557-003	20	20	~	0.01		0.01
115	K1006557-004	20	20	~	0.00		0.00
116	K1006557-008	20	20	~	0.01		0.01
117	~~K1006557-008A~~	~~20~~	~~20~~	~	~~1.20~~	See rerun sent 7/6/10	~~119%~~
118	K1006557-008D	20	20	~	0.01		0.01
119	K1006557-008S	20	20	~	1.20		119%
120	K1006557-003 DISS	20	20	~	0.00		0.00
121	K1006557-004 DISS	20	20	~	0.00		0.00
122	K1006557-008 DISS	20	20	~	0.00		0.00
123	K1006549-010	20	20	~	0.00		0.00
124	CCV13	~	~	~	4.90		98%
125	CCB13	~	~	~	0.00		0%

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
126	K1006549-011	20	20	~	0.01		0.01
127	K1006557-008A	20	20	~	1.00		99%
128	CCV14	~	~	~	4.80		96%
129	CCB14	~	~	~	0.00		< 0.2
130							
131							
132							
133							
134							
135							
136							
137							
138							
139							
140							
141							
142							
143							
144							
145							
146							
147							
148							
149							
150							

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
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Columbia Analytical Services K-CVAA-02

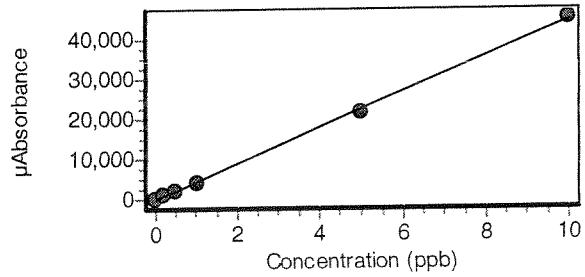
Report Generated By CETAC QuickTrace
Analyst: ACQMET18
Worksheet file: C:\Program Files\QuickTrace\Worksheets\070210B.wsz
Date Started: 7/2/2010 10:26:06 AM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	07/02/10 10:32:06 am	0.00	79	20.32	
Replicates	61.5	90.3	94.1	68.7						
Standard #1					STD	07/02/10 10:33:42 am	0.20	1002	1.89	
Replicates	999.0	980.6	1026.6	1000.1						
Standard #2					STD	07/02/10 10:35:19 am	0.50	2185	0.84	
Replicates	2159.2	2192.5	2202.1	2185.8						
Standard #3					STD	07/02/10 10:36:57 am	1.00	4282	0.74	
Replicates	4241.3	4311.9	4272.9	4301.2						
Standard #4					STD	07/02/10 10:38:35 am	5.00	21745	0.15	
Replicates	21794.1	21732.3	21728.2	21726.8						
Standard #5					STD	07/02/10 10:40:13 am	10.00	45049	0.38	
Replicates	44826.9	45007.8	45173.2	45189.2						

Calibration

Equation: A = 78.649 + 4461.799C
R2: 0.99956
SEE: 454.6936
Flags:



ICV1					ICV	07/02/10 10:41:52 am	5.10	22616	0.42	
Replicates	22485.8	22606.5	22669.0	22702.9						
% Recovery	101.02									

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB1					ICB	07/02/10 10:43:28 am	-0.01	30	62.62	
	Replicates	56.2	21.8	12.6	29.4					
CRA1					CRDL	07/02/10 10:45:04 am	0.20	976	3.83	
	Replicates	958.9	1022.0	935.2	986.7					
	% Recovery	100.53								
CCV1					CCV	07/02/10 10:46:42 am	4.90	21900	0.27	
	Replicates	21818.3	21895.5	21941.3	21943.5					
	% Recovery	97.81								
CCB1					CCB	07/02/10 10:48:18 am	-0.01	55	20.18	
	Replicates	58.8	42.8	50.3	68.7					
K1005913-MB					UNK	07/02/10 10:49:53 am	0.01	116	18.80	
	Replicates	85.9	113.9	132.9	131.1					
LCSW K1005913					UNK	07/02/10 10:51:29 am	4.90	21937	1.58	
	Replicates	21551.3	21776.5	22071.3	22348.5					
K1005913-002					UNK	07/02/10 10:53:05 am	0.01	105	17.06	
	Replicates	86.1	125.9	114.0	95.3					
K1005913-003					UNK	07/02/10 10:54:42 am	0.01	110	12.97	
	Replicates	115.4	126.5	105.8	92.8					
K1005913-004					UNK	07/02/10 10:56:19 am	0.00	89	10.68	
	Replicates	98.6	78.4	82.9	94.3					
K1005913-005					UNK	07/02/10 10:57:56 am	0.01	105	4.83	
	Replicates	97.8	105.6	109.1	107.8					
K1005913-006					UNK	07/02/10 10:59:33 am	0.01	116	21.77	
	Replicates	124.4	89.8	103.3	147.6					
K1005913-007					UNK	07/02/10 11:01:11 am	0.01	107	9.01	
	Replicates	102.9	98.3	106.5	120.7					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1005913-008				UNK	07/02/10 11:02:49 am	0.00	99	17.70	
Replicates	92.6	120.8	79.3	102.5					
K1005913-009				UNK	07/02/10 11:04:27 am	0.00	91	24.52	
Replicates	71.9	111.2	110.2	71.9					
CCV2				CCV	07/02/10 11:06:05 am	5.00	22187	0.36	
Replicates	22075.3	22186.6	22245.4	22242.5					
% Recovery	99.10								
CCB2				CCB	07/02/10 11:07:41 am	-0.01	46	22.26	
Replicates	49.2	31.4	47.4	55.2					
K1005913-011				UNK	07/02/10 11:09:19 am	0.01	115	21.39	
Replicates	128.3	88.5	142.8	101.8					
K1005913-012				UNK	07/02/10 11:10:58 am	0.01	122	9.31	
Replicates	112.6	126.2	113.5	136.5					
K1005913-013				UNK	07/02/10 11:12:33 am	0.01	130	4.42	
Replicates	133.0	122.2	128.5	135.2					
K1005913-014				UNK	07/02/10 11:14:09 am	0.00	85	32.71	
Replicates	63.1	69.4	124.8	82.2					
K1005913-015				UNK	07/02/10 11:15:45 am	0.00	88	19.57	
Replicates	108.7	95.3	71.9	75.8					
K1005913-016				UNK	07/02/10 11:17:21 am	0.00	69	27.33	
Replicates	49.4	92.2	74.0	58.7					
K1005913-017				UNK	07/02/10 11:18:57 am	0.02	158	13.35	
Replicates	140.7	166.0	142.2	185.1					
K1005913-020				UNK	07/02/10 11:20:34 am	0.01	131	10.97	
Replicates	138.4	112.0	128.3	145.0					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1005913-024				UNK	07/02/10 11:22:11 am	0.00	99	25.44	
Replicates	75.3	130.9	82.7	105.7					
K1005913-024D				UNK	07/02/10 11:23:48 am	0.01	142	10.21	
Replicates	123.6	147.0	157.9	138.5					
CCV3				CCV	07/02/10 11:25:26 am	5.00	22487	0.47	
Replicates	22332.4	22509.6	22541.4	22563.6					
% Recovery	100.44								
CCB3				CCB	07/02/10 11:27:02 am	0.00	67	1.48	
Replicates	66.1	67.4	65.5	67.5					
K1005913-024S				UNK	07/02/10 11:28:40 am	1.10	5044	1.36	
Replicates	4963.5	5018.8	5068.3	5124.2					
K1005913-025				UNK	07/02/10 11:30:17 am	0.01	131	16.94	
Replicates	134.3	152.7	136.2	100.0					
K1005913-026				UNK	07/02/10 11:31:56 am	0.00	73	17.64	
Replicates	74.0	71.2	57.5	88.9					
K1006113-025				UNK	07/02/10 11:33:34 am	-0.01	53	10.47	
Replicates	60.9	48.2	51.7	50.8					
K1005913-024A				UNK	07/02/10 11:36:51 am	0.97	4417	0.99	
Replicates	4371.5	4393.9	4433.8	4470.4					
K1006103-MB				UNK	07/02/10 11:43:45 am	-0.01	51	11.22	
Replicates	45.2	54.4	47.6	57.5					
LCSW K1006103				UNK	07/02/10 11:45:21 am	5.40	24093	1.38	
Replicates	23728.5	23921.0	24252.3	24470.8					
K1006103-001				UNK	07/02/10 11:46:57 am	-0.01	30	17.41	
Replicates	27.3	27.2	37.3	26.6					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006103-001D				UNK	07/02/10 11:48:33 am	0.01	120	21.27	
Replicates	109.3	145.7	134.2	89.0					
K1006103-001S				UNK	07/02/10 11:50:10 am	1.10	4771	0.99	
Replicates	4706.0	4767.8	4792.6	4816.0					
CCV4				CCV	07/02/10 11:51:48 am	5.00	22216	0.19	
Replicates	22159.3	22212.9	22242.1	22251.3					
% Recovery	99.23								
CCB4				CCB	07/02/10 11:53:24 am	-0.01	36	70.84	
Replicates	68.1	12.8	42.5	18.8					
K1006103-001A				UNK	07/02/10 11:55:01 am	1.00	4579	0.87	
Replicates	4628.0	4581.2	4530.7	4576.8					
K1006103-002				UNK	07/02/10 11:56:38 am	0.00	89	20.70	
Replicates	78.6	116.7	83.8	78.0					
K1006103-003				UNK	07/02/10 11:58:16 am	0.01	106	29.05	
Replicates	143.9	74.7	116.2	88.3					
K1006103-004				UNK	07/02/10 11:59:53 am	0.00	80	30.01	
Replicates	58.8	85.4	64.7	112.0					
K1006103-005				UNK	07/02/10 12:01:32 pm	0.00	84	21.10	
Replicates	110.2	73.0	82.8	71.9					
K1006103-006				UNK	07/02/10 12:03:10 pm	0.00	87	27.37	
Replicates	99.7	52.1	92.3	104.2					
K1006103-007				UNK	07/02/10 12:04:46 pm	0.00	74	39.08	
Replicates	92.3	64.1	102.2	38.1					
K1006103-008				UNK	07/02/10 12:06:22 pm	0.01	114	7.05	
Replicates	110.1	104.7	121.9	119.6					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006103-009				UNK	07/02/10 12:07:58 pm	0.00	97	27.40	
Replicates	66.4	130.6	90.4	101.2					
K1006103-015				UNK	07/02/10 12:09:34 pm	0.00	92	28.73	
Replicates	127.1	98.2	70.9	72.3					
CCV5				CCV	07/02/10 12:11:12 pm	5.00	22256	0.33	
Replicates	22161.9	22232.9	22323.9	22305.5					
% Recovery	99.41								
CCB5				CCB	07/02/10 12:12:47 pm	0.00	70	37.94	
Replicates	61.7	58.6	50.4	109.1					
K1006103-016				UNK	07/02/10 12:14:24 pm	0.00	80	32.34	
Replicates	110.8	92.3	55.4	62.3					
K1006091-001				UNK	07/02/10 12:16:00 pm	0.00	88	15.48	
Replicates	101.2	89.9	90.4	68.8					
K1006091-002				UNK	07/02/10 12:17:37 pm	0.00	72	13.91	
Replicates	81.4	79.4	60.9	66.1					
K1006091-003				UNK	07/02/10 12:19:15 pm	0.00	78	11.68	
Replicates	87.6	67.8	84.1	73.9					
K1006091-004				UNK	07/02/10 12:20:52 pm	-0.01	40	29.97	
Replicates	33.9	38.3	57.1	30.2					
K1006091-005				UNK	07/02/10 12:22:30 pm	0.00	76	20.83	
Replicates	85.7	78.0	88.5	53.5					
K1006091-006				UNK	07/02/10 12:24:08 pm	0.01	129	17.22	
Replicates	106.0	118.0	135.9	157.0					
K1006091-007				UNK	07/02/10 12:25:47 pm	0.00	76	31.15	
Replicates	77.7	54.1	64.7	108.9					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006091-008				UNK	07/02/10 12:27:23 pm	0.00	97	12.58	
Replicates	88.3	105.1	110.0	85.2					
K1006091-009				UNK	07/02/10 12:28:59 pm	0.01	104	22.50	
Replicates	133.5	76.4	104.7	101.1					
CCV6				CCV	07/02/10 12:30:37 pm	5.10	22660	0.08	
Replicates	22644.2	22670.9	22679.0	22646.0					
% Recovery	101.22								
CCB6				CCB	07/02/10 12:32:13 pm	0.00	60	43.03	
Replicates	50.0	97.9	51.1	40.5					
K1006091-MB				UNK	07/02/10 12:37:04 pm	0.01	102	25.24	
Replicates	121.4	101.1	65.5	118.3					
LCSW K1006091				UNK	07/02/10 12:38:41 pm	5.20	23112	0.23	
Replicates	23149.9	23071.0	23061.7	23164.6					
K1006091-010				UNK	07/02/10 12:40:17 pm	0.00	84	30.93	
Replicates	93.9	76.0	52.3	113.1					
K1006091-010A				UNK	07/02/10 12:41:54 pm	1.10	4810	0.91	
Replicates	4748.2	4809.1	4836.4	4845.0					
K1006091-010D				UNK	07/02/10 12:43:31 pm	0.00	70	40.61	
Replicates	52.6	58.3	112.8	57.1					
K1006091-010S				UNK	07/02/10 12:45:08 pm	1.00	4565	0.42	
Replicates	4590.3	4569.2	4547.7	4552.4					
K1006091-011				UNK	07/02/10 12:46:46 pm	0.00	65	13.36	
Replicates	55.1	75.1	68.3	61.1					
K1006091-012				UNK	07/02/10 12:48:23 pm	-0.01	38	38.99	
Replicates	28.2	27.0	39.5	59.3					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006421-001				UNK	07/02/10 12:50:02 pm	0.01	106	25.27	
Replicates	100.9	128.4	69.8	123.3					
K1006421-002				UNK	07/02/10 12:51:40 pm	0.00	90	19.00	
Replicates	94.0	109.4	87.2	68.3					
CCV7				CCV	07/02/10 12:53:18 pm	5.10	22822	0.98	
Replicates	22538.4	22749.6	22989.4	23011.9					
% Recovery	101.95								
CCB7				CCB	07/02/10 12:54:54 pm	-0.01	50	26.26	
Replicates	47.8	37.8	69.1	47.0					
K1006421-003				UNK	07/02/10 12:56:30 pm	0.00	66	41.38	
Replicates	40.3	57.7	61.7	104.7					
K1006421-004				UNK	07/02/10 12:58:07 pm	0.00	64	46.11	
Replicates	64.0	97.7	68.4	25.9					
K1006421-005				UNK	07/02/10 12:59:43 pm	0.00	100	12.56	
Replicates	85.6	111.6	94.2	110.1					
K1006421-006				UNK	07/02/10 01:01:20 pm	0.00	78	43.33	
Replicates	65.4	36.5	112.4	96.1					
K1006421-007				UNK	07/02/10 01:02:57 pm	0.00	82	27.57	
Replicates	102.7	85.4	90.7	50.0					
K1006421-008				UNK	07/02/10 01:04:33 pm	0.00	78	19.09	
Replicates	87.0	93.7	70.0	61.5					
K1006421-009				UNK	07/02/10 01:06:10 pm	0.00	59	39.93	
Replicates	82.7	70.4	28.1	54.6					
K1006421-010				UNK	07/02/10 01:07:48 pm	0.00	76	10.83	
Replicates	86.0	75.9	65.8	76.9					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006421-011				UNK	07/02/10 01:09:25 pm	0.00	77	35.66	
Replicates	42.0	94.3	69.7	103.6					
K1006489-001				UNK	07/02/10 01:11:03 pm	0.00	91	33.68	
Replicates	113.5	113.3	89.8	48.3					
CCV8				CCV	07/02/10 01:12:41 pm	5.10	22826	1.47	
Replicates	22408.5	22720.6	23004.8	23170.8					
% Recovery	101.97								
CCB8				CCB	07/02/10 01:14:17 pm	0.00	76	44.36	
Replicates	104.3	27.5	90.7	81.1					
K1006489-002				UNK	07/02/10 01:15:55 pm	0.00	87	11.48	
Replicates	77.5	88.2	81.6	100.4					
K1005976-MB				UNK	07/02/10 02:07:57 pm	0.00	79	17.78	
Replicates	84.5	95.7	65.9	68.7					
LCSW K1005976				UNK	07/02/10 02:09:34 pm	5.80	25967	0.32	
Replicates	25844.6	26027.4	26014.5	25981.0					
K1005976-001				UNK	07/02/10 02:11:10 pm	0.05	311	8.84	
Replicates	351.1	295.8	290.4	308.4					
K1005976-002				UNK	07/02/10 02:12:47 pm	0.04	258	2.64	
Replicates	260.1	263.4	261.9	248.4					
K1005976-003				UNK	07/02/10 02:14:24 pm	0.00	87	17.63	
Replicates	106.1	86.2	86.1	68.7					
K1005976-004				UNK	07/02/10 02:16:01 pm	0.00	96	9.73	
Replicates	107.4	84.8	93.7	96.9					
K1005976-005				UNK	07/02/10 02:17:38 pm	0.01	111	23.82	
Replicates	92.1	144.8	117.5	87.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1005976-006				UNK	07/02/10 02:19:15 pm	0.01	121	22.53	
Replicates	143.2	94.8	100.2	145.8					
K1005976-007				UNK	07/02/10 02:20:52 pm	0.00	60	13.97	
Replicates	54.9	61.2	53.7	72.2					
CCV9				CCV	07/02/10 02:22:30 pm	5.10	22838	0.45	
Replicates	22732.8	22768.1	22904.5	22946.6					
% Recovery	102.02								
CCB9				CCB	07/02/10 02:24:06 pm	0.01	106	12.87	
Replicates	105.8	98.1	124.9	94.3					
K1005976-001 DISS				UNK	07/02/10 02:25:44 pm	0.01	107	7.18	
Replicates	102.0	102.8	118.7	106.5					
K1005976-002 DISS				UNK	07/02/10 02:27:21 pm	0.00	78	50.62	
Replicates	104.6	116.3	31.4	59.8					
K1005976-003 DISS				UNK	07/02/10 02:29:00 pm	0.00	86	19.66	
Replicates	102.5	98.2	77.6	66.7					
K1005976-004 DISS				UNK	07/02/10 02:30:38 pm	0.00	78	26.01	
Replicates	56.6	65.2	93.6	97.4					
K1005976-005 DISS				UNK	07/02/10 02:32:15 pm	0.00	73	56.96	
Replicates	127.2	85.8	43.9	36.9					
K1005976-006 DISS				UNK	07/02/10 02:33:52 pm	0.00	89	10.66	
Replicates	98.8	79.1	95.5	83.1					
K1005976-007 DISS				UNK	07/02/10 02:35:29 pm	0.00	62	52.99	
Replicates	65.6	16.8	71.3	95.5					
K1006635-014				UNK	07/02/10 02:37:07 pm	0.06	344	0.93	
Replicates	340.5	346.6	346.4	341.5					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006636-004				UNK	07/02/10 02:38:44 pm	0.00	60	36.99	
Replicates	34.2	74.1	82.7	49.7					
K1006636-008				UNK	07/02/10 02:40:21 pm	0.00	74	19.23	
Replicates	69.1	90.9	79.5	57.5					
CCV10				CCV	07/02/10 02:41:59 pm	5.20	23363	0.25	
Replicates	23304.3	23331.7	23376.2	23440.4					
% Recovery	104.37								
CCB10				CCB	07/02/10 02:43:35 pm	0.10	544	12.02	
Replicates	555.3	615.2	456.8	549.3					
K1005981-001				UNK	07/02/10 02:45:12 pm	0.04	260	5.54	
Replicates	267.4	265.2	269.7	238.8					
K1005981-001A				UNK	07/02/10 02:46:49 pm	1.10	4914	0.82	
Replicates	4854.4	4934.5	4921.8	4943.6					
K1005981-001D				UNK	07/02/10 02:48:27 pm	0.04	236	11.85	
Replicates	205.1	258.0	220.5	262.0					
K1005981-001S				UNK	07/02/10 02:50:05 pm	1.10	4888	0.47	
Replicates	4918.5	4863.4	4880.9	4887.6					
K1005956-MB				UNK	07/02/10 02:51:43 pm	0.00	84	5.36	
Replicates	81.7	87.1	87.7	78.3					
LCSW K1005956				UNK	07/02/10 02:53:21 pm	5.40	24110	0.49	
Replicates	24185.4	24229.8	24050.4	23973.8					
K1005956-001 DISS				UNK	07/02/10 02:54:58 pm	0.00	71	22.01	
Replicates	58.3	88.2	79.2	56.9					
K1005956-002 DISS				UNK	07/02/10 02:56:36 pm	0.00	59	21.16	
Replicates	45.7	54.8	61.0	75.6					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1005959-001				UNK	07/02/10 02:58:13 pm	0.03	227	8.13	
Replicates	227.3	206.1	250.8	222.5					
K1005959-002				UNK	07/02/10 02:59:51 pm	0.04	236	1.91	
Replicates	232.8	240.6	239.6	232.0					
~~CCV11~~				~~CCV~~	~~07/02/10 03:01:29 pm~~	~~6.60~~	~~29650~~	~~0.98~~	~~Q~~
Replicates	29301.2	29544.4	29787.0	29967.7					
% Recovery	132.55								
CCV11				CCV	07/02/10 03:34:25 pm	4.90	21824	0.59	
Replicates	21667.3	21775.4	21907.2	21948.0					
% Recovery	97.48								
CCB11				CCB	07/02/10 03:36:01 pm	0.00	57	28.45	
Replicates	52.0	73.8	66.7	37.0					
K1005959-003				UNK	07/02/10 03:37:38 pm	0.06	360	5.11	
Replicates	383.8	350.8	364.2	341.4					
K1005989-001				UNK	07/02/10 03:39:16 pm	0.01	128	11.52	
Replicates	109.3	126.2	130.2	145.1					
K1006003-001 DISS				UNK	07/02/10 03:40:53 pm	0.00	79	15.99	
Replicates	83.7	76.1	63.9	94.0					
K1006003-001 DISSD				UNK	07/02/10 03:42:30 pm	0.00	89	8.85	
Replicates	91.1	78.0	89.6	96.8					
K1006003-001 DISSS				UNK	07/02/10 03:44:08 pm	1.20	5476	0.85	
Replicates	5522.4	5504.5	5458.9	5419.1					
K1006003-002 DISS				UNK	07/02/10 03:45:46 pm	0.00	93	15.68	
Replicates	79.6	90.5	86.9	113.3					
K1006003-003 DISS				UNK	07/02/10 03:47:24 pm	0.00	78	30.44	
Replicates	79.6	102.7	45.7	83.7					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006003-004 DISS				UNK	07/02/10 03:49:02 pm	0.00	84	29.88	
Replicates	103.5	99.2	85.6	48.2					
K1006518-003				UNK	07/02/10 03:50:40 pm	0.00	57	46.26	
Replicates	43.9	93.4	32.6	58.8					
K1006518-004				UNK	07/02/10 03:52:18 pm	-0.01	48	9.53	
Replicates	45.7	43.3	52.2	52.4					
CCV12				CCV	07/02/10 03:53:55 pm	4.80	21416	0.23	
Replicates	21490.7	21388.9	21400.9	21384.4					
% Recovery	95.65								
CCB12				CCB	07/02/10 03:55:31 pm	0.00	62	14.73	
Replicates	57.0	52.3	70.7	69.8					
K1006557-003				UNK	07/02/10 03:57:08 pm	0.01	120	15.59	
Replicates	102.1	110.2	145.0	123.8					
K1006557-004				UNK	07/02/10 03:58:46 pm	0.00	65	42.26	
Replicates	75.9	39.7	45.1	98.0					
K1006557-008				UNK	07/02/10 04:00:23 pm	0.01	105	11.89	
Replicates	106.9	92.3	98.5	121.1					
~~K1006557-008A~~				UNK	~~07/02/10 04:02:01 pm~~	1.20	5212	1.17	
Replicates	5247.3	5271.3	5195.3	5134.2					NOM 7/6/10
K1006557-008D				UNK	07/02/10 04:03:38 pm	0.01	101	29.11	
Replicates	118.0	100.6	59.9	125.9					
K1006557-008S				UNK	07/02/10 04:05:16 pm	1.20	5560	0.76	
Replicates	5620.3	5549.5	5519.7	5552.5					
K1006557-003 DISS				UNK	07/02/10 04:06:53 pm	0.00	84	14.77	
Replicates	74.4	79.5	101.9	78.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006557-004 DISS				UNK	07/02/10 04:08:31 pm	0.00	85	31.36	
Replicates	122.6	60.6	75.6	80.2					
K1006557-008 DISS				UNK	07/02/10 04:10:10 pm	0.00	100	23.37	
Replicates	69.8	118.1	118.8	93.4					
K1006549-010				UNK	07/02/10 04:11:48 pm	0.00	72	19.39	
Replicates	79.0	70.9	85.9	53.4					
CCV13				CCV	07/02/10 04:13:26 pm	4.90	21850	1.00	
Replicates	21592.9	21759.4	21961.6	22085.8					
% Recovery	97.59								
CCB13				CCB	07/02/10 04:15:02 pm	0.00	61	22.91	
Replicates	71.7	41.8	71.5	60.9					
K1006549-011				UNK	07/02/10 04:16:40 pm	0.01	105	14.73	
Replicates	116.5	100.9	118.2	85.0					
K1006557-008A				UNK	07/02/10 04:18:44 pm	1.00	4588	0.80	
Replicates	4545.4	4571.4	4625.3	4610.7					
CCV14				CCV	07/02/10 04:21:46 pm	4.80	21672	0.96	
Replicates	21391.7	21641.5	21790.9	21865.1					
% Recovery	96.79								
CCB14				CCB	07/02/10 04:23:21 pm	0.00	73	14.63	
Replicates	87.9	70.2	69.9	62.9					

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114664 **Prep Workflow:** HgDigAq **Status:** Prepped **Prep Date:** 06/30/2010 17:30
Team: Metals **Prep Method:** Method **Current Step:** Digestion **Due Date:** 06/26/2010
Analyst: KKLEIN **Rush/NPDES:** N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006471-03	Method Blank		20 mL	20 mL			Hg T	
KQ1006471-04	Lab Control Sample		20 mL	20 mL	0.1 mL	18222	Hg T	
K1005913-002	CTMW-14-0610	.10	20 mL	20 mL			Hg T	
K1005913-003	CTMW-24D-0610	.10	20 mL	20 mL			Hg T	
K1005913-004	CTMW-24-0610	.10	20 mL	20 mL			Hg T	
K1005913-005	CTMW-20-0610	.10	20 mL	20 mL			Hg T	
K1005913-006	CTMW-5-0610	.10	20 mL	20 mL			Hg T	
K1005913-007	CTMW-15-0610	.10	20 mL	20 mL			Hg T	
K1005913-008	CTMW-25D-0610	.10	20 mL	20 mL			Hg T	
K1005913-009	CTMW-21-0610	.10	20 mL	20 mL			Hg T	
K1005913-011	CTMW-17-0610	.10	20 mL	20 mL			Hg T	
K1005913-012	CTMW-17D-0610	.10	20 mL	20 mL			Hg T	
K1005913-013	CTMW-11R-0610	.10	20 mL	20 mL			Hg T	
K1005913-014	CTMW-23-0610	.10	20 mL	20 mL			Hg T	
K1005913-015	CTMW-12-0610	.10	20 mL	20 mL			Hg T	
K1005913-016	CTMW-8-0610	.10	20 mL	20 mL			Hg T	
K1005913-017	CTMW-9-0610	.10	20 mL	20 mL			Hg T	
K1005913-020	CTMW-18-0610	.10	20 mL	20 mL			Hg T	
K1005913-024	CTMW-7-0610	.21	20 mL	20 mL			Hg T	
K1005913-024: KQ1006471-05	Duplicate	.21	20 mL	20 mL			Hg T	
K1005913-024: KQ1006471-06	Matrix Spike	.21	20 mL	20 mL	0.2 mL	19089	Hg T	
K1005913-025	CTMW-9-7-0610	.21	20 mL	20 mL			Hg T	
K1005913-026	Field Blank#1-0610	.21	20 mL	20 mL			Hg T	

K1006113-025	Equipment Blank	.04	20 mL	20 mL			Hg T	

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19089	7/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	18222	7/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	15559	Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET K2S2O8 Hg	15561	Digestion	K-MET SnCl Hg	18000
Digestion	K-MET KMnO4 Hg	15563	Digestion	K-MET HNO3	18888
Digestion	K-MET H2SO4 Hg	16385	Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	16760			

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C	Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	30-JUN-10 17:30	30-JUN-10 19:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-I

Review

Reviewed by: JDB Date: 7/6/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114664 **Prep Workflow**: HgDigAq **Status**: Draft **Prep Date**: 06/30/2010 14:50
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/26/2010
Analyst: BSHELDON **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006471-03	Method Blank						Hg T	
KQ1006471-04	Lab Control Sample						Hg T	
K1005913-002	CTMW-14-0610	.10					Hg T	
K1005913-003	CTMW-24D-0610	.10					Hg T	
K1005913-004	CTMW-24-0610	.10					Hg T	
K1005913-005	CTMW-20-0610	.10					Hg T	
K1005913-006	CTMW-5-0610	.10					Hg T	
K1005913-007	CTMW-15-0610	.10					Hg T	
K1005913-008	CTMW-25D-0610	.10					Hg T	
K1005913-009	CTMW-21-0610	.10					Hg T	
K1005913-011	CTMW-17-0610	.10					Hg T	
K1005913-012	CTMW-17D-0610	.10					Hg T	
K1005913-013	CTMW-11R-0610	.10					Hg T	
K1005913-014	CTMW-23-0610	.10					Hg T	
K1005913-015	CTMW-12-0610	.10					Hg T	
K1005913-016	CTMW-8-0610	.10					Hg T	
K1005913-017	CTMW-9-0610	.10					Hg T	
K1005913-020	CTMW-18-0610	.10					Hg T	
K1005913-024	CTMW-7-0610	.21					Hg T	
K1005913-024: KQ1006471-05	Duplicate	.21					Hg T	
K1005913-024: KQ1006471-06	Matrix Spike	.21					Hg T	
K1005913-025	CTMW-9-7-0610	.21					Hg T	
K1005913-026	Field Blank#1-0610	.21					Hg T	
K1006113-025	Equipment Blank	.04					Hg T	

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114666 **Prep Workflow**: HgDigAq **Status**: Prepped **Prep Date**: 06/30/2010 19:30
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/29/2010
Analyst: KKLEIN **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006473-01	Method Blank		20 mL	20 mL			Hg T	
KQ1006473-02	Lab Control Sample		20 mL	20 mL	0.1 mL	18222	Hg T	
K1006091-001	SK-12-01	.05	20 mL	20 mL			Hg T	
K1006091-002	SK-12-02	.05	20 mL	20 mL			Hg T	
K1006091-003	SK-12-03	.05	20 mL	20 mL			Hg T	
K1006091-004	SK-12-04	.05	20 mL	20 mL			Hg T	
K1006091-005	SK-41-01	.05	20 mL	20 mL			Hg T	
K1006091-006	NW-11-01	.05	20 mL	20 mL			Hg T	
K1006091-007	UT-41-01	.05	20 mL	20 mL			Hg T	
K1006091-008	UT-41-02	.05	20 mL	20 mL			Hg T	
K1006091-009	UT-41-03	.05	20 mL	20 mL			Hg T	
K1006103-001	UT-11-01	.05	20 mL	20 mL			Hg T	
K1006103-001: KQ1006473-03	Duplicate	.05	20 mL	20 mL			Hg T	
K1006103-001: KQ1006473-04	Matrix Spike	.05	20 mL	20 mL	0.2 mL	19089	Hg T	
K1006103-002	UT-01-01	.05	20 mL	20 mL			Hg T	
K1006103-003	UT-03-01	.05	20 mL	20 mL			Hg T	
K1006103-004	UT-03-02	.05	20 mL	20 mL			Hg T	
K1006103-005	UT-03-03	.05	20 mL	20 mL			Hg T	
K1006103-006	UT-03-04	.05	20 mL	20 mL			Hg T	
K1006103-007	EB-01-01	.05	20 mL	20 mL			Hg T	
K1006103-008	SK-31-01	.05	20 mL	20 mL			Hg T	
K1006103-009	TB-01-01	.05	20 mL	20 mL			Hg T	
K1006103-015	EB-01-02	.05	20 mL	20 mL			Hg T	

K1006103-016	EB-01-03	.05	20 mL	20 mL			Hg T	

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19089	7/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	18222	7/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	15559	Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET K2S2O8 Hg	15561	Digestion	K-MET SnCl Hg	18000
Digestion	K-MET KMnO4 Hg	15563	Digestion	K-MET HNO3	18888
Digestion	K-MET H2SO4 Hg	16385	Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	16760			

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C	Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	30-JUN-10 19:30	30-JUN-10 21:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-I

Review

Reviewed by: JDB Date: 7/6/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114669 **Prep Workflow**: HgDigAq **Status**: Prepped **Prep Date**: 06/30/2010 19:30
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/30/2010
Analyst: KKLEIN **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006474-01	Method Blank		20 mL	20 mL			Hg T	
KQ1006474-02	Lab Control Sample		20 mL	20 mL	0.1 mL	18222	Hg T	
K1006091-010	UT-41-04	.05	20 mL	20 mL			Hg T	
K1006091-010: KQ1006474-03	Duplicate	.05	20 mL	20 mL			Hg T	
K1006091-010: KQ1006474-04	Matrix Spike	.05	20 mL	20 mL	0.2 mL	19089	Hg T	
K1006091-011	KC-01-01	.05	20 mL	20 mL			Hg T	
K1006091-012	SY-02-01	.05	20 mL	20 mL			Hg T	
K1006421-001	SM0610-AP26-VG301	.01	20 mL	20 mL			Hg T	
K1006421-002	SM0610-DP16-VG301	.01	20 mL	20 mL			Hg T	
K1006421-003	SM0610-DP31-VG301	.01	20 mL	20 mL			Hg T	
K1006421-004	SM0610-DP35-VG301	.01	20 mL	20 mL			Hg T	
K1006421-005	SM0610-EP12-VG301	.01	20 mL	20 mL			Hg T	
K1006421-006	SM0610-ES4-VG301	.01	20 mL	20 mL			Hg T	
K1006421-007	SM0610-HSCC1-VG301	.01	20 mL	20 mL			Hg T	
K1006421-008	SM0610-PCO05-VG301	.01	20 mL	20 mL			Hg T	
K1006421-009	SM0610-PCO13-VG301	.01	20 mL	20 mL			Hg T	
K1006421-010	SM0610-SV30-VG301	.01	20 mL	20 mL			Hg T	
K1006421-011	SM0610-LSSSPN4-AVM301	.01	20 mL	20 mL			Hg T	
K1006489-001	SM0610-EP18-VG301	.01	20 mL	20 mL			Hg T	
K1006489-002	SM0610-EP27-VG301	.01	20 mL	20 mL			Hg T	

20 Total Samples consisting of 16 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19089	7/1/2010

Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	18222	7/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET K2S2O8 Hg	15561
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET H2SO4 Hg	16385
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Step	Name	Property	Value	
Digestion	K-HotPlate-02	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	30-JUN-10 19:30	01-JUN-10 21:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-I

Review

Reviewed by: JDB Date: 7/6/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114666 **Prep Workflow**: HgDigAq **Status**: Draft **Prep Date**: 06/30/2010 14:54
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/29/2010
Analyst: BSHELDON **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006473-01	Method Blank						Hg T	
KQ1006473-02	Lab Control Sample						Hg T	
K1006091-001	SK-12-01	.05					Hg T	
K1006091-002	SK-12-02	.05					Hg T	
K1006091-003	SK-12-03	.05					Hg T	
K1006091-004	SK-12-04	.05					Hg T	
K1006091-005	SK-41-01	.05					Hg T	
K1006091-006	NW-11-01	.05					Hg T	
K1006091-007	UT-41-01	.05					Hg T	
K1006091-008	UT-41-02	.05					Hg T	
K1006091-009	UT-41-03	.05					Hg T	
K1006103-001	UT-11-01	.05					Hg T	
K1006103-001: KQ1006473-03	Duplicate	.05					Hg T	
K1006103-001: KQ1006473-04	Matrix Spike	.05					Hg T	
K1006103-002	UT-01-01	.05					Hg T	
K1006103-003	UT-03-01	.05					Hg T	
K1006103-004	UT-03-02	.05					Hg T	
K1006103-005	UT-03-03	.05					Hg T	
K1006103-006	UT-03-04	.05					Hg T	
K1006103-007	EB-01-01	.05					Hg T	
K1006103-008	SK-31-01	.05					Hg T	
K1006103-009	TB-01-01	.05					Hg T	
K1006103-015	EB-01-02	.05					Hg T	
K1006103-016	EB-01-03	.05					Hg T	

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114669 **Prep Workflow**: HgDigAq **Status**: Draft **Prep Date**: 06/30/2010 14:56
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 07/01/2010
Analyst: BSHELDON **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006474-01	Method Blank						Hg T	
KQ1006474-02	Lab Control Sample						Hg T	
K1006091-010	UT-41-04	.05					Hg T	
K1006091-010: KQ1006474-03	Duplicate	.05					Hg T	
K1006091-010: KQ1006474-04	Matrix Spike	.05					Hg T	
K1006091-011	KC-01-01	.05					Hg T	
K1006091-012	SY-02-01	.05					Hg T	
K1006421-001	SM0610-AP26-VG301	.01					Hg T	
K1006421-002	SM0610-DP16-VG301	.01					Hg T	
K1006421-003	SM0610-DP31-VG301	.01					Hg T	
K1006421-004	SM0610-DP35-VG301	.01					Hg T	
K1006421-005	SM0610-EP12-VG301	.01					Hg T	
K1006421-006	SM0610-ES4-VG301	.01					Hg T	
K1006421-007	SM0610-HSCC1-VG301	.01					Hg T	
K1006421-008	SM0610-PCO05-VG301	.01					Hg T	
K1006421-009	SM0610-PCO13-VG301	.01					Hg T	
K1006421-010	SM0610-SV30-VG301	.01					Hg T	
K1006421-011	SM0610-LSSSPN4-AVM301	.01					Hg T	
K1006489-001	SM0610-EP18-VG301	.01					Hg T	
K1006489-002	SM0610-EP27-VG301	.01					Hg T	

20 Total Samples consisting of 16 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114665 **Prep Workflow**: HgDigAq **Status**: Prepped **Prep Date**: 06/30/2010 17:30
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/26/2010
Analyst: KKLEIN **Rush/NPDES**: NPDES

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006472-09	Method Blank		20 mL	20 mL			Hg T	
KQ1006472-10	Lab Control Sample		20 mL	20 mL	0.1 mL	18222	Hg T	
K1005956-001	BPCU-MW05-W14	.05	20 mL	20 mL			Hg D	
K1005956-002	BPCU-MW06-W14	.05	20 mL	20 mL			Hg D	
K1005959-001	US Crane	.01	20 mL	20 mL			Hg T	
K1005959-002	Industrial Way	.01	20 mL	20 mL			Hg T	
K1005959-003	Utility Vault	.01	20 mL	20 mL			Hg T	
K1005989-001	KCP INJ 1	.08	20 mL	20 mL			Hg T	
K1006003-001	BPCU-MW07-W14	.05	20 mL	20 mL			Hg D	
K1006003-001: KQ1006472-03	Duplicate	.05	20 mL	20 mL			Hg D	
K1006003-001: KQ1006472-04	Matrix Spike	.05	20 mL	20 mL	0.2 mL	19089	Hg D	
K1006003-002	BPCU-MW09-W14	.05	20 mL	20 mL			Hg D	
K1006003-003	BPCU-MW08-W14	.05	20 mL	20 mL			Hg D	
K1006003-004	BPCU-MW01-W14	.05	20 mL	20 mL			Hg D	
K1006518-003	0610MACLWS501	.01	20 mL	20 mL			Hg T	
K1006518-004	0610MACLWS401	.01	20 mL	20 mL			Hg T	
K1006549-010	OL10-WAT-01	.07	20 mL	20 mL			Hg T	
K1006549-011	OL10-WAT-02	.07	20 mL	20 mL			Hg T	
K1006557-003	MW-05R-0610	.16	20 mL	20 mL			Hg D	
K1006557-003	MW-05R-0610	.15	20 mL	20 mL			Hg T	
K1006557-004	MW-15R-0610	.16	20 mL	20 mL			Hg D	
K1006557-004	MW-15R-0610	.15	20 mL	20 mL			Hg T	
K1006557-008	MW-08R-0610	.16	20 mL	20 mL			Hg D	

K1006557-008	MW-08R-0610	.15	20 mL	20 mL			Hg T	
K1006557-008: KQ1006472-05	Duplicate	.15	20 mL	20 mL			Hg T	
K1006557-008: KQ1006472-06	Matrix Spike	.15	20 mL	20 mL	0.2 mL	19089	Hg T	

23 Total Samples consisting of 17 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19089	7/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	18222	7/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	15559	Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET K2S2O8 Hg	15561	Digestion	K-MET SnCl Hg	18000
Digestion	K-MET KMnO4 Hg	15563	Digestion	K-MET HNO3	18888
Digestion	K-MET H2SO4 Hg	16385	Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	16760			

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C	Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	30-JUN-10 17:30	30-JUN-10 19:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-I

Review

Reviewed by: JDB Date: 7/6/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114665 **Prep Workflow**: HgDigAq **Status**: Draft **Prep Date**: 06/30/2010 14:52
Team: Metals **Prep Method**: Method **Current Step**: Digestion
Analyst: BSHELDON **Rush/NPDES**: NPDES **Due Date**: 06/26/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006472-01	Method Blank						Hg D, Hg T	
KQ1006472-02	Lab Control Sample						Hg D, Hg T	
K1005956-001	BPCU-MW05-W14	.05					Hg D	
K1005956-002	BPCU-MW06-W14	.05					Hg D	
K1005959-001	US Crane	.01					Hg T	
K1005959-002	Industrial Way	.01					Hg T	
K1005959-003	Utility Vault	.01					Hg T	
K1005989-001	KCP INJ 1	.08					Hg T	
K1006003-001	BPCU-MW07-W14	.05					Hg D	
K1006003-001: KQ1006472-03	Duplicate	.05					Hg D	
K1006003-001: KQ1006472-04	Matrix Spike	.05					Hg D	
K1006003-002	BPCU-MW09-W14	.05					Hg D	
K1006003-003	BPCU-MW08-W14	.05					Hg D	
K1006003-004	BPCU-MW01-W14	.05					Hg D	
K1006518-003	0610MACLWS501	.01					Hg T	
K1006518-004	0610MACLWS401	.01					Hg T	
K1006549-010	OL10-WAT-01	.07					Hg T	
K1006549-011	OL10-WAT-02	.07					Hg T	
K1006557-003	MW-05R-0610	.16					Hg D	
K1006557-003	MW-05R-0610	.15					Hg T	
K1006557-004	MW-15R-0610	.16					Hg D	
K1006557-004	MW-15R-0610	.15					Hg T	
K1006557-008	MW-08R-0610	.16					Hg D	
K1006557-008	MW-08R-0610	.15					Hg T	

K1006557-008: KQ1006472-05	Duplicate	.15					Hg T	
K1006557-008: KQ1006472-06	Matrix Spike	.15					Hg T	

23 Total Samples consisting of 17 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114670 **Prep Workflow**: HgDigAq **Status**: Prepped **Prep Date**: 06/30/2010 19:30
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/27/2010
Analyst: KKLEIN **Rush/NPDES**: RUSH

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006475-05	Method Blank		20 mL	20 mL			Hg T	
KQ1006475-06	Lab Control Sample		20 mL	20 mL	0.1 mL	18222	Hg T	
K1005976-001	Bonanza Creek	.05	20 mL	20 mL			Hg D	
K1005976-001	Bonanza Creek	.04	20 mL	20 mL			Hg T	
K1005976-002	Bottom Marg	.05	20 mL	20 mL			Hg D	
K1005976-002	Bottom Marg	.04	20 mL	20 mL			Hg T	
K1005976-003	Emma Creek	.05	20 mL	20 mL			Hg D	
K1005976-003	Emma Creek	.04	20 mL	20 mL			Hg T	
K1005976-004	Emma Creek DUP	.05	20 mL	20 mL			Hg D	
K1005976-004	Emma Creek DUP	.04	20 mL	20 mL			Hg T	
K1005976-005	Lower Marg	.05	20 mL	20 mL			Hg D	
K1005976-005	Lower Marg	.04	20 mL	20 mL			Hg T	
K1005976-006	Middle Marg	.05	20 mL	20 mL			Hg D	
K1005976-006	Middle Marg	.04	20 mL	20 mL			Hg T	
K1005976-007	0608101702 Bk	.05	20 mL	20 mL			Hg D	
K1005976-007	0608101702 Bk	.04	20 mL	20 mL			Hg T	
K1005981-001	Kawa Stream	.12	20 mL	20 mL			Hg T	
K1005981-001: KQ1006475-03	Duplicate	.12	20 mL	20 mL			Hg T	
K1005981-001: KQ1006475-04	Matrix Spike	.12	20 mL	20 mL	0.2 mL	19089	Hg T	
K1006635-014	Effluent_062410	.09	20 mL	20 mL			Hg T	
K1006636-004	BG-121 COMP	.01	20 mL	20 mL			Hg T	
K1006636-008	BG-122 COMP	.01	20 mL	20 mL			Hg T	

15 Total Samples consisting of 11 Client Samples, 2 Client QC Samples, 2 Batch QC Samples

associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19089	7/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	18222	7/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	15559	Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET K2S2O8 Hg	15561	Digestion	K-MET SnCl Hg	18000
Digestion	K-MET KMnO4 Hg	15563	Digestion	K-MET HNO3	18888
Digestion	K-MET H2SO4 Hg	16385	Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	16760			

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C	Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	30-JUN-10 19:30	30-JUN-10 21:30	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-I

Review

Reviewed by: JDB Date: 7/6/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114670 **Prep Workflow**: HgDigAq **Status**: Draft **Prep Date**: 06/30/2010 14:57
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 06/27/2010
Analyst: BSHELDON **Rush/NPDES**: RUSH

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006475-01	Method Blank						Hg D, Hg T	
KQ1006475-02	Lab Control Sample						Hg D, Hg T	
K1005976-001	Bonanza Creek	.05					Hg D	
K1005976-001	Bonanza Creek	.04					Hg T	
K1005976-002	Bottom Marg	.05					Hg D	
K1005976-002	Bottom Marg	.04					Hg T	
K1005976-003	Emma Creek	.05					Hg D	
K1005976-003	Emma Creek	.04					Hg T	
K1005976-004	Emma Creek DUP	.05					Hg D	
K1005976-004	Emma Creek DUP	.04					Hg T	
K1005976-005	Lower Marg	.05					Hg D	
K1005976-005	Lower Marg	.04					Hg T	
K1005976-006	Middle Marg	.05					Hg D	
K1005976-006	Middle Marg	.04					Hg T	
K1005976-007	0608101702 Bk	.05					Hg D	
K1005976-007	0608101702 Bk	.04					Hg T	
K1005981-001	Kawa Stream	.12					Hg T	
K1005981-001: KQ1006475-03	Duplicate	.12					Hg T	
K1005981-001: KQ1006475-04	Matrix Spike	.12					Hg T	
K1006635-014	Effluent_062410	.09					Hg T	
K1006636-004	BG-121 COMP	.01					Hg T	
K1006636-008	BG-122 COMP	.01					Hg T	

15 Total Samples consisting of 11 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Service Request # K1006636 4,8 (water)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 072210AICP02
Star Lims: 209391

Primary Review by 3C Date 7/22/10

Secondary Review by [illegible] Date 7/22/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/22/10 07:45 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1150	.0319	.0249	.00021
Stddev	.0137	.0059	.0098	.00004
%RSD	11.95	18.42	39.26	19.163
#1	.1053	.0360	.0319	.00024
#2	.1247	.0277	.0180	.00018

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00259	.4045	.0004	.3623
Stddev	.00011	.0158	.0001	.0050
%RSD	4.2169	3.899	22.40	1.376
#1	-.00267	.3934	.0005	.3588
#2	-.00251	.4157	.0004	.3658

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.1187	-.0006	.0003	-.0414
Stddev	.0196	.0001	.0003	.0469
%RSD	16.50	19.90	102.4	113.2
#1	-.1325	-.0005	.0001	-.0745
#2	-.1048	-.0007	.0005	-.0083

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0011	.0005	.0001	.1455
Stddev	.0001	.0001	.0001	.0215
%RSD	6.698	19.61	197.7	14.79
#1	.0011	.0004	.0001	.1607
#2	.0010	.0006	.0000	.1302

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	-.01932	.00084	-.0005	.0002
Stddev	.00391	.00003	.0000	.0001
%RSD	20.260	3.8774	3.428	49.61
#1	-.02209	.00086	-.0005	.0002
#2	-.01655	.00081	-.0005	.0001

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.3230	-.0125	.0580
Stddev	.0002	.0623	.0294	.0195
%RSD	120.1	19.28	235.7	33.62
#1	.0000	.2789	.0083	.0442
#2	-.0003	.3670	-.0333	.0717

Sample Name: Blank Run Time: 07/22/10 07:45

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0027	.0005	.0073	.0009
Stddev	.0004	.0000	.0002	.0001
%RSD	16.55	1.262	2.591	9.422
#1	.0024	.0005	.0072	.0008
#2	.0030	.0005	.0074	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0353	.2840	.00298	.0001
Stddev	.0245	.0176	.00019	.0000
%RSD	69.31	6.185	6.3698	41.31
#1	.0526	.2964	.00312	.0001
#2	.0180	.2716	.00285	.0002

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.19736	-.00089
Stddev	.07623	.00027
%RSD	38.624	30.443
#1	.25126	-.00108
#2	.14346	-.00070

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	197.11
Stddev	.66
%RSD	.33649
#1	196.64
#2	197.58

7/22/10

7/22/10

Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/22/10 07:48 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.37	2.8877	.46912	36.63
Stddev	.11	.0326	.00107	.63
%RSD	.5297	1.1308	.22809	1.731
#1	20.29	2.8646	.46836	36.18
#2	20.44	2.9108	.46987	37.08

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.7388	59.71	.6628	225.7
Stddev	.0085	.17	.0018	.2
%RSD	1.149	.2927	.2756	.1012
#1	.7328	59.59	.6615	225.9
#2	.7448	59.84	.6641	225.5

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.650	46.31	97.06	434.27
Stddev	.014	.45	1.01	1.55
%RSD	.3016	.9759	1.042	.35730
#1	4.660	45.99	96.35	435.37
#2	4.640	46.63	97.78	433.18

Elem	Sr4077
Line	407.771 { 82}
Avg	8.4457
Stddev	.0083
%RSD	.09819
#1	8.4399
#2	8.4516

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	194.67
Stddev	.10
%RSD	.04944
#1	194.60
#2	194.74

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/22/10 07:51 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	16.71	11.28	48.42	.2741
Stddev	.07	.00	.16	.0066
%RSD	.4105	.0151	.3205	2.395
#1	16.66	11.28	48.31	.2787
#2	16.76	11.28	48.53	.2694

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	31.25	.1122	.1791	19.39
Stddev	.03	.0031	.0044	.11
%RSD	.0985	2.737	2.472	.5810
#1	31.23	.1144	.1822	19.47
#2	31.27	.1100	.1760	19.31

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4015	.0846	1416.5	2.9440
Stddev	.0178	.0020	29.5	.0749
%RSD	4.438	2.423	2.0799	2.5452
#1	.4141	.0860	1437.3	2.9969
#2	.3889	.0831	1395.6	2.8910

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1456	.1641	10.78	18.85
Stddev	.0021	.0039	.07	.02
%RSD	1.451	2.377	.6860	.1269
#1	.1471	.1669	10.72	18.86
#2	.1441	.1614	10.83	18.83

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0820	.1480	.1405	.16816
Stddev	.0018	.0038	.0038	.00443
%RSD	2.241	2.599	2.673	2.6327
#1	.0833	.1507	.1431	.17129
#2	.0807	.1453	.1378	.16503

Elem	Tl1908
Line	190.864 {176}
Avg	.0735
Stddev	.0013
%RSD	1.784
#1	.0745
#2	.0726

Sample Name: STDA Run Time: 07/22/10 07:51

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	203.29
Stddev	5.98
%RSD	2.9409
#1	199.06
#2	207.52

Method: 2010A Sample Name: ICV1 ICPM-64-C Operator:
Comment:
Run Time: 07/22/10 07:55 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.112	2.529	2.595	5.0802	.12418	.0021
Stddev	.023	.033	.032	.0100	.00023	.0002
%RSD	.4562	1.292	1.242	.19782	.18543	10.47
#1	5.095	2.506	2.572	5.0731	.12434	.0023
#2	5.128	2.552	2.618	5.0873	.12401	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	5.000%	5.000%	5.000%	5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.287	12.65	.5214	1.291	.6347	2.536
Stddev	.009	.23	.0063	.011	.0002	.017
%RSD	.7287	1.847	1.208	.8141	.0300	.6646
#1	1.280	12.49	.5170	1.284	.6346	2.524
#2	1.293	12.82	.5259	1.298	.6348	2.548
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.570	12.48	1.2528	2.057	1.282	12.81
Stddev	.033	.15	.0230	.032	.013	.26
%RSD	1.285	1.186	1.8322	1.566	1.014	2.037
#1	2.546	12.38	1.2366	2.035	1.272	12.62
#2	2.593	12.59	1.2690	2.080	1.291	12.99
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	5.000%	5.000%	5.0000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.549	.6351	12.46	.0127	1.282	1.295
Stddev	.001	.0056	.27	.0051	.000	.014
%RSD	.0366	.8821	2.152	40.21	.0275	1.095
#1	2.549	.6391	12.27	.0164	1.282	1.285
#2	2.550	.6312	12.65	.0091	1.281	1.305
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 07/22/10 07:55

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0196	-.1472	2.0766	2.590	.00042	.00694
Stddev	.0141	.0019	.0003	.027	.00022	.00007
%RSD	71.72	1.274	.01639	1.038	50.948	.97027
#1	-.0097	-.1459	2.0764	2.571	.00027	.00699
#2	-.0296	-.1486	2.0769	2.609	.00058	.00689
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	199.35
Stddev	.01
%RSD	.00530
#1	199.35
#2	199.34

Method: 2010A Sample Name: ICVB1 ICPM-S6-C Operator:
Comment:
Run Time: 07/22/10 07:58 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.018	.0182	.0030	.00660	.00026	1.987
Stddev	.018	.0007	.0013	.00065	.00004	.009
%RSD	1.810	3.809	43.00	9.8501	14.581	.4721
#1	1.031	.0187	.0021	.00706	.00028	1.980
#2	1.005	.0177	.0040	.00614	.00023	1.993
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	5.148	.0067	.0020	.0033	9.723
Stddev	.0001	.033	.0027	.0006	.0023	.044
%RSD	3.426	.6412	39.76	30.91	71.21	.4527
#1	.0018	5.124	.0086	.0024	.0016	9.755
#2	.0019	5.171	.0048	.0016	.0049	9.692
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097	4.9029	9.806	.0133	.0016	.0818
Stddev	.0099	.0209	.025	.0073	.0008	.0031
%RSD	101.7	.42526	.2533	54.48	47.78	3.821
#1	.0168	4.8881	9.789	.0185	.0011	.0840
#2	.0027	4.9176	9.824	.0082	.0022	.0795
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		5.0000%	5.000%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	-.0004	.0898	4.990	.0053	.0034
Stddev	.0100	.0004	.0008	.000	.0005	.0007
%RSD	119.6	97.34	.8673	.0000	9.755	20.60
#1	.0154	-.0001	.0903	4.990	.0049	.0029
#2	.0013	-.0007	.0892	4.990	.0057	.0039
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVB1 Run Time: 07/22/10 07:58

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.017	5.105	.00398	.0163	2.0744	1.9786
Stddev	.029	.019	.00005	.0188	.0177	.0080
%RSD	.5777	.3705	1.2548	115.5	.85530	.40189
#1	4.997	5.092	.00394	.0296	2.0869	1.9842
#2	5.038	5.119	.00401	.0030	2.0618	1.9730
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	199.78
Stddev	.62
%RSD	.31079
#1	199.34
#2	200.22

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/22/10 08:01 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	-.0054	.0000	-.00016	.00001
Stddev	.0029	.0000	.0017	.00011	.00001
%RSD	108.2	.0283	41640.	66.052	84.600
#1	-.0006	-.0054	.0012	-.00023	.00001
#2	-.0047	-.0054	-.0012	-.00008	.00000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0009	-.0029	.0045	.0013
Stddev	.0001	.0000	.0003	.0000	.0002
%RSD	11.00	4.148	10.85	.9509	14.99
#1	.0007	-.0009	-.0026	.0046	.0011
#2	.0006	-.0008	-.0031	.0045	.0014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0051	.0025	-.00004	.00101
Stddev	.0000	.0056	.0026	.00007	.00093
%RSD	.0664	110.0	106.2	169.86	91.456
#1	.0016	.0091	.0006	-.00009	.00167
#2	.0016	.0011	.0044	.00001	.00036
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0000	.0070	.0199	.0016
Stddev	.0001	.001	.0043	.0073	.0037
%RSD	3.578	2532.	61.96	36.50	231.2
#1	.0018	.0004	.0101	.0251	-.0010
#2	.0019	-.0004	.0039	.0148	.0043
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: ICB Run Time: 07/22/10 08:01

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0037	-.0007	-.0003	.0067
Stddev	.0031	.0043	.0014	.0001	.0021
%RSD	164.4	116.8	196.8	23.50	31.65
#1	.0040	.0067	-.0017	-.0003	.0052
#2	-.0003	.0006	.0003	-.0004	.0082
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	.00067	-.0010	.00000	.00011
Stddev	.0009	.00083	.0108	.00001	.00006
%RSD	55.64	122.50	1133.	275.96	54.753
#1	-.0024	.00009	-.0086	.00000	.00015
#2	-.0010	.00126	.0067	.00001	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.18
Stddev	.13
%RSD	.06746
#1	197.09
#2	197.28

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 08:10 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.972	.0121	.0002	2.4021	.04966	.0037
Stddev	.037	.0076	.0077	.0068	.00018	.0006
%RSD	.7439	62.71	3426.	.28288	.37150	16.32
#1	4.935	.0069	-.0049	2.3955	.04983	.0035
#2	4.945	.0168	.0038	2.3982	.04978	.0030
#3	5.008	.0201	.0093	2.4037	.04963	.0038
#4	4.999	.0044	-.0073	2.4109	.04942	.0044
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	5.000%			5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.16	.0021	-.0003	.0001	24.91
Stddev	.0002	.37	.0024	.0006	.0017	.19
%RSD	14.76	1.461	114.1	198.5	2382.	.7638
#1	.0014	24.62	.0013	-.0011	.0006	24.63
#2	.0014	25.31	.0037	.0003	-.0025	25.03
#3	.0018	25.45	-.0009	.0000	.0011	25.04
#4	.0013	25.25	.0042	-.0005	.0011	24.94
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	25.06	4.936	.0006	-.0027	9.989
Stddev	.0089	.07	.008	.0011	.0005	.092
%RSD	313.7	.2804	.1652	200.1	18.41	.9219
#1	-.0050	24.97	4.929	.0003	-.0024	9.882
#2	.0099	25.09	4.930	.0013	-.0035	9.946
#3	-.0108	25.06	4.947	-.0009	-.0026	10.05
#4	-.0054	25.13	4.936	.0015	-.0024	10.08
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		5.000%	5.000%			5.000%

Sample Name: CCVB Run Time: 07/22/10 08:10

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0001	9.816	-.0014	.0048	.0014
Stddev	.0106	.0018	.041	.0048	.0015	.0006
%RSD	213.0	1258.	.4210	339.3	30.12	41.18
#1	-.0040	-.0019	9.789	.0035	.0048	.0020
#2	.0012	.0007	9.781	-.0010	.0052	.0013
#3	.0204	.0019	9.824	-.0001	.0064	.0007
#4	.0024	-.0013	9.872	-.0080	.0029	.0016
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			5.000%			

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.01	2.498	.00102	.0256	.49911	.49648
Stddev	.06	.009	.00163	.0099	.00391	.00070
%RSD	.6396	.3781	160.19	38.63	.78246	.14047
#1	9.940	2.485	.00034	.0330	.49474	.49707
#2	9.979	2.499	.00024	.0137	.49822	.49702
#3	10.07	2.506	.00346	.0213	.49931	.49561
#4	10.06	2.503	.00003	.0345	.50419	.49621
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.47
Stddev	.74
%RSD	.37640
#1	196.48
#2	197.54
#3	197.56
#4	198.29

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 08:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4862	2.482	2.472	.45362	.52958	.5023
Stddev	.0149	.021	.021	.00095	.00120	.0017
%RSD	3.074	.8532	.8351	.21002	.22727	.3471
#1	.4954	2.451	2.449	.45366	.52928	.5003
#2	.5024	2.494	2.489	.45270	.52943	.5029
#3	.4736	2.492	2.460	.45322	.53124	.5017
#4	.4734	2.493	2.490	.45493	.52836	.5044
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		5.000%	5.000%			5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5125	2.499	.5093	.5117	.5061	.5050
Stddev	.0022	.022	.0010	.0014	.0030	.0018
%RSD	.4243	.8921	.1973	.2679	.5854	.3570
#1	.5120	2.474	.5095	.5122	.5071	.5074
#2	.5102	2.519	.5088	.5114	.5087	.5031
#3	.5124	2.486	.5082	.5100	.5066	.5049
#4	.5154	2.516	.5105	.5132	.5018	.5046
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.542	1.9720	1.0016	1.019	.5133	5.115
Stddev	.004	.0067	.0063	.004	.0034	.036
%RSD	.1746	.34197	.62452	.3559	.6659	.6950
#1	2.546	1.9622	.99552	1.016	.5136	5.133
#2	2.544	1.9767	1.0028	1.018	.5086	5.088
#3	2.536	1.9727	.99825	1.018	.5144	5.157
#4	2.542	1.9762	1.0098	1.024	.5167	5.084
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	5.000%	5.0000%	5.0000%	5.000%	5.000%	

Sample Name: CCVA Run Time: 07/22/10 08:15

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	.5004	.4722	2.490	.5088	.5111
Stddev	.008	.0035	.0064	.013	.0055	.0033
%RSD	.3262	.6958	1.364	.5190	1.080	.6451
#1	2.475	.4961	.4658	2.498	.5082	.5100
#2	2.478	.5046	.4691	2.475	.5018	.5091
#3	2.463	.5005	.4808	2.484	.5151	.5095
#4	2.462	.5005	.4730	2.503	.5100	.5161
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	5.000%	5.000%		5.000%	5.000%	5.000%

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0191	.2854	.50908	5.038	.51264	.49386
Stddev	.0088	.0031	.00191	.025	.00263	.00103
%RSD	46.42	1.082	.37521	.5059	.51312	.20782
#1	-.0082	.2851	.50638	5.027	.51268	.49501
#2	-.0225	.2870	.50926	5.031	.51174	.49254
#3	-.0166	.2813	.51081	5.019	.51620	.49373
#4	-.0290	.2884	.50989	5.076	.50994	.49416
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	201.05
Stddev	.45
%RSD	.22214
#1	200.57
#2	201.57
#3	200.81
#4	201.25

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 08:21 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0116	-.0009	.00007	.00003	.0002
Stddev	.0029	.0158	.0048	.00022	.00005	.0002
%RSD	7419.	135.7	521.0	297.77	153.53	74.41
#1	.0021	.0228	-.0043	.00023	.00007	.0004
#2	-.0020	.0005	.0025	-.00008	.00000	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0037	.0009	.0004	.0012	.0022
Stddev	.0005	.0028	.0030	.0002	.0011	.0012
%RSD	82.00	74.98	335.2	57.38	91.41	55.15
#1	-.0009	.0057	.0031	.0003	.0004	.0031
#2	-.0003	.0018	-.0012	.0006	.0020	.0014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.00006	.00058	.0034	.0002	.0036
Stddev	.0003	.00013	.00028	.0013	.0014	.0102
%RSD	8.134	211.88	47.770	38.68	601.5	287.3
#1	.0032	-.00003	.00077	.0044	-.0007	-.0037
#2	.0036	.00016	.00038	.0025	.0012	.0108
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0021	.0035	.0026	.0021	-.0001
Stddev	.0036	.0002	.0021	.0056	.0000	.0003
%RSD	566.9	10.12	60.84	216.5	.5856	311.7
#1	.0032	-.0022	.0020	.0066	.0021	.0001
#2	-.0019	-.0019	.0050	-.0014	.0021	-.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 08:21

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	-.0060	.00044	.0021	.00036	.00011
Stddev	.0120	.0001	.00065	.0123	.00009	.00000
%RSD	127.4	2.415	145.44	599.5	25.061	.26025
#1	.0009	-.0059	.00090	.0108	.00030	.00011
#2	.0178	-.0061	-.00001	-.0067	.00042	.00011
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	196.00
Stddev	.50
%RSD	.25443
#1	195.65
#2	196.35

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/22/10 08:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0617	.0451	.0764	.00475	.00471	.0487
Stddev	.0030	.0000	.0018	.00037	.00003	.0004
%RSD	4.823	.0743	2.334	7.7971	.66586	.8534
#1	.0638	.0452	.0776	.00501	.00469	.0490
#2	.0596	.0451	.0751	.00449	.00474	.0485
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	.0621	.0077	.0103	.0115	.0295
Stddev	.0003	.0050	.0034	.0004	.0007	.0003
%RSD	7.162	8.034	43.77	3.678	6.149	.9659
#1	.0047	.0656	.0101	.0105	.0110	.0297
#2	.0042	.0586	.0053	.0100	.0119	.0293
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0507	.02395	.00573	.0101	.0213	.4628
Stddev	.0002	.00036	.00029	.0018	.0016	.0111
%RSD	.4709	1.4892	5.0542	18.20	7.419	2.409
#1	.0506	.02370	.00594	.0114	.0202	.4707
#2	.0509	.02421	.00553	.0088	.0224	.4550
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0957	.0084	.2629	.0358	.0090	.0093
Stddev	.0145	.0008	.0110	.0037	.0008	.0010
%RSD	15.14	9.930	4.198	10.21	8.342	10.66
#1	.0854	.0090	.2707	.0384	.0085	.0086
#2	.1059	.0078	.2551	.0332	.0095	.0100
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/22/10 08:24

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1761	.3994	.00969	.1454	.01025	.00954
Stddev	.0026	.0018	.00121	.0063	.00023	.00031
%RSD	1.457	.4572	12.498	4.358	2.2488	3.2546
#1	.1779	.3981	.01054	.1499	.01042	.00976
#2	.1742	.4007	.00883	.1409	.01009	.00932
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	198.57
Stddev	4.38
%RSD	2.2065
#1	195.47
#2	201.66

Method: 2010A Sample Name: ICSA ICP7264-B Operator:
Comment:
Run Time: 07/22/10 08:27 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.5	.0468	.0022	-.00036	.00008	-.0142
Stddev	1.8	.0164	.0051	.00032	.00000	.0022
%RSD	.3544	35.01	228.5	89.142	.46515	15.32
#1	506.2	.0352	-.0014	-.00058	.00008	-.0127
#2	508.7	.0583	.0058	-.00013	.00008	-.0158
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	484.6	-.0010	.0007	.0038	202.1
Stddev	.0000	1.3	.0026	.0004	.0014	3.5
%RSD	.1450	.2666	256.2	48.73	36.05	1.730
#1	.0119	483.7	-.0028	.0005	.0028	199.6
#2	.0119	485.6	.0008	.0010	.0048	204.5
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	516.5	.00520	.0040	-.0036	.0030
Stddev	.0119	3.6	.00003	.0019	.0008	.0122
%RSD	817.1	.6887	.53889	47.28	22.81	399.6
#1	-.0069	514.0	.00518	.0027	-.0030	-.0056
#2	.0098	519.0	.00522	.0053	-.0041	.0117
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	.0015	.1470	-.0129	.0031	.0075
Stddev	.0030	.0010	.0002	.0119	.0005	.0009
%RSD	21.25	70.71	.1700	92.77	15.56	11.37
#1	.0122	.0007	.1472	-.0213	.0035	.0069
#2	.0165	.0022	.1468	-.0044	.0028	.0081
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/22/10 08:27

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0410	-.0186	.01313	.1493	.01240	.01613
Stddev	.0120	.0005	.00058	.0026	.00040	.00033
%RSD	29.36	2.864	4.4502	1.757	3.2393	2.0364
#1	.0325	-.0190	.01354	.1512	.01268	.01590
#2	.0495	-.0182	.01271	.1475	.01211	.01636
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	180.10
Stddev	1.89
%RSD	1.0468
#1	181.43
#2	178.77

Method: 2010A Sample Name: ICSAB ICP7-61-B Operator:
Comment:
Run Time: 07/22/10 08:30 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	502.2	1.055	.0028	.44855	.51804	-.0109
Stddev	2.8	.010	.0064	.00187	.00202	.0007
%RSD	.5641	.9360	227.9	.41756	.38919	6.759
#1	500.2	1.048	.0074	.44723	.51662	-.0103
#2	504.2	1.062	-.0017	.44988	.51947	-.0114
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9840	481.7	.4939	.4880	.4897	197.2
Stddev	.0057	1.7	.0033	.0028	.0042	.7
%RSD	.5817	.3444	.6617	.5830	.8613	.3381
#1	.9800	480.5	.4916	.4860	.4927	196.7
#2	.9881	482.9	.4962	.4900	.4867	197.7
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.003	514.3	.46434	.0024	.9558	-.0349
Stddev	.022	.4	.00210	.0015	.0000	.0061
%RSD	2.184	.0778	.45287	63.27	.0041	17.39
#1	.9875	514.0	.46286	.0034	.9558	-.0306
#2	1.019	514.5	.46583	.0013	.9559	-.0392
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0184	.9759	.0406	-.0113	.5045	.9554
Stddev	.0152	.0006	.0015	.0043	.0021	.0031
%RSD	82.59	.0654	3.757	37.70	.4182	.3238
#1	.0292	.9764	.0395	-.0144	.5060	.9532
#2	.0077	.9755	.0416	-.0083	.5030	.9576
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/22/10 08:30

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	-.0186	.01319	.1350	.01188	.01604
Stddev	.0030	.0066	.00098	.0394	.00004	.00012
%RSD	22.05	35.59	7.4560	29.18	.33994	.75162
#1	.0159	-.0233	.01249	.1071	.01185	.01596
#2	.0116	-.0139	.01388	.1628	.01191	.01613
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	183.21
Stddev	.29
%RSD	.15992
#1	183.00
#2	183.41

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/22/10 08:33 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.0	1.037	-.0048	.45052	.52121	-.0113
Stddev	1.5	.002	.0050	.00043	.00347	.0002
%RSD	.3047	.1691	106.0	.09559	.66505	1.533
#1	505.1	1.036	-.0012	.45083	.52366	-.0114
#2	502.9	1.038	-.0083	.45022	.51876	-.0112
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9875	484.5	.4939	.4875	.4887	197.2
Stddev	.0031	3.3	.0042	.0025	.0006	.6
%RSD	.3186	.6792	.8505	.5040	.1186	.2874
#1	.9897	482.2	.4909	.4892	.4891	196.8
#2	.9853	486.9	.4968	.4858	.4883	197.6
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.010	515.6	.46511	-.0004	.9595	-.0393
Stddev	.013	1.3	.00142	.0024	.0024	.0036
%RSD	1.283	.2531	.30489	658.1	.2459	9.269
#1	1.019	514.7	.46611	-.0021	.9611	-.0419
#2	1.001	516.5	.46411	.0013	.9578	-.0368
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0404	.9832	.0374	-.0097	.5039	.9554
Stddev	.0100	.0017	.0021	.0007	.0055	.0015
%RSD	24.88	.1735	5.733	7.466	1.084	.1548
#1	.0475	.9820	.0389	-.0092	.5078	.9544
#2	.0333	.9844	.0359	-.0102	.5000	.9565
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

7/22/10

Sample Name: ICSAB Run Time: 07/22/10 08:33

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0371	-.0203	.01382	.1268	.01190	.01640
Stddev	.0188	.0024	.00240	.0217	.00007	.00072
%RSD	50.79	11.71	17.334	17.12	.58593	4.3624
#1	.0238	-.0186	.01552	.1114	.01194	.01691
#2	.0504	-.0220	.01213	.1421	.01185	.01589
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	183.33
Stddev	1.12
%RSD	.61104
#1	182.54
#2	184.12

BE 7/22/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 08:36 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.049	.0102	-.0021	2.3950	.04952	.0040
Stddev	.056	.0035	.0013	.0005	.00001	.0005
%RSD	1.111	34.07	62.73	.02112	.02826	11.32
#1	5.089	.0127	-.0030	2.3946	.04953	.0043
#2	5.010	.0078	-.0012	2.3953	.04951	.0037
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.31	.0004	-.0009	.0021	24.95
Stddev	.0002	.12	.0013	.0007	.0003	.08
%RSD	14.17	.4706	356.8	75.44	13.99	.3366
#1	.0016	25.22	-.0006	-.0014	.0019	25.01
#2	.0013	25.39	.0013	-.0004	.0023	24.89
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0029	25.07	4.908	.0005	-.0015	10.13
Stddev	.0082	.08	.001	.0014	.0009	.02
%RSD	281.4	.3347	.0189	300.2	62.98	.1593
#1	.0029	25.01	4.907	-.0005	-.0021	10.12
#2	-.0087	25.13	4.908	.0014	-.0008	10.14
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	.0016	9.955	.0052	.0063	.0020
Stddev	.0009	.0017	.005	.0011	.0009	.0014
%RSD	9.625	102.5	.0488	20.36	14.74	70.14
#1	.0101	.0028	9.958	.0059	.0069	.0029
#2	.0089	.0004	9.951	.0044	.0056	.0010
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 08:36

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.03	2.494	.00174	.0175	.50737	.49755
Stddev	.08	.013	.00055	.0055	.00202	.00121
%RSD	.7866	.5260	31.790	31.58	.39844	.24243
#1	9.973	2.484	.00214	.0214	.50594	.49840
#2	10.08	2.503	.00135	.0136	.50880	.49669
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.82
Stddev	.77
%RSD	.38942
#1	197.28
#2	198.36

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 08:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4762	2.466	2.459	.44481	.52415	.5016
Stddev	.0137	.031	.008	.00004	.00064	.0029
%RSD	2.872	1.261	.3302	.00949	.12196	.5732
#1	.4665	2.444	2.465	.44484	.52461	.4995
#2	.4859	2.488	2.453	.44478	.52370	.5036
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5043	2.467	.5017	.5059	.5149	.5146
Stddev	.0004	.005	.0014	.0018	.0041	.0149
%RSD	.0751	.1926	.2729	.3611	.7984	2.897
#1	.5041	2.463	.5027	.5046	.5178	.5251
#2	.5046	2.470	.5007	.5072	.5120	.5040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.492	1.9664	.99318	.9939	.5037	5.135
Stddev	.006	.0073	.00036	.0057	.0007	.022
%RSD	.2294	.36922	.03642	.5715	.1468	.4255
#1	2.488	1.9613	.99292	.9899	.5032	5.119
#2	2.496	1.9716	.99343	.9979	.5042	5.150
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.454	.5025	.4700	2.433	.5015	.5003
Stddev	.023	.0017	.0029	.018	.0013	.0009
%RSD	.9494	.3350	.6223	.7490	.2668	.1770
#1	2.438	.5014	.4720	2.421	.5025	.4996
#2	2.471	.5037	.4679	2.446	.5006	.5009
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 08:39

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0177	.2856	.50737	5.004	.51518	.49258
Stddev	.0080	.0007	.00005	.042	.00058	.00055
%RSD	45.19	.2611	.01028	.8398	.11330	.11261
#1	-.0120	.2851	.50741	4.974	.51477	.49219
#2	-.0233	.2861	.50734	5.033	.51560	.49297
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	202.54
Stddev	.75
%RSD	.36897
#1	202.02
#2	203.07

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 08:42 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	.0133	-.0074	-.00007	.00009
Stddev	.0010	.0053	.0052	.00028	.00008
%RSD	36.79	40.29	70.70	403.81	91.417
#1	-.0020	.0170	-.0037	.00013	.00003
#2	-.0034	.0095	-.0111	-.00027	.00015
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0008	-.0007	.0021	.0001
Stddev	.0009	.0001	.0028	.0027	.0005
%RSD	470.9	10.69	420.3	127.7	781.4
#1	.0009	-.0009	.0013	.0040	-.0003
#2	-.0005	-.0008	-.0026	.0002	.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0043	.0047	.00035	.00079
Stddev	.0012	.0013	.0030	.00019	.00021
%RSD	65.26	31.22	62.54	53.409	26.825
#1	.0027	.0052	.0068	.00022	.00094
#2	.0010	.0033	.0026	.00048	.00064
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0006	-.0078	.0141	-.0001
Stddev	.0050	.0005	.0010	.0082	.0004
%RSD	199.8	89.90	13.27	57.87	290.5
#1	.0060	.0010	-.0086	.0199	.0002
#2	-.0010	.0002	-.0071	.0083	-.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/22/10 08:42

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0031	.0070	-.0012	.0000	.0034
Stddev	.0014	.0014	.0000	.000	.0001
%RSD	44.99	19.57	1.429	863.9	2.456
#1	-.0021	.0061	-.0011	-.0003	.0035
#2	-.0040	.0080	-.0012	.0002	.0034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0037	.00012	-.0096	.00021	.00022
Stddev	.0000	.00113	.0121	.00031	.00002
%RSD	1.260	937.75	125.3	143.46	8.9136
#1	-.0036	-.00068	-.0182	.00043	.00021
#2	-.0037	.00092	-.0011	.00000	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	198.59
Stddev	.61
%RSD	.30531
#1	198.16
#2	199.02

Method: 2010A Sample Name: K1006524-MB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0109	-.0033	-.0028	-.00027	.00003
#1	-.0061	-.0029	-.0080	-.00030	.00002
#2	-.0157	-.0037	.0025	-.00024	.00004

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0005	-.0009	.0028	.0003
#1	-.0003	-.0003	.0026	.0020	.0005
#2	-.0004	-.0007	-.0044	.0035	.0001

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0011	-.0007	-.00001	-.00014
#1	.0028	.0007	-.0007	-.00005	-.00018
#2	.0020	.0015	-.0007	.00004	-.00011

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0001	.0098	.0013	-.0010
#1	.0016	.0000	.0120	.0122	-.0025
#2	.0017	.0003	.0076	-.0096	.0004

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	.0030	.0012	.0001	.3152
#1	-.0010	.0021	.0006	.0001	.3186
#2	-.0046	.0039	.0018	.0001	.3119

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0065	.00058	-.0088	-.00010	.00000
#1	-.0074	.00205	-.0031	-.00028	-.00001
#2	-.0056	-.00089	-.0144	.00009	.00001

Int. Std.	Sc3572
Units	Cts/S
Avg	200.82
#1	201.15
#2	200.49

Method: 2010A Sample Name: LCSW Operator: JC
Comment: K1006524 (209391) (072210A)
Run Time: 07/22/10 08:48 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.992	2.488	2.604	5.0074	.12220	1.000
#1	4.955	2.466	2.599	4.9909	.12208	.9972
#2	5.029	2.510	2.609	5.0239	.12232	1.003

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.292	12.34	.5126	1.267	.6275	2.474
#1	1.288	12.17	.5081	1.263	.6300	2.468
#2	1.296	12.51	.5171	1.271	.6250	2.481

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.562	12.44	1.2429	1.003	1.261	12.90
#1	2.555	12.36	1.2337	.9948	1.258	12.91
#2	2.568	12.51	1.2521	1.011	1.264	12.89

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.533	.6255	12.75	.0096	1.259	1.255
#1	2.506	.6236	12.80	.0143	1.259	1.248
#2	2.560	.6274	12.71	.0050	1.259	1.261

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2059	.0332	.00210	2.618	.00020	.00664
#1	.1974	.0345	.00275	2.565	.00012	.00663
#2	.2143	.0319	.00146	2.670	.00028	.00665

Int. Std.	Sc3572
Units	Cts/S
Avg	198.43
#1	197.93
#2	198.94

Method: 2010A Sample Name: K1006524-005 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	.0110	.0057	.09719	-.00002	.2434
#1	.0223	.0093	.0066	.09682	.00000	.2425
#2	-.0092	.0127	.0048	.09756	-.00004	.2443

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	46.90	.0018	.0007	.0010	5.808
#1	.0001	46.54	.0019	.0008	.0003	5.813
#2	.0000	47.27	.0017	.0005	.0017	5.802

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	52.15	.54288	1.021	.0073	35.47
#1	.0023	51.93	.54273	1.018	.0075	35.57
#2	.0048	52.36	.54304	1.024	.0071	35.36

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0001	122.3	-.0034	.0003	.0028
#1	.0228	.0004	123.4	-.0096	-.0007	.0032
#2	-.0016	-.0002	121.3	.0028	.0013	.0025

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6680	6.785	.00183	.0631	.10413	.15459
#1	.6696	6.765	.00174	.0672	.10451	.15509
#2	.6664	6.804	.00192	.0589	.10376	.15409

Int. Std.	Sc3572
Units	Cts/S
Avg	195.22
#1	194.41
#2	196.03

Method: 2010A Sample Name: K1006524-005D Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:54 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126	.0066	.0053	.09641	.00005	.2440
#1	.0072	.0061	.0041	.09534	.00004	.2425
#2	.0181	.0072	.0066	.09747	.00006	.2454

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	46.35	-.0031	.0001	.0000	5.794
#1	.0006	46.23	-.0031	-.0001	-.0010	5.767
#2	-.0004	46.47	-.0031	.0004	.0010	5.821

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	51.75	.54003	1.028	.0066	35.56
#1	-.0069	51.46	.53788	1.019	.0070	35.46
#2	.0024	52.04	.54218	1.037	.0061	35.66

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0054	.0040	122.9	-.0023	.0046	.0045
#1	-.0106	.0043	122.5	.0014	.0074	.0059
#2	-.0003	.0037	123.4	-.0061	.0018	.0032

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6742	6.744	-.00029	.0693	.10523	.15573
#1	.6730	6.697	-.00044	.0654	.10457	.15561
#2	.6753	6.791	-.00014	.0731	.10590	.15585

Int. Std.	Sc3572
Units	Cts/S
Avg	194.07
#1	193.87
#2	194.27

Method: 2010A Sample Name: K1006524-005S Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.923	.4615	.9390	1.9603	.04579	1.162
#1	1.939	.4485	.9218	1.9546	.04560	1.159
#2	1.907	.4745	.9563	1.9661	.04597	1.165

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0471	53.62	.1942	.4720	.2264	6.622
#1	.0472	53.40	.1943	.4704	.2265	6.587
#2	.0470	53.84	.1940	.4737	.2263	6.657

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4647	59.99	1.0144	1.950	.4753	43.33
#1	.4610	59.93	1.0163	1.940	.4722	43.29
#2	.4684	60.05	1.0125	1.961	.4784	43.37

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9377	.0428	124.3	-.0003	.4841	.4739
#1	.9364	.0430	124.2	-.0023	.4821	.4726
#2	.9390	.0425	124.4	.0017	.4860	.4753

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6586	6.612	.00008	.9893	.09762	.15047
#1	.6478	6.605	-.00038	.9548	.09773	.15024
#2	.6693	6.618	.00053	1.024	.09751	.15070

Int. Std.	Sc3572
Units	Cts/S
Avg	193.10
#1	193.14
#2	193.06

Method: 2010A Sample Name: K1006524-001 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0099	.0057	.17250	-.00004	.4514
#1	.0238	.0083	.0112	.17228	-.00001	.4492
#2	-.0022	.0115	.0001	.17273	-.00007	.4537

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	118.8	.0033	.0003	-.0015	6.193
#1	.0005	117.5	.0015	.0004	-.0020	6.215
#2	.0007	120.2	.0052	.0003	-.0010	6.172

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	34.79	.57972	.0177	.0028	9.288
#1	-.0082	34.73	.57877	.0204	.0030	9.380
#2	.0121	34.84	.58068	.0149	.0027	9.196

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074	-.0010	>180.0	.0050	.0026	.3119
#1	.0036	.0013	>180.0	.0080	.0020	.3112
#2	.0113	-.0034	>180.0	.0020	.0032	.3125

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2465	10.14	.00200	.0742	.02637	.25775
#1	.2494	10.10	.00182	.0647	.02676	.25786
#2	.2436	10.18	.00219	.0837	.02599	.25764

Int. Std.	Sc3572
Units	Cts/S
Avg	192.73
#1	192.03
#2	193.44

Method: 2010A Sample Name: K1006524-002 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0006	.0031	.05535	-.00008
#1	-.0184	.0048	.0105	.05541	-.00016
#2	.0089	-.0035	-.0043	.05529	-.00001

Elem	B_2497	Cd2265	Ca2112	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0484	-.0006	46.26	-.0005	.0002
#1	.0488	-.0007	45.96	.0003	.0003
#2	.0479	-.0006	46.57	-.0013	.0002

Elem	Cu3247	Fe2599	Pb2203	Mg2025	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0694	-.0048	21.01	.00172
#1	.0009	.0722	-.0123	21.01	.00183
#2	.0018	.0666	.0027	21.02	.00161

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0106	-.0005	3.824	.0026	.0000
#1	.0113	-.0009	3.847	.0058	.0013
#2	.0099	-.0002	3.801	-.0006	-.0013

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	72.52	-.0059	.0036	.0033	.2303
#1	73.11	.0021	.0044	.0033	.2290
#2	71.92	-.0140	.0027	.0033	.2316

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	3.375	.00077	.0318	.00721	.10988
#1	3.368	.00105	.0318	.00693	.10999
#2	3.383	.00049	.0317	.00749	.10977

Int. Std.	Sc3572
Units	Cts/S
Avg	196.49
#1	196.24
#2	196.73

Method: 2010A Sample Name: K1006524-003 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:06 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0008	-.0017	.03634	-.00002	.0904
#1	.0131	.0045	-.0038	.03629	.00000	.0901
#2	-.0005	-.0029	.0005	.03639	-.00004	.0906

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	29.93	.0015	-.0001	.0041	.2980
#1	-.0008	29.66	.0005	-.0004	.0027	.2968
#2	-.0002	30.20	.0024	.0002	.0055	.2991

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	5.6820	.16251	.1324	.0002	6.975
#1	.0033	5.6757	.16234	.1315	.0001	6.987
#2	.0025	5.6884	.16269	.1333	.0004	6.962

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090	.0017	55.25	-.0005	.0045	.0015
#1	.0058	.0002	55.40	-.0011	.0041	.0013
#2	.0122	.0032	55.09	.0001	.0049	.0017

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5542	6.254	.00159	.0340	.00232	.27721
#1	.5550	6.237	-.00007	.0417	.00239	.27790
#2	.5535	6.271	.00324	.0263	.00225	.27651

Int. Std.	Sc3572
Units	Cts/S
Avg	197.63
#1	197.24
#2	198.03

Method: 2010A Sample Name: K1006524-004 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:09 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0295	.0170	.0058	.04211	-.00004	.2253
#1	.0213	.0100	.0058	.04204	.00001	.2250
#2	.0377	.0241	.0058	.04217	-.00010	.2257

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	157.2	.0036	-.0010	.0283	.0032
#1	-.0001	156.2	.0018	-.0006	.0290	.0035
#2	-.0005	158.1	.0054	-.0014	.0277	.0029

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.23	.05097	.00033	2.787	-.0005	46.98
#1	25.11	.05093	.00037	2.762	-.0009	47.06
#2	25.35	.05101	.00029	2.812	-.0002	46.91

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0008	93.12	-.0011	.0049	.4032
#1	.0109	.0041	93.41	.0010	.0052	.4017
#2	.0058	-.0024	92.83	-.0031	.0047	.4047

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2041	.4803	.00136	.0023	.21064	.35868
#1	.2078	.4773	.00139	-.0045	.21065	.35968
#2	.2003	.4833	.00133	.0091	.21064	.35768

Int. Std.	Sc3572
Units	Cts/S
Avg	193.10
#1	192.83
#2	193.37

Method: 2010A Sample Name: K1006524-006 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:12 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0071	.0084	.09230	-.00001	.2492
#1	.0055	.0158	.0053	.09156	-.00002	.2487
#2	.0110	-.0016	.0115	.09305	.00001	.2497

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	47.26	.0025	.0005	.0005	5.054
#1	-.0001	46.97	.0014	.0006	-.0008	5.033
#2	.0006	47.54	.0036	.0004	.0017	5.074

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086	52.78	.55066	1.055	.0069	35.74
#1	.0152	52.69	.54794	1.054	.0075	35.63
#2	.0020	52.88	.55338	1.055	.0064	35.86

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0001	124.1	.0002	.0039	.0040
#1	.0048	.0002	123.7	-.0006	.0015	.0033
#2	-.0029	-.0004	124.5	.0011	.0064	.0047

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4952	6.875	.00015	.0784	.10516	.15819
#1	.4878	6.854	-.00037	.0756	.10482	.15819
#2	.5027	6.896	.00067	.0813	.10550	.15818

Int. Std.	Sc3572
Units	Cts/S
Avg	193.17
#1	193.03
#2	193.31

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 09:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.984	.0120	.0010	2.4324	.05009	.0036
Stddev	.005	.0000	.0091	.0078	.00017	.0008
%RSD	.1076	.3402	909.8	.32238	.33877	20.93
#1	4.981	.0120	.0075	2.4268	.05021	.0042
#2	4.988	.0120	-.0055	2.4379	.04997	.0031
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	25.53	.0018	-.0015	-.0001	24.98
Stddev	.0002	.21	.0034	.0005	.0017	.10
%RSD	15.69	.8046	185.7	34.92	1200.	.3840
#1	.0014	25.38	.0042	-.0019	.0011	24.91
#2	.0017	25.67	-.0006	-.0011	-.0014	25.05
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	25.11	4.951	.0065	-.0023	10.02
Stddev	.0006	.01	.011	.0045	.0008	.04
%RSD	12.21	.0540	.2200	70.16	33.59	.4371
#1	.0042	25.10	4.944	.0097	-.0017	10.05
#2	.0049	25.12	4.959	.0033	-.0028	9.984
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127	-.0013	9.871	.0034	.0035	.0019
Stddev	.0036	.0033	.089	.0013	.0019	.0014
%RSD	28.52	253.1	.8993	39.74	54.30	73.80
#1	.0153	.0010	9.934	.0043	.0049	.0009
#2	.0101	-.0037	9.808	.0024	.0022	.0029
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 09:15

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.994	2.504	.00179	.0377	.50180	.49639
Stddev	.013	.011	.00152	.0042	.00500	.00272
%RSD	.1253	.4227	84.714	11.17	.99687	.54810
#1	9.986	2.496	.00287	.0406	.50534	.49832
#2	10.00	2.511	.00072	.0347	.49826	.49447
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.33
Stddev	.80
%RSD	.40765
#1	196.76
#2	197.90

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 09:18 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4763	2.474	2.510	.45575	.52311	.5002
Stddev	.0038	.023	.013	.00250	.00161	.0021
%RSD	.8017	.9377	.5051	.54913	.30844	.4202
#1	.4736	2.457	2.501	.45398	.52197	.4987
#2	.4790	2.490	2.519	.45752	.52425	.5017
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5177	2.469	.5106	.5138	.5167	.5193
Stddev	.0031	.012	.0047	.0028	.0039	.0131
%RSD	.5912	.4929	.9280	.5538	.7577	2.520
#1	.5155	2.477	.5072	.5118	.5139	.5285
#2	.5198	2.460	.5139	.5158	.5195	.5100
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.518	1.9785	1.0097	1.007	.5105	5.019
Stddev	.003	.0044	.0045	.012	.0038	.041
%RSD	.1118	.22174	.44760	1.223	.7523	.8150
#1	2.516	1.9816	1.0065	.9983	.5078	4.990
#2	2.520	1.9754	1.0129	1.016	.5133	5.048
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.448	.4984	.4701	2.462	.4964	.5156
Stddev	.002	.0021	.0013	.008	.0001	.0048
%RSD	.0966	.4179	.2859	.3242	.0244	.9226
#1	2.446	.4970	.4691	2.456	.4964	.5122
#2	2.450	.4999	.4710	2.468	.4963	.5190
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 09:18

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0083	.2849	.50929	5.048	.50427	.48689
Stddev	.0075	.0053	.00000	.040	.00468	.00119
%RSD	90.12	1.867	.00004	.7975	.92722	.24445
#1	-.0136	.2811	.50929	5.019	.50097	.48605
#2	-.0030	.2887	.50929	5.076	.50758	.48774
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	202.98
Stddev	.04
%RSD	.02137
#1	202.95
#2	203.02

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 09:21 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	-.0016	.0022	.00000	.00012	-.0009
Stddev	.0058	.0065	.0004	.0002	.00006	.0008
%RSD	94.74	414.4	20.41	11541.	48.793	98.38
#1	.0103	.0030	.0025	.00014	.00016	-.0003
#2	.0020	-.0061	.0018	-.00014	.00008	-.0014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0020	-.0009	.0003	.0030	.0035
Stddev	.0006	.0028	.0014	.0001	.0002	.0004
%RSD	113.8	142.1	157.0	25.18	6.717	11.37
#1	-.0001	.0000	.0001	.0003	.0028	.0038
#2	-.0009	.0040	-.0019	.0004	.0031	.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061	.00202	.00093	.0046	.0008	.0099
Stddev	.0136	.00003	.00013	.0020	.0000	.0186
%RSD	223.1	1.3512	13.718	44.17	3.580	186.6
#1	.0157	.00200	.00102	.0060	.0008	.0231
#2	-.0035	.00203	.00084	.0032	.0009	-.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0010	.0028	.0038	-.0021	.0004
Stddev	.0136	.0008	.0026	.0064	.0013	.0001
%RSD	353.0	80.33	90.35	166.7	62.08	27.87
#1	.0135	.0004	.0047	.0083	-.0012	.0005
#2	-.0058	.0016	.0010	-.0007	-.0030	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 09:21

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	-.0059	.00126	.0055	.00032	.00019
Stddev	.0135	.0006	.00058	.0094	.00013	.00001
%RSD	113.8	10.74	45.838	171.8	40.154	6.3297
#1	.0215	-.0055	.00085	.0121	.00023	.00020
#2	.0023	-.0064	.00167	-.0012	.00042	.00018
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	199.92
Stddev	.12
%RSD	.05901
#1	199.83
#2	200.00

Method: 2010A Sample Name: K1006524-007 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0013	.0022	.00007	-.00003	.0001
#1	-.0007	-.0037	-.0012	-.00014	-.00003	-.0004
#2	.0061	.0062	.0055	.00028	-.00003	.0006

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.0011	-.0012	.0003	.0019	.0114
#1	-.0009	-.0013	-.0007	.0004	.0013	.0196
#2	-.0008	-.0009	-.0018	.0001	.0026	.0032

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.00009	.00002	.0004	-.0001	.0162
#1	.0019	.00012	.00012	.0016	.0003	.0164
#2	-.0031	.00005	-.00008	-.0008	-.0005	.0159

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0083	-.0006	.0072	-.0016	-.0008	.0000
#1	-.0019	-.0019	.0070	.0016	-.0030	-.0002
#2	-.0148	.0007	.0074	-.0047	.0014	.0003

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2498	-.0047	.00166	-.0020	-.00019	.00011
#1	.2446	-.0041	.00200	-.0067	-.00011	.00010
#2	.2549	-.0053	.00132	.0028	-.00027	.00013

Int. Std.	Sc3572
Units	Cts/S
Avg	197.49
#1	196.58
#2	198.40

Method: 2010A Sample Name: K1006777-008 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.0041	.0009	-.00020	-.00002	.0001
#1	-.0034	-.0029	.0031	-.00011	-.00011	-.0001
#2	.0171	.0112	-.0012	-.00030	.00006	.0003

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0084	.0017	-.0008	.0029	.0026
#1	-.0005	.0084	.0030	-.0012	.0026	.0025
#2	-.0007	.0084	.0004	-.0005	.0033	.0027

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0033	.00021	.00021	.0010	-.0002	-.0026
#1	-.0023	.00018	.00024	.0011	.0003	-.0167
#2	-.0044	.00024	.00019	.0009	-.0007	.0115

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0013	.0105	-.0056	-.0003	.0010
#1	.0096	.0010	.0083	-.0022	.0010	.0015
#2	.0045	.0016	.0127	-.0091	-.0016	.0005

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2641	.0475	.00025	-.0077	-.00041	.00006
#1	.2587	.0472	.00010	-.0125	-.00047	.00007
#2	.2694	.0479	.00041	-.0030	-.00035	.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	198.92
#1	198.73
#2	199.11

Method: 2010A Sample Name: K1006777-008L Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 09:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0033	-.0031	-.00016	.00003	-.0001
#1	.0144	-.0012	.0006	-.00020	.00009	.0001
#2	-.0116	-.0054	-.0068	-.00012	-.00004	-.0002

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0064	-.0002	-.0003	.0030	.0007
#1	-.0004	.0009	-.0006	.0005	.0031	.0006
#2	-.0012	.0119	.0003	-.0010	.0028	.0008

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.00007	.00002	.0002	.0008	.0117
#1	.0081	.00001	-.00001	.0000	.0008	.0204
#2	.0051	.00014	.00005	.0003	.0008	.0030

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0006	.0115	.0000	-.0011	.0014
#1	.0083	.0031	.0113	.0031	-.0016	.0018
#2	-.0006	-.0019	.0116	-.0030	-.0007	.0011

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0568	.0088	-.00051	-.0001	-.00027	.00004
#1	.0533	.0086	-.00114	.0009	-.00012	.00004
#2	.0604	.0091	.00012	-.0011	-.00042	.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	198.26
#1	197.77
#2	198.75

Method: 2010A Sample Name: K1006465-001 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.0027	-.0057	.06930	-.00004	.1908
#1	.0203	.0023	-.0082	.06846	-.00003	.1903
#2	-.0084	.0032	-.0032	.07013	-.00006	.1913

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	47.40	.0010	.0002	.0006	.9854
#1	-.0005	46.93	.0006	.0005	.0012	.9792
#2	.0002	47.86	.0013	.0000	.0000	.9917

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	31.52	.20028	.0126	.0024	27.97
#1	.0103	31.38	.19859	.0115	.0018	28.18
#2	.0032	31.65	.20197	.0137	.0029	27.76

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0025	56.55	.0012	.0034	.0009
#1	.0097	.0046	56.79	.0053	.0030	.0008
#2	.0046	.0005	56.30	-.0028	.0038	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8591	8.690	.00140	.0361	.07861	.10755
#1	.8578	8.666	.00163	.0331	.07901	.10758
#2	.8603	8.714	.00118	.0391	.07821	.10752

Int. Std.	Sc3572
Units	Cts/S
Avg	195.23
#1	195.56
#2	194.91

Method: 2010A Sample Name: K1006465-002 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0302	.0047	.0023	.20400	-.00004	.0691
#1	.0240	.0031	-.0015	.20234	-.00007	.0697
#2	.0363	.0064	.0060	.20567	-.00001	.0686

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	140.5	.0024	.0010	.0016	10.08
#1	.0009	139.2	.0030	.0021	.0011	10.00
#2	.0014	141.7	.0017	-.0001	.0022	10.17

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	40.20	.35999	.0090	.0004	2.566
#1	.0075	40.08	.35804	.0089	.0002	2.570
#2	-.0035	40.31	.36194	.0092	.0006	2.561

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205	.0013	39.81	.0003	.0046	.0013
#1	.0231	.0019	40.14	-.0045	.0044	.0017
#2	.0179	.0007	39.47	.0051	.0048	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6768	17.49	.00198	.0867	.00621	.18080
#1	.6636	17.42	.00201	.0927	.00621	.18071
#2	.6900	17.57	.00195	.0807	.00620	.18090

Int. Std.	Sc3572
Units	Cts/S
Avg	193.81
#1	193.50
#2	194.12

Method: 2010A Sample Name: K1006465-003 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	.0127	-.0026	.12998	-.00005	.1240
#1	.0170	.0139	.0042	.12968	-.00005	.1237
#2	.0102	.0114	-.0093	.13029	-.00004	.1242

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	96.23	.0015	-.0001	.0005	6.505
#1	.0004	95.09	.0015	.0000	.0023	6.489
#2	.0006	97.36	.0015	-.0001	-.0013	6.521

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	32.09	.55031	.0114	.0028	2.627
#1	.0007	32.05	.54950	.0119	.0030	2.643
#2	.0019	32.12	.55111	.0109	.0027	2.610

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0229	.0021	82.08	.0076	.0062	.0012
#1	.0229	.0019	83.38	-.0010	.0049	.0008
#2	.0229	.0022	80.78	.0162	.0075	.0015

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5558	11.22	.00096	.0581	.00505	.13356
#1	.5449	11.16	.00054	.0584	.00475	.13429
#2	.5667	11.27	.00137	.0577	.00535	.13284

Int. Std.	Sc3572
Units	Cts/S
Avg	193.66
#1	192.62
#2	194.70

Method: 2010A Sample Name: K1006465-004 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0250	.0087	.0042	.14737	-.00008	.2773
#1	.0160	.0149	-.0020	.14690	-.00008	.2769
#2	.0339	.0025	.0104	.14783	-.00007	.2777

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	62.08	.0019	.0008	.0007	10.79
#1	.0015	61.73	.0016	.0007	.0021	10.68
#2	.0010	62.43	.0021	.0009	-.0007	10.91

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	27.83	.17627	.2016	.0015	19.96
#1	.0023	27.79	.17538	.2004	.0015	20.02
#2	-.0041	27.87	.17716	.2029	.0015	19.91

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	.0014	80.74	.0131	.0021	.0150
#1	.0244	.0035	80.95	.0107	.0016	.0149
#2	-.0013	-.0006	80.53	.0156	.0026	.0151

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4454	8.490	.00247	.0534	.03079	.11327
#1	.4429	8.437	.00194	.0523	.03099	.11320
#2	.4480	8.543	.00299	.0544	.03059	.11334

Int. Std.	Sc3572
Units	Cts/S
Avg	194.44
#1	194.56
#2	194.32

Method: 2010A Sample Name: K1006465-005 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195	.0117	.0014	.05571	.00000	.1120
#1	.0215	.0208	.0067	.05541	.00005	.1117
#2	.0174	.0026	-.0038	.05600	-.00005	.1123

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	38.42	.0017	.0003	.0020	7.399
#1	.0002	37.88	.0029	.0007	.0016	7.424
#2	.0009	38.95	.0004	-.0002	.0025	7.373

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	10.70	.62260	.0700	.0017	3.549
#1	.0016	10.67	.64718	.0697	.0014	3.563
#2	-.0022	10.73	.59802	.0704	.0020	3.535

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0011	47.58	.0015	.0028	.0005
#1	-.0066	-.0004	48.27	.0030	.0021	.0009
#2	.0101	.0025	46.89	.0001	.0036	.0001

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.130	13.00	.00173	.0431	.00289	.06417
#1	1.117	12.95	.00126	.0492	.00289	.06441
#2	1.144	13.06	.00220	.0371	.00290	.06392

Int. Std.	Sc3572
Units	Cts/S
Avg	198.75
#1	197.52
#2	199.98

Method: 2010A Sample Name: K1006465-006 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211	.0100	.0004	.15668	-.00007	.0570
#1	.0198	.0063	.0066	.15689	-.00004	.0563
#2	.0225	.0138	-.0058	.15647	-.00010	.0576

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	151.9	.0014	.0009	.0004	9.775
#1	.0007	151.4	.0021	.0008	-.0004	9.827
#2	.0005	152.5	.0008	.0010	.0012	9.723

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0050	47.09	.51505	.0036	-.0007	2.293
#1	-.0171	47.12	.51669	.0033	-.0016	2.304
#2	.0070	47.06	.51341	.0038	.0002	2.281

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154	.0005	52.95	.0098	.0036	.0008
#1	.0166	.0019	53.51	.0136	.0048	-.0001
#2	.0141	-.0010	52.40	.0060	.0024	.0018

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4544	13.46	.00222	.0571	.00743	.19859
#1	.4576	13.45	.00156	.0465	.00779	.19942
#2	.4512	13.47	.00287	.0677	.00707	.19777

Int. Std.	Sc3572
Units	Cts/S
Avg	193.55
#1	193.11
#2	193.99

Method: 2010A Sample Name: RB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0130	.0017	.0031	.00016	-.00002
#1	-.0075	-.0012	.0000	.00005	.00002
#2	-.0185	.0046	.0062	.00028	-.00006

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0006	.0040	-.0001	.0009
#1	-.0017	-.0007	.0035	.0010	.0009
#2	-.0009	-.0006	.0044	-.0012	.0009

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0056	.0014	.00064	.00011
#1	.0030	.0098	-.0069	.00088	.00016
#2	.0038	.0014	.0097	.00041	.00007

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0000	-.0044	.0109	-.0021
#1	.0005	.0002	.0027	.0109	-.0010
#2	.0022	-.0002	-.0115	.0109	-.0031

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0020	.0021	-.0004	.0138
#1	.0067	.0005	.0019	-.0004	.0113
#2	.0074	.0034	.0023	-.0003	.0162

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0041	.00074	-.0058	.00006	.00003
#1	-.0047	.00068	-.0029	.00001	-.00001
#2	-.0034	.00079	-.0087	.00012	.00006

Int. Std.	Sc3572
Units	Cts/S
Avg	198.29
#1	197.92
#2	198.67

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 10:01 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.018	.0098	-.0033	2.4337	.04947	.0027
Stddev	.021	.0006	.0057	.0364	.00011	.0004
%RSD	.4217	6.042	175.0	1.4953	.21973	15.50
#1	5.033	.0102	-.0073	2.4079	.04939	.0024
#2	5.003	.0094	.0008	2.4594	.04954	.0030
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	26.25	.0030	-.0013	.0013	25.33
Stddev	.0001	.39	.0026	.0004	.0001	.33
%RSD	3.919	1.477	84.23	32.92	7.412	1.283
#1	.0014	25.98	.0048	-.0010	.0014	25.10
#2	.0013	26.53	.0012	-.0016	.0012	25.56
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0097	25.17	4.921	.0006	-.0030	9.820
Stddev	.0049	.08	.006	.0015	.0001	.069
%RSD	50.79	.3077	.1200	263.7	3.006	.6991
#1	-.0062	25.12	4.925	.0017	-.0030	9.868
#2	-.0132	25.23	4.917	-.0005	-.0029	9.771
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	-.0015	9.661	.0012	.0021	.0013
Stddev	.0037	.0015	.073	.0048	.0019	.0009
%RSD	57.81	99.51	.7601	403.2	88.99	72.14
#1	.0037	-.0004	9.712	.0046	.0034	.0019
#2	.0089	-.0025	9.609	-.0022	.0008	.0006
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 10:01

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.14	2.512	-.00006	.0125	.48932	.48630
Stddev	.09	.012	.00175	.0093	.00398	.00076
%RSD	.8504	.4664	2805.9	74.17	.81337	.15565
#1	10.08	2.503	-.00130	.0191	.49213	.48683
#2	10.20	2.520	.00118	.0060	.48650	.48576
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	199.97
Stddev	.26
%RSD	.12898
#1	199.78
#2	200.15

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 10:04 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5085	2.480	2.545	.45496	.52062	.5010
Stddev	.0069	.017	.034	.00088	.00012	.0015
%RSD	1.362	.6697	1.328	.19370	.02278	.3073
#1	.5036	2.468	2.521	.45558	.52071	.4999
#2	.5134	2.492	2.569	.45433	.52054	.5021
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5181	2.461	.5114	.5094	.5181	.5200
Stddev	.0007	.012	.0016	.0009	.0048	.0119
%RSD	.1326	.5050	.3223	.1857	.9172	2.285
#1	.5186	2.452	.5126	.5088	.5147	.5284
#2	.5176	2.470	.5103	.5101	.5214	.5116
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.503	1.9812	1.0100	.9998	.5105	5.048
Stddev	.013	.0094	.0019	.0076	.0004	.014
%RSD	.5293	.47172	.18579	.7605	.0714	.2790
#1	2.513	1.9746	1.0086	.9944	.5108	5.058
#2	2.494	1.9878	1.0113	1.005	.5103	5.039
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.462	.5029	.4750	2.425	.4934	.5113
Stddev	.007	.0099	.0022	.027	.0004	.0032
%RSD	.3049	1.972	.4734	1.112	.0804	.6194
#1	2.468	.4958	.4766	2.444	.4937	.5090
#2	2.457	.5099	.4734	2.406	.4931	.5135
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 10:04

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0103	.2884	.50876	5.020	.50347	.48175
Stddev	.0215	.0006	.00008	.025	.00314	.00258
%RSD	209.9	.2021	.01578	.5005	.62351	.53544
#1	-.0255	.2888	.50870	5.037	.50569	.48357
#2	.0050	.2879	.50882	5.002	.50125	.47992
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	204.30
Stddev	.12
%RSD	.05845
#1	204.22
#2	204.39

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 10:07 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0287	.0092	-.0003	.00057	.00012
Stddev	.0048	.0111	.0074	.00011	.00001
%RSD	16.83	121.4	2371.	18.961	5.0586
#1	-.0322	.0170	.0049	.00064	.00011
#2	-.0253	.0013	-.0055	.00049	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0002	.0040	-.0001	.0005
Stddev	.0004	.0009	.0012	.0009	.0004
%RSD	89.63	458.0	31.32	910.7	72.03
#1	.0007	-.0008	.0031	-.0008	.0007
#2	.0002	.0004	.0048	.0006	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0043	.0030	.00273	.00110
Stddev	.0001	.0006	.0035	.00011	.00011
%RSD	3.387	13.69	115.6	4.0726	10.185
#1	.0030	.0047	.0005	.00265	.00118
#2	.0028	.0038	.0054	.00281	.00102
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0049	-.0003	.0004	.0096	-.0004
Stddev	.0020	.0003	.0040	.0036	.0008
%RSD	40.75	95.81	1063.	37.70	189.7
#1	.0063	-.0006	-.0024	.0122	.0001
#2	.0035	-.0001	.0032	.0071	-.0010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/22/10 10:07

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0050	-.0018	.0000	.0095
Stddev	.0051	.0048	.0013	.001	.0025
%RSD	208.6	94.62	70.04	1642.	26.78
#1	.0061	.0084	-.0027	-.0003	.0113
#2	-.0012	.0017	-.0009	.0003	.0077
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	.00122	.0053	.00036	.00026
Stddev	.0017	.00069	.0066	.00036	.00002
%RSD	32.36	57.109	125.1	100.41	8.0464
#1	-.0064	.00171	.0006	.00062	.00027
#2	-.0040	.00072	.0100	.00011	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	201.18
Stddev	.05
%RSD	.02304
#1	201.21
#2	201.15

Method: 2010A Sample Name: K1006579-MB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117	.0037	-.0071	-.00032	.00005	.0006
#1	-.0116	.0029	-.0092	-.00033	.00003	.0004
#2	.0349	.0046	-.0049	-.00031	.00007	.0007

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0075	.0003	.0001	.0033	.0008
#1	-.0004	.0106	.0019	.0007	.0043	.0012
#2	.0000	.0044	-.0012	-.0004	.0024	.0003

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.00003	.00007	.0011	.0003	.0108
#1	.0014	-.00003	.00003	.0019	.0009	.0127
#2	-.0002	-.00002	.00011	.0003	-.0002	.0089

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	-.0015	.0022	-.0032	-.0024	.0001
#1	-.0006	-.0034	.0044	-.0002	-.0018	.0006
#2	-.0071	.0004	.0001	-.0061	-.0030	-.0004

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2094	-.0076	.00037	.0017	-.00030	-.00001
#1	.2091	-.0067	-.00100	.0064	-.00059	-.00005
#2	.2096	-.0085	.00174	-.0030	.00000	.00002

Int. Std.	Sc3572
Units	Cts/S
Avg	199.64
#1	199.88
#2	199.40

Method: 2010A Sample Name: LCSW Operator: JC
Comment: K1006579 (209391) (072210A)
Run Time: 07/22/10 10:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.172	2.544	2.671	5.1425	.12451	1.027
#1	5.158	2.544	2.664	5.1469	.12459	1.025
#2	5.186	2.545	2.677	5.1382	.12444	1.029

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.331	12.95	.5364	1.309	.6519	2.552
#1	1.329	12.85	.5352	1.305	.6454	2.547
#2	1.333	13.06	.5375	1.313	.6583	2.557

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.606	12.65	1.3257	1.042	1.297	13.07
#1	2.605	12.63	1.3196	1.034	1.293	13.05
#2	2.608	12.68	1.3317	1.050	1.301	13.10

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.570	.6416	12.95	.0100	1.291	1.305
#1	2.588	.6415	12.97	.0094	1.286	1.297
#2	2.551	.6418	12.93	.0105	1.297	1.312

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1904	.0322	.00374	2.636	.00061	.00704
#1	.1968	.0319	.00421	2.589	.00042	.00708
#2	.1840	.0325	.00327	2.683	.00081	.00699

Int. Std.	Sc3572
Units	Cts/S
Avg	198.98
#1	198.59
#2	199.37

Method: 2010A Sample Name: K1006579-002 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0479	.0126	.0119	.48665	-.00006	.7800
#1	.0616	.0188	.0057	.48412	-.00003	.7788
#2	.0343	.0063	.0181	.48918	-.00010	.7813

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	102.6	.0015	.0016	.0003	11.76
#1	.0015	101.3	-.0022	.0012	.0002	11.70
#2	.0012	103.9	.0052	.0019	.0004	11.82

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0021	35.52	.15313	.0085	.0030	11.73
#1	-.0078	35.37	.15281	.0107	.0031	11.83
#2	.0037	35.66	.15345	.0063	.0029	11.64

Elem	Se1960	Ag3280	Na5895 X	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	-.0012	178.2	.0132	.0047	.0043
#1	.0052	-.0022	>180.0	.0111	.0066	.0039
#2	.0129	-.0001	176.3	.0152	.0028	.0047

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4469	7.580	.00099	.0976	.01667	.34554
#1	.4484	7.542	.00035	.1098	.01676	.34674
#2	.4454	7.617	.00163	.0854	.01658	.34434

Int. Std.	Sc3572
Units	Cts/S
Avg	191.52
#1	190.84
#2	192.21

X see Dilution Sc 7/22/10

Method: 2010A Sample Name: K1006579-002D Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	.0104	-.0003	.46503	-.00002	.7520
#1	.0080	.0170	.0018	.46426	-.00003	.7509
#2	.0108	.0038	-.0024	.46581	-.00002	.7531

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	98.02	-.0021	.0011	.0016	11.19
#1	.0000	97.52	-.0041	.0012	.0012	11.15
#2	.0006	98.52	-.0001	.0011	.0019	11.24

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0035	34.30	.14635	.0041	.0027	11.40
#1	-.0035	34.23	.14620	.0032	.0022	11.24
#2	-.0035	34.38	.14650	.0051	.0032	11.55

Elem	Se1960	Ag3280	Na5895 *	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0000	172.7	-.0007	.0038	.0022
#1	.0000	-.0022	171.9	.0016	.0037	.0021
#2	.0039	.0022	173.5	-.0030	.0038	.0024

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4173	7.383	.00101	.0597	.01670	.33850
#1	.4188	7.350	.00097	.0677	.01649	.33843
#2	.4157	7.415	.00106	.0517	.01692	.33857

Int. Std.	Sc3572
Units	Cts/S
Avg	192.22
#1	191.78
#2	192.67

* See Dilution 3c 7/22/10

Method: 2010A Sample Name: K1006579-002S Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.970	.4519	.9516	2.3227	.04655	1.665
#1	1.979	.4497	.9448	2.3167	.04652	1.662
#2	1.961	.4542	.9584	2.3286	.04658	1.668

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0471	104.5	.1928	.4726	.2341	11.81
#1	.0471	103.8	.1928	.4728	.2347	11.81
#2	.0470	105.1	.1929	.4725	.2335	11.81

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4624	43.49	.58934	.9404	.4722	21.00
#1	.4639	43.39	.58831	.9315	.4704	20.99
#2	.4608	43.58	.59037	.9494	.4740	21.01

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9071	.0470	175.7	.0116	.4917	.4685
#1	.9020	.0457	176.4	.0075	.4898	.4667
#2	.9123	.0483	175.1	.0158	.4936	.4703

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3982	7.286	.00339	.9494	.01648	.32880
#1	.3842	7.249	.00291	.9444	.01637	.32828
#2	.4122	7.322	.00387	.9543	.01658	.32932

Int. Std.	Sc3572
Units	Cts/S
Avg	191.98
#1	191.58
#2	192.38

*see Dilution JL 7/22/11

Method: 2010A Sample Name: K1006579-001 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0287	.0170	.0023	.42496	-.00007	.6272
#1	.0273	.0182	.0020	.42506	-.00006	.6254
#2	.0301	.0157	.0026	.42486	-.00007	.6291

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	205.7	.0009	.0006	-.0001	14.91
#1	.0015	204.6	-.0005	.0006	.0007	14.89
#2	.0011	206.8	.0023	.0007	-.0008	14.93

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0075	51.52	2.2862	.0050	.0029	16.92
#1	-.0053	51.45	2.2952	.0072	.0036	16.92
#2	-.0096	51.59	2.2772	.0028	.0022	16.91

Elem	Se1960	Ag3280	Na5895 *	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0221	.0019	>180.0	.0068	.0077	.0033
#1	.0195	-.0007	>180.0	.0077	.0072	.0035
#2	.0247	.0046	>180.0	.0058	.0081	.0031

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3120	10.96	.00236	.0903	.00796	.57967
#1	.3123	10.95	.00080	.0954	.00775	.57963
#2	.3116	10.97	.00393	.0852	.00818	.57971

Int. Std.	Sc3572
Units	Cts/S
Avg	188.67
#1	188.51
#2	188.82

* see Dilution 3C 7/22/10

Method: 2010A Sample Name: K1006579-003 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	.0024	.0088	.61367	.00003	1.152
#1	.0265	-.0050	.0094	.61081	.00003	1.148
#2	.0128	.0099	.0082	.61653	.00003	1.156

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	62.56	.0026	.0022	.0011	9.510
#1	.0007	62.13	.0041	.0018	.0012	9.449
#2	.0010	62.99	.0012	.0027	.0010	9.571

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080	31.05	.15045	.0201	.0059	45.87
#1	.0029	31.02	.14996	.0207	.0072	45.88
#2	.0132	31.08	.15094	.0195	.0046	45.86

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	-.0001	>180.0	.0107	.0064	.0062
#1	.0025	.0028	>180.0	.0078	.0072	.0069
#2	.0102	-.0031	>180.0	.0136	.0057	.0055

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4542	11.98	.00375	.0761	.01990	.25814
#1	.4566	12.02	.00421	.0613	.01988	.25771
#2	.4518	11.94	.00328	.0909	.01993	.25857

Int. Std.	Sc3572
Units	Cts/S
Avg	191.46
#1	191.53
#2	191.39

*See Dilution
JC 7/22/10

Method: 2010A Sample Name: K1006579-004 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 10:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126	.0020	-.0033	.16381	-.00002	.6010
#1	.0119	.0007	-.0091	.16307	.00004	.5984
#2	.0133	.0032	.0026	.16456	-.00009	.6035

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	55.70	-.0017	.0003	.0035	17.25
#1	.0005	55.20	.0013	.0000	.0036	17.18
#2	-.0003	56.20	-.0047	.0006	.0035	17.31

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0086	21.25	.07018	.0148	.0009	3.574
#1	-.0061	21.25	.06990	.0147	.0017	3.609
#2	-.0111	21.25	.07046	.0148	.0002	3.539

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055	.0003	101.7	-.0069	.0016	.0028
#1	.0017	-.0004	102.8	-.0104	-.0015	.0032
#2	.0094	.0010	100.5	-.0035	.0047	.0023

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4272	6.017	.00221	.0424	.00662	.16019
#1	.4309	6.010	.00407	.0396	.00657	.16086
#2	.4236	6.024	.00036	.0452	.00666	.15953

Int. Std.	Sc3572
Units	Cts/S
Avg	194.22
#1	193.69
#2	194.75

Method: 2010A Sample Name: K1006579-001 Operator: JC
Comment: DISS (209391) (072210A)
Run Time: 07/22/10 10:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0271	.0173	.0046	.41771	-.00014	.6156
#1	.0229	.0198	-.0025	.41547	-.00015	.6158
#2	.0312	.0148	.0117	.41994	-.00012	.6154

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	210.5	.0049	.0012	.0005	14.21
#1	.0003	208.8	.0072	.0014	.0014	14.11
#2	.0013	212.2	.0026	.0010	-.0004	14.32

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	50.79	2.2747	.0019	.0041	16.20
#1	.0037	50.71	2.2593	.0032	.0039	16.18
#2	-.0027	50.86	2.2901	.0006	.0043	16.21

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm *	ppm	ppm	ppm
Avg	.0073	.0027	173.3	-.0017	-.0004	.0046
#1	-.0036	.0034	172.6	-.0038	-.0005	.0045
#2	.0182	.0019	174.0	.0003	-.0003	.0047

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2908	10.79	.00194	.0930	.00697	.55037
#1	.2852	10.79	.00103	.0967	.00685	.54961
#2	.2964	10.78	.00284	.0893	.00709	.55114

Int. Std.	Sc3572
Units	Cts/S
Avg	192.55
#1	192.89
#2	192.21

* see dilution
JC 7/22/10

Method: 2010A Sample Name: K1006579-002 Operator: JC
Comment: DISS (209391) (072210A)
Run Time: 07/22/10 10:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0024	.0100	.0010	.47576	-.00002
#1	.0023	.0112	.0044	.47499	-.00006
#2	-.0072	.0088	-.0024	.47653	.00002

Elem	B_2497	Cd2265	Ca2112	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.7842	.0003	104.7	.0018	.0002
#1	.7841	.0001	104.1	.0002	.0001
#2	.7843	.0004	105.4	.0034	.0002

Elem	Cu3247	Fe2714	Pb2203	Mg2025	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	10.64	-.0056	35.47	.14857
#1	-.0015	10.59	-.0056	35.41	.14808
#2	-.0002	10.69	-.0056	35.53	.14906

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0031	.0000	11.84	.0071	-.0016
#1	.0026	-.0003	11.83	.0141	-.0016
#2	.0037	.0003	11.84	.0000	-.0016

Elem	Na5895 *	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	175.7	-.0053	.0020	.0022	.4375
#1	175.6	-.0036	.0039	.0021	.4395
#2	175.9	-.0070	.0000	.0023	.4354

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	7.640	.00170	.0591	.01663	.33829
#1	7.641	.00236	.0581	.01652	.33876
#2	7.638	.00105	.0602	.01675	.33782

Int. Std.	Sc3572
Units	Cts/S
Avg	196.51
#1	196.76
#2	196.26

* See Dilution
JC 7/22/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 10:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.987	.0131	.0023	2.4187	.04923	.0031
Stddev	.014	.0018	.0005	.0187	.00014	.0001
%RSD	.2892	13.37	20.66	.77190	.28217	1.979
#1	4.977	.0144	.0019	2.4055	.04914	.0031
#2	4.997	.0119	.0026	2.4319	.04933	.0030
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	25.65	.0036	-.0018	.0007	25.22
Stddev	.0002	.28	.0011	.0001	.0023	.27
%RSD	12.09	1.102	29.64	3.456	321.2	1.052
#1	.0017	25.45	.0028	-.0018	.0024	25.03
#2	.0020	25.85	.0043	-.0018	-.0009	25.40
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	25.03	4.889	.0013	-.0037	10.07
Stddev	.0064	.03	.017	.0003	.0003	.03
%RSD	111.8	.1078	.3523	20.87	8.429	.3157
#1	.0103	25.01	4.877	.0011	-.0034	10.04
#2	.0012	25.05	4.901	.0015	-.0039	10.09
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0159	-.0004	10.02	-.0041	.0055	.0009
Stddev	.0045	.0037	.03	.0055	.0019	.0013
%RSD	28.38	856.7	.3182	135.1	34.16	140.7
#1	.0191	-.0031	10.04	-.0002	.0068	.0019
#2	.0127	.0022	9.998	-.0079	.0041	.0000
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 10:39

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.01	2.486	.00267	.0223	.50326	.49038
Stddev	.08	.014	.00130	.0149	.00168	.00006
%RSD	.7715	.5803	48.862	66.81	.33316	.01163
#1	9.951	2.475	.00174	.0117	.50445	.49042
#2	10.06	2.496	.00359	.0328	.50208	.49034
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.90
Stddev	.11
%RSD	.05693
#1	197.82
#2	197.98

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 10:42 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4809	2.459	2.500	.45097	.52255	.5006
Stddev	.0243	.012	.018	.00325	.00027	.0005
%RSD	5.050	.4820	.7398	.72137	.05180	.1098
#1	.4981	2.451	2.487	.44867	.52274	.5002
#2	.4637	2.468	2.513	.45327	.52236	.5010
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5113	2.486	.5092	.5080	.5149	.5224
Stddev	.0051	.022	.0068	.0056	.0016	.0096
%RSD	.9947	.9006	1.337	1.108	.3157	1.845
#1	.5077	2.471	.5044	.5040	.5160	.5292
#2	.5149	2.502	.5140	.5120	.5137	.5156
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.502	1.9712	1.0017	1.002	.5078	5.121
Stddev	.021	.0119	.0003	.015	.0019	.055
%RSD	.8560	.60278	.03092	1.533	.3764	1.069
#1	2.487	1.9628	1.0019	.9916	.5064	5.160
#2	2.517	1.9796	1.0015	1.013	.5091	5.082
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.426	.4931	.4866	2.433	.5001	.5078
Stddev	.009	.0029	.0098	.030	.0046	.0062
%RSD	.3485	.5900	2.016	1.226	.9242	1.218
#1	2.420	.4910	.4935	2.412	.5034	.5034
#2	2.432	.4952	.4797	2.454	.4968	.5122
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 10:42

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0048	.2899	.50812	4.980	.51062	.48508
Stddev	.0011	.0020	.00465	.014	.00811	.00248
%RSD	22.22	.6894	.91597	.2824	1.5892	.51175
#1	-.0056	.2913	.50483	4.971	.51636	.48683
#2	-.0041	.2885	.51141	4.990	.50488	.48332
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	202.34
Stddev	.23
%RSD	.11431
#1	202.17
#2	202.50

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 10:45 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137	.0124	.0086	.00010	.00019	.0002
Stddev	.0164	.0018	.0000	.00038	.00006	.0001
%RSD	120.2	14.78	.0017	380.78	33.413	79.78
#1	.0020	.0137	.0086	.00037	.00014	.0001
#2	.0253	.0111	.0086	-.00017	.00023	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0073	.0037	.0002	.0026	.0063
Stddev	.0004	.0028	.0014	.0000	.0036	.0006
%RSD	3181.	38.65	38.51	2.424	141.5	9.253
#1	.0003	.0092	.0027	.0002	.0000	.0068
#2	-.0003	.0053	.0048	.0001	.0051	.0059
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	.00372	.00120	.0043	-.0003	-.0019
Stddev	.0020	.00012	.00012	.0039	.0003	.0059
%RSD	41.47	3.0980	9.9891	92.40	89.77	303.1
#1	.0035	.00381	.00128	.0070	-.0001	.0022
#2	.0064	.00364	.00111	.0015	-.0005	-.0061
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	-.0009	.0088	.0017	.0003	-.0003
Stddev	.0054	.0019	.0029	.0018	.0002	.0004
%RSD	121.1	212.7	33.10	104.0	60.31	134.9
#1	.0006	-.0022	.0108	.0030	.0002	.0000
#2	.0083	.0004	.0067	.0005	.0004	-.0006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 10:45

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	-.0049	.00057	-.0010	.00038	.00034
Stddev	.0107	.0008	.00204	.0081	.00028	.00004
%RSD	248.4	16.73	356.42	769.5	73.622	10.545
#1	.0033	-.0044	-.00087	.0047	.00058	.00036
#2	-.0119	-.0055	.00202	-.0067	.00018	.00031
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	198.32
Stddev	.16
%RSD	.07834
#1	198.43
#2	198.21

Method: 2010A Sample Name: K1006579-003 Operator: JC
Comment: DISS (209391) (072210A)
Run Time: 07/22/10 10:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0328	.0037	.0056	.55421	-.00007	1.126
#1	.0294	.0131	.0016	.55112	-.00006	1.122
#2	.0362	-.0058	.0096	.55731	-.00007	1.131

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	59.84	.0014	.0010	.0008	6.499
#1	.0008	59.12	.0046	.0012	.0010	6.485
#2	.0005	60.56	-.0018	.0008	.0006	6.513

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	30.49	.14463	.0186	.0044	45.00
#1	.0051	30.41	.14396	.0174	.0042	44.94
#2	.0016	30.58	.14531	.0197	.0045	45.07

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.0003	>180.0	.0091	.0056	.0047
#1	.0049	.0002	>180.0	.0090	.0036	.0053
#2	.0100	.0005	>180.0	.0093	.0075	.0042

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3226	11.39	.00074	.0773	.01945	.25474
#1	.3106	11.30	-.00106	.0774	.01999	.25533
#2	.3345	11.48	.00254	.0771	.01892	.25415

Int. Std.	Sc3572
Units	Cts/S
Avg	189.76
#1	189.37
#2	190.16

x see Dilution 3L 7/22/10

Method: 2010A Sample Name: K1006579-004 Operator: JC
Comment: DISS (209391) (072210A)
Run Time: 07/22/10 11:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0064	.0081	.13224	-.00002	.5769
#1	-.0069	.0081	.0031	.13187	-.00002	.5749
#2	.0137	.0048	.0130	.13262	-.00003	.5790

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	55.83	.0004	-.0003	.0002	4.869
#1	-.0004	55.30	-.0010	.0000	-.0006	4.862
#2	.0001	56.35	.0018	-.0007	.0011	4.876

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	22.12	.07144	.0124	.0017	4.025
#1	.0051	22.05	.07133	.0126	.0015	4.047
#2	-.0078	22.18	.07155	.0122	.0019	4.002

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0029	.0024	104.0	.0075	.0048	.0022
#1	-.0055	-.0001	104.6	.0052	.0062	.0022
#2	-.0004	.0049	103.5	.0098	.0035	.0021

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2845	5.403	.00236	.0401	.00672	.17112
#1	.2867	5.380	.00200	.0422	.00637	.17170
#2	.2822	5.426	.00272	.0379	.00707	.17054

Int. Std.	Sc3572
Units	Cts/S
Avg	191.01
#1	190.29
#2	191.72

Method: 2010A Sample Name: K1006636-004 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0109	-.0075	.0018	-.00007	-.00002
#1	-.0048	-.0021	.0018	.00007	-.00006
#2	-.0170	-.0128	.0019	-.00021	.00003

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0004	.0121	.0058	.0005
#1	.0007	-.0001	.0167	.0037	.0009
#2	.0002	-.0006	.0075	.0079	.0002

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0301	.0049	.00112	.00070
#1	.0024	.0326	.0048	.00124	.00074
#2	.0026	.0276	.0051	.00100	.00066

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0008	.0025	.0096	-.0006	-.0003
#1	-.0006	.0028	.0147	-.0019	.0010
#2	.0021	.0021	.0044	.0006	-.0016

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0128	.0014	.0002	.0005	.2513
#1	.0144	.0028	.0013	.0001	.2608
#2	.0113	.0000	-.0009	.0009	.2419

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0590	.00111	.0009	-.00024	.00006
#1	.0581	.00043	.0067	-.00013	.00006
#2	.0599	.00180	-.0049	-.00035	.00006

Int. Std.	Sc3572
Units	Cts/S
Avg	197.87
#1	197.10
#2	198.64

Method: 2010A Sample Name: K1006636-004L Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 11:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0016	.0028	.00010	-.00001
#1	.0007	.0037	.0080	.00004	.00002
#2	-.0034	-.0070	-.0025	.00016	-.00004

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	-.0005	.0031	.0024	.0005
#1	-.0005	-.0007	.0084	.0053	.0005
#2	-.0007	-.0002	-.0022	-.0004	.0006

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0058	-.0023	.00029	.00015
#1	.0008	.0061	-.0002	.00018	.00014
#2	.0018	.0055	-.0044	.00040	.00016

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.0008	-.0001	.0013	.0000
#1	.0017	.0003	.0076	.0071	.0022
#2	.0007	.0012	-.0078	-.0045	-.0022

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0190	.0067	-.0035	.0021	.0576
#1	.0147	.0074	-.0033	.0029	.0579
#2	.0232	.0061	-.0036	.0013	.0574

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0078	.00158	.0008	.00027	.00005
#1	.0090	.00253	.0047	.00019	.00003
#2	.0066	.00064	-.0031	.00035	.00007

Int. Std.	Sc3572
Units	Cts/S
Avg	199.20
#1	198.18
#2	200.22

Method: 2010A Sample Name: K1006636-008 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:11 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0082	.0009	-.0009	-.00001	.00002
#1	.0117	.0038	-.0025	.00009	.00003
#2	-.0280	-.0020	.0006	-.00011	.00002

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0004	.0042	.0010	.0001
#1	.0004	-.0003	.0022	-.0005	.0006
#2	-.0002	-.0006	.0062	.0025	-.0004

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0045	.0038	.00034	.00025
#1	.0038	.0049	-.0027	.00031	.00022
#2	.0028	.0042	.0103	.00036	.00027

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0001	.0037	.0083	.0012
#1	.0019	.0002	.0047	.0006	.0019
#2	.0019	.0000	.0027	.0161	.0004

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0164	.0028	-.0016	.0001	.2728
#1	.0189	.0001	-.0006	.0004	.2785
#2	.0139	.0055	-.0026	-.0002	.2670

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0455	-.00050	-.0050	.00005	.00005
#1	.0468	-.00107	-.0069	.00000	.00008
#2	.0442	.00007	-.0031	.00011	.00002

Int. Std.	Sc3572
Units	Cts/S
Avg	200.87
#1	200.68
#2	201.06

Method: 2010A Sample Name: RB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:14 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0008	.0015	-.00005	-.00002	-.0005
#1	-.0048	-.0004	.0074	-.00020	-.00004	.0000
#2	.0048	.0021	-.0043	.00009	.00000	-.0009

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0024	-.0002	.0001	.0018	-.0002
#1	-.0003	.0088	-.0009	-.0001	.0001	-.0006
#2	-.0005	-.0040	.0005	.0002	.0036	.0001

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	-.00004	.00010	.0000	-.0005	.0150
#1	.0132	-.00009	.00002	.0006	-.0016	.0140
#2	-.0019	.00001	.00018	-.0007	.0006	.0159

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.0018	.0069	.0004	-.0002	-.0003
#1	-.0058	.0025	.0060	.0027	-.0027	.0001
#2	.0122	.0010	.0077	-.0019	.0023	-.0007

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085	-.0057	.00039	-.0106	-.00026	.00001
#1	.0081	-.0063	.00096	-.0087	-.00012	.00001
#2	.0090	-.0051	-.00017	-.0125	-.00040	.00001

Int. Std.	Sc3572
Units	Cts/S
Avg	200.21
#1	200.38
#2	200.04

Method: 2010A Sample Name: K1006959-MB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:17 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0123	.0058	-.0058	-.00035	.00003
#1	-.0171	-.0012	-.0068	-.00013	.00004
#2	-.0075	.0128	-.0049	-.00057	.00003

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0007	.0042	.0009	-.0004
#1	.0015	-.0007	.0053	-.0014	-.0002
#2	.0012	-.0007	.0031	.0032	-.0007

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0024	.0071	.00003	.00030
#1	.0035	.0026	.0033	.00005	.00031
#2	.0021	.0022	.0108	.00000	.00029

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0011	.0001	.0080	.0019	-.0003
#1	.0016	-.0010	.0017	-.0058	.0002
#2	.0007	.0013	.0142	.0096	-.0007

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0162	.0026	-.0030	.0001	.0116
#1	.0175	.0052	-.0046	-.0005	.0126
#2	.0150	-.0001	-.0014	.0008	.0107

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0164	.00138	.0072	-.00008	.00003
#1	.0195	.00031	-.0064	.00021	.00001
#2	.0134	.00246	.0208	-.00037	.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	192.58
#1	191.22
#2	193.95

Method: 2010A Sample Name: K1006959-001 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.078	.0505	.1562	.16782	-.00107	.6088
#1	2.049	.0570	.1555	.16416	-.00108	.6021
#2	2.106	.0440	.1568	.17148	-.00106	.6155

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	5.672	.0390	.0020	.0250	1.155
#1	.0001	5.592	.0357	.0035	.0251	1.137
#2	.0001	5.752	.0422	.0005	.0248	1.173

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	3.2431	.68019	.2178	.0449	>450.0
#1	.0004	3.2159	.66887	.2118	.0447	>450.0
#2	-.0015	3.2703	.69152	.2238	.0450	>450.0

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0312	.0000	^ *****	.1205	1.156	.1026
#1	.0388	.0014	^-----	.1225	1.157	.1001
#2	.0235	-.0015	>180.0	.1185	1.155	.1050

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.044	25.61	.02831	2.269	.02913	.07332
#1	2.006	25.04	.02802	2.180	.02965	.07338
#2	2.083	26.18	.02860	2.357	.02862	.07327

Int. Std.	Sc3572
Units	Cts/S
Avg	166.79
#1	165.66
#2	167.91

* See Dilution
JC 7/22/10

Method: 2010A Sample Name: K1006959-001D Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.116	.0575	.1798	.16832	-.00119	.6125
#1	2.074	.0578	.1733	.16526	-.00124	.6051
#2	2.158	.0572	.1862	.17139	-.00115	.6200

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	5.599	.0442	.0020	.0253	1.153
#1	.0011	5.519	.0418	.0016	.0275	1.136
#2	.0003	5.680	.0466	.0024	.0231	1.170

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	3.1970	.67914	.2198	.0444	>450.0
#1	.0039	3.1648	.67161	.2150	.0429	>450.0
#2	.0234	3.2291	.68667	.2246	.0458	>450.0

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0446	-.0036	^ *****	.1377	1.145	.1063
#1	.0581	-.0033	^ -----	.1268	1.145	.1032
#2	.0312	-.0039	^ -----	.1486	1.145	.1094

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.061	26.33	.02876	2.394	.02868	.07246
#1	2.008	25.80	.02875	2.351	.02861	.07253
#2	2.113	26.86	.02877	2.437	.02875	.07240

Int. Std.	Sc3572
Units	Cts/S
Avg	166.96
#1	165.93
#2	167.99

X Site Dilution 3C 7/22/10

Method: 2010A Sample Name: K1006959-002 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 11:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.167	.0612	.1539	.17467	-.00112	.6310
#1	2.143	.0570	.1493	.17063	-.00105	.6247
#2	2.191	.0654	.1585	.17870	-.00118	.6373

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	6.091	.0436	.0017	.0244	1.190
#1	.0009	5.996	.0465	.0018	.0248	1.172
#2	.0007	6.185	.0407	.0016	.0240	1.209

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	2.9589	.68649	.2188	.0460	444.4 X
#1	.0034	2.9340	.67562	.2148	.0463	443.0
#2	-.0020	2.9838	.69736	.2229	.0456	445.8

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm X	ppm	ppm	ppm
Avg	.0421	.0020	>180.0	.1313	1.151	.0777
#1	.0504	.0011	>180.0	.1328	1.152	.0753
#2	.0337	.0029	>180.0	.1298	1.149	.0802

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.228	26.33	.02826	2.429	.02839	.07796
#1	2.180	25.89	.02755	2.403	.02855	.07792
#2	2.277	26.77	.02896	2.454	.02824	.07800

Int. Std.	Sc3572
Units	Cts/S
Avg	167.64
#1	166.62
#2	168.65

* See Dilution 3c 7/22/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 11:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.032	.0135	.0084	2.4659	.05004	.0054
Stddev	.023	.0070	.0005	.0261	.00038	.0010
%RSD	.4597	51.66	5.441	1.0599	.76335	18.56
#1	5.015	.0185	.0088	2.4844	.04977	.0061
#2	5.048	.0086	.0081	2.4475	.05031	.0047
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	26.00	.0047	-.0003	.0017	25.19
Stddev	.0003	.59	.0010	.0005	.0005	.24
%RSD	21.53	2.255	21.76	165.0	29.63	.9602
#1	.0015	26.41	.0054	-.0007	.0021	25.36
#2	.0011	25.58	.0039	.0001	.0014	25.02
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	25.29	5.000	.0005	-.0021	10.44
Stddev	.0006	.03	.002	.0007	.0005	.02
%RSD	45.38	.1361	.0373	145.2	23.12	.1802
#1	-.0009	25.26	4.998	.0000	-.0018	10.42
#2	-.0017	25.31	5.001	.0010	-.0025	10.45
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	-.0009	10.37	-.0011	.0020	.0007
Stddev	.0000	.0002	.06	.0004	.0010	.0000
%RSD	.1601	23.88	.5541	36.08	52.73	6.810
#1	.0089	-.0007	10.33	-.0014	.0012	.0007
#2	.0089	-.0010	10.41	-.0008	.0027	.0007
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 11:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.15	2.587	.00199	.0655	.51866	.49947
Stddev	.10	.030	.00320	.0133	.00236	.00358
%RSD	.9839	1.168	160.87	20.33	.45459	.71602
#1	10.22	2.608	-.00027	.0749	.51699	.49694
#2	10.08	2.566	.00425	.0561	.52033	.50200
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.12
Stddev	.73
%RSD	.37022
#1	197.63
#2	196.60

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 11:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4914	2.454	2.454	.44487	.53439	.5005
Stddev	.0096	.014	.008	.00782	.00243	.0052
%RSD	1.953	.5869	.3198	1.7574	.45503	1.044
#1	.4982	2.444	2.448	.43934	.53267	.4968
#2	.4846	2.465	2.459	.45040	.53611	.5042
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5029	2.473	.5007	.5057	.5092	.5311
Stddev	.0086	.046	.0082	.0103	.0043	.0086
%RSD	1.713	1.853	1.646	2.029	.8492	1.627
#1	.4968	2.441	.4948	.4985	.5123	.5372
#2	.5090	2.506	.5065	.5130	.5061	.5250
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.515	1.9638	.99162	.9967	.5048	5.346
Stddev	.025	.0075	.00605	.0228	.0095	.033
%RSD	1.006	.38287	.61058	2.290	1.876	.6090
#1	2.498	1.9585	.98734	.9806	.4981	5.369
#2	2.533	1.9691	.99590	1.013	.5115	5.323
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	.4986	.5807	2.454	.5077	.4993
Stddev	.013	.0027	.0321	.055	.0017	.0112
%RSD	.5165	.5455	5.522	2.233	.3367	2.245
#1	2.461	.4967	.6034	2.415	.5065	.4914
#2	2.479	.5005	.5581	2.493	.5089	.5073
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 11:32

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0091	.3103	.50632	4.998	.53855	.50105
Stddev	.0174	.0026	.00292	.079	.00772	.00187
%RSD	190.2	.8491	.57627	1.581	1.4332	.37320
#1	.0032	.3122	.50426	4.942	.54401	.50237
#2	-.0214	.3085	.50838	5.054	.53309	.49973
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	199.54
Stddev	.16
%RSD	.08026
#1	199.66
#2	199.43

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 11:35 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0151	.0112	.0046	.00000	.00026	.0008
Stddev	.0048	.0141	.0004	.0000	.00000	.0009
%RSD	32.02	125.6	9.369	15.163	.01728	125.2
#1	.0185	.0212	.0043	.00000	.00026	.0014
#2	.0117	.0013	.0049	.00000	.00026	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0035	.0009	.0008	.0003	.0063
Stddev	.0000	.0006	.0033	.0006	.0024	.0008
%RSD	8.931	17.57	358.4	71.80	856.2	12.63
#1	-.0004	.0040	-.0014	.0004	-.0014	.0068
#2	-.0003	.0031	.0032	.0012	.0020	.0057
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	.00351	.00130	.0041	.0009	.0250
Stddev	.0003	.00001	.00042	.0027	.0008	.0069
%RSD	4.654	.28369	31.933	64.63	98.70	27.78
#1	.0073	.00350	.00160	.0060	.0015	.0299
#2	.0068	.00351	.00101	.0022	.0003	.0201
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	.0001	.0481	.0079	-.0016	-.0002
Stddev	.0045	.0008	.0016	.0001	.0005	.0004
%RSD	117.9	556.5	3.236	1.499	34.88	186.4
#1	-.0071	-.0004	.0470	.0079	-.0020	.0001
#2	-.0006	.0007	.0492	.0078	-.0012	-.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 11:35

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	-.0027	.00129	.0095	.00040	.00030
Stddev	.0057	.0002	.00113	.0121	.00030	.00001
%RSD	386.4	7.305	88.143	127.2	73.543	2.5256
#1	.0026	-.0026	.00209	.0010	.00061	.00031
#2	-.0055	-.0028	.00048	.0180	.00019	.00029
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.85
Stddev	.55
%RSD	.27598
#1	197.47
#2	198.24

Method: 2010A Sample Name: K1006579-002 Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 11:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	.0083	-.0059	.09507	-.00007	.1558
#1	-.0093	.0062	-.0022	.09420	-.00010	.1558
#2	.0181	.0103	-.0096	.09594	-.00003	.1559

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	20.67	.0012	-.0001	.0026	2.335
#1	-.0002	20.42	-.0006	.0004	.0023	2.318
#2	-.0003	20.91	.0031	-.0007	.0029	2.352

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	6.5447	.03031	-.0002	-.0007	2.467
#1	.0044	6.5094	.03025	-.0007	-.0002	2.483
#2	.0093	6.5800	.03037	.0004	-.0011	2.452

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	-.0004	38.54	.0051	.0025	.0010
#1	.0021	-.0013	38.88	.0030	.0003	.0013
#2	.0021	.0004	38.20	.0072	.0047	.0006

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0893	1.507	.00054	.0116	.00338	.07159
#1	.0881	1.495	-.00002	.0232	.00306	.07153
#2	.0906	1.518	.00110	.0001	.00371	.07165

Int. Std.	Sc3572
Units	Cts/S
Avg	197.10
#1	196.74
#2	197.46

Method: 2010A Sample Name: K1006579-002D Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 11:50 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.0054	.0027	.09211	-.00004
#1	-.0066	.0079	.0101	.09187	-.00008
#2	.0016	.0029	-.0047	.09235	.00000

Elem	B_2497	Cd2265	Ca2112	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.1487	-.0001	20.06	-.0016	.0001
#1	.1483	.0000	19.94	-.0014	-.0009
#2	.1491	-.0003	20.19	-.0019	.0010

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0014	2.268	-.0004	6.4670	.02908
#1	.0016	2.269	-.0044	6.4702	.02900
#2	.0012	2.268	.0035	6.4639	.02916

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0011	-.0005	2.348	.0027	-.0031
#1	.0002	-.0014	2.352	-.0044	-.0025
#2	.0020	.0004	2.344	.0098	-.0037

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	36.01	-.0029	.0045	.0008	.0925
#1	36.09	-.0029	.0039	.0005	.0953
#2	35.94	-.0030	.0051	.0010	.0898

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	1.465	.00024	.0104	.00309	.06866
#1	1.461	.00068	.0095	.00318	.06867
#2	1.468	-.00021	.0113	.00300	.06865

Int. Std.	Sc3572
Units	Cts/S
Avg	198.52
#1	198.25
#2	198.79

Method: 2010A Sample Name: K1006579-002S Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 11:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3697	.0881	.1702	.43600	.00937	.3360
#1	.3597	.0943	.1635	.43507	.00941	.3357
#2	.3798	.0819	.1769	.43693	.00932	.3363

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	21.53	.0371	.0955	.0435	2.460
#1	.0086	21.46	.0366	.0949	.0415	2.453
#2	.0081	21.61	.0377	.0960	.0456	2.467

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0925	8.1153	.11893	.1814	.0964	4.449
#1	.0872	8.0548	.11868	.1782	.0959	4.442
#2	.0978	8.1758	.11918	.1845	.0968	4.456

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1665	.0113	38.01	-.0015	.0982	.0951
#1	.1602	.0105	38.01	.0004	.0957	.0939
#2	.1729	.0120	38.00	-.0035	.1007	.0964

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0742	1.469	.00134	.1512	.00359	.06943
#1	.0746	1.460	-.00018	.1476	.00363	.06943
#2	.0737	1.478	.00286	.1549	.00356	.06943

Int. Std.	Sc3572
Units	Cts/S
Avg	196.74
#1	196.62
#2	196.86

Method: 2010A Sample Name: K1006579-001 Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 11:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0018	.0013	.08478	-.00001	.1264
#1	.0006	-.0020	-.0024	.08477	-.00003	.1253
#2	.0047	.0055	.0050	.08478	.00001	.1275

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	42.08	-.0003	.0011	.0031	3.153
#1	-.0005	41.75	.0038	.0013	.0002	3.148
#2	-.0007	42.41	-.0044	.0009	.0059	3.157

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	10.29	.42749	.0025	-.0001	3.525
#1	.0032	10.29	.42636	.0022	.0002	3.573
#2	-.0014	10.30	.42862	.0029	-.0004	3.476

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0117	.0044	38.66	-.0001	.0054	.0010
#1	.0047	.0022	39.36	.0026	.0073	.0014
#2	.0188	.0066	37.97	-.0028	.0036	.0006

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0656	2.018	.00217	.0095	.00178	.12208
#1	.0564	2.014	.00247	.0125	.00169	.12219
#2	.0749	2.022	.00186	.0066	.00187	.12197

Int. Std.	Sc3572
Units	Cts/S
Avg	194.52
#1	194.07
#2	194.98

Method: 2010A Sample Name: K1006579-003 Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 11:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104	-.0037	-.0051	.11911	-.00003	.2265
#1	.0138	-.0053	-.0091	.11823	-.00003	.2260
#2	.0070	-.0020	-.0011	.11998	-.00004	.2269

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	12.33	.0012	.0005	.0022	1.913
#1	-.0002	12.21	.0004	.0011	.0015	1.903
#2	-.0008	12.44	.0021	-.0001	.0030	1.922

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	5.8253	.02935	.0033	.0008	9.106
#1	-.0023	5.8028	.02902	.0024	.0002	9.153
#2	-.0056	5.8477	.02968	.0043	.0013	9.060

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097	.0007	40.61	.0050	.0053	.0008
#1	-.0005	.0007	40.96	.0012	.0048	.0008
#2	.0200	.0007	40.25	.0089	.0059	.0008

Elem	P_2149	Si2516	Tl3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0886	2.167	.00180	.0086	.00362	.05070
#1	.0924	2.154	.00199	.0114	.00360	.05075
#2	.0848	2.180	.00161	.0057	.00365	.05064

Int. Std.	Sc3572
Units	Cts/S
Avg	197.23
#1	197.00
#2	197.46

Method: 2010A Sample Name: K1006579-001 Operator: JC
Comment: 1/5 DISS (209391) (072210A)
Run Time: 07/22/10 12:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0046	.0022	.08291	-.00001	.1266
#1	.0006	.0055	.0019	.08267	-.00003	.1272
#2	.0020	.0038	.0025	.08316	.00001	.1259

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	41.66	.0019	.0010	.0003	3.029
#1	-.0005	41.66	-.0006	.0001	.0036	3.043
#2	-.0007	41.66	.0045	.0018	-.0029	3.015

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	10.22	.42075	.0003	-.0002	3.447
#1	-.0010	10.27	.42248	.0002	-.0002	3.457
#2	-.0010	10.17	.41902	.0004	-.0002	3.437

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0018	-.0009	37.42	-.0003	.0048	.0012
#1	-.0120	-.0004	37.60	.0006	.0056	.0006
#2	.0085	-.0013	37.24	-.0013	.0039	.0018

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0556	2.012	.00080	.0161	.00161	.11950
#1	.0592	2.018	.00060	.0278	.00141	.12039
#2	.0521	2.005	.00101	.0044	.00182	.11862

Int. Std.	Sc3572
Units	Cts/S
Avg	196.14
#1	195.60
#2	196.68

Method: 2010A Sample Name: K1006579-002 Operator: JC
Comment: 1/5 DISS (209391) (072210A)
Run Time: 07/22/10 12:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	.0017	.0005	.09342	.00002	.1539
#1	.0166	.0021	-.0059	.09233	.00000	.1524
#2	-.0094	.0013	.0070	.09451	.00003	.1554

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0007	20.48	-.0016	-.0003	.0014	2.138
#1	-.0011	20.15	-.0007	-.0003	.0023	2.120
#2	-.0003	20.81	-.0025	-.0003	.0005	2.155

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	6.6521	.02923	.0013	-.0004	2.401
#1	.0018	6.6195	.02890	.0014	.0006	2.386
#2	-.0006	6.6846	.02957	.0013	-.0014	2.417

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0006	36.86	-.0063	.0023	-.0003
#1	.0072	-.0013	36.83	-.0080	.0002	-.0009
#2	-.0044	.0025	36.90	-.0046	.0043	.0003

Elem	P_2149	Si2516	Tl3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0825	1.494	.00347	.0181	.00324	.07021
#1	.0804	1.479	.00325	.0229	.00342	.07010
#2	.0845	1.509	.00368	.0133	.00305	.07033

Int. Std.	Sc3572
Units	Cts/S
Avg	198.31
#1	197.98
#2	198.63

Method: 2010A Sample Name: K1006579-003 Operator: JC
Comment: 1/5 DISS (209391) (072210A)
Run Time: 07/22/10 12:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0063	-.0008	-.0086	.11656	-.00003
#1	-.0152	.0030	-.0110	.11709	-.00001
#2	.0026	-.0045	-.0061	.11604	-.00005

Elem	B_2497	Cd2265	Ca2112	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.2330	-.0002	13.37	.0021	.0009
#1	.2320	.0002	13.07	.0010	.0009
#2	.2340	-.0005	13.67	.0031	.0008

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0002	1.293	.0021	6.0412	.03007
#1	.0027	1.306	.0028	6.0291	.03035
#2	-.0024	1.280	.0013	6.0533	.02979

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0003	9.022	.0026	-.0012
#1	.0036	.0004	9.080	-.0031	.0022
#2	.0039	.0002	8.963	.0084	-.0046

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	41.13	-.0038	.0001	.0007	.0743
#1	42.23	-.0080	.0009	-.0002	.0790
#2	40.04	.0004	-.0008	.0016	.0696

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	2.168	.00207	.0082	.00384	.05152
#1	2.159	.00261	.0020	.00386	.05262
#2	2.178	.00153	.0145	.00381	.05041

Int. Std.	Sc3572
Units	Cts/S
Avg	198.02
#1	194.36
#2	201.69

Method: 2010A Sample Name: K1006959-001 Operator: JC
Comment: 1/20 (209391) (072210A)
Run Time: 07/22/10 12:11 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1178	.0014	.0099	.00797	-.00008	.0360
#1	.1130	.0039	.0105	.00803	-.00006	.0360
#2	.1225	-.0011	.0093	.00791	-.00010	.0359

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.2536	.0030	.0005	.0043	.0600
#1	-.0006	.2525	.0041	.0004	.0043	.0607
#2	.0003	.2547	.0019	.0005	.0043	.0593

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0041	.16814	.03460	.0097	.0016	30.77
#1	-.0081	.16853	.03476	.0105	.0010	30.87
#2	-.0002	.16775	.03443	.0090	.0021	30.68

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0122	.0003	>180.0	.0093	.0496	.0046
#1	-.0032	.0028	>180.0	.0065	.0505	.0048
#2	-.0212	-.0022	>180.0	.0120	.0488	.0044

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1133	1.249	.00193	.1204	.00195	.00359
#1	.1127	1.241	.00387	.1149	.00202	.00361
#2	.1139	1.258	.00000	.1259	.00188	.00357

Int. Std.	Sc3572
Units	Cts/S
Avg	196.22
#1	195.87
#2	196.57

Method: 2010A Sample Name: K1006959-001D Operator: JC
Comment: 1/20 (209391) (072210A)
Run Time: 07/22/10 12:14 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1116	.0076	-.0058	.00750	-.00009	.0352
#1	.1074	.0113	-.0080	.00749	-.00004	.0353
#2	.1157	.0039	-.0037	.00752	-.00014	.0351

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.2514	.0030	.0005	.0037	.0567
#1	-.0011	.2520	.0038	.0008	.0043	.0567
#2	-.0005	.2507	.0022	.0002	.0030	.0566

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	.16390	.03305	.0086	.0019	30.27
#1	.0023	.16343	.03300	.0084	.0021	30.21
#2	.0002	.16438	.03310	.0088	.0018	30.34

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0005	>180.0	.0074	.0484	.0043
#1	-.0032	-.0007	>180.0	.0027	.0486	.0049
#2	.0173	.0016	>180.0	.0120	.0482	.0036

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1051	1.259	.00022	.1135	.00179	.00346
#1	.1061	1.251	.00041	.1213	.00160	.00345
#2	.1042	1.267	.00003	.1056	.00198	.00347

Int. Std.	Sc3572
Units	Cts/S
Avg	198.01
#1	197.58
#2	198.45

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 12:18 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.032	.0132	-.0005	2.4066	.04937	.0034
Stddev	.033	.0111	.0000	.0310	.00019	.0006
%RSD	.6459	84.59	9.311	1.2867	.37899	16.86
#1	5.009	.0053	-.0005	2.3847	.04924	.0030
#2	5.055	.0210	-.0005	2.4285	.04950	.0038
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	25.71	.0014	-.0010	-.0003	25.18
Stddev	.0005	.13	.0022	.0003	.0012	.17
%RSD	26.48	.4977	153.8	25.20	346.8	.6686
#1	.0015	25.62	.0029	-.0008	-.0012	25.07
#2	.0022	25.80	-.0001	-.0012	.0005	25.30
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0031	25.02	4.905	.0013	-.0035	10.23
Stddev	.0061	.26	.039	.0009	.0004	.01
%RSD	195.3	1.034	.7977	68.61	11.99	.1034
#1	.0012	24.84	4.878	.0019	-.0038	10.22
#2	-.0075	25.21	4.933	.0007	-.0032	10.24
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114	.0022	10.16	.0062	.0045	.0014
Stddev	.0218	.0008	.03	.0048	.0009	.0003
%RSD	190.6	37.66	.2829	76.80	20.11	21.08
#1	.0268	.0028	10.18	.0096	.0038	.0012
#2	-.0040	.0016	10.14	.0028	.0051	.0016
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 12:18

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.04	2.504	.00120	.0194	.50825	.49268
Stddev	.07	.013	.00050	.0082	.00273	.00060
%RSD	.7367	.5137	41.534	42.32	.53688	.12103
#1	9.983	2.495	.00085	.0136	.51018	.49225
#2	10.09	2.513	.00155	.0252	.50632	.49310
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	198.19
Stddev	.22
%RSD	.10877
#1	198.34
#2	198.04

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 12:20 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4885	2.466	2.445	.44733	.52741	.4976
Stddev	.0041	.018	.026	.00226	.00267	.0055
%RSD	.8414	.7404	1.053	.50500	.50620	1.109
#1	.4856	2.453	2.427	.44573	.52552	.4937
#2	.4914	2.479	2.463	.44893	.52930	.5015
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5042	2.493	.5068	.5051	.5091	.5319
Stddev	.0038	.038	.0038	.0050	.0015	.0146
%RSD	.7549	1.507	.7491	.9927	.2877	2.743
#1	.5015	2.466	.5041	.5015	.5080	.5422
#2	.5069	2.519	.5095	.5086	.5101	.5216
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.501	2.0880	.99599	.9987	.5035	5.232
Stddev	.000	.0141	.00541	.0222	.0038	.095
%RSD	.0171	.67528	.54339	2.224	.7612	1.820
#1	2.501	2.0781	.99216	.9830	.5008	5.300
#2	2.501	2.0980	.99982	1.014	.5062	5.165
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.418	.4965	.5245	2.450	.5088	.5008
Stddev	.036	.0032	.0136	.010	.0042	.0060
%RSD	1.503	.6348	2.593	.3976	.8211	1.195
#1	2.393	.4988	.5341	2.443	.5118	.4965
#2	2.444	.4943	.5149	2.457	.5059	.5050
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 12:20

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0175	.2943	.50608	4.977	.52070	.49447
Stddev	.0102	.0026	.00113	.042	.00907	.00065
%RSD	57.86	.8828	.22421	.8521	1.7415	.13049
#1	-.0104	.2924	.50528	4.947	.52711	.49493
#2	-.0247	.2961	.50689	5.007	.51429	.49401
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	200.73
Stddev	.67
%RSD	.33384
#1	200.25
#2	201.20

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 12:23 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0080	.0025	.00050	.00032	.0002
Stddev	.0174	.0153	.0035	.00002	.00005	.0000
%RSD	2420.	191.4	141.2	3.4135	14.159	9.806
#1	.0130	.0188	.0049	.00051	.00036	.0002
#2	-.0116	-.0028	.0000	.00048	.00029	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0079	-.0006	.0007	.0031	.0059
Stddev	.0002	.0025	.0020	.0007	.0010	.0009
%RSD	145.2	31.44	328.4	94.30	32.14	14.69
#1	.0000	.0062	-.0021	.0002	.0024	.0065
#2	-.0003	.0097	.0008	.0012	.0038	.0052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.00402	.00148	.0060	-.0002	.0152
Stddev	.0038	.00007	.00021	.0028	.0013	.0097
%RSD	152.5	1.6553	14.015	46.53	837.9	63.82
#1	.0052	.00398	.00163	.0080	.0008	.0083
#2	-.0002	.00407	.00133	.0040	-.0011	.0221
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	-.0001	.0262	.0064	.0041	.0003
Stddev	.0009	.0012	.0016	.0024	.0005	.0000
%RSD	70.89	878.5	5.960	37.35	11.37	8.702
#1	.0019	-.0010	.0251	.0081	.0044	.0003
#2	.0006	.0007	.0273	.0047	.0038	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 12:23

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	-.0036	.00067	.0059	.00041	.00037
Stddev	.0105	.0011	.00045	.0068	.00040	.00001
%RSD	236.6	29.69	67.111	116.7	98.301	2.5903
#1	.0119	-.0044	.00099	.0010	.00012	.00037
#2	-.0030	-.0028	.00035	.0107	.00069	.00038
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	196.40
Stddev	.32
%RSD	.16137
#1	196.63
#2	196.18

Method: 2010A Sample Name: K1006959-002 Operator: JC
Comment: 1/20 (209391) (072210A)
Run Time: 07/22/10 12:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1205	-.0015	-.0012	.00794	-.00012	.0367
#1	.1254	-.0035	-.0018	.00800	-.00009	.0368
#2	.1156	.0006	-.0006	.00788	-.00016	.0367

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.2739	.0021	.0004	.0052	.0641
#1	-.0006	.2742	.0012	.0000	.0054	.0646
#2	-.0002	.2736	.0031	.0007	.0049	.0636

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0053	.18191	.03433	.0099	.0019	29.17
#1	-.0091	.18190	.03434	.0098	.0019	29.23
#2	-.0014	.18193	.03432	.0101	.0020	29.11

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	.0007	>180.0	-.0002	.0568	.0033
#1	.0032	.0019	>180.0	.0055	.0565	.0023
#2	.0237	-.0004	>180.0	-.0058	.0571	.0042

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1089	1.485	.00075	.1196	.00207	.00394
#1	.1069	1.478	.00132	.1050	.00188	.00393
#2	.1109	1.492	.00019	.1341	.00225	.00396

Int. Std.	Sc3572
Units	Cts/S
Avg	190.47
#1	190.13
#2	190.80

Method: 2010A Sample Name: K1006959-003 Operator: JC
Comment: 1/20 (209391) (072210A)
Run Time: 07/22/10 12:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1341	.0076	-.0009	.00915	-.00005	.0433
#1	.1334	.0072	.0037	.00938	-.00003	.0430
#2	.1349	.0081	-.0055	.00891	-.00007	.0435

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.2699	.0038	.0007	.0041	.0552
#1	-.0006	.2671	.0048	.0000	.0037	.0549
#2	-.0003	.2728	.0028	.0014	.0045	.0555

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093	.16148	.04109	.0120	.0029	33.32
#1	.0063	.16106	.04092	.0120	.0029	33.46
#2	.0122	.16190	.04125	.0120	.0030	33.18

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	.0030	>180.0	.0145	.0628	.0037
#1	.0122	.0019	>180.0	.0134	.0629	.0041
#2	-.0007	.0040	>180.0	.0156	.0627	.0033

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1103	1.368	.00093	.1408	.00203	.00383
#1	.1030	1.363	.00271	.1330	.00206	.00380
#2	.1176	1.372	-.00085	.1485	.00199	.00385

Int. Std.	Sc3572
Units	Cts/S
Avg	192.42
#1	192.22
#2	192.61

Method: 2010A Sample Name: K1006959-001 Operator: JC
Comment: 1/1000 (209391) (072210A)
Run Time: 07/22/10 12:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	-.0033	-.0028	.00039	.00001
#1	-.0089	.0004	-.0062	.00027	.00001
#2	.0021	-.0070	.0006	.00051	.00001

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	-.0009	.0079	.0004	.0008
#1	.0005	-.0007	.0066	.0008	.0007
#2	-.0002	-.0011	.0092	.0000	.0009

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0015	.0014	.00211	.00062
#1	.0034	.0014	-.0035	.00200	.00065
#2	.0016	.0015	.0063	.00221	.00060

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0009	.0004	.5595	.0058	-.0009
#1	.0012	.0009	.5621	.0071	-.0007
#2	.0007	-.0001	.5570	.0045	-.0010

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	6.065	.0010	.0003	-.0005	.0065
#1	6.093	-.0015	-.0008	-.0006	.0030
#2	6.037	.0036	.0014	-.0004	.0100

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0237	.00161	-.0087	.00040	.00008
#1	.0247	.00069	.0083	.00036	.00009
#2	.0227	.00254	-.0257	.00043	.00007

Int. Std.	Sc3572
Units	Cts/S
Avg	200.14
#1	200.02
#2	200.27

See 1/100 Dilution 5 7/22/10

Method: 2010A Sample Name: K1005959-001 Operator: JC
Comment: 1/100
Run Time: 07/22/10 12:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0240	.0066	.0006	.00147	-.00002	.0067
#1	.0240	.0038	-.0037	.00138	-.00005	.0062
#2	.0240	.0095	.0049	.00156	.00001	.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0368	.0027	.0005	.0036	.0125
#1	-.0008	.0343	.0031	.0000	.0030	.0124
#2	.0000	.0392	.0023	.0010	.0041	.0127

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.03109	.00685	.0023	.0001	6.260
#1	-.0085	.03105	.00683	.0032	-.0002	6.310
#2	.0122	.03114	.00688	.0014	.0005	6.209

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	-.0006	67.29	-.0006	.0109	.0010
#1	.0096	.0002	68.26	.0034	.0098	.0012
#2	-.0006	-.0013	66.33	-.0046	.0120	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0270	.2362	.00012	.0336	.00040	.00075
#1	.0245	.2382	-.00100	.0395	.00020	.00073
#2	.0294	.2341	.00125	.0276	.00061	.00076

Int. Std.	Sc3572
Units	Cts/S
Avg	197.10
#1	196.39
#2	197.82

Method: 2010A Sample Name: K1005969-001D Operator: JC
Comment: 1/100 (209391) (072210A)
Run Time: 07/22/10 12:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	-.0041	-.0012	.00120	.00004	.0062
#1	.0213	-.0078	-.0062	.00125	.00002	.0063
#2	-.0089	-.0004	.0037	.00116	.00005	.0060

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0421	.0027	-.0004	.0024	.0117
#1	-.0010	.0410	.0033	-.0004	.0019	.0117
#2	.0005	.0431	.0020	-.0005	.0030	.0117

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	.03063	.00670	.0024	-.0004	6.042
#1	.0077	.03078	.00659	.0016	-.0005	6.063
#2	.0102	.03048	.00680	.0031	-.0004	6.021

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0064	.0012	64.91	-.0024	.0120	.0006
#1	-.0084	-.0004	65.19	-.0037	.0119	-.0003
#2	-.0045	.0028	64.63	-.0011	.0121	.0014

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236	.2379	.00009	.0163	.00037	.00069
#1	.0208	.2354	.00061	.0086	.00028	.00070
#2	.0263	.2405	-.00042	.0239	.00046	.00068

Int. Std.	Sc3572
Units	Cts/S
Avg	197.34
#1	197.37
#2	197.32

Method: 2010A Sample Name: K1005969-002 Operator: JC
Comment: 1/100 (209391) (072210A)
Run Time: 07/22/10 12:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0281	.0037	.0006	.00152	.00001	.0065
#1	.0117	.0004	.0049	.00162	.00001	.0064
#2	.0445	.0070	-.0037	.00143	.00000	.0067

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0465	.0034	-.0007	.0028	.0125
#1	-.0006	.0436	.0040	-.0007	.0019	.0124
#2	-.0005	.0493	.0028	-.0008	.0037	.0126

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0010	.02971	.00675	.0010	-.0004	5.754
#1	.0078	.02968	.00699	.0017	-.0001	5.874
#2	-.0098	.02973	.00651	.0004	-.0007	5.635

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.0013	64.95	.0009	.0136	.0013
#1	.0032	.0004	66.44	.0031	.0112	.0012
#2	-.0019	.0022	63.46	-.0014	.0160	.0014

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0320	.2473	.00000	.0137	.00056	.00079
#1	.0442	.2487	-.00040	.0224	.00007	.00086
#2	.0198	.2459	.00040	.0049	.00104	.00072

Int. Std.	Sc3572
Units	Cts/S
Avg	195.68
#1	195.29
#2	196.08

Method: 2010A Sample Name: K1005969-003 Operator:
Comment: 1/100
Run Time: 07/22/10 12:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0260	-.0024	.0009	.00159	-.00004	.0078
#1	.0253	-.0037	.0018	.00146	-.00003	.0072
#2	.0267	-.0011	.0000	.00171	-.00005	.0083

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0436	-.0010	-.0001	.0040	.0110
#1	.0002	.0458	.0020	-.0006	.0026	.0109
#2	-.0005	.0414	-.0039	.0004	.0054	.0111

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	.02965	.00800	.0018	-.0006	6.480
#1	.0049	.02972	.00797	.0007	.0000	6.528
#2	.0053	.02958	.00803	.0030	-.0013	6.433

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077	.0002	73.27	.0003	.0131	.0011
#1	.0032	.0002	74.08	.0036	.0141	.0015
#2	.0122	.0002	72.46	-.0030	.0122	.0006

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0240	.2529	.00062	.0195	.00013	.00072
#1	.0323	.2499	.00066	.0166	.00034	.00076
#2	.0157	.2559	.00059	.0223	-.00009	.00069

Int. Std.	Sc3572
Units	Cts/S
Avg	195.49
#1	195.12
#2	195.85

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 12:55 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.985	.0090	.0007	2.4334	.05028	.0037
Stddev	.009	.0007	.0018	.0176	.00018	.0010
%RSD	.1774	7.285	261.1	.72222	.35333	27.39
#1	4.992	.0094	-.0006	2.4210	.05041	.0044
#2	4.979	.0085	.0020	2.4458	.05016	.0030
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	25.31	.0032	-.0012	.0013	24.95
Stddev	.0004	.43	.0024	.0003	.0001	.28
%RSD	27.34	1.699	76.44	21.49	8.272	1.133
#1	.0013	25.00	.0015	-.0014	.0012	24.75
#2	.0019	25.61	.0049	-.0011	.0014	25.15
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0061	25.05	4.932	.0005	-.0017	9.997
Stddev	.0050	.29	.017	.0024	.0003	.088
%RSD	82.49	1.170	.3337	466.7	17.31	.8810
#1	-.0096	24.85	4.944	.0022	-.0015	9.934
#2	-.0025	25.26	4.920	-.0012	-.0020	10.06
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0004	9.958	.0027	.0040	.0015
Stddev	.0000	.0004	.066	.0002	.0013	.0001
%RSD	.3684	92.93	.6643	8.375	31.61	3.492
#1	.0050	.0002	9.911	.0026	.0049	.0016
#2	.0050	.0007	10.00	.0029	.0031	.0015
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 12:55

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.505	.00258	.0204	.50307	.49850
Stddev	.10	.006	.00079	.0095	.00531	.00038
%RSD	1.042	.2228	30.633	46.45	1.0560	.07618
#1	10.00	2.501	.00202	.0137	.49932	.49877
#2	10.15	2.509	.00314	.0271	.50683	.49823
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.07
Stddev	.47
%RSD	.23728
#1	196.74
#2	197.40

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 12:58 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4716	2.449	2.505	.45287	.52643	.5007
Stddev	.0070	.025	.008	.00171	.00178	.0033
%RSD	1.478	1.0000	.3347	.37655	.33816	.6663
#1	.4765	2.432	2.499	.45407	.52769	.4983
#2	.4667	2.466	2.511	.45166	.52517	.5031
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5155	2.474	.5061	.5106	.5153	.5300
Stddev	.0025	.015	.0014	.0038	.0015	.0178
%RSD	.4870	.5894	.2726	.7403	.2893	3.353
#1	.5173	2.464	.5071	.5133	.5142	.5425
#2	.5137	2.484	.5051	.5079	.5164	.5174
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.514	1.9915	.99379	.9983	.5069	5.027
Stddev	.014	.0169	.00400	.0046	.0040	.037
%RSD	.5405	.85124	.40243	.4634	.7970	.7376
#1	2.524	1.9796	.99662	.9950	.5098	5.053
#2	2.505	2.0035	.99096	1.002	.5041	5.001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.483	.5008	.5038	2.445	.4976	.5100
Stddev	.004	.0075	.0092	.023	.0037	.0035
%RSD	.1524	1.494	1.821	.9272	.7435	.6772
#1	2.481	.4955	.5102	2.461	.5002	.5124
#2	2.486	.5061	.4973	2.429	.4950	.5075
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 12:58

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0126	.2932	.50413	4.994	.50712	.48791
Stddev	.0071	.0011	.00408	.005	.00574	.00441
%RSD	56.35	.3641	.81020	.1104	1.1313	.90462
#1	-.0076	.2939	.50702	4.990	.51118	.49103
#2	-.0176	.2924	.50124	4.998	.50307	.48479
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	203.49
Stddev	1.31
%RSD	.64601
#1	202.56
#2	204.42

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 13:01 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0213	.0125	.0062	.00015	.00022	.0002
Stddev	.0039	.0229	.0096	.00022	.00003	.0001
%RSD	18.18	182.9	155.4	142.20	14.846	60.81
#1	.0185	.0287	.0129	.00031	.00025	.0001
#2	.0240	-.0037	-.0006	.00000	.00020	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0011	-.0007	.0005	.0032	.0065
Stddev	.000	.0015	.0016	.0013	.0023	.0008
%RSD	1825.	141.7	227.3	240.7	72.41	11.97
#1	-.0001	.0022	.0004	-.0004	.0048	.0071
#2	.0001	.0000	-.0019	.0014	.0016	.0060
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0085	.00445	.00165	.0052	.0006	.0004
Stddev	.0021	.00003	.00028	.0048	.0002	.0023
%RSD	24.25	.68408	16.900	92.34	29.61	586.2
#1	.0099	.00442	.00184	.0085	.0005	.0020
#2	.0070	.00447	.00145	.0018	.0007	-.0012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058	-.0003	.0238	.0027	-.0004	-.0002
Stddev	.0054	.0015	.0040	.0014	.0040	.0005
%RSD	94.23	499.5	16.83	50.81	1141.	269.0
#1	.0096	-.0013	.0210	.0017	.0025	-.0006
#2	.0019	.0007	.0267	.0037	-.0032	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 13:01

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	-.0030	.00171	.0044	.00024	.00037
Stddev	.0002	.0014	.00030	.0079	.00001	.00005
%RSD	5.547	45.61	17.818	180.9	3.9425	12.391
#1	.0043	-.0040	.00193	-.0012	.00025	.00040
#2	.0046	-.0021	.00149	.0099	.00023	.00034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	201.30
Stddev	.59
%RSD	.29278
#1	200.88
#2	201.71

Service Request # K1006636
Calibration 072610B
QC in calibration 072610B
QC Service Request K1006579
STARLIMS Batch # 209940

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: As results calculated without ArCl correction.

Primary Review by _____ Date 7/27/10
Secondary Review by JDB Date 7/27/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	WATER CRA	Unknown	0 kg	0 ml	1.00	0	1	4	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006524-MB	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSW K1006524	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	K1006524-005	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006524-005D	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006524-005 1/5L	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006524-005 +20A	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006524-005S	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006524-001	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006524-002	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006524-003	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006524-004	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006524-006	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006524-007	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006777-008	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006465-001	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006465-002	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006465-003	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006465-004	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006465-005	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006465-006	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006579-MB	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	LCSW K1006579	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006579-001	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	K1006579-001D	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	K1006579-001 1/5L	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006579-001 +20A	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006579-001S	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006579-002	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	K1006579-003	Unknown	0 kg	0 ml	1.00	1	3	5	145
43	K1006579-004	Unknown	0 kg	0 ml	1.00	1	3	6	145
44	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
45	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
46	K1006579-001 DISS	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1006579-002 DISS	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1006579-003 DISS	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006579-004 DISS	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	K1006636-004	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006636-008	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006666-MB	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	LCSW K1006666	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	K1006666-001 1/2	Unknown	0 kg	0 ml	1.00	1	4	3	145
55	K1006666-002	Unknown	0 kg	0 ml	1.00	1	4	4	145
56	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
57	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
58	K1006666-003	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006666-004	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006666-001 DISS 1/2	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006666-002 DISS	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006666-003 DISS	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006666-004 DISS	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1004241-018	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1004241-018D	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	K1004241-018 1/5L	Unknown	0 kg	0 ml	1.00	1	5	1	145
67	K1004241-018 +20A	Unknown	0 kg	0 ml	1.00	1	5	2	145
68	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
69	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
70	K1004241-018S	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	K1004241-010	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1004241-011	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1004241-012	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1004241-013	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1004241-014	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1004241-015	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	K1004241-016	Unknown	0 kg	0 ml	1.00	1	5	10	145
78	K1004241-017	Unknown	0 kg	0 ml	1.00	1	5	11	145
79	K1004241-019	Unknown	0 kg	0 ml	1.00	1	5	12	145
80	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
81	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:53:05 7/26/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-350.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	-5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-38.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:53:05 7/26/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-350.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	-5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80

ExCell Mass Calibration Date: 7/26/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1286	0.715	-0.026	TRUE	
7.016	1552	0.767	0.019	TRUE	Li-7
9.012	2059	0.767	0.016	TRUE	Be-9
23.985	5871	0.715	0.026	TRUE	Mg-24
24.986	6124	0.766	0.02	TRUE	Co-59
25.983	6378	0.715	0.021	TRUE	In-115
26.982	6625	0.715	-0.007	TRUE	Ce-140
45.953	11466	0.715	0.045	TRUE	Pb-208
53.949	13487	0.766	-0.011	TRUE	Bi-209
55.935	13988	0.817	-0.028	TRUE	U-238
57.934	14495	0.817	-0.036	TRUE	
58.933	14748	0.766	-0.041	TRUE	
63.929	16022	0.766	-0.031	TRUE	
65.926	16536	0.817	-0.009	TRUE	
69.925	17556	0.766	-0.001	TRUE	
75.92	19077	0.766	-0.023	TRUE	
112.904	28501	0.766	0	TRUE	
114.904	29008	0.766	-0.009	TRUE	
139.905	35385	0.714	0.021	TRUE	
141.908	35905	0.714	0.059	TRUE	
155.923	39467	0.714	0.022	TRUE	
205.974	52220	0.612	-0.003	TRUE	
206.976	52473	0.663	-0.012	TRUE	
207.977	52733	0.663	0.007	TRUE	
208.98	52987	0.714	-0.001	TRUE	
238.051	60397	0.612	-0.019	TRUE	

Excluded In Calib | Excluded In Results | Multi Element | Scan Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	6Li	7Li	9Be	59Co	115In	208Pb
1	Stability 07-26-2010	7/26/2010 9:08:12 A	(P)0.000	(P)15082.125	(P)5064.231	(P)29777.504	(P)29069.380	(P)16562.096
2	Stability 07-26-2010	7/26/2010 9:09:28 A	(P)0.000	(P)15006.211	(P)5052.060	(P)29372.832	(P)28725.687	(P)16795.034
3	Stability 07-26-2010	7/26/2010 9:10:43 A	(P)0.000	(P)15006.379	(P)5081.237	(P)29147.709	(P)28989.224	(P)16727.288
4	Stability 07-26-2010	7/26/2010 9:11:58 A	(P)0.333	(P)15370.265	(P)5159.265	(P)29160.066	(P)29117.979	(P)17233.722
5	Stability 07-26-2010	7/26/2010 9:13:13 A	(P)0.000	(P)15826.429	(P)5151.095	(P)29351.623	(P)29323.065	(P)17426.457
	Mean of Stability 07-26	7/26/2010 9:08:12 A	(P)0.067	(P)15258.282	(P)5101.578	(P)29361.947	(P)29045.067	(P)16948.919
	SD of Stability 07-26-20		(P)0.149	(P)351.197	(P)50.101	(P)254.738	(P)216.975	(P)364.551
	%RSD of Stability 07		(P)223.607	(P)2.302	(P)0.982	(P)0.868	(P)0.747	(P)2.151

Run	Label	TimeStamp	209Bi	202Hg	238U
1	Stability 07-26-2010	7/26/2010 9:08:12 A	(P)28036.654	(P)0.000	(P)30142.437
2	Stability 07-26-2010	7/26/2010 9:09:28 A	(P)26999.492	(P)0.000	(P)30292.603
3	Stability 07-26-2010	7/26/2010 9:10:43 A	(P)26937.874	(P)0.000	(P)30652.706
4	Stability 07-26-2010	7/26/2010 9:11:58 A	(P)27100.348	(P)0.167	(P)31021.838
5	Stability 07-26-2010	7/26/2010 9:13:13 A	(P)27558.389	(P)0.167	(P)31867.184
	Mean of Stability 07-26	7/26/2010 9:08:12 A	(P)27326.551	(P)0.067	(P)30795.354
	SD of Stability 07-26-20		(P)465.618	(P)0.091	(P)689.116
	%RSD of Stability 07		(P)1.704	(P)136.931	(P)2.238

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/26/10 15:34					
Antimony	121	-0.0031	0.0045	-0.0015	**0**	0.004	0
Antimony	123	0.0018	-0.002	0.0002	**0**	0.0019	0
Arsenic	75	0.0048	-0.0042	-0.0006	**0**	0.0046	0
Cadmium	111	-0.0021	0.0011	0.001	**0**	0.0018	0
Cadmium	114	0.0004	-0.0002	-0.0002	**0**	0.0003	0
Chromium	52	0.0074	-0.0084	0.001	**0**	0.008	0
Chromium	53	0.1003	-0.0227	-0.0776	**0**	0.0911	0
Lead	206	0.0011	-0.0007	-0.0004	**0**	0.0009	0
Lead	207	-0.0009	0	0.0009	**0**	0.0009	0
Lead	208	-0.0006	0	0.0006	**0**	0.0006	0
Molybdenum	95	0.0021	-0.0016	-0.0005	**0**	0.0019	0
Molybdenum	97	0.0028	0.0029	-0.0057	**0**	0.0049	0
Molybdenum	98	0.001	0.0008	-0.0019	**0**	0.0016	0
Selenium	77	0.0027	-0.006	0.0033	**0**	0.0052	0
Selenium	78	-0.1045	0.0246	0.0799	**0**	0.0947	0
Selenium	82	0.0739	-0.099	0.025	**0**	0.0891	0
Thallium	203	0.001	-0.0014	0.0005	**0**	0.0013	0
Thallium	205	0	-0.0001	0.0001	**0**	0.0001	0
Uranium	238	-0.0003	0.0003	0	**0**	0.0003	0

Internal Standard Factors:

Lithium	6	1.061	0.976	0.968	**1.061**	n/a	n/a
Scandium	45	1.034	0.972	0.996	**1.034**	n/a	n/a
Gallium	71	1.026	0.992	0.983	**1.026**	n/a	n/a
Rhodium	103	1.036	0.984	0.982	**1.036**	n/a	n/a
Indium	115	1.036	0.985	0.981	**1.036**	n/a	n/a
Lutetium	175	1.036	0.988	0.978	**1.036**	n/a	n/a
Gold	197	1.039	0.983	0.98	**1.039**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		7/26/10 15:37					
Antimony	121	25.01	25.11	24.88	**25**	0.1192	0.4767
Antimony	123	25.05	25.11	24.84	**25**	0.145	0.5798
Arsenic	75	25.26	25	24.74	**25**	0.2641	1.056
Cadmium	111	24.98	25.2	24.82	**25**	0.1893	0.7573
Cadmium	114	24.75	25.38	24.87	**25**	0.3333	1.333
Chromium	52	24.78	25.34	24.89	**25**	0.2969	1.188
Chromium	53	24.46	25.55	24.98	**25**	0.5443	2.177
Lead	206	25.1	25.37	24.53	**25**	0.4317	1.727
Lead	207	25.02	25.39	24.59	**25**	0.403	1.612
Lead	208	25.08	25.19	24.73	**25**	0.238	0.9519
Molybdenum	95	25.03	24.86	25.11	**25**	0.1252	0.5007
Molybdenum	97	25.09	25.15	24.76	**25**	0.2142	0.8567
Molybdenum	98	24.68	25.37	24.94	**25**	0.3475	1.39
Selenium	77	25.11	24.94	24.95	**25**	0.0969	0.3874
Selenium	78	24.58	25.49	24.93	**25**	0.4637	1.855
Selenium	82	24.78	25.42	24.8	**25**	0.365	1.46
Thallium	203	24.14	24.95	25.91	**25**	0.8863	3.545
Thallium	205	24.13	25.04	25.82	**25**	0.8454	3.382
Uranium	238	25.05	25.15	24.81	**25**	0.176	0.7042

Internal Standard Factors:

Lithium	6	0.999	1.013	0.986	**0.999**	n/a	n/a
Scandium	45	1.005	1.008	1	**1.005**	n/a	n/a
Gallium	71	0.977	0.946	0.944	**0.977**	n/a	n/a
Rhodium	103	0.982	0.966	0.951	**0.982**	n/a	n/a
Indium	115	0.978	0.98	0.977	**0.978**	n/a	n/a
Lutetium	175	0.972	0.945	0.953	**0.972**	n/a	n/a
Gold	197	0.997	0.973	0.967	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/26/10 15:41					
Antimony	121	23.82	23.75	23.55	**23.71**	0.1395	0.5882
Antimony	123	23.64	23.59	23.74	**23.66**	0.0716	0.3027
Arsenic	75	24.98	24.2	24.86	**24.68**	0.4172	1.691
Cadmium	111	12.17	12.41	12.05	**12.21**	0.1823	1.493
Cadmium	114	12.61	12.49	12.43	**12.51**	0.0951	0.7605
Chromium	52	9.585	9.678	9.477	**9.58**	0.1005	1.049
Chromium	53	9.333	9.355	9.573	**9.421**	0.1326	1.408
Lead	206	22.7	22.85	22.95	**22.83**	0.1224	0.5362
Lead	207	25.04	25.55	25.43	**25.34**	0.2659	1.049
Lead	208	24.21	24.38	24.38	**24.32**	0.0999	0.4108
Molybdenum	95	24.79	24.24	24.89	**24.64**	0.3499	1.42
Molybdenum	97	24.46	24.43	24.92	**24.6**	0.2721	1.106
Molybdenum	98	24.55	24.21	24.82	**24.53**	0.3052	1.244
Selenium	77	24.8	24.8	24.75	**24.78**	0.0308	0.1243
Selenium	78	25.31	24.43	24.65	**24.8**	0.4582	1.848
Selenium	82	24.84	24.49	23.91	**24.41**	0.4693	1.923
Thallium	203	27.09	27.32	26.79	**27.06**	0.265	0.9792
Thallium	205	26.74	26.79	27.03	**26.85**	0.1513	0.5633
Uranium	238	24.49	24.49	24.79	**24.59**	0.1778	0.7229

Internal Standard Factors:							
Lithium	6	1.016	0.99	1.006	**1.016**	n/a	n/a
Scandium	45	1.015	0.998	1.003	**1.015**	n/a	n/a
Gallium	71	1.008	0.951	0.962	**1.008**	n/a	n/a
Rhodium	103	0.986	0.956	0.979	**0.986**	n/a	n/a
Indium	115	1.009	0.988	0.982	**1.009**	n/a	n/a
Lutetium	175	0.989	0.969	0.968	**0.989**	n/a	n/a
Gold	197	0.991	0.979	0.982	**0.991**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/26/10 15:44					
Antimony	121	24.8	24.92	24.39	**24.7**	0.2758	1.117
Antimony	123	25.11	25.03	24.5	**24.88**	0.3316	1.333
Arsenic	75	25.05	24.91	24.89	**24.95**	0.0842	0.3374
Cadmium	111	24.53	24.48	24.42	**24.48**	0.0557	0.2277
Cadmium	114	24.98	24.97	24.58	**24.84**	0.2269	0.9132
Chromium	52	24.88	24.54	24.57	**24.66**	0.1889	0.766
Chromium	53	24.81	24.28	24.55	**24.55**	0.2641	1.076
Lead	206	24.64	24.57	24.68	**24.63**	0.0572	0.2322
Lead	207	24.74	24.63	24.78	**24.72**	0.0819	0.3314
Lead	208	24.64	24.73	24.8	**24.72**	0.0808	0.327
Molybdenum	95	24.57	24.83	24.66	**24.68**	0.1318	0.5341
Molybdenum	97	24.74	25.19	24.76	**24.9**	0.2544	1.022
Molybdenum	98	24.71	25.32	24.73	**24.92**	0.3466	1.391
Selenium	77	26.02	25.02	24.68	**25.24**	0.6985	2.767
Selenium	78	25.32	24.4	24.43	**24.71**	0.5229	2.116
Selenium	82	25.47	24.66	25.06	**25.06**	0.4053	1.617
Thallium	203	25.74	25.51	26.34	**25.86**	0.4257	1.646
Thallium	205	25.44	25.3	26.25	**25.66**	0.509	1.983
Uranium	238	24.38	24.72	24.56	**24.55**	0.1715	0.6986

Internal Standard Factors:

Lithium	6	1.061	1	0.982	**1.061**	n/a	n/a
Scandium	45	1.019	0.993	0.998	**1.019**	n/a	n/a
Gallium	71	0.991	0.937	0.934	**0.991**	n/a	n/a
Rhodium	103	0.99	0.97	0.967	**0.99**	n/a	n/a
Indium	115	1	0.98	0.953	**1**	n/a	n/a
Lutetium	175	0.994	0.946	0.956	**0.994**	n/a	n/a
Gold	197	0.997	0.966	0.96	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/26/10 15:53					
Antimony	121	-0.0061	-0.0053	-0.006	**-0.0058**	0.0005	7.828
Antimony	123	-0.0105	-0.0084	-0.0112	**-0.01**	0.0015	14.62
Arsenic	75	-0.002	0.0027	0.0047	**0.0018**	0.0034	187.9
Cadmium	111	-0.0003	0.002	-0.0005	**0.0004**	0.0014	373.4
Cadmium	114	0.0012	0.0032	0.0024	**0.0023**	0.001	44.86
Chromium	52	-0.001	0.007	-0.0049	**0.0003**	0.0061	1806
Chromium	53	0.1757	0.0463	-0.0444	**0.0592**	0.1106	186.9
Lead	206	0.0003	0.0005	0.0004	**0.0004**	0.0001	21.18
Lead	207	0.0029	0.0091	0.0021	**0.0047**	0.0038	82.05
Lead	208	0.0013	0.0039	0.0012	**0.0021**	0.0015	72.38
Molybdenum	95	0.001	0.0032	0.0021	**0.0021**	0.0011	51.46
Molybdenum	97	-0.0053	0.0029	0.0003	**-0.0007**	0.0042	584.4
Molybdenum	98	-0.0031	-0.0002	-0.0032	**-0.0022**	0.0017	78.4
Selenium	77	0.024	-0.0988	-0.1087	**-0.0611**	0.0739	120.9
Selenium	78	0.0521	-0.0277	0.0465	**0.0237**	0.0445	188.2
Selenium	82	0.1103	0.1732	-0.0981	**0.0618**	0.142	229.8
Thallium	203	0.0064	0.0073	0.0032	**0.0057**	0.0021	37.58
Thallium	205	0.0047	0.0096	0.0028	**0.0057**	0.0035	62.15
Uranium	238	0.0017	0.0029	0.0018	**0.0022**	0.0006	29.72

Internal Standard Factors:

Lithium	6	1.073	1.03	1.028	**1.073**	n/a	n/a
Scandium	45	1.046	1.014	0.992	**1.046**	n/a	n/a
Gallium	71	1.015	0.966	0.976	**1.015**	n/a	n/a
Rhodium	103	1.041	0.985	0.985	**1.041**	n/a	n/a
Indium	115	1.048	1.006	1.005	**1.048**	n/a	n/a
Lutetium	175	1.021	1.003	0.994	**1.021**	n/a	n/a
Gold	197	1.043	1.003	0.995	**1.043**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/26/10 15:57					
Antimony	121	-0.014	-0.013	-0.0145	**-0.0139**	0.0008	5.578
Antimony	123	-0.0111	-0.0137	-0.0161	**-0.0137**	0.0025	18.24
Arsenic	75	-0.0021	-0.0006	0.0017	**-0.0003**	0.0019	552.8
Cadmium	111	-0.0013	-0.0031	0.001	**-0.0011**	0.002	187.1
Cadmium	114	0.0011	0.0006	0.0016	**0.0011**	0.0005	47.31
Chromium	52	0.009	0.0149	-0.0074	**0.0055**	0.0116	210.1
Chromium	53	-0.1385	-0.1454	-0.2912	**-0.1917**	0.0862	44.98
Lead	206	-0.0015	0.0015	0.0012	**0.0004**	0.0017	382.6
Lead	207	-0.0011	0.0025	-0.001	**0.0001**	0.0021	2024
Lead	208	0.0002	0.0012	0.001	**0.0008**	0.0005	67.29
Molybdenum	95	0.0025	-0.0026	-0.0001	**0**	0.0025	5794
Molybdenum	97	-0.0001	0.0058	0.001	**0.0022**	0.0031	139.6
Molybdenum	98	-0.0039	-0.003	-0.001	**-0.0026**	0.0015	57.85
Selenium	77	-0.0819	-0.0517	0.0096	**-0.0413**	0.0466	112.7
Selenium	78	0.1991	0.192	0	**0.1304**	0.113	86.65
Selenium	82	0.2084	-0.0457	-0.0799	**0.0276**	0.1575	570.7
Thallium	203	0.0031	0.0034	0.0017	**0.0028**	0.0009	33.67
Thallium	205	0.004	0.0025	0.0017	**0.0027**	0.0012	43.27
Uranium	238	0.0007	0.0012	0.0026	**0.0015**	0.001	66.21

Internal Standard Factors:							
Lithium	6	1.033	0.998	1.015	**1.033**	n/a	n/a
Scandium	45	1.007	1.011	0.975	**1.007**	n/a	n/a
Gallium	71	1.003	0.982	0.962	**1.003**	n/a	n/a
Rhodium	103	1.024	1.008	0.975	**1.024**	n/a	n/a
Indium	115	1.035	0.988	0.98	**1.035**	n/a	n/a
Lutetium	175	1.013	0.986	0.979	**1.013**	n/a	n/a
Gold	197	1.008	1.005	0.974	**1.008**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		WATER CRA			Mean	SD	%RSD
TimeStamp		7/26/10 16:00					
Antimony	121	0.044	0.0309	0.0358	**0.0369**	0.0066	17.98
Antimony	123	0.0419	0.0439	0.0397	**0.0418**	0.0021	4.976
Arsenic	75	0.5658	0.538	0.5492	**0.551**	0.014	2.539
Cadmium	111	0.0227	0.0135	0.025	**0.0204**	0.0061	29.72
Cadmium	114	0.0256	0.0237	0.0195	**0.0229**	0.0032	13.76
Chromium	52	0.2203	0.2169	0.2188	**0.2187**	0.0017	0.7803
Chromium	53	0.0263	0.0372	-0.0865	**-0.0077**	0.0685	890.5
Lead	206	0.0213	0.0234	0.0165	**0.0204**	0.0035	17.17
Lead	207	0.0209	0.0252	0.0279	**0.0247**	0.0036	14.41
Lead	208	0.0223	0.0237	0.0234	**0.0231**	0.0008	3.3
Molybdenum	95	0.0582	0.0568	0.0463	**0.0538**	0.0065	12.07
Molybdenum	97	0.0428	0.062	0.0569	**0.0539**	0.0099	18.42
Molybdenum	98	0.0499	0.0519	0.0582	**0.0533**	0.0044	8.2
Selenium	77	1.195	0.9129	0.9692	**1.026**	0.1495	14.57
Selenium	78	1.372	1.137	1.364	**1.291**	0.1333	10.32
Selenium	82	0.8407	0.9601	0.9095	**0.9034**	0.0599	6.628
Thallium	203	0.0222	0.0222	0.0278	**0.0241**	0.0032	13.33
Thallium	205	0.0256	0.026	0.0241	**0.0252**	0.001	3.861
Uranium	238	0.0202	0.0217	0.0201	**0.0207**	0.0009	4.355

Internal Standard Factors:

Lithium	6	1.009	1.005	0.981	**1.009**	n/a	n/a
Scandium	45	0.986	0.987	0.971	**0.986**	n/a	n/a
Gallium	71	0.977	0.96	0.97	**0.977**	n/a	n/a
Rhodium	103	0.977	0.974	0.986	**0.977**	n/a	n/a
Indium	115	0.996	0.993	0.978	**0.996**	n/a	n/a
Lutetium	175	0.995	0.986	0.977	**0.995**	n/a	n/a
Gold	197	0.987	0.981	0.966	**0.987**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/26/10 16:04					
Antimony	121	0.0482	0.0366	0.0378	**0.0409**	0.0063	15.53
Antimony	123	0.0408	0.0282	0.0388	**0.0359**	0.0068	18.97
Arsenic	75	0.7247	0.5582	0.6483	**0.6437**	0.0833	12.95
Cadmium	111	0.495	0.4622	0.4691	**0.4755**	0.0173	3.636
Cadmium	114	0.4459	0.4355	0.4094	**0.4303**	0.0188	4.376
Chromium	52	0.6804	0.6871	0.664	**0.6772**	0.0119	1.751
Chromium	53	10.63	9.739	9.883	**10.08**	0.4766	4.727
Lead	206	0.0945	0.0852	0.1006	**0.0935**	0.0077	8.281
Lead	207	0.1124	0.1061	0.104	**0.1075**	0.0044	4.063
Lead	208	0.1124	0.1012	0.106	**0.1065**	0.0056	5.275
Molybdenum	95	62	63.9	63.7	**63.2**	1.045	1.654
Molybdenum	97	62.74	63.66	63.83	**63.41**	0.5869	0.9255
Molybdenum	98	63.96	63.37	63.4	**63.58**	0.3314	0.5213
Selenium	77	2.28	2.664	2.292	**2.412**	0.218	9.039
Selenium	78	0.7135	0.7027	0.5813	**0.6658**	0.0734	11.03
Selenium	82	-0.0959	-0.0503	-0.253	**-0.1331**	0.1063	79.89
Thallium	203	0.0445	0.0485	0.0463	**0.0464**	0.002	4.299
Thallium	205	0.0448	0.0459	0.0444	**0.0451**	0.0008	1.715
Uranium	238	0.0079	0.0104	0.0098	**0.0094**	0.0013	14

Internal Standard Factors:

Lithium	6	1.305	1.243	1.214	**1.305**	n/a	n/a
Scandium	45	1.231	1.236	1.243	**1.231**	n/a	n/a
Gallium	71	1.258	1.231	1.233	**1.258**	n/a	n/a
Rhodium	103	1.263	1.279	1.289	**1.263**	n/a	n/a
Indium	115	1.256	1.227	1.25	**1.256**	n/a	n/a
Lutetium	175	1.181	1.179	1.183	**1.181**	n/a	n/a
Gold	197	1.235	1.22	1.255	**1.235**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/26/10 16:16					
Antimony	121	0.0236	0.0231	0.0209	**0.0226**	0.0014	6.305
Antimony	123	0.0217	0.0321	0.0293	**0.0277**	0.0054	19.38
Arsenic	75	26.82	25.44	26.09	**26.12**	0.6913	2.647
Cadmium	111	24.62	24.84	24.95	**24.8**	0.1652	0.6658
Cadmium	114	24.81	24.78	25.15	**24.91**	0.2067	0.8296
Chromium	52	50.39	49.54	51.63	**50.52**	1.051	2.08
Chromium	53	57.44	57.65	58.17	**57.75**	0.3736	0.647
Lead	206	0.0985	0.097	0.1039	**0.0998**	0.0037	3.663
Lead	207	0.1171	0.1229	0.1101	**0.1167**	0.0065	5.532
Lead	208	0.1105	0.1142	0.1134	**0.1127**	0.0019	1.722
Molybdenum	95	53.67	54.42	53.72	**53.94**	0.4146	0.7687
Molybdenum	97	54.27	54.66	55.08	**54.67**	0.4035	0.7381
Molybdenum	98	53.84	54.83	54.41	**54.36**	0.4947	0.9101
Selenium	77	26.64	26.73	25.86	**26.41**	0.4759	1.802
Selenium	78	25.86	25.33	25.83	**25.67**	0.2963	1.154
Selenium	82	25.73	24.67	25.09	**25.16**	0.5332	2.119
Thallium	203	0.0314	0.0291	0.0347	**0.0317**	0.0028	8.933
Thallium	205	0.0338	0.032	0.028	**0.0313**	0.003	9.613
Uranium	238	0.0046	0.0048	0.0051	**0.0048**	0.0002	4.753

Internal Standard Factors:

Lithium	6	1.331	1.215	1.238	**1.331**	n/a	n/a
Scandium	45	1.278	1.253	1.28	**1.278**	n/a	n/a
Gallium	71	1.261	1.248	1.249	**1.261**	n/a	n/a
Rhodium	103	1.3	1.295	1.295	**1.3**	n/a	n/a
Indium	115	1.264	1.249	1.253	**1.264**	n/a	n/a
Lutetium	175	1.203	1.207	1.187	**1.203**	n/a	n/a
Gold	197	1.245	1.246	1.236	**1.245**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-MB			Mean	SD	%RSD
TimeStamp		7/26/10 16:20					
Antimony	121	-0.023	-0.0248	-0.0245	**-0.0241**	0.001	3.985
Antimony	123	-0.0266	-0.0256	-0.0232	**-0.0251**	0.0018	7.01
Arsenic	75	0.0086	0.0114	0.0175	**0.0125**	0.0045	36.28
Cadmium	111	0.0001	-0.0001	-0.0011	**-0.0003**	0.0006	186.2
Cadmium	114	0.0025	0.0019	0.0002	**0.0015**	0.0012	78.19
Chromium	52	0.0171	0.0288	0.0256	**0.0238**	0.006	25.32
Chromium	53	0.3065	0.0493	-0.0333	**0.1075**	0.1772	164.8
Lead	206	-0.0003	-0.0007	-0.0005	**-0.0005**	0.0002	33.9
Lead	207	-0.0036	0.0023	0.0004	**-0.0003**	0.003	1068
Lead	208	-0.0019	0.0007	-0.0012	**-0.0008**	0.0014	173.7
Molybdenum	95	0.0321	0.0229	0.0168	**0.0239**	0.0077	32.28
Molybdenum	97	0.0297	0.0218	0.0187	**0.0234**	0.0057	24.36
Molybdenum	98	0.0238	0.0238	0.0184	**0.022**	0.0031	14.11
Selenium	77	-0.0456	0.0686	0.0435	**0.0221**	0.06	271
Selenium	78	-0.097	-0.1045	-0.0305	**-0.0773**	0.0407	52.64
Selenium	82	0.1485	0.12	0.1195	**0.1293**	0.0166	12.81
Thallium	203	-0.0018	-0.0018	-0.0013	**-0.0016**	0.0003	17.92
Thallium	205	-0.0015	-0.0021	-0.0017	**-0.0018**	0.0003	14.74
Uranium	238	-0.0008	-0.0003	0.0001	**-0.0003**	0.0005	134.7

Internal Standard Factors:

Lithium	6	1.162	1.117	1.125	**1.162**	n/a	n/a
Scandium	45	1.195	1.136	1.127	**1.195**	n/a	n/a
Gallium	71	1.154	1.097	1.098	**1.154**	n/a	n/a
Rhodium	103	1.153	1.092	1.081	**1.153**	n/a	n/a
Indium	115	1.149	1.119	1.097	**1.149**	n/a	n/a
Lutetium	175	1.117	1.071	1.071	**1.117**	n/a	n/a
Gold	197	1.139	1.091	1.081	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		LCSW K1006524			Mean	SD	%RSD
TimeStamp		7/26/10 16:24					
Antimony	121	20.51	20.27	20.42	**20.4**	0.1182	0.5791
Antimony	123	20.91	20.42	20.37	**20.57**	0.2992	1.455
Arsenic	75	20.1	20.59	20.56	**20.42**	0.2754	1.349
Cadmium	111	20.46	20.01	20.04	**20.17**	0.2487	1.233
Cadmium	114	20.49	20.29	20.38	**20.39**	0.0977	0.479
Chromium	52	19.72	20.5	20.79	**20.34**	0.5499	2.704
Chromium	53	19.88	20.49	19.78	**20.05**	0.3841	1.915
Lead	206	20.42	20.71	20.59	**20.57**	0.1482	0.7202
Lead	207	20.16	20.59	20.69	**20.48**	0.2836	1.385
Lead	208	20.6	20.86	20.77	**20.75**	0.1312	0.6323
Molybdenum	95	20.29	20.62	20.72	**20.54**	0.2271	1.105
Molybdenum	97	20.48	20.37	20.74	**20.53**	0.1938	0.9442
Molybdenum	98	20.28	20.39	20.54	**20.4**	0.1267	0.6209
Selenium	77	19.59	20.36	19.97	**19.98**	0.3825	1.915
Selenium	78	20.09	21.02	20.69	**20.6**	0.4715	2.289
Selenium	82	19.42	19.62	21.91	**20.32**	1.384	6.813
Thallium	203	22.31	22.45	22.64	**22.47**	0.1648	0.7334
Thallium	205	22.68	22.34	22.74	**22.59**	0.2166	0.9592
Uranium	238	20.91	21	20.55	**20.82**	0.2387	1.147

Internal Standard Factors:							
Lithium	6	1.127	1.071	1.15	**1.127**	n/a	n/a
Scandium	45	1.13	1.112	1.119	**1.13**	n/a	n/a
Gallium	71	1.091	1.08	1.072	**1.091**	n/a	n/a
Rhodium	103	1.091	1.071	1.07	**1.091**	n/a	n/a
Indium	115	1.098	1.053	1.062	**1.098**	n/a	n/a
Lutetium	175	1.077	1.048	1.063	**1.077**	n/a	n/a
Gold	197	1.096	1.074	1.075	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005			Mean	SD	%RSD
TimeStamp		7/26/10 16:29					
Antimony	121	0.1063	0.1119	0.1088	**0.109**	0.0028	2.564
Antimony	123	0.106	0.1063	0.1044	**0.1056**	0.001	0.9577
Arsenic	75	9.586	9.71	9.363	**9.553**	0.1757	1.839
Cadmium	111	2.351	2.365	2.268	**2.328**	0.0524	2.252
Cadmium	114	1.645	1.705	1.64	**1.663**	0.036	2.164
Chromium	52	0.5749	0.5901	0.5942	**0.5864**	0.0101	1.728
Chromium	53	2.38	2.465	2.385	**2.41**	0.0476	1.976
Lead	206	0.5266	0.5089	0.5269	**0.5208**	0.0103	1.984
Lead	207	0.5655	0.5726	0.5563	**0.5648**	0.0082	1.449
Lead	208	0.5481	0.549	0.553	**0.55**	0.0026	0.4696
Molybdenum	95	1144	1147	1141	**1144**	3.431	0.2999
Molybdenum	97	1157	1171	1165	**1165**	7.057	0.606
Molybdenum	98	1172	1156	1178	**1169**	10.92	0.9346
Selenium	77	0.8201	1.106	1.014	**0.98**	0.1459	14.89
Selenium	78	1.505	2.37	2.532	**2.136**	0.5524	25.86
Selenium	82	14.79	15.12	15.27	**15.06**	0.2494	1.656
Thallium	203	0.0061	0.0051	0.0091	**0.0068**	0.0021	30.46
Thallium	205	0.0054	0.0041	0.0059	**0.0051**	0.0009	17.91
Uranium	238	0.0784	0.0754	0.0739	**0.0759**	0.0023	3.046

See 1/20

Internal Standard Factors:

Lithium	6	1.075	1.038	1.054	**1.075**	n/a	n/a
Scandium	45	1.079	1.067	1.083	**1.079**	n/a	n/a
Gallium	71	1.171	1.214	1.164	**1.171**	n/a	n/a
Rhodium	103	1.178	1.156	1.183	**1.178**	n/a	n/a
Indium	115	1.157	1.15	1.149	**1.157**	n/a	n/a
Lutetium	175	1.042	1.041	1.028	**1.042**	n/a	n/a
Gold	197	1.111	1.118	1.118	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005D			Mean	SD	%RSD
TimeStamp		7/26/10 16:33					
Antimony	121	0.1268	0.1077	0.1129	**0.1158**	0.0098	8.483
Antimony	123	0.0984	0.1092	0.1071	**0.1049**	0.0058	5.489
Arsenic	75	9.572	9.877	9.252	**9.567**	0.3123	3.265
Cadmium	111	2.337	2.333	2.328	**2.333**	0.0046	0.1983
Cadmium	114	1.69	1.672	1.669	**1.677**	0.0109	0.6486
Chromium	52	0.5395	0.5553	0.555	**0.5499**	0.009	1.641
Chromium	53	2.572	2.379	2.446	**2.466**	0.0977	3.962
Lead	206	0.497	0.5348	0.5014	**0.5111**	0.0207	4.046
Lead	207	0.5729	0.5704	0.5501	**0.5645**	0.0125	2.216
Lead	208	0.5456	0.5531	0.5334	**0.5441**	0.01	1.83
Molybdenum	95	1137	1193	1163	**1164**	27.76	2.384
Molybdenum	97	1169	1189	1144	**1167**	22.79	1.952
Molybdenum	98	1166	1175	1139	**1160**	18.54	1.598
Selenium	77	0.9146	0.9052	0.87	**0.8966**	0.0235	2.624
Selenium	78	2.469	2.722	2.246	**2.479**	0.2377	9.588
Selenium	82	15.34	16.58	16.24	**16.05**	0.6421	4
Thallium	203	0.0006	0.001	0.0037	**0.0018**	0.0017	94.06
Thallium	205	0.001	0.0013	0.0006	**0.001**	0.0004	37.78
Uranium	238	0.0735	0.0761	0.0739	**0.0745**	0.0014	1.821

Internal Standard Factors:

Lithium	6	1.062	1.055	1.03	**1.062**	n/a	n/a
Scandium	45	1.099	1.076	1.089	**1.099**	n/a	n/a
Gallium	71	1.257	1.226	1.221	**1.257**	n/a	n/a
Rhodium	103	1.198	1.201	1.178	**1.198**	n/a	n/a
Indium	115	1.176	1.166	1.151	**1.176**	n/a	n/a
Lutetium	175	1.08	1.056	1.058	**1.08**	n/a	n/a
Gold	197	1.146	1.137	1.136	**1.146**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005 1/5L			Mean	SD	%RSD
TimeStamp		7/26/10 16:36					
Antimony	121	-0.0033	0.0067	-0.0054	**-0.0007**	0.0065	997.4
Antimony	123	-0.003	0.0099	0.0078	**0.0049**	0.0069	141.9
Arsenic	75	1.958	2.026	2.013	**1.999**	0.0359	1.795
~~Cadmium~~	~~111~~	~~0.4912~~	~~0.453~~	~~0.4934~~	**~~0.4792~~**	~~0.0227~~	~~4.738~~
Cadmium	114	0.3413	0.3159	0.3401	**0.3324**	0.0143	4.31
Chromium	52	0.1498	0.147	0.1459	**0.1476**	0.002	1.353
Chromium	53	1.115	0.8275	0.7326	**0.8917**	0.199	22.32
Lead	206	0.101	0.1018	0.0991	**0.1006**	0.0014	1.372
Lead	207	0.1093	0.1121	0.1142	**0.1119**	0.0025	2.206
Lead	208	0.1049	0.1112	0.1105	**0.1089**	0.0034	3.14
~~Molybdenum~~	~~95~~	~~212.5~~	~~213~~	~~217.7~~	**~~214.4~~**	~~2.867~~	~~1.337~~
Molybdenum	97	217.3	213.2	217.2	**215.9**	2.33	1.079
Molybdenum	98	216.6	212.1	218.6	**215.8**	3.309	1.534
Selenium	77	0.2786	0.1524	0.2362	**0.2224**	0.0642	28.87
Selenium	78	0.3585	0.5741	0.4709	**0.4678**	0.1078	23.05
Selenium	82	2.91	2.88	2.973	**2.921**	0.0472	1.615
Thallium	203	0.0004	0.0011	-0.0002	**0.0004**	0.0006	144.1
Thallium	205	-0.0009	-0.0002	0.0003	**-0.0003**	0.0006	201.6
Uranium	238	0.0127	0.0124	0.0146	**0.0132**	0.0012	8.844

Internal Standard Factors:

Lithium	6	1.03	1.022	0.985	**1.03**	n/a	n/a
Scandium	45	1.068	1.031	1.057	**1.068**	n/a	n/a
Gallium	71	1.073	1.023	1.061	**1.073**	n/a	n/a
Rhodium	103	1.051	1.028	1.029	**1.051**	n/a	n/a
Indium	115	1.056	1.041	1.019	**1.056**	n/a	n/a
Lutetium	175	1.03	0.999	0.998	**1.03**	n/a	n/a
Gold	197	0.997	0.98	0.971	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005 +20A			Mean	SD	%RSD
TimeStamp		7/26/10 16:40					
Antimony	121	20.3	20.48	20.48	**20.42**	0.1039	0.5086
Antimony	123	20.34	20.76	20.41	**20.5**	0.2243	1.094
Arsenic	75	30.46	30.49	30.04	**30.33**	0.2527	0.8334
~~Cadmium~~	~~111~~	~~21.95~~	~~22.14~~	~~21.88~~	~~**21.99**~~	~~0.136~~	~~0.6184~~
Cadmium	114	20.74	21.18	20.94	**20.95**	0.2225	1.062
Chromium	52	19.84	19.44	19.52	**19.6**	0.2127	1.085
Chromium	53	21.76	20.61	21.73	**21.37**	0.6551	3.066
Lead	206	19.53	18.94	19.28	**19.25**	0.2965	1.54
Lead	207	19.31	19	19.09	**19.13**	0.1621	0.8473
Lead	208	19.58	19.15	19.42	**19.38**	0.2198	1.134
~~Molybdenum~~	~~95~~	~~1117~~	~~1137~~	~~1128~~	~~**1127**~~	~~10.12~~	~~0.8977~~
Molybdenum	97	1144	1132	1144	**1140**	6.993	0.6134
Molybdenum	98	1140	1139	1149	**1143**	5.879	0.5145
Selenium	77	21.15	21.57	21.74	**21.49**	0.2998	1.395
Selenium	78	23.15	22.34	22.48	**22.66**	0.4339	1.915
Selenium	82	37.03	36.65	34.68	**36.12**	1.263	3.497
Thallium	203	19.89	19.96	19.74	**19.86**	0.1115	0.5615
Thallium	205	19.82	19.92	19.4	**19.71**	0.2782	1.411
Uranium	238	21.7	20.93	21.41	**21.35**	0.3932	1.842

Internal Standard Factors:

Lithium	6	1.048	1.019	1.028	**1.048**	n/a	n/a
Scandium	45	1.096	1.073	1.109	**1.096**	n/a	n/a
Gallium	71	1.217	1.199	1.221	**1.217**	n/a	n/a
Rhodium	103	1.206	1.189	1.197	**1.206**	n/a	n/a
Indium	115	1.169	1.169	1.162	**1.169**	n/a	n/a
Lutetium	175	1.07	1.054	1.043	**1.07**	n/a	n/a
Gold	197	1.151	1.127	1.135	**1.151**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005S			Mean	SD	%RSD
TimeStamp		7/26/10 16:49					
Antimony	121	20.68	20.38	20.39	**20.48**	0.1679	0.8197
Antimony	123	21.01	20.44	20.61	**20.69**	0.2937	1.42
Arsenic	75	30.48	30.67	31.15	**30.77**	0.3437	1.117
~~Cadmium~~	~~111~~	~~21.72~~	~~22.23~~	~~21.9~~	~~**21.95**~~	~~0.2576~~	~~1.174~~
Cadmium	114	21.27	21.14	20.93	**21.11**	0.1713	0.8115
Chromium	52	19.73	19.15	19.49	**19.46**	0.294	1.511
Chromium	53	22.21	21.92	21.58	**21.9**	0.3182	1.453
Lead	206	18.94	19.58	19.26	**19.26**	0.3205	1.664
Lead	207	18.83	19.5	19.46	**19.27**	0.377	1.957
Lead	208	19.06	19.63	19.41	**19.36**	0.2903	1.499
~~Molybdenum~~	~~95~~	~~1211~~	~~1177~~	~~1198~~	~~**1195**~~	~~16.98~~	~~1.42~~
Molybdenum	97	1230	1204	1215	**1216**	12.86	1.057
Molybdenum	98	1210	1200	1221	**1210**	10.64	0.8794
Selenium	77	21.22	20.45	22.34	**21.33**	0.9503	4.455
Selenium	78	22.51	22.67	22.54	**22.57**	0.0863	0.3821
Selenium	82	36.91	37.46	37.21	**37.19**	0.2786	0.749
Thallium	203	20.17	20.35	20.25	**20.26**	0.0905	0.4469
Thallium	205	19.8	20.16	19.71	**19.89**	0.2399	1.206
Uranium	238	21.18	21.64	21.14	**21.32**	0.2744	1.287

Internal Standard Factors:

Lithium	6	1.091	1.062	1.065	**1.091**	n/a	n/a
Scandium	45	1.117	1.09	1.085	**1.117**	n/a	n/a
Gallium	71	1.234	1.195	1.231	**1.234**	n/a	n/a
Rhodium	103	1.227	1.197	1.207	**1.227**	n/a	n/a
Indium	115	1.179	1.166	1.169	**1.179**	n/a	n/a
Lutetium	175	1.07	1.063	1.055	**1.07**	n/a	n/a
Gold	197	1.135	1.153	1.139	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-001			Mean	SD	%RSD
TimeStamp		7/26/10 16:53					
Antimony	121	0.0826	0.0892	0.0795	**0.0838**	0.005	5.923
Antimony	123	0.066	0.0726	0.0675	**0.0687**	0.0035	5.038
Arsenic	75	3.518	3.616	3.584	**3.573**	0.0497	1.39
~~Cadmium~~	~~111~~	~~0.0197~~	~~0.0294~~	~~0.0215~~	~~**0.0235**~~	~~0.0052~~	~~21.95~~
Cadmium	114	0.023	0.023	0.0226	**0.0229**	0.0002	1.015
Chromium	52	0.2529	0.2368	0.2413	**0.2437**	0.0083	3.395
Chromium	53	6.842	7.126	7.522	**7.163**	0.3411	4.762
Lead	206	0.4402	0.4423	0.4342	**0.4389**	0.0042	0.9629
Lead	207	0.4929	0.4792	0.5107	**0.4943**	0.0158	3.194
Lead	208	0.4831	0.4741	0.4759	**0.4777**	0.0048	0.9965
Molybdenum	95	11.72	11.64	11.48	**11.61**	0.1207	1.039
Molybdenum	97	11.99	11.84	11.73	**11.85**	0.1306	1.102
Molybdenum	98	11.6	11.36	11.27	**11.41**	0.1691	1.482
Selenium	77	3.087	3.113	2.968	**3.056**	0.0771	2.522
Selenium	78	1.728	1.739	1.69	**1.719**	0.0256	1.49
Selenium	82	21.28	20.99	22.16	**21.48**	0.6096	2.838
Thallium	203	0.006	0.0057	0.006	**0.0059**	0.0002	2.816
Thallium	205	0.0037	0.0038	0.0042	**0.0039**	0.0002	6.186
Uranium	238	0.0515	0.0492	0.047	**0.0492**	0.0023	4.605

7/27/10

See new with MoO correction

Internal Standard Factors:

Lithium	6	1.262	1.253	1.269	**1.262**	n/a	n/a
Scandium	45	1.175	1.138	1.151	**1.175**	n/a	n/a
Gallium	71	1.395	1.353	1.35	**1.395**	n/a	n/a
Rhodium	103	1.425	1.388	1.389	**1.425**	n/a	n/a
Indium	115	1.359	1.334	1.339	**1.359**	n/a	n/a
Lutetium	175	1.226	1.195	1.199	**1.226**	n/a	n/a
Gold	197	1.354	1.33	1.31	**1.354**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-002			Mean	SD	%RSD
TimeStamp		7/26/10 16:57					
Antimony	121	0.15	0.157	0.172	**0.1597**	0.0112	7.036
Antimony	123	0.16	0.1701	0.163	**0.1644**	0.0052	3.155
Arsenic	75	1.536	1.424	1.494	**1.485**	0.0565	3.803
~~Cadmium~~	~~111~~	~~0.0312~~	~~0.0372~~	~~0.0234~~	~~**0.0306**~~	~~0.0069~~	~~22.63~~
Cadmium	114	0.0255	0.023	0.0269	**0.0251**	0.002	7.815
Chromium	52	0.3244	0.3057	0.3048	**0.3116**	0.0111	3.547
Chromium	53	3.432	3.579	3.557	**3.523**	0.0792	2.249
Lead	206	0.1315	0.1333	0.1194	**0.1281**	0.0075	5.894
Lead	207	0.1607	0.1549	0.1512	**0.1556**	0.0048	3.071
Lead	208	0.1429	0.1399	0.1381	**0.1403**	0.0024	1.708
Molybdenum	95	11.69	11.2	11.41	**11.43**	0.245	2.143
Molybdenum	97	11.5	11.53	11.64	**11.56**	0.0723	0.6256
Molybdenum	98	11.64	11.44	11.59	**11.56**	0.1022	0.8839
Selenium	77	0.8815	0.9974	1.109	**0.9958**	0.1135	11.4
Selenium	78	0.725	0.6298	1.011	**0.7887**	0.1986	25.18
Selenium	82	0.7809	0.516	0.5599	**0.6189**	0.142	22.94
Thallium	203	0.0024	0.002	0.003	**0.0025**	0.0005	21.99
Thallium	205	0.0011	0.0021	0.0008	**0.0013**	0.0007	52.38
Uranium	238	0.4791	0.468	0.4767	**0.4746**	0.0059	1.239

Internal Standard Factors:

Lithium	6	1.139	1.064	1.079	**1.139**	n/a	n/a
Scandium	45	1.08	1.03	1.037	**1.08**	n/a	n/a
Gallium	71	1.178	1.113	1.146	**1.178**	n/a	n/a
Rhodium	103	1.198	1.137	1.151	**1.198**	n/a	n/a
Indium	115	1.178	1.129	1.152	**1.178**	n/a	n/a
Lutetium	175	1.118	1.086	1.086	**1.118**	n/a	n/a
Gold	197	1.174	1.131	1.148	**1.174**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-003			Mean	SD	%RSD
TimeStamp		7/26/10 17:01					
Antimony	121	0.0039	0.0068	0.0039	**0.0049**	0.0016	33.65
Antimony	123	0.0141	0.0133	0.0161	**0.0145**	0.0015	10.18
Arsenic	75	3.559	3.417	3.442	**3.472**	0.0759	2.187
~~Cadmium~~	~~111~~	~~0.3385~~	~~0.3554~~	~~0.3113~~	~~**0.3351**~~	~~0.0223~~	~~6.652~~
Cadmium	114	0.22	0.2454	0.2232	**0.2295**	0.0138	6.022
Chromium	52	0.4472	0.4505	0.4277	**0.4418**	0.0123	2.784
Chromium	53	2.601	2.178	2.045	**2.275**	0.2901	12.75
Lead	206	0.0301	0.031	0.0323	**0.0312**	0.0011	3.637
Lead	207	0.0395	0.0361	0.0293	**0.035**	0.0052	14.96
Lead	208	0.0366	0.0358	0.0359	**0.0361**	0.0004	1.13
Molybdenum	95	155.5	152	152.2	**153.2**	1.937	1.264
Molybdenum	97	159.5	155	152.3	**155.6**	3.632	2.333
Molybdenum	98	158.5	153.1	155.1	**155.6**	2.707	1.74
Selenium	77	0.4527	0.5615	0.4359	**0.4833**	0.0682	14.1
Selenium	78	0.8811	0.9206	0.6738	**0.8251**	0.1326	16.07
Selenium	82	2.489	2.416	2.492	**2.465**	0.043	1.743
Thallium	203	0.0022	0.0007	0.0001	**0.001**	0.0011	106.2
Thallium	205	-0.0005	-0.0005	0.0004	**-0.0002**	0.0005	266.2
Uranium	238	0.0032	0.005	0.0044	**0.0042**	0.001	22.65

Internal Standard Factors:

Lithium	6	1.114	1.085	1.06	**1.114**	n/a	n/a
Scandium	45	1.052	1.045	1.007	**1.052**	n/a	n/a
Gallium	71	1.157	1.091	1.108	**1.157**	n/a	n/a
Rhodium	103	1.159	1.096	1.109	**1.159**	n/a	n/a
Indium	115	1.14	1.107	1.078	**1.14**	n/a	n/a
Lutetium	175	1.079	1.041	1.013	**1.079**	n/a	n/a
Gold	197	1.129	1.098	1.089	**1.129**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/26/10 17:05					
Antimony	121	25.03	24.94	24.7	**24.89**	0.1724	0.6925
Antimony	123	25.3	25.25	24.93	**25.16**	0.2041	0.8111
Arsenic	75	24.18	25.43	25.12	**24.91**	0.6491	2.606
Cadmium	111	24.98	25.13	24.88	**24.99**	0.1257	0.503
Cadmium	114	25	24.8	24.83	**24.88**	0.1078	0.4332
Chromium	52	25.35	24.73	25.25	**25.11**	0.3307	1.317
Chromium	53	26.23	25.33	26.04	**25.87**	0.4741	1.833
Lead	206	25.05	24.84	25.3	**25.06**	0.231	0.9217
Lead	207	24.94	24.36	24.87	**24.72**	0.3176	1.285
Lead	208	25.13	24.8	25.17	**25.03**	0.2028	0.8101
Molybdenum	95	24.78	25.09	25.13	**25**	0.1929	0.7717
Molybdenum	97	24.7	25.38	25.01	**25.03**	0.3401	1.359
Molybdenum	98	24.68	25.16	24.74	**24.86**	0.2593	1.043
Selenium	77	24.39	24.28	24.82	**24.5**	0.2817	1.15
Selenium	78	24.86	25.67	25.41	**25.31**	0.4102	1.621
Selenium	82	24.45	26.46	25.22	**25.38**	1.017	4.009
Thallium	203	24.94	25.67	26.61	**25.74**	0.8382	3.256
Thallium	205	24.84	25.45	26.27	**25.52**	0.7202	2.822
Uranium	238	25.34	24.73	25.57	**25.21**	0.4308	1.709

Internal Standard Factors:

Lithium	6	1.065	0.993	0.978	**1.065**	n/a	n/a
Scandium	45	1.034	1.006	1.025	**1.034**	n/a	n/a
Gallium	71	0.997	0.985	0.987	**0.997**	n/a	n/a
Rhodium	103	0.988	0.978	0.979	**0.988**	n/a	n/a
Indium	115	1.024	0.99	0.996	**1.024**	n/a	n/a
Lutetium	175	1.007	0.981	1.006	**1.007**	n/a	n/a
Gold	197	1.044	1.006	1.025	**1.044**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/26/10 17:13					
Antimony	121	-0.0232	-0.0208	-0.0233	**-0.0224**	0.0014	6.407
Antimony	123	-0.0263	-0.0185	-0.0228	**-0.0225**	0.0039	17.21
Arsenic	75	0.0099	0.0168	0.0189	**0.0152**	0.0047	31.05
Cadmium	111	-0.0012	0.002	-0.0005	**0.0001**	0.0017	1724
Cadmium	114	0.0012	0.0017	0.005	**0.0026**	0.002	76.51
Chromium	52	0.0252	0.0171	0.0213	**0.0212**	0.004	19.11
Chromium	53	1.067	0.7123	0.6372	**0.8054**	0.2294	28.48
Lead	206	0.0045	0.0057	0.0038	**0.0047**	0.001	21.08
Lead	207	0.0026	0.0058	0.0044	**0.0043**	0.0016	38.06
Lead	208	0.0034	0.0047	0.004	**0.004**	0.0007	16.98
Molybdenum	95	0.0419	0.0421	0.0474	**0.0438**	0.0031	7.108
Molybdenum	97	0.0403	0.0472	0.0401	**0.0425**	0.004	9.468
Molybdenum	98	0.0382	0.0425	0.0326	**0.0378**	0.0049	13.07
Selenium	77	0.0287	0.0604	0.1294	**0.0728**	0.0515	70.72
Selenium	78	0.3706	0.0558	0.2105	**0.2123**	0.1574	74.15
Selenium	82	-0.1492	-0.1166	-0.0011	**-0.089**	0.0778	87.5
Thallium	203	0.0041	0.0099	0.0047	**0.0062**	0.0032	51.06
Thallium	205	0.0049	0.0075	0.0047	**0.0057**	0.0016	27.76
Uranium	238	0.0021	0.0047	0.0034	**0.0034**	0.0013	38.38

Internal Standard Factors:

Lithium	6	1.079	1.038	1.037	**1.079**	n/a	n/a
Scandium	45	1.045	1.032	1.016	**1.045**	n/a	n/a
Gallium	71	1.036	0.987	0.994	**1.036**	n/a	n/a
Rhodium	103	1.046	0.994	0.989	**1.046**	n/a	n/a
Indium	115	1.063	1.006	0.997	**1.063**	n/a	n/a
Lutetium	175	1.046	1.014	0.993	**1.046**	n/a	n/a
Gold	197	1.083	1.032	1.022	**1.083**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-004			Mean	SD	%RSD
TimeStamp		7/26/10 17:16					
Antimony	121	0.7512	0.7657	0.7467	**0.7545**	0.0099	1.317
Antimony	123	0.7881	0.7129	0.7416	**0.7475**	0.038	5.079
Arsenic	75	1.389	1.438	1.482	**1.436**	0.0468	3.26
~~Cadmium~~	~~111~~	~~6.676~~	~~6.319~~	~~6.457~~	~~**6.484**~~	~~0.18~~	~~2.776~~
Cadmium	114	4.746	4.544	4.417	**4.569**	0.1657	3.628
Chromium	52	2.326	2.378	2.381	**2.362**	0.0308	1.304
Chromium	53	3.363	3.306	2.977	**3.215**	0.2081	6.473
Lead	206	24750	24330	24800	**24630**	259	1.052
Lead	207	25970	26220	25740	**25980**	238.7	0.9188
~~Lead~~	~~208~~	~~25760~~	~~25680~~	~~25910~~	~~**25790**~~	~~116.7~~	~~0.4525~~
~~Molybdenum~~	~~95~~	~~3200~~	~~3247~~	~~3212~~	~~**3220**~~	~~24.24~~	~~0.7528~~
Molybdenum	97	3267	3310	3237	**3271**	37.01	1.131
Molybdenum	98	3296	3333	3211	**3280**	62.68	1.911
Selenium	77	9.516	9.582	10.45	**9.848**	0.5194	5.274
Selenium	78	10.45	9.773	10.23	**10.15**	0.3468	3.416
Selenium	82	32.65	32.03	31.33	**32**	0.6611	2.066
Thallium	203	3.039	3.132	2.995	**3.055**	0.0702	2.296
Thallium	205	2.947	2.934	2.995	**2.959**	0.0322	1.089
Uranium	238	0.0004	0.0012	0.0005	**0.0007**	0.0004	58.17

Internal Standard Factors:

Lithium	6	0.895	0.881	0.903	**0.895**	n/a	n/a
Scandium	45	1.256	1.333	1.352	**1.256**	n/a	n/a
Gallium	71	0.886	0.911	0.932	**0.886**	n/a	n/a
Rhodium	103	1.311	1.369	1.359	**1.311**	n/a	n/a
Indium	115	1.295	1.314	1.314	**1.295**	n/a	n/a
Lutetium	175	1.154	1.18	1.17	**1.154**	n/a	n/a
Gold	197	1.226	1.242	1.25	**1.226**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-006			Mean	SD	%RSD
TimeStamp		7/26/10 17:20					
Antimony	121	0.1128	0.0936	0.1101	**0.1055**	0.0104	9.843
Antimony	123	0.1112	0.1244	0.1139	**0.1165**	0.0069	5.965
Arsenic	75	9.344	9.526	9.777	**9.549**	0.2177	2.28
Cadmium	111	2.318	2.332	2.401	**2.35**	0.0446	1.896
Cadmium	114	1.588	1.63	1.603	**1.607**	0.0211	1.31
Chromium	52	0.5512	0.548	0.5488	**0.5493**	0.0017	0.3004
Chromium	53	3.416	2.959	2.937	**3.104**	0.2701	8.703
Lead	206	0.6164	1.528	3.263	**1.803**	1.345	74.6
Lead	207	0.6347	1.73	3.611	**1.992**	1.505	75.57
Lead	208	0.6354	1.633	3.436	**1.901**	1.42	74.66
Molybdenum	95	1251	1259	1245	**1252**	7.202	0.5753
Molybdenum	97	1260	1263	1241	**1255**	12.22	0.9743
Molybdenum	98	1192	1185	1169	**1182**	11.79	0.9971
Selenium	77	1.081	1.001	0.8956	**0.9926**	0.093	9.371
Selenium	78	1.593	2.02	1.86	**1.824**	0.2158	11.83
Selenium	82	16.81	17.18	16.01	**16.67**	0.6004	3.602
Thallium	203	0.0039	0.0045	0.0077	**0.0054**	0.002	37.98
Thallium	205	0.0026	0.003	0.005	**0.0036**	0.0013	36.35
Uranium	238	0.0781	0.0701	0.0829	**0.0771**	0.0065	8.392

Internal Standard Factors:

Lithium	6	1.046	0.998	1.02	**1.046**	n/a	n/a
Scandium	45	1.231	1.22	1.198	**1.231**	n/a	n/a
Gallium	71	1.368	1.347	1.334	**1.368**	n/a	n/a
Rhodium	103	1.321	1.307	1.271	**1.321**	n/a	n/a
Indium	115	1.273	1.254	1.244	**1.273**	n/a	n/a
Lutetium	175	1.134	1.111	1.123	**1.134**	n/a	n/a
Gold	197	1.221	1.18	1.194	**1.221**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-007			Mean	SD	%RSD
TimeStamp		7/26/10 17:24					
Antimony	121	-0.0283	-0.0272	-0.0281	**-0.0279**	0.0006	2.216
Antimony	123	-0.0252	-0.0277	-0.0235	**-0.0254**	0.0021	8.39
Arsenic	75	0.0104	0.0124	0.0121	**0.0116**	0.0011	9.305
Cadmium	111	0.0008	0.0008	0.0014	**0.001**	0.0004	35.62
Cadmium	114	0.001	0.0018	0	**0.0009**	0.0009	95.23
Chromium	52	0.063	0.0952	0.0603	**0.0728**	0.0194	26.64
Chromium	53	0.8534	0.4886	0.323	**0.555**	0.2714	48.9
Lead	206	0.0261	0.0418	0.069	**0.0456**	0.0217	47.56
Lead	207	0.0286	0.0464	0.0961	**0.057**	0.0349	61.27
Lead	208	0.029	0.0459	0.0759	**0.0503**	0.0237	47.2
Molybdenum	95	0.723	0.5131	0.4467	**0.5609**	0.1442	25.71
Molybdenum	97	0.7124	0.5575	0.4237	**0.5645**	0.1445	25.6
Molybdenum	98	0.7126	0.5178	0.4295	**0.5533**	0.1449	26.18
Selenium	77	0.1056	0.0435	0.1146	**0.0879**	0.0387	44.02
Selenium	78	-0.0721	0.336	0.0897	**0.1178**	0.2055	174.4
Selenium	82	0.0608	0.0215	-0.0938	**-0.0039**	0.0803	2083
Thallium	203	-0.0005	-0.001	0.0009	**-0.0002**	0.001	506.7
Thallium	205	-0.0013	-0.0017	-0.0016	**-0.0015**	0.0002	13.62
Uranium	238	-0.0003	-0.0006	-0.0002	**-0.0004**	0.0002	62.69

Internal Standard Factors:

Lithium	6	1.073	1.017	0.999	**1.073**	n/a	n/a
Scandium	45	1.161	1.132	1.082	**1.161**	n/a	n/a
Gallium	71	1.098	1.095	1.047	**1.098**	n/a	n/a
Rhodium	103	1.082	1.095	1.055	**1.082**	n/a	n/a
Indium	115	1.101	1.104	1.044	**1.101**	n/a	n/a
Lutetium	175	1.064	1.074	1.031	**1.064**	n/a	n/a
Gold	197	1.092	1.11	1.06	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006777-008			Mean	SD	%RSD
TimeStamp		7/26/10 17:28					
Antimony	121	-0.0268	-0.0245	-0.028	**-0.0264**	0.0018	6.686
Antimony	123	-0.0247	-0.0232	-0.0228	**-0.0235**	0.001	4.213
Arsenic	75	0.0015	0.0167	0.0004	**0.0062**	0.0091	147.2
Cadmium	111	-0.0038	0.0054	0.0043	**0.002**	0.005	256.4
Cadmium	114	0.0002	0.003	0.0001	**0.0011**	0.0016	146.2
Chromium	52	0.0711	0.0886	0.0652	**0.075**	0.0122	16.26
Chromium	53	0.2579	0.1784	0.0518	**0.1627**	0.1039	63.87
Lead	206	0.0748	0.0524	0.0666	**0.0646**	0.0114	17.57
Lead	207	0.0713	0.0658	0.0784	**0.0718**	0.0063	8.786
Lead	208	0.0755	0.0604	0.0768	**0.0709**	0.0091	12.83
Molybdenum	95	0.2429	0.1948	0.1975	**0.2117**	0.027	12.77
Molybdenum	97	0.2687	0.2078	0.1988	**0.2251**	0.038	16.89
Molybdenum	98	0.2187	0.2035	0.183	**0.2017**	0.0179	8.877
Selenium	77	-0.0532	0.1099	0.0072	**0.0213**	0.0824	387.3
Selenium	78	0.2889	0.2347	0.0958	**0.2065**	0.0996	48.25
Selenium	82	-0.2663	-0.1821	-0.0466	**-0.165**	0.1108	67.17
Thallium	203	-0.0007	-0.0016	-0.0009	**-0.001**	0.0005	43.03
Thallium	205	-0.001	-0.0016	-0.0009	**-0.0012**	0.0004	33.92
Uranium	238	-0.0005	-0.0005	0.0006	**-0.0001**	0.0006	457.3

Internal Standard Factors:							
Lithium	6	1.03	1.003	1.012	**1.03**	n/a	n/a
Scandium	45	1.114	1.105	1.094	**1.114**	n/a	n/a
Gallium	71	1.113	1.066	1.045	**1.113**	n/a	n/a
Rhodium	103	1.093	1.089	1.05	**1.093**	n/a	n/a
Indium	115	1.103	1.095	1.084	**1.103**	n/a	n/a
Lutetium	175	1.087	1.065	1.029	**1.087**	n/a	n/a
Gold	197	1.094	1.094	1.075	**1.094**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-001			Mean	SD	%RSD
TimeStamp		7/26/10 17:31					
Antimony	121	0.0214	0.0197	0.0165	**0.0192**	0.0025	13.03
Antimony	123	0.027	0.0124	0.0275	**0.0223**	0.0086	38.34
Arsenic	75	0.3401	0.3572	0.3958	**0.3644**	0.0285	7.834
Cadmium	111	0.043	0.0325	0.0352	**0.0369**	0.0055	14.85
Cadmium	114	0.0329	0.0227	0.0243	**0.0266**	0.0055	20.72
Chromium	52	0.3114	0.3292	0.3291	**0.3232**	0.0103	3.171
Chromium	53	0.6478	0.5989	0.5359	**0.5942**	0.0561	9.436
Lead	206	0.0648	0.0748	0.0679	**0.0691**	0.0051	7.395
Lead	207	0.0735	0.069	0.0777	**0.0734**	0.0044	5.958
Lead	208	0.0701	0.0737	0.0735	**0.0724**	0.002	2.798
Molybdenum	95	16.46	16.46	16.59	**16.5**	0.0743	0.4502
Molybdenum	97	16.79	16.96	16.5	**16.75**	0.2352	1.404
Molybdenum	98	16.73	16.57	16.46	**16.59**	0.1334	0.8045
Selenium	77	0.2276	0.2034	0.2199	**0.217**	0.0124	5.694
Selenium	78	0.5948	0.973	0.9834	**0.8504**	0.2215	26.04
Selenium	82	1.816	2.335	1.987	**2.046**	0.2641	12.91
Thallium	203	-0.0006	-0.0002	-0.0021	**-0.001**	0.001	101.2
Thallium	205	-0.0011	-0.0015	-0.0005	**-0.001**	0.0005	49
Uranium	238	0.0018	0.0016	0.0019	**0.0018**	0.0002	10.33

7/27/10

7/27/10

See rerun with MnO correction

Internal Standard Factors:

Lithium	6	1.026	0.992	0.977	**1.026**	n/a	n/a
Scandium	45	1.066	1.066	1.083	**1.066**	n/a	n/a
Gallium	71	1.215	1.186	1.199	**1.215**	n/a	n/a
Rhodium	103	1.235	1.213	1.2	**1.235**	n/a	n/a
Indium	115	1.195	1.187	1.224	**1.195**	n/a	n/a
Lutetium	175	1.123	1.086	1.087	**1.123**	n/a	n/a
Gold	197	1.173	1.151	1.161	**1.173**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-002			Mean	SD	%RSD
TimeStamp		7/26/10 17:34					
Antimony	121	0.007	0.0039	0.0063	**0.0057**	0.0016	28.59
Antimony	123	0.0077	0.0144	0.0054	**0.0092**	0.0047	50.85
Arsenic	75	0.6633	0.6881	0.6259	**0.6591**	0.0313	4.75
~~Cadmium~~	~~111~~	~~0.0238~~	~~0.0238~~	~~0.0251~~	~~**0.0242**~~	~~0.0008~~	~~3.256~~
Cadmium	114	0.0192	0.0181	0.0197	**0.019**	0.0008	4.395
Chromium	52	0.3587	0.351	0.3516	**0.3538**	0.0043	1.202
Chromium	53	2.412	2.426	2.335	**2.391**	0.0489	2.046
Lead	206	0.0308	0.0317	0.0308	**0.0311**	0.0005	1.724
Lead	207	0.0353	0.0451	0.0438	**0.0414**	0.0053	12.8
Lead	208	0.0335	0.0411	0.0335	**0.036**	0.0044	12.11
~~Molybdenum~~	~~95~~	~~11.18~~	~~11.26~~	~~11.05~~	~~**11.16**~~	~~0.1051~~	~~0.9412~~
Molybdenum	97	11.47	11.52	11.5	**11.49**	0.0284	0.2469
Molybdenum	98	11.07	10.87	10.89	**10.94**	0.1069	0.977
Selenium	77	1.298	1.02	0.9208	**1.08**	0.1957	18.13
Selenium	78	0.7312	0.7984	0.6916	**0.7404**	0.054	7.297
Selenium	82	32.04	30.71	33.18	**31.98**	1.235	3.863
Thallium	203	-0.0001	-0.0007	-0.0021	**-0.001**	0.001	103.3
Thallium	205	-0.0005	-0.0011	-0.0011	**-0.0009**	0.0003	36.85
Uranium	238	0.0002	0.0003	-0.0003	**0.0001**	0.0003	526.5

Internal Standard Factors:

Lithium	6	1.102	1.092	1.075	**1.102**	n/a	n/a
Scandium	45	1.027	1.017	0.976	**1.027**	n/a	n/a
Gallium	71	1.219	1.173	1.189	**1.219**	n/a	n/a
Rhodium	103	1.254	1.241	1.219	**1.254**	n/a	n/a
Indium	115	1.187	1.196	1.166	**1.187**	n/a	n/a
Lutetium	175	1.112	1.096	1.098	**1.112**	n/a	n/a
Gold	197	1.176	1.177	1.158	**1.176**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-003			Mean	SD	%RSD
TimeStamp		7/26/10 17:37					
Antimony	121	0.0438	0.0408	0.036	**0.0402**	0.0039	9.694
Antimony	123	0.0398	0.0424	0.0374	**0.0399**	0.0025	6.197
Arsenic	75	0.5246	0.5269	0.5397	**0.5304**	0.0081	1.526
~~Cadmium~~	~~111~~	~~0.0301~~	~~0.0185~~	~~0.0269~~	~~**0.0252**~~	~~0.006~~	~~23.97~~
Cadmium	114	0.0164	0.0113	0.0265	**0.0181**	0.0077	42.69
Chromium	52	0.5845	0.5636	0.5712	**0.5731**	0.0105	1.839
Chromium	53	1.791	1.704	1.647	**1.714**	0.0725	4.23
Lead	206	0.1082	0.1012	0.1057	**0.105**	0.0035	3.367
Lead	207	0.1244	0.1151	0.1167	**0.1187**	0.005	4.191
Lead	208	0.1094	0.109	0.1152	**0.1112**	0.0035	3.121
~~Molybdenum~~	~~95~~	~~14.19~~	~~14.21~~	~~14.26~~	~~**14.22**~~	~~0.0408~~	~~0.287~~
Molybdenum	97	14.43	14.25	14.58	**14.42**	0.1662	1.152
Molybdenum	98	14.33	14.28	14.23	**14.28**	0.0502	0.3514
Selenium	77	0.7628	1.155	0.8283	**0.9154**	0.2101	22.96
Selenium	78	0.9896	0.9663	0.8732	**0.9431**	0.0616	6.529
Selenium	82	12.46	12.03	11.51	**12**	0.476	3.966
Thallium	203	-0.0007	-0.0002	-0.0018	**-0.0009**	0.0008	91.02
Thallium	205	-0.0019	-0.001	-0.0009	**-0.0013**	0.0005	41.88
Uranium	238	0.0031	0.0032	0.0036	**0.0033**	0.0003	8.451

Internal Standard Factors:

Lithium	6	1.115	1.114	1.136	**1.115**	n/a	n/a
Scandium	45	1.078	1.056	1.071	**1.078**	n/a	n/a
Gallium	71	1.229	1.22	1.225	**1.229**	n/a	n/a
Rhodium	103	1.249	1.232	1.241	**1.249**	n/a	n/a
Indium	115	1.203	1.181	1.199	**1.203**	n/a	n/a
Lutetium	175	1.097	1.085	1.096	**1.097**	n/a	n/a
Gold	197	1.172	1.16	1.186	**1.172**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-004			Mean	SD	%RSD
TimeStamp		7/26/10 17:41					
Antimony	121	0.0322	0.0309	0.023	**0.0287**	0.005	17.46
Antimony	123	0.0339	0.03	0.0309	**0.0316**	0.002	6.453
Arsenic	75	0.7613	0.7773	0.7135	**0.7507**	0.0332	4.419
Cadmium	111	0.4465	0.4849	0.4443	**0.4585**	0.0228	4.981
Cadmium	114	0.3223	0.3241	0.3241	**0.3235**	0.0011	0.3262
Chromium	52	0.2434	0.2367	0.2197	**0.2333**	0.0122	5.235
Chromium	53	1.131	1.07	0.82	**1.007**	0.1647	16.36
Lead	206	0.0194	0.019	0.0258	**0.0214**	0.0038	17.65
Lead	207	0.0247	0.0183	0.032	**0.025**	0.0069	27.44
Lead	208	0.0208	0.0201	0.0292	**0.0234**	0.0051	21.71
Molybdenum	95	229	234	227.4	**230.1**	3.43	1.49
Molybdenum	97	229.5	236	228.1	**231.2**	4.22	1.825
Molybdenum	98	233.1	233.9	229.2	**232.1**	2.495	1.075
Selenium	77	0.4522	0.6421	0.5504	**0.5482**	0.095	17.32
Selenium	78	0.8291	1.14	1.146	**1.039**	0.1814	17.47
Selenium	82	12.12	12.16	12.09	**12.12**	0.0351	0.2893
Thallium	203	0.0009	-0.0008	-0.0008	**-0.0002**	0.001	453.8
Thallium	205	-0.0013	-0.0019	-0.0013	**-0.0015**	0.0004	25.78
Uranium	238	0.0013	0.0013	0.0014	**0.0013**	0	3.06

Internal Standard Factors:

Lithium	6	1.09	1.114	1.069	**1.09**	n/a	n/a
Scandium	45	1.124	1.119	1.09	**1.124**	n/a	n/a
Gallium	71	1.253	1.243	1.235	**1.253**	n/a	n/a
Rhodium	103	1.242	1.225	1.197	**1.242**	n/a	n/a
Indium	115	1.207	1.172	1.168	**1.207**	n/a	n/a
Lutetium	175	1.091	1.068	1.067	**1.091**	n/a	n/a
Gold	197	1.171	1.143	1.136	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-005			Mean	SD	%RSD
TimeStamp		7/26/10 17:44					
Antimony	121	0.0478	0.0446	0.0461	**0.0462**	0.0016	3.473
Antimony	123	0.0401	0.0475	0.0406	**0.0427**	0.0041	9.686
Arsenic	75	0.5655	0.6284	0.657	**0.617**	0.0468	7.586
~~Cadmium~~	~~111~~	~~0.1796~~	~~0.1671~~	~~0.1659~~	**~~0.1709~~**	~~0.0076~~	~~4.454~~
Cadmium	114	0.1165	0.1143	0.1035	**0.1114**	0.007	6.264
Chromium	52	0.9486	0.9096	0.894	**0.9174**	0.0281	3.066
Chromium	53	1.071	1.109	0.8939	**1.025**	0.1149	11.22
Lead	206	0.6291	0.6311	0.6299	**0.63**	0.001	0.161
Lead	207	0.6943	0.7164	0.6715	**0.6941**	0.0224	3.228
Lead	208	0.6822	0.6816	0.6693	**0.6777**	0.0073	1.073
~~Molybdenum~~	~~95~~	~~76.23~~	~~77.38~~	~~76.57~~	**~~76.73~~**	~~0.5881~~	~~0.7665~~
Molybdenum	97	77.61	77.12	77.12	**77.28**	0.2848	0.3686
Molybdenum	98	77.32	77.38	78.91	**77.87**	0.9002	1.156
Selenium	77	0.5072	0.5668	0.3546	**0.4762**	0.1094	22.98
Selenium	78	0.7535	0.6013	0.7916	**0.7155**	0.1007	14.08
Selenium	82	3.4	3.51	2.746	**3.219**	0.4133	12.84
Thallium	203	-0.0015	-0.0015	-0.0013	**-0.0014**	0.0001	9.169
Thallium	205	-0.0012	-0.0009	-0.002	**-0.0014**	0.0006	42.4
Uranium	238	0.0037	0.0031	0.003	**0.0033**	0.0004	12.78

Internal Standard Factors:

Lithium	6	1.156	1.155	1.13	**1.156**	n/a	n/a
Scandium	45	1.123	1.103	1.079	**1.123**	n/a	n/a
Gallium	71	1.255	1.214	1.231	**1.255**	n/a	n/a
Rhodium	103	1.22	1.198	1.201	**1.22**	n/a	n/a
Indium	115	1.206	1.204	1.189	**1.206**	n/a	n/a
Lutetium	175	1.116	1.095	1.078	**1.116**	n/a	n/a
Gold	197	1.191	1.165	1.155	**1.191**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-006			Mean	SD	%RSD
TimeStamp		7/26/10 17:48					
Antimony	121	0.0103	0.0033	0.0037	**0.0058**	0.0039	67.54
Antimony	123	0.0056	-0.0018	-0.0032	**0.0002**	0.0047	2496
Arsenic	75	0.4059	0.3904	0.3954	**0.3973**	0.0079	1.985
Cadmium	111	-0.0027	-0.0007	0.0003	**-0.001**	0.0015	147
Cadmium	114	-0.0003	0	0.0044	**0.0014**	0.0026	191.5
Chromium	52	0.2795	0.2832	0.2765	**0.2797**	0.0034	1.202
Chromium	53	1.961	2.099	2.026	**2.029**	0.0694	3.418
Lead	206	0.0559	0.0522	0.0423	**0.0502**	0.0071	14.07
Lead	207	0.0589	0.0478	0.0445	**0.0504**	0.0076	14.98
Lead	208	0.0585	0.0524	0.0423	**0.0511**	0.0082	16.05
Molybdenum	95	0.4265	0.3821	0.3551	**0.3879**	0.036	9.29
Molybdenum	97	0.4816	0.4489	0.4589	**0.4631**	0.0168	3.622
Molybdenum	98	0.325	0.2827	0.264	**0.2906**	0.0313	10.76
Selenium	77	1.23	0.8784	1.089	**1.066**	0.177	16.6
Selenium	78	0.7088	0.871	0.5483	**0.7093**	0.1614	22.75
Selenium	82	13.59	14.79	13.85	**14.08**	0.6285	4.465
Thallium	203	-0.0007	-0.0007	-0.0001	**-0.0005**	0.0003	63.43
Thallium	205	-0.0019	-0.0024	-0.0021	**-0.0021**	0.0003	12.74
Uranium	238	0.0019	0.0017	0.0016	**0.0017**	0.0002	8.703

Internal Standard Factors:

Lithium	6	1.163	1.094	1.089	**1.163**	n/a	n/a
Scandium	45	1.05	1.04	1.03	**1.05**	n/a	n/a
Gallium	71	1.206	1.185	1.18	**1.206**	n/a	n/a
Rhodium	103	1.258	1.224	1.22	**1.258**	n/a	n/a
Indium	115	1.212	1.172	1.188	**1.212**	n/a	n/a
Lutetium	175	1.106	1.12	1.108	**1.106**	n/a	n/a
Gold	197	1.196	1.177	1.173	**1.196**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/26/10 17:51					
Antimony	121	25.62	25.06	24.83	**25.17**	0.406	1.613
Antimony	123	25.35	25.31	24.59	**25.08**	0.4272	1.703
Arsenic	75	24.21	24.81	25.41	**24.81**	0.5991	2.414
Cadmium	111	24.83	24.99	25.01	**24.94**	0.0974	0.3905
Cadmium	114	25.2	24.99	24.74	**24.97**	0.2322	0.9295
Chromium	52	24.83	24.7	24.9	**24.81**	0.0994	0.4006
Chromium	53	25.08	24.36	24.63	**24.69**	0.3674	1.488
Lead	206	26.02	25.37	25.76	**25.72**	0.3285	1.277
Lead	207	25.44	25.39	25.3	**25.38**	0.0683	0.2691
Lead	208	25.8	25.54	25.38	**25.57**	0.2104	0.8227
Molybdenum	95	25.12	25.28	24.86	**25.08**	0.2138	0.8525
Molybdenum	97	24.66	25.14	25.29	**25.03**	0.3267	1.305
Molybdenum	98	25.13	25.15	25.31	**25.2**	0.0994	0.3946
Selenium	77	23.72	25.03	24.84	**24.53**	0.7064	2.88
Selenium	78	25.26	25.98	25.66	**25.63**	0.3593	1.402
Selenium	82	25.38	25.75	25.28	**25.47**	0.2447	0.9607
Thallium	203	25.64	26.74	27.42	**26.6**	0.9003	3.385
Thallium	205	25.34	26.25	26.67	**26.09**	0.679	2.603
Uranium	238	26.1	25.73	25.84	**25.89**	0.1906	0.7361

Internal Standard Factors:							
Lithium	6	0.98	0.951	0.962	**0.98**	n/a	n/a
Scandium	45	1.078	1.01	1.048	**1.078**	n/a	n/a
Gallium	71	1.001	0.987	1.012	**1.001**	n/a	n/a
Rhodium	103	1.031	1.003	0.994	**1.031**	n/a	n/a
Indium	115	1.058	1.012	0.987	**1.058**	n/a	n/a
Lutetium	175	1.009	0.994	0.988	**1.009**	n/a	n/a
Gold	197	1.063	1.014	1.019	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/26/10 17:58					
Antimony	121	-0.0266	-0.0239	-0.0238	**-0.0248**	0.0016	6.323
Antimony	123	-0.0243	-0.0213	-0.025	**-0.0235**	0.002	8.427
Arsenic	75	0.0075	0.0118	0.0045	**0.0079**	0.0037	46.58
Cadmium	111	0.0015	0.0081	-0.0004	**0.0031**	0.0045	145.6
Cadmium	114	0.0036	0.007	0.0048	**0.0051**	0.0017	33.85
Chromium	52	-0.013	0.0179	0.0067	**0.0039**	0.0156	405.1
Chromium	53	0.1446	-0.1133	-0.2107	**-0.0598**	0.1836	307
Lead	206	0.0033	0.0059	0.0057	**0.005**	0.0014	28.73
Lead	207	0.0041	0.0048	0.0054	**0.0048**	0.0007	14.37
Lead	208	0.0051	0.0074	0.0059	**0.0061**	0.0011	18.47
Molybdenum	95	0.0342	0.0409	0.0345	**0.0365**	0.0038	10.27
Molybdenum	97	0.0288	0.0307	0.0363	**0.0319**	0.0039	12.2
Molybdenum	98	0.0333	0.035	0.0353	**0.0345**	0.001	3.029
Selenium	77	0.0017	0.1224	-0.0358	**0.0294**	0.0827	280.9
Selenium	78	0.0999	-0.0073	0.1916	**0.0948**	0.0996	105.1
Selenium	82	0.0186	0.2344	0.1086	**0.1206**	0.1084	89.91
Thallium	203	0.0056	0.007	0.0037	**0.0054**	0.0017	31.01
Thallium	205	0.0062	0.0067	0.0042	**0.0057**	0.0014	23.88
Uranium	238	0.0027	0.0039	0.0042	**0.0036**	0.0008	22.13

Internal Standard Factors:

Lithium	6	1.065	0.995	1.015	**1.065**	n/a	n/a
Scandium	45	1.054	1.041	1.038	**1.054**	n/a	n/a
Gallium	71	1.014	1.003	1.007	**1.014**	n/a	n/a
Rhodium	103	1.063	1.014	1.021	**1.063**	n/a	n/a
Indium	115	1.06	1.018	1.028	**1.06**	n/a	n/a
Lutetium	175	1.035	1.002	1.02	**1.035**	n/a	n/a
Gold	197	1.054	1.03	1.052	**1.054**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-MB			Mean	SD	%RSD
TimeStamp		7/26/10 18:01					
Antimony	121	-0.027	-0.0275	-0.0261	**-0.0269**	0.0007	2.68
Antimony	123	-0.0259	-0.0233	-0.0264	**-0.0252**	0.0017	6.78
Arsenic	75	0.0011	0.0063	0.0035	**0.0036**	0.0026	72.19
Cadmium	111	-0.0013	-0.0022	-0.0022	**-0.0019**	0.0005	28.65
Cadmium	114	0.0007	0.0017	0.0021	**0.0015**	0.0007	46.22
Chromium	52	0.0326	0.0401	0.0497	**0.0408**	0.0086	21.12
Chromium	53	-0.1453	-0.2766	-0.2943	**-0.2387**	0.0814	34.09
Lead	206	0.0028	0.0063	0.0027	**0.0039**	0.0021	52.49
Lead	207	0.0016	0.0016	0.005	**0.0027**	0.0019	71.39
Lead	208	0.0032	0.0043	0.0041	**0.0039**	0.0006	15.27
Molybdenum	95	0.021	0.0248	0.0193	**0.0217**	0.0028	13.06
Molybdenum	97	0.0259	0.0208	0.0304	**0.0257**	0.0048	18.57
Molybdenum	98	0.0197	0.0171	0.0224	**0.0197**	0.0027	13.56
Selenium	77	0.0496	-0.0589	0.0439	**0.0115**	0.061	529.9
Selenium	78	-0.0269	0.0361	-0.0913	**-0.0274**	0.0637	232.6
Selenium	82	-0.0647	0.2893	0.117	**0.1139**	0.177	155.5
Thallium	203	-0.0006	0.0012	0.0008	**0.0004**	0.0009	212.4
Thallium	205	-0.0002	0.0002	0.0011	**0.0004**	0.0007	178.1
Uranium	238	-0.0009	-0.0005	0.0001	**-0.0004**	0.0005	107.1

Internal Standard Factors:							
Lithium	6	1.079	1.025	0.988	**1.079**	n/a	n/a
Scandium	45	1.061	1.021	1.032	**1.061**	n/a	n/a
Gallium	71	1.029	1.008	1.01	**1.029**	n/a	n/a
Rhodium	103	1.026	1.007	1.003	**1.026**	n/a	n/a
Indium	115	1.032	0.999	1.002	**1.032**	n/a	n/a
Lutetium	175	1.022	0.972	0.989	**1.022**	n/a	n/a
Gold	197	1.05	1.019	1.018	**1.05**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		LCSW K1006579			Mean	SD	%RSD
TimeStamp		7/26/10 18:05					
Antimony	121	20.29	20.51	20.04	**20.28**	0.2352	1.16
Antimony	123	20.48	20.54	20.04	**20.36**	0.2748	1.35
Arsenic	75	20.05	20.15	19.8	**20**	0.179	0.895
Cadmium	111	20.02	20.23	20.05	**20.1**	0.1147	0.5704
Cadmium	114	20.32	20.37	19.97	**20.22**	0.2189	1.083
Chromium	52	19.97	20.25	20.43	**20.22**	0.2332	1.153
Chromium	53	19.64	20.14	20.07	**19.95**	0.2744	1.375
Lead	206	20.52	20.99	20.69	**20.73**	0.2427	1.171
Lead	207	20.43	20.97	20.94	**20.78**	0.3019	1.453
Lead	208	20.59	21.08	20.83	**20.84**	0.2436	1.169
Molybdenum	95	20.23	20.15	20.19	**20.19**	0.0382	0.1891
Molybdenum	97	20.07	20.22	20.58	**20.29**	0.26	1.281
Molybdenum	98	20.26	19.86	20.35	**20.16**	0.2627	1.303
Selenium	77	18.76	20.25	20.39	**19.8**	0.9053	4.572
Selenium	78	20.13	19.72	20.11	**19.99**	0.2331	1.166
Selenium	82	20.35	20.48	20.65	**20.49**	0.1523	0.7433
Thallium	203	22.47	22.5	22.76	**22.57**	0.1616	0.716
Thallium	205	21.84	22.25	22.33	**22.14**	0.263	1.188
Uranium	238	21.13	21.01	20.78	**20.97**	0.1758	0.8382

Internal Standard Factors:							
Lithium	6	0.999	1.034	1.026	**0.999**	n/a	n/a
Scandium	45	1.049	1.041	1.049	**1.049**	n/a	n/a
Gallium	71	1.011	1.005	1.014	**1.011**	n/a	n/a
Rhodium	103	1.017	0.992	1.01	**1.017**	n/a	n/a
Indium	115	1.025	1.016	0.985	**1.025**	n/a	n/a
Lutetium	175	1.002	0.979	0.982	**1.002**	n/a	n/a
Gold	197	1.023	1.018	1.023	**1.023**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-001			Mean	SD	%RSD
TimeStamp		7/26/10 18:10					
Antimony	121	2.432	2.439	2.479	**2.45**	0.0255	1.042
Antimony	123	2.487	2.451	2.443	**2.46**	0.0233	0.9482
Arsenic	75	7.305	7.263	6.936	**7.168**	0.2021	2.819
Cadmium	111	0.056	0.0431	0.041	**0.0467**	0.0081	17.41
Cadmium	114	0.0525	0.0433	0.0494	**0.0484**	0.0046	9.601
Chromium	52	0.4306	0.4164	0.4706	**0.4392**	0.0281	6.407
Chromium	53	4.951	4.49	4.419	**4.62**	0.2891	6.258
Lead	206	1.189	1.146	1.244	**1.193**	0.049	4.11
Lead	207	1.309	1.296	1.315	**1.307**	0.0093	0.7095
Lead	208	1.255	1.262	1.291	**1.27**	0.0194	1.525
Molybdenum	95	1.161	1.099	1.176	**1.145**	0.041	3.579
Molybdenum	97	1.151	1.116	1.135	**1.134**	0.0176	1.552
Molybdenum	98	1.046	1.05	1.134	**1.077**	0.0495	4.593
Selenium	77	3.486	2.986	2.912	**3.128**	0.3123	9.985
Selenium	78	1.911	1.73	1.924	**1.855**	0.1086	5.854
Selenium	82	4.506	4.242	3.878	**4.209**	0.3154	7.494
Thallium	203	0.0181	0.0155	0.0196	**0.0177**	0.0021	11.94
Thallium	205	0.0206	0.0178	0.0158	**0.0181**	0.0024	13.53
Uranium	238	1.209	1.228	1.212	**1.216**	0.0101	0.8314

Internal Standard Factors:

Lithium	6	1.25	1.253	1.262	**1.25**	n/a	n/a
Scandium	45	1.164	1.134	1.154	**1.164**	n/a	n/a
Gallium	71	1.342	1.339	1.331	**1.342**	n/a	n/a
Rhodium	103	1.386	1.406	1.412	**1.386**	n/a	n/a
Indium	115	1.313	1.327	1.333	**1.313**	n/a	n/a
Lutetium	175	1.174	1.175	1.181	**1.174**	n/a	n/a
Gold	197	1.311	1.321	1.333	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-001S			Mean	SD	%RSD
TimeStamp		7/26/10 18:14					
Antimony	121	22.21	22.66	22.3	**22.39**	0.2377	1.062
Antimony	123	21.79	22.63	22.75	**22.39**	0.521	2.327
Arsenic	75	27.87	28.73	28.44	**28.35**	0.4379	1.545
Cadmium	111	18.64	19.25	19.34	**19.08**	0.3826	2.005
Cadmium	114	18.31	18.53	18.63	**18.49**	0.1645	0.8892
Chromium	52	18.31	19.54	19.08	**18.98**	0.6241	3.289
Chromium	53	22.52	23.63	22.44	**22.86**	0.6613	2.892
Lead	206	20.53	20.27	21.17	**20.66**	0.4612	2.233
Lead	207	20.26	20.4	20.92	**20.53**	0.3476	1.693
Lead	208	20.51	20.5	21.13	**20.71**	0.3613	1.744
Molybdenum	95	24.44	24.57	25.03	**24.68**	0.3092	1.253
Molybdenum	97	24.27	25.33	24.97	**24.86**	0.537	2.16
Molybdenum	98	24.46	24.5	25.18	**24.71**	0.4056	1.641
Selenium	77	23.53	23.39	22.75	**23.22**	0.4141	1.783
Selenium	78	22.07	21.84	21.62	**21.84**	0.2241	1.026
Selenium	82	24.4	24.59	23.86	**24.28**	0.3736	1.539
Thallium	203	20.05	20.71	20.39	**20.38**	0.3296	1.617
Thallium	205	19.57	20.27	20.09	**19.97**	0.3611	1.808
Uranium	238	24.07	24.24	24.41	**24.24**	0.1654	0.6825

Internal Standard Factors:							
Lithium	6	1.279	1.246	1.246	**1.279**	n/a	n/a
Scandium	45	1.169	1.186	1.192	**1.169**	n/a	n/a
Gallium	71	1.346	1.365	1.367	**1.346**	n/a	n/a
Rhodium	103	1.402	1.412	1.437	**1.402**	n/a	n/a
Indium	115	1.305	1.331	1.368	**1.305**	n/a	n/a
Lutetium	175	1.186	1.201	1.209	**1.186**	n/a	n/a
Gold	197	1.333	1.317	1.372	**1.333**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-001 1/5L			Mean	SD	%RSD
TimeStamp		7/26/10 18:19					
Antimony	121	0.4766	0.477	0.4579	**0.4705**	0.0109	2.316
Antimony	123	0.464	0.4856	0.5036	**0.4844**	0.0198	4.093
Arsenic	75	1.387	1.452	1.422	**1.42**	0.0324	2.281
Cadmium	111	0.0191	0.0177	0.0147	**0.0172**	0.0023	13.17
Cadmium	114	0.0137	0.0144	0.0143	**0.0141**	0.0003	2.466
Chromium	52	0.0927	0.0817	0.0788	**0.0844**	0.0073	8.709
Chromium	53	1.321	1.071	0.906	**1.099**	0.2088	18.99
Lead	206	0.2312	0.2269	0.2296	**0.2292**	0.0021	0.9301
Lead	207	0.2664	0.2363	0.2509	**0.2512**	0.0151	5.991
Lead	208	0.2571	0.241	0.247	**0.2484**	0.0081	3.267
Molybdenum	95	0.2163	0.2225	0.2215	**0.2201**	0.0033	1.509
Molybdenum	97	0.2379	0.224	0.2404	**0.2341**	0.0088	3.763
Molybdenum	98	0.2143	0.2236	0.231	**0.223**	0.0083	3.743
Selenium	77	0.2141	0.3001	0.4051	**0.3064**	0.0957	31.23
Selenium	78	0.461	0.5466	0.5337	**0.5138**	0.0462	8.985
Selenium	82	0.6716	0.9249	0.6523	**0.7496**	0.1521	20.29
Thallium	203	0.0069	0.0093	0.0077	**0.008**	0.0012	15.49
Thallium	205	0.0068	0.0097	0.009	**0.0085**	0.0015	17.99
Uranium	238	0.2075	0.2112	0.2171	**0.2119**	0.0049	2.304

Internal Standard Factors:

Lithium	6	1.13	1.101	1.085	**1.13**	n/a	n/a
Scandium	45	1.161	1.138	1.105	**1.161**	n/a	n/a
Gallium	71	1.224	1.17	1.138	**1.224**	n/a	n/a
Rhodium	103	1.203	1.157	1.166	**1.203**	n/a	n/a
Indium	115	1.172	1.162	1.15	**1.172**	n/a	n/a
Lutetium	175	1.1	1.074	1.068	**1.1**	n/a	n/a
Gold	197	1.117	1.083	1.082	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-001 +20A			Mean	SD	%RSD
TimeStamp		7/26/10 18:23					
Antimony	121	22.74	21.99	22.68	**22.47**	0.4163	1.853
Antimony	123	22.87	22.32	22.21	**22.46**	0.352	1.567
Arsenic	75	27.63	28.23	27.36	**27.74**	0.4423	1.595
Cadmium	111	19	18.77	18.81	**18.86**	0.1214	0.6436
Cadmium	114	18.69	18.59	18.62	**18.64**	0.053	0.2845
Chromium	52	18.95	19.22	18.74	**18.97**	0.2378	1.253
Chromium	53	22.31	22.5	22.47	**22.43**	0.104	0.4637
Lead	206	20.89	20.12	20.46	**20.49**	0.3858	1.883
Lead	207	20.62	20.5	20.4	**20.51**	0.1101	0.5367
Lead	208	20.94	20.43	20.38	**20.58**	0.3072	1.493
Molybdenum	95	24.06	24.09	24.04	**24.06**	0.0214	0.0889
Molybdenum	97	24.11	24.71	23.92	**24.25**	0.416	1.716
Molybdenum	98	24.14	24.07	24.06	**24.09**	0.0451	0.187
Selenium	77	22.1	23.14	22.33	**22.53**	0.5461	2.425
Selenium	78	21.9	22.56	21.78	**22.08**	0.4212	1.908
Selenium	82	24.63	23.49	23.51	**23.88**	0.6529	2.735
Thallium	203	19.9	19.64	19.96	**19.83**	0.1672	0.8429
Thallium	205	19.99	19.33	19.78	**19.7**	0.3386	1.719
Uranium	238	24.03	24.11	23.82	**23.99**	0.1546	0.6443

Internal Standard Factors:							
Lithium	6	1.231	1.217	1.231	**1.231**	n/a	n/a
Scandium	45	1.171	1.191	1.175	**1.171**	n/a	n/a
Gallium	71	1.342	1.333	1.348	**1.342**	n/a	n/a
Rhodium	103	1.363	1.384	1.38	**1.363**	n/a	n/a
Indium	115	1.321	1.298	1.328	**1.321**	n/a	n/a
Lutetium	175	1.177	1.155	1.172	**1.177**	n/a	n/a
Gold	197	1.325	1.314	1.322	**1.325**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-001D			Mean	SD	%RSD
TimeStamp		7/26/10 18:29					
Antimony	121	2.458	2.513	2.46	**2.477**	0.0311	1.254
Antimony	123	2.486	2.414	2.513	**2.471**	0.0509	2.061
Arsenic	75	7.13	7.193	7.01	**7.111**	0.093	1.308
Cadmium	111	0.0271	0.044	0.0356	**0.0356**	0.0084	23.67
Cadmium	114	0.0351	0.0424	0.0436	**0.0403**	0.0046	11.39
Chromium	52	0.4247	0.4228	0.4431	**0.4302**	0.0112	2.605
Chromium	53	4.351	4.123	3.829	**4.101**	0.2616	6.378
Lead	206	1.224	1.21	1.233	**1.222**	0.0117	0.9536
Lead	207	1.259	1.291	1.359	**1.303**	0.0511	3.924
Lead	208	1.231	1.276	1.286	**1.264**	0.0293	2.32
Molybdenum	95	1.127	1.178	1.129	**1.144**	0.0287	2.506
Molybdenum	97	1.165	1.19	1.155	**1.17**	0.0182	1.551
Molybdenum	98	1.097	1.088	1.126	**1.104**	0.0201	1.82
Selenium	77	2.801	2.679	2.394	**2.625**	0.2089	7.958
Selenium	78	1.307	1.971	1.901	**1.726**	0.3648	21.13
Selenium	82	3.443	3.795	3.204	**3.481**	0.2972	8.54
Thallium	203	0.0016	0.0052	0.0081	**0.005**	0.0032	64.79
Thallium	205	0.0075	0.0055	0.0037	**0.0056**	0.0019	33.93
Uranium	238	1.222	1.217	1.249	**1.23**	0.0171	1.388

Internal Standard Factors:

Lithium	6	1.313	1.284	1.287	**1.313**	n/a	n/a
Scandium	45	1.206	1.185	1.236	**1.206**	n/a	n/a
Gallium	71	1.408	1.418	1.393	**1.408**	n/a	n/a
Rhodium	103	1.443	1.462	1.444	**1.443**	n/a	n/a
Indium	115	1.382	1.387	1.394	**1.382**	n/a	n/a
Lutetium	175	1.209	1.212	1.228	**1.209**	n/a	n/a
Gold	197	1.371	1.374	1.382	**1.371**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-002			Mean	SD	%RSD
TimeStamp		7/26/10 18:33					
Antimony	121	0.7869	0.7643	0.8208	**0.7906**	0.0285	3.599
Antimony	123	0.7761	0.7455	0.7726	**0.7647**	0.0168	2.192
Arsenic	75	6.255	6.205	6.473	**6.311**	0.1422	2.254
Cadmium	111	0.0058	0.0146	0.0156	**0.012**	0.0054	44.65
Cadmium	114	0.0152	0.0117	0.0072	**0.0114**	0.004	35.34
Chromium	52	0.3728	0.3812	0.3476	**0.3672**	0.0175	4.764
Chromium	53	3.382	3.292	3.066	**3.247**	0.1626	5.007
Lead	206	0.8025	0.7925	0.7985	**0.7978**	0.005	0.629
Lead	207	0.9282	0.8336	0.8726	**0.8781**	0.0475	5.412
Lead	208	0.8591	0.8377	0.8341	**0.8436**	0.0135	1.598
Molybdenum	95	4.302	4.337	4.38	**4.34**	0.0395	0.9091
Molybdenum	97	4.386	4.286	4.324	**4.332**	0.0508	1.174
Molybdenum	98	4.253	4.238	4.331	**4.274**	0.0496	1.16
Selenium	77	1.41	1.939	1.212	**1.52**	0.3757	24.71
Selenium	78	1.016	1.29	1.469	**1.259**	0.2285	18.16
Selenium	82	4.314	4.916	3.531	**4.254**	0.6945	16.33
Thallium	203	0.0032	0.005	0.0027	**0.0036**	0.0012	32.54
Thallium	205	0.0025	0.0041	0.0044	**0.0037**	0.001	27.95
Uranium	238	0.0164	0.0194	0.0197	**0.0185**	0.0018	9.984

Internal Standard Factors:

Lithium	6	1.268	1.217	1.219	**1.268**	n/a	n/a
Scandium	45	1.248	1.234	1.234	**1.248**	n/a	n/a
Gallium	71	1.411	1.382	1.398	**1.411**	n/a	n/a
Rhodium	103	1.443	1.405	1.39	**1.443**	n/a	n/a
Indium	115	1.374	1.329	1.316	**1.374**	n/a	n/a
Lutetium	175	1.224	1.175	1.19	**1.224**	n/a	n/a
Gold	197	1.343	1.312	1.304	**1.343**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-003			Mean	SD	%RSD
TimeStamp		7/26/10 18:37					
Antimony	121	0.8855	0.8201	0.8253	**0.8436**	0.0364	4.308
Antimony	123	0.8733	0.8475	0.8485	**0.8565**	0.0146	1.706
Arsenic	75	4.694	4.466	4.79	**4.65**	0.1663	3.576
Cadmium	111	0.1222	0.1273	0.1543	**0.1346**	0.0172	12.8
Cadmium	114	0.235	0.2324	0.2251	**0.2309**	0.0051	2.222
Chromium	52	2.124	2.203	2.111	**2.146**	0.0499	2.325
Chromium	53	4.216	4.076	3.79	**4.028**	0.2171	5.39
Lead	206	5.897	5.778	5.952	**5.875**	0.089	1.515
Lead	207	6.473	6.318	6.255	**6.349**	0.1122	1.768
Lead	208	6.222	6.134	6.161	**6.172**	0.045	0.729
Molybdenum	95	20.29	20.33	20.47	**20.36**	0.0933	0.4584
Molybdenum	97	21.01	20.17	20.32	**20.5**	0.4506	2.198
Molybdenum	98	20.41	20.13	20.35	**20.3**	0.1476	0.7274
Selenium	77	1.077	0.9893	0.9395	**1.002**	0.0696	6.945
Selenium	78	1.594	1.987	2.459	**2.014**	0.4332	21.51
Selenium	82	4.761	4.769	3.855	**4.462**	0.5253	11.78
Thallium	203	-0.0007	0.001	0.0006	**0.0003**	0.0009	301.6
Thallium	205	-0.0002	-0.001	0	**-0.0004**	0.0005	124.7
Uranium	238	0.025	0.0224	0.023	**0.0235**	0.0014	5.888

7/27/10

7/27/10

See rerun with mo correction

Internal Standard Factors:

Lithium	6	1.321	1.254	1.245	**1.321**	n/a	n/a
Scandium	45	1.23	1.224	1.192	**1.23**	n/a	n/a
Gallium	71	1.436	1.395	1.383	**1.436**	n/a	n/a
Rhodium	103	1.451	1.393	1.43	**1.451**	n/a	n/a
Indium	115	1.41	1.35	1.354	**1.41**	n/a	n/a
Lutetium	175	1.226	1.199	1.169	**1.226**	n/a	n/a
Gold	197	1.38	1.321	1.33	**1.38**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-004			Mean	SD	%RSD
TimeStamp		7/26/10 18:42					
Antimony	121	3.038	3.069	3.1	**3.069**	0.0308	1.003
Antimony	123	3.014	3.094	3.086	**3.064**	0.0442	1.443
Arsenic	75	9.188	8.723	9.121	**9.011**	0.2512	2.787
Cadmium	111	0.0278	0.0345	0.0324	**0.0316**	0.0034	10.92
Cadmium	114	0.0318	0.0272	0.0277	**0.0289**	0.0025	8.775
Chromium	52	0.4472	0.4635	0.457	**0.4559**	0.0082	1.805
Chromium	53	1.671	1.484	1.253	**1.469**	0.209	14.22
Lead	206	1.407	1.308	1.407	**1.374**	0.0571	4.154
Lead	207	1.531	1.452	1.55	**1.511**	0.0522	3.453
Lead	208	1.464	1.417	1.495	**1.459**	0.0392	2.687
Molybdenum	95	11.35	11.59	11.6	**11.51**	0.139	1.207
Molybdenum	97	11.84	11.34	11.88	**11.69**	0.3004	2.57
Molybdenum	98	11.65	11.35	11.74	**11.58**	0.2059	1.778
Selenium	77	0.6444	0.5618	0.9724	**0.7262**	0.2172	29.91
Selenium	78	0.6945	0.392	0.5996	**0.562**	0.1547	27.53
Selenium	82	1.691	1.753	1.853	**1.765**	0.0814	4.613
Thallium	203	-0.0012	-0.0004	-0.0003	**-0.0006**	0.0005	77.48
Thallium	205	0.0005	-0.0018	-0.0023	**-0.0012**	0.0015	122.9
Uranium	238	0.0055	0.0053	0.0068	**0.0058**	0.0008	13.76

7/27/10

Internal Standard Factors:

Lithium	6	1.236	1.183	1.166	**1.236**	n/a	n/a
Scandium	45	1.242	1.186	1.174	**1.242**	n/a	n/a
Gallium	71	1.324	1.264	1.293	**1.324**	n/a	n/a
Rhodium	103	1.337	1.282	1.29	**1.337**	n/a	n/a
Indium	115	1.263	1.25	1.247	**1.263**	n/a	n/a
Lutetium	175	1.143	1.121	1.147	**1.143**	n/a	n/a
Gold	197	1.256	1.204	1.238	**1.256**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/26/10 18:46					
Antimony	121	24.24	24.18	24.79	**24.4**	0.3359	1.377
Antimony	123	24.53	24.42	25	**24.65**	0.3094	1.255
Arsenic	75	23.55	23.93	24.9	**24.13**	0.6964	2.886
Cadmium	111	24.41	24.69	24.77	**24.62**	0.1917	0.7783
Cadmium	114	24.51	24.31	24.84	**24.55**	0.2726	1.11
Chromium	52	23.62	24.31	24.33	**24.09**	0.4025	1.671
Chromium	53	23.65	23.86	24.13	**23.88**	0.2381	0.9969
Lead	206	25.43	25.36	25.83	**25.54**	0.2517	0.9855
Lead	207	25.09	25.09	25.19	**25.12**	0.0593	0.2358
Lead	208	25.17	25.56	25.83	**25.52**	0.3308	1.296
Molybdenum	95	24.18	24.55	24.69	**24.47**	0.2671	1.091
Molybdenum	97	23.95	24.59	24.7	**24.41**	0.4071	1.668
Molybdenum	98	23.98	24.53	24.49	**24.33**	0.3039	1.249
Selenium	77	23.28	24.46	25.48	**24.41**	1.102	4.517
Selenium	78	24.41	24.63	24.23	**24.42**	0.202	0.8273
Selenium	82	24.27	24.73	25.41	**24.81**	0.5749	2.318
Thallium	203	24.95	26.04	26.75	**25.92**	0.9085	3.506
Thallium	205	25.11	25.64	26.61	**25.79**	0.7624	2.957
Uranium	238	25.23	25.88	26.18	**25.76**	0.4853	1.884

Internal Standard Factors:							
Lithium	6	1.079	1.06	1.047	**1.079**	n/a	n/a
Scandium	45	1.14	1.12	1.113	**1.14**	n/a	n/a
Gallium	71	1.082	1.071	1.077	**1.082**	n/a	n/a
Rhodium	103	1.088	1.081	1.068	**1.088**	n/a	n/a
Indium	115	1.105	1.07	1.058	**1.105**	n/a	n/a
Lutetium	175	1.05	1.038	1.034	**1.05**	n/a	n/a
Gold	197	1.117	1.104	1.089	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/26/10 18:53					
Antimony	121	-0.0221	-0.0216	-0.0235	**-0.0224**	0.001	4.49
Antimony	123	-0.0212	-0.0222	-0.0223	**-0.0219**	0.0006	2.761
Arsenic	75	0.0118	0.0073	0.0116	**0.0102**	0.0025	24.95
Cadmium	111	0.0021	0.0053	0.0007	**0.0027**	0.0023	87.98
Cadmium	114	0.0068	0.008	0.0005	**0.0051**	0.004	78.89
Chromium	52	-0.0163	-0.0048	-0.017	**-0.0127**	0.0069	54.24
Chromium	53	0.0584	-0.0411	-0.2451	**-0.0759**	0.1547	203.8
Lead	206	0.0046	0.0022	0.0071	**0.0046**	0.0025	53.22
Lead	207	0.0084	0.0046	0.0049	**0.006**	0.0021	35.47
Lead	208	0.005	0.0056	0.0071	**0.0059**	0.0011	18.71
Molybdenum	95	0.0212	0.0219	0.0214	**0.0215**	0.0004	1.815
Molybdenum	97	0.0093	0.0251	0.0208	**0.0184**	0.0082	44.34
Molybdenum	98	0.0168	0.0168	0.0182	**0.0173**	0.0008	4.677
Selenium	77	0.0449	0.0426	0.0234	**0.037**	0.0119	32.05
Selenium	78	-0.0882	-0.2665	-0.2581	**-0.2043**	0.1006	49.25
Selenium	82	-0.069	0.0114	0.2398	**0.0607**	0.1602	263.9
Thallium	203	0.0091	0.0091	0.0058	**0.008**	0.0019	23.7
Thallium	205	0.0064	0.0067	0.0062	**0.0065**	0.0002	3.751
Uranium	238	0.0044	0.0038	0.005	**0.0044**	0.0006	13.1

Internal Standard Factors:

Lithium	6	1.12	1.07	1.07	**1.12**	n/a	n/a
Scandium	45	1.162	1.123	1.106	**1.162**	n/a	n/a
Gallium	71	1.154	1.095	1.064	**1.154**	n/a	n/a
Rhodium	103	1.136	1.075	1.062	**1.136**	n/a	n/a
Indium	115	1.163	1.081	1.076	**1.163**	n/a	n/a
Lutetium	175	1.101	1.074	1.034	**1.101**	n/a	n/a
Gold	197	1.166	1.103	1.097	**1.166**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-001 DISS			Mean	SD	%RSD
TimeStamp		7/26/10 18:56					
Antimony	121	2.362	2.468	2.474	**2.435**	0.0631	2.592
Antimony	123	2.498	2.488	2.4	**2.462**	0.0538	2.184
Arsenic	75	7.036	6.951	7.017	**7.002**	0.0446	0.6367
Cadmium	111	0.0116	0.007	0.0023	**0.0069**	0.0046	66.89
Cadmium	114	0.009	0.0072	0.0115	**0.0092**	0.0022	23.33
Chromium	52	0.4	0.4131	0.4033	**0.4055**	0.0068	1.682
Chromium	53	4.635	4.464	4.352	**4.484**	0.1427	3.182
Lead	206	0.0275	0.0246	0.0252	**0.0258**	0.0015	5.808
Lead	207	0.0208	0.0256	0.0332	**0.0265**	0.0063	23.61
Lead	208	0.0252	0.0238	0.0295	**0.0262**	0.003	11.4
Molybdenum	95	1.014	0.9952	1.045	**1.018**	0.0253	2.481
Molybdenum	97	1.061	1.004	1.009	**1.025**	0.0316	3.081
Molybdenum	98	0.9809	0.9652	0.9632	**0.9698**	0.0097	0.9969
Selenium	77	3.127	2.67	2.747	**2.848**	0.2445	8.586
Selenium	78	1.351	1.517	1.484	**1.45**	0.0881	6.071
Selenium	82	3.265	3.169	4.111	**3.515**	0.5188	14.76
Thallium	203	0.0058	0.0022	0.001	**0.003**	0.0025	83.34
Thallium	205	0.0026	0.0023	0.0022	**0.0024**	0.0002	8.291
Uranium	238	1.237	1.209	1.181	**1.209**	0.0279	2.309

Internal Standard Factors:							
Lithium	6	1.275	1.298	1.258	**1.275**	n/a	n/a
Scandium	45	1.198	1.188	1.179	**1.198**	n/a	n/a
Gallium	71	1.381	1.369	1.4	**1.381**	n/a	n/a
Rhodium	103	1.433	1.447	1.464	**1.433**	n/a	n/a
Indium	115	1.358	1.372	1.346	**1.358**	n/a	n/a
Lutetium	175	1.204	1.195	1.2	**1.204**	n/a	n/a
Gold	197	1.367	1.364	1.361	**1.367**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-002 DISS			Mean	SD	%RSD
TimeStamp		7/26/10 19:00					
Antimony	121	0.7784	0.7965	0.8132	**0.7961**	0.0174	2.186
Antimony	123	0.8353	0.7842	0.8039	**0.8078**	0.0257	3.186
Arsenic	75	6.017	5.995	6.228	**6.08**	0.1286	2.115
Cadmium	111	0.0092	0.0054	0.0139	**0.0095**	0.0042	44.66
Cadmium	114	0.01	0.0106	0.007	**0.0092**	0.0019	20.6
Chromium	52	0.3504	0.3634	0.3706	**0.3615**	0.0102	2.823
Chromium	53	3.504	3.278	3.188	**3.323**	0.1628	4.899
Lead	206	0.0131	0.0148	0.0173	**0.0151**	0.0021	14.03
Lead	207	0.0138	0.0218	0.0193	**0.0183**	0.0041	22.27
Lead	208	0.0142	0.017	0.0196	**0.0169**	0.0027	15.99
Molybdenum	95	4.139	4.072	4.097	**4.102**	0.034	0.8289
Molybdenum	97	4.112	4.131	4.1	**4.114**	0.0156	0.3788
Molybdenum	98	4.107	4.124	3.989	**4.073**	0.0734	1.801
Selenium	77	1.818	1.736	1.535	**1.696**	0.1452	8.562
Selenium	78	1.475	0.9104	1.156	**1.18**	0.2829	23.97
Selenium	82	4.23	4.303	4.614	**4.382**	0.2039	4.654
Thallium	203	-0.0008	0.0004	-0.0002	**-0.0002**	0.0006	272
Thallium	205	-0.0008	-0.0004	-0.0008	**-0.0007**	0.0002	32.91
Uranium	238	0.0118	0.0133	0.013	**0.0127**	0.0008	6.427

Internal Standard Factors:

Lithium	6	1.212	1.248	1.239	**1.212**	n/a	n/a
Scandium	45	1.228	1.195	1.218	**1.228**	n/a	n/a
Gallium	71	1.405	1.36	1.395	**1.405**	n/a	n/a
Rhodium	103	1.434	1.387	1.434	**1.434**	n/a	n/a
Indium	115	1.353	1.317	1.358	**1.353**	n/a	n/a
Lutetium	175	1.173	1.192	1.176	**1.173**	n/a	n/a
Gold	197	1.331	1.315	1.34	**1.331**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-003 DISS			Mean	SD	%RSD
TimeStamp		7/26/10 19:04					
Antimony	121	0.8556	0.8826	0.8563	**0.8648**	0.0154	1.778
Antimony	123	0.8594	0.8386	0.8738	**0.8572**	0.0177	2.065
Arsenic	75	4.092	4.068	4.095	**4.085**	0.0148	0.3624
~~Cadmium~~	~~111~~	~~0.037~~	~~0.0411~~	~~0.0401~~	~~**0.0394**~~	~~0.0021~~	~~5.36~~
Cadmium	114	0.0806	0.0736	0.079	**0.0777**	0.0037	4.722
Chromium	52	1.764	1.82	1.824	**1.803**	0.0338	1.875
Chromium	53	3.928	3.724	3.684	**3.779**	0.1305	3.454
Lead	206	0.0557	0.05	0.0569	**0.0542**	0.0037	6.766
Lead	207	0.0739	0.0595	0.0674	**0.0669**	0.0072	10.77
Lead	208	0.0646	0.0602	0.0631	**0.0626**	0.0022	3.526
Molybdenum	95	21.05	20.59	20.31	**20.65**	0.373	1.806
Molybdenum	97	21.42	20.72	20.87	**21**	0.3703	1.763
Molybdenum	98	20.81	21.21	21.16	**21.06**	0.2166	1.028
Selenium	77	1.027	1.201	1.243	**1.157**	0.1146	9.904
Selenium	78	1.877	2.625	1.695	**2.066**	0.4931	23.87
Selenium	82	4.327	4.683	4.176	**4.395**	0.2601	5.918
Thallium	203	-0.0007	-0.0014	-0.0002	**-0.0008**	0.0006	80.27
Thallium	205	-0.0023	-0.0018	-0.0019	**-0.002**	0.0003	14.93
Uranium	238	0.0206	0.0227	0.0212	**0.0215**	0.0011	4.896

7/27/10

Internal Standard Factors:

Lithium	6	1.253	1.212	1.27	**1.253**	n/a	n/a
Scandium	45	1.238	1.212	1.211	**1.238**	n/a	n/a
Gallium	71	1.455	1.416	1.394	**1.455**	n/a	n/a
Rhodium	103	1.457	1.42	1.403	**1.457**	n/a	n/a
Indium	115	1.398	1.385	1.346	**1.398**	n/a	n/a
Lutetium	175	1.219	1.177	1.204	**1.219**	n/a	n/a
Gold	197	1.366	1.331	1.355	**1.366**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006579-004 DISS			Mean	SD	%RSD
TimeStamp		7/26/10 19:08					
Antimony	121	3.262	3.374	3.123	**3.253**	0.1259	3.869
Antimony	123	3.293	3.309	3.278	**3.293**	0.0156	0.473
Arsenic	75	3.416	3.145	3.396	**3.319**	0.1512	4.555
~~Cadmium~~	~~111~~	~~0.0368~~	~~0.0293~~	~~0.0235~~	~~**0.0299**~~	~~0.0067~~	~~22.42~~
Cadmium	114	0.0301	0.0268	0.027	**0.028**	0.0018	6.497
Chromium	52	0.3238	0.3043	0.3406	**0.3229**	0.0181	5.616
Chromium	53	1.866	1.66	1.732	**1.753**	0.1043	5.95
Lead	206	0.0128	0.017	0.0108	**0.0135**	0.0032	23.62
Lead	207	0.0133	0.0183	0.0126	**0.0147**	0.0031	21.11
Lead	208	0.014	0.0165	0.0116	**0.014**	0.0025	17.67
Molybdenum	95	15.39	15.54	15.59	**15.51**	0.104	0.6709
Molybdenum	97	15.64	15.51	15.42	**15.52**	0.1105	0.7119
Molybdenum	98	15.46	15.57	15.61	**15.55**	0.0761	0.4893
Selenium	77	0.8994	0.7925	0.8171	**0.8363**	0.056	6.695
Selenium	78	1.136	0.8525	1.028	**1.006**	0.1431	14.23
Selenium	82	1.682	1.824	1.253	**1.586**	0.2974	18.75
Thallium	203	0	-0.0006	0.001	**0.0001**	0.0008	812.6
Thallium	205	-0.0022	-0.0027	-0.0019	**-0.0022**	0.0004	17.4
Uranium	238	0.0048	0.0067	0.0069	**0.0061**	0.0011	18.51

Internal Standard Factors:							
Lithium	6	1.195	1.188	1.132	**1.195**	n/a	n/a
Scandium	45	1.203	1.176	1.159	**1.203**	n/a	n/a
Gallium	71	1.349	1.285	1.303	**1.349**	n/a	n/a
Rhodium	103	1.323	1.295	1.282	**1.323**	n/a	n/a
Indium	115	1.289	1.251	1.221	**1.289**	n/a	n/a
Lutetium	175	1.151	1.122	1.107	**1.151**	n/a	n/a
Gold	197	1.251	1.214	1.206	**1.251**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006636-004			Mean	SD	%RSD
TimeStamp		7/26/10 19:13					
Antimony	121	-0.0243	-0.025	-0.025	**-0.0248**	0.0004	1.539
Antimony	123	-0.0251	-0.0242	-0.0228	**-0.0241**	0.0011	4.727
Arsenic	75	0.0354	0.0134	0.0115	**0.0201**	0.0133	66.22
Cadmium	111	0.0028	0.0052	-0.0002	**0.0026**	0.0027	105.1
Cadmium	114	0.0023	0.0001	0.0013	**0.0012**	0.0011	87.61
Chromium	52	0.074	0.0652	0.0693	**0.0695**	0.0044	6.328
Chromium	53	0.4331	0.182	0.1325	**0.2492**	0.1612	64.68
Lead	206	0.0271	0.0284	0.0287	**0.0281**	0.0009	3.042
Lead	207	0.025	0.0342	0.0312	**0.0302**	0.0047	15.56
Lead	208	0.0288	0.0309	0.0309	**0.0302**	0.0012	4.089
Molybdenum	95	0.0144	0.0157	0.0142	**0.0148**	0.0008	5.526
Molybdenum	97	0.0165	0.0125	0.0165	**0.0152**	0.0023	15.29
Molybdenum	98	0.0116	0.0093	0.012	**0.011**	0.0015	13.57
Selenium	77	0.0399	-0.0736	-0.1453	**-0.0597**	0.0933	156.5
Selenium	78	-0.0421	-0.036	-0.1686	**-0.0822**	0.0749	91.03
Selenium	82	0.0632	-0.1515	-0.0277	**-0.0387**	0.1078	278.7
Thallium	203	-0.0026	-0.0018	-0.0006	**-0.0017**	0.001	61.44
Thallium	205	-0.0021	-0.0025	-0.001	**-0.0019**	0.0008	40.01
Uranium	238	-0.0005	0	-0.0001	**-0.0002**	0.0003	157.9

Internal Standard Factors:

Lithium	6	1.116	1.052	1.013	**1.116**	n/a	n/a
Scandium	45	1.183	1.121	1.118	**1.183**	n/a	n/a
Gallium	71	1.135	1.059	1.058	**1.135**	n/a	n/a
Rhodium	103	1.106	1.065	1.078	**1.106**	n/a	n/a
Indium	115	1.125	1.084	1.068	**1.125**	n/a	n/a
Lutetium	175	1.08	1.054	1.04	**1.08**	n/a	n/a
Gold	197	1.142	1.088	1.094	**1.142**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006636-008			Mean	SD	%RSD
TimeStamp		7/26/10 19:16					
Antimony	121	-0.0271	-0.0269	-0.0247	**-0.0262**	0.0013	5.119
Antimony	123	-0.0277	-0.0262	-0.0219	**-0.0253**	0.003	11.95
Arsenic	75	0.0163	0.0136	0.005	**0.0117**	0.0059	50.36
Cadmium	111	-0.001	0.0016	-0.0011	**-0.0002**	0.0015	860.2
Cadmium	114	-0.0002	0.0029	0.002	**0.0016**	0.0016	100
Chromium	52	0.042	0.0512	0.0483	**0.0472**	0.0047	9.894
Chromium	53	0.131	-0.0345	-0.0057	**0.0303**	0.0884	292.2
Lead	206	0.005	0.0059	0.0053	**0.0054**	0.0005	8.463
Lead	207	0.0052	0.0055	0.003	**0.0046**	0.0014	30.36
Lead	208	0.006	0.0057	0.0039	**0.0052**	0.0011	21.76
Molybdenum	95	0.0149	0.0159	0.0196	**0.0168**	0.0024	14.6
Molybdenum	97	0.0212	0.0192	0.0166	**0.019**	0.0023	12.19
Molybdenum	98	0.0093	0.017	0.0095	**0.012**	0.0044	36.84
Selenium	77	-0.013	0.0968	-0.0208	**0.021**	0.0658	313.6
Selenium	78	0.2105	-0.017	-0.0601	**0.0445**	0.1454	326.9
Selenium	82	-0.0178	0.0396	0.0792	**0.0337**	0.0488	144.7
Thallium	203	-0.0013	-0.0029	-0.0014	**-0.0018**	0.0009	48.96
Thallium	205	-0.0016	-0.0024	-0.0021	**-0.002**	0.0004	19.74
Uranium	238	-0.0001	-0.0004	-0.0001	**-0.0002**	0.0002	94.07

Internal Standard Factors:

Lithium	6	1.086	1.07	1.054	**1.086**	n/a	n/a
Scandium	45	1.121	1.106	1.12	**1.121**	n/a	n/a
Gallium	71	1.126	1.066	1.085	**1.126**	n/a	n/a
Rhodium	103	1.101	1.073	1.076	**1.101**	n/a	n/a
Indium	115	1.108	1.077	1.065	**1.108**	n/a	n/a
Lutetium	175	1.077	1.044	1.027	**1.077**	n/a	n/a
Gold	197	1.125	1.084	1.084	**1.125**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006666-MB			Mean	SD	%RSD
TimeStamp		7/26/10 19:19					
Antimony	121	-0.0287	-0.0273	-0.0276	**-0.0279**	0.0008	2.696
Antimony	123	-0.0237	-0.0253	-0.0263	**-0.0251**	0.0013	5.146
Arsenic	75	0.0124	0.0056	-0.0013	**0.0056**	0.0068	122.3
Cadmium	111	-0.0038	-0.0038	0.0025	**-0.0017**	0.0037	213.5
Cadmium	114	0.001	0.0013	-0.0014	**0.0003**	0.0015	561.7
Chromium	52	0.0212	0.0274	0.0252	**0.0246**	0.0031	12.68
Chromium	53	0.0015	-0.1217	-0.1272	**-0.0824**	0.0728	88.29
Lead	206	0.0023	-0.0002	-0.0002	**0.0006**	0.0014	237.4
Lead	207	-0.0008	0.0004	0.0029	**0.0008**	0.0019	225.1
Lead	208	0.0001	0.0005	0.0009	**0.0005**	0.0004	74.77
Molybdenum	95	-0.0001	-0.0022	0.0054	**0.001**	0.0039	382.9
Molybdenum	97	0.0001	0.0022	0.0043	**0.0022**	0.0021	96.43
Molybdenum	98	0.0001	-0.0012	0.0004	**-0.0003**	0.0009	315.7
Selenium	77	0.0192	-0.0131	-0.0123	**-0.0021**	0.0184	894.5
Selenium	78	-0.1098	-0.0572	-0.0807	**-0.0826**	0.0263	31.9
Selenium	82	-0.1465	-0.123	0.0682	**-0.0671**	0.1178	175.6
Thallium	203	-0.0016	-0.0019	0.0004	**-0.001**	0.0012	122.7
Thallium	205	-0.001	-0.001	-0.0011	**-0.001**	0.0001	5.91
Uranium	238	-0.0003	-0.0007	-0.001	**-0.0007**	0.0003	49.55

Internal Standard Factors:

Lithium	6	1.07	1.087	1.037	**1.07**	n/a	n/a
Scandium	45	1.128	1.11	1.095	**1.128**	n/a	n/a
Gallium	71	1.092	1.064	1.064	**1.092**	n/a	n/a
Rhodium	103	1.12	1.052	1.073	**1.12**	n/a	n/a
Indium	115	1.093	1.068	1.077	**1.093**	n/a	n/a
Lutetium	175	1.056	1.034	1.028	**1.056**	n/a	n/a
Gold	197	1.111	1.077	1.073	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		LCSW K1006666			Mean	SD	%RSD
TimeStamp		7/26/10 19:23					
Antimony	121	20.31	20.13	20.12	**20.19**	0.1095	0.5422
Antimony	123	20.21	20.69	20.5	**20.47**	0.2368	1.157
Arsenic	75	19.39	19.65	19.34	**19.46**	0.1684	0.8652
Cadmium	111	20.14	20.49	20.17	**20.27**	0.1937	0.956
Cadmium	114	20.1	20.14	20.97	**20.4**	0.492	2.411
Chromium	52	20.05	20	20.63	**20.23**	0.3535	1.748
Chromium	53	20.54	20.29	20.13	**20.32**	0.2052	1.01
Lead	206	21.43	21.15	20.8	**21.13**	0.3134	1.484
Lead	207	21.23	21.36	20.77	**21.12**	0.3101	1.468
Lead	208	21.36	21.2	20.99	**21.18**	0.1867	0.8816
Molybdenum	95	20.15	21.02	20.21	**20.46**	0.4848	2.369
Molybdenum	97	20.16	20.85	19.78	**20.26**	0.54	2.665
Molybdenum	98	20.63	20.66	19.91	**20.4**	0.4218	2.068
Selenium	77	18.99	20.28	19.16	**19.48**	0.701	3.599
Selenium	78	19.39	19.31	20.11	**19.6**	0.44	2.244
Selenium	82	20.48	20.93	19.5	**20.31**	0.7298	3.594
Thallium	203	22.68	22.11	22.32	**22.37**	0.2891	1.292
Thallium	205	22.43	21.85	22.05	**22.11**	0.2977	1.347
Uranium	238	21.5	21.26	21.39	**21.38**	0.1195	0.5588

Internal Standard Factors:

Lithium	6	1.074	1.051	1.054	**1.074**	n/a	n/a
Scandium	45	1.149	1.143	1.145	**1.149**	n/a	n/a
Gallium	71	1.089	1.089	1.052	**1.089**	n/a	n/a
Rhodium	103	1.091	1.097	1.055	**1.091**	n/a	n/a
Indium	115	1.083	1.069	1.083	**1.083**	n/a	n/a
Lutetium	175	1.053	1.022	1.025	**1.053**	n/a	n/a
Gold	197	1.112	1.093	1.077	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006666-001 1/2			Mean	SD	%RSD
TimeStamp		7/26/10 19:28					
Antimony	121	0.8575	0.8152	0.831	**0.8346**	0.0214	2.56
Antimony	123	0.784	0.8134	0.8382	**0.8118**	0.0271	3.343
Arsenic	75	3.509	3.271	3.43	**3.403**	0.1214	3.568
Cadmium	111	0.7702	0.7826	0.6967	**0.7498**	0.0464	6.188
Cadmium	114	1.414	1.474	1.528	**1.472**	0.057	3.874
Chromium	52	12.38	12.14	12.1	**12.2**	0.1511	1.238
Chromium	53	23.53	22.1	21.22	**22.28**	1.164	5.222
Lead	206	13.17	13.11	13.33	**13.2**	0.1127	0.8536
Lead	207	14.61	14.38	14.33	**14.44**	0.1486	1.029
Lead	208	14.09	13.94	14.11	**14.05**	0.0933	0.664
Molybdenum	95	115.6	117.4	115.4	**116.1**	1.082	0.9315
Molybdenum	97	117.7	116	118.4	**117.4**	1.239	1.056
Molybdenum	98	117.6	118.7	117.1	**117.8**	0.8105	0.6878
Selenium	77	1.739	1.851	1.954	**1.848**	0.1077	5.826
Selenium	78	1.237	1.305	1.191	**1.244**	0.0573	4.608
Selenium	82	3.478	3.341	3.144	**3.321**	0.1682	5.065
Thallium	203	0.0049	0.0103	0.0134	**0.0095**	0.0043	44.96
Thallium	205	0.0042	0.0078	0.0097	**0.0073**	0.0028	38.2
Uranium	238	0.0168	0.0183	0.0226	**0.0192**	0.003	15.75

Internal Standard Factors:

Lithium	6	1.404	1.36	1.395	**1.404**	n/a	n/a
Scandium	45	1.26	1.221	1.223	**1.26**	n/a	n/a
Gallium	71	1.489	1.441	1.432	**1.489**	n/a	n/a
Rhodium	103	1.525	1.462	1.458	**1.525**	n/a	n/a
Indium	115	1.43	1.399	1.39	**1.43**	n/a	n/a
Lutetium	175	1.208	1.203	1.193	**1.208**	n/a	n/a
Gold	197	1.399	1.368	1.367	**1.399**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006666-002			Mean	SD	%RSD
TimeStamp		7/26/10 19:32					
Antimony	121	0.7584	0.8668	0.7772	**0.8008**	0.058	7.238
Antimony	123	0.7461	0.85	0.7817	**0.7926**	0.0528	6.66
Arsenic	75	6.506	6.873	6.719	**6.699**	0.1845	2.754
Cadmium	111	0.0378	0.0212	0.0268	**0.0286**	0.0084	29.5
Cadmium	114	0.0894	0.1013	0.0931	**0.0946**	0.0061	6.416
Chromium	52	2.042	2.119	2.16	**2.107**	0.0597	2.833
Chromium	53	24.67	25.47	27.19	**25.78**	1.288	4.996
Lead	206	0.1104	0.1068	0.1241	**0.1138**	0.0091	8.011
Lead	207	0.1064	0.1369	0.1319	**0.1251**	0.0164	13.07
Lead	208	0.1099	0.1222	0.131	**0.121**	0.0106	8.757
Molybdenum	95	16.11	15.87	16.57	**16.18**	0.3536	2.185
Molybdenum	97	15.39	15.56	15.39	**15.45**	0.1001	0.6483
Molybdenum	98	11.24	11.75	11.72	**11.57**	0.2834	2.45
Selenium	77	9.598	10.33	10.13	**10.02**	0.3781	3.773
Selenium	78	21.09	20.72	19.59	**20.47**	0.7838	3.83
Selenium	82	191.4	186.6	185.5	**187.8**	3.151	1.678
Thallium	203	-0.0003	0.0031	0.0011	**0.0013**	0.0017	133.2
Thallium	205	0.0017	0.0003	-0.0006	**0.0005**	0.0012	248.5
Uranium	238	0.0743	0.0757	0.0761	**0.0754**	0.0009	1.219

7/27/10

Internal Standard out of control

Internal Standard Factors:

Lithium	6	2.023	2.094	2.047	**2.023**	n/a	n/a
Scandium	45	1.654	1.709	1.741	**1.654**	n/a	n/a
Gallium	71	2.06	2.112	2.145	**2.06**	n/a	n/a
Rhodium	103	2.303	2.329	2.404	**2.303**	n/a	n/a
Indium	115	2.008	2.139	2.107	**2.008**	n/a	n/a
Lutetium	175	1.637	1.685	1.707	**1.637**	n/a	n/a
Gold	197	2.105	2.199	2.247	**2.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/26/10 19:36					
Antimony	121	24.26	25.07	25.06	**24.8**	0.463	1.867
Antimony	123	24.31	25.19	24.72	**24.74**	0.4417	1.785
Arsenic	75	23.43	24.28	24.74	**24.15**	0.6659	2.757
Cadmium	111	24.32	24.43	25.44	**24.73**	0.6157	2.49
Cadmium	114	24.05	24.98	24.99	**24.67**	0.5417	2.196
Chromium	52	24	24.24	24.82	**24.35**	0.4189	1.72
Chromium	53	31.13	29.84	29.07	**30.02**	1.04	3.465
Lead	206	25.9	26.01	26.32	**26.07**	0.2166	0.8308
Lead	207	25.76	26.12	26.37	**26.08**	0.3077	1.18
Lead	208	25.76	26.16	26.34	**26.09**	0.296	1.135
Molybdenum	95	23.77	24.68	25.3	**24.58**	0.7678	3.123
Molybdenum	97	24.28	24.71	24.98	**24.66**	0.3527	1.431
Molybdenum	98	24.09	24.69	24.33	**24.37**	0.3029	1.243
Selenium	77	24.79	25.91	23.86	**24.85**	1.024	4.12
Selenium	78	23	25.2	24.56	**24.25**	1.132	4.669
Selenium	82	25.25	24.92	25.79	**25.32**	0.437	1.726
Thallium	203	25.2	26.39	26.57	**26.05**	0.7461	2.864
Thallium	205	24.91	26.52	26.25	**25.89**	0.8666	3.347
Uranium	238	26.3	26.35	26.11	**26.25**	0.1252	0.4768

Internal Standard Factors:

Lithium	6	1.152	1.092	1.069	**1.152**	n/a	n/a
Scandium	45	1.17	1.15	1.153	**1.17**	n/a	n/a
Gallium	71	1.084	1.082	1.092	**1.084**	n/a	n/a
Rhodium	103	1.11	1.091	1.077	**1.11**	n/a	n/a
Indium	115	1.106	1.093	1.076	**1.106**	n/a	n/a
Lutetium	175	1.068	1.06	1.051	**1.068**	n/a	n/a
Gold	197	1.172	1.14	1.131	**1.172**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/26/10 19:43					
Antimony	121	-0.0247	-0.018	-0.0224	**-0.0217**	0.0034	15.74
Antimony	123	-0.0178	-0.0166	-0.0208	**-0.0184**	0.0022	11.85
Arsenic	75	0.0262	0.0651	0.0598	**0.0503**	0.0211	41.86
Cadmium	111	0.001	0.0008	0.0035	**0.0018**	0.0015	85.51
Cadmium	114	0.004	0.0054	0.0064	**0.0053**	0.0012	22.66
Chromium	52	-0.0049	0.0159	0.0014	**0.0041**	0.0107	258.4
Chromium	53	2.089	1.946	1.851	**1.962**	0.1198	6.104
Lead	206	0.0067	0.0028	0.0036	**0.0043**	0.0021	47.62
Lead	207	0.0046	0.0083	0.0079	**0.0069**	0.002	29.05
Lead	208	0.0048	0.0061	0.0063	**0.0057**	0.0008	14.75
Molybdenum	95	0.0309	0.0293	0.0297	**0.03**	0.0008	2.817
Molybdenum	97	0.0271	0.0349	0.0364	**0.0328**	0.005	15.29
Molybdenum	98	0.0317	0.0284	0.0275	**0.0292**	0.0022	7.614
Selenium	77	0.1446	0.1585	0.1041	**0.1357**	0.0282	20.8
Selenium	78	-0.037	-0.1107	-0.1544	**-0.1007**	0.0593	58.93
Selenium	82	0.391	0.1304	-0.1163	**0.135**	0.2537	187.9
Thallium	203	0.0062	0.0085	0.0082	**0.0076**	0.0013	16.55
Thallium	205	0.0064	0.0081	0.006	**0.0068**	0.0011	15.74
Uranium	238	0.0049	0.0064	0.0056	**0.0056**	0.0007	13

Internal Standard Factors:

Lithium	6	1.119	1.132	1.098	**1.119**	n/a	n/a
Scandium	45	1.168	1.15	1.138	**1.168**	n/a	n/a
Gallium	71	1.137	1.109	1.087	**1.137**	n/a	n/a
Rhodium	103	1.136	1.083	1.105	**1.136**	n/a	n/a
Indium	115	1.132	1.098	1.074	**1.132**	n/a	n/a
Lutetium	175	1.108	1.066	1.046	**1.108**	n/a	n/a
Gold	197	1.171	1.131	1.13	**1.171**	n/a	n/a

Subcontract Laboratory Results

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

July 21, 2010

Report to:
Lynda Huckestein
Columbia Analytical Services
1317 S. 13th Ave.
Kelso, WA 98626

Bill to:
Accounts Payable
Columbia Analytical Services
1317 South 13th Ave.
Kelso, WA 98626

cc: Columbia Analytical Services, Inc.

Project ID: K1006636
ACZ Project ID: L82973

Lynda Huckestein:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 29, 2010. This project has been assigned to ACZ's project number, L82973. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L82973. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 21, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-121 COMP
Locator:

ACZ Sample ID: ***L82973-01***
Date Sampled: *06/23/10 13:30*
Date Received: *06/29/10*
Sample Matrix: *Surface Water*

Lead 210, total — Prep Method:
EICHROM, OTW01

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210, total	07/14/10 11:57		0.91	1.7	3.3	pCi/L	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes, total — Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/12/10 0:04		0.01	0.06	0.42	pCi/L		jjg

Thorium 230, total — Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230, total	07/09/10 12:09		1.5	0.48	0.66	pCi/L	*	mwm

Uranium, Isotopic Total — Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234, total	07/16/10 9:02		-0.21	1.6	1	pCi/L	*	mwm
Uranium 235, total	07/16/10 9:02		-0.34	0.88	1	pCi/L	*	mwm
Uranium 238, total	07/16/10 9:02		-0.35	1	1	pCi/L	*	mwm

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-122 COMP
Locator:

ACZ Sample ID: ***L82973-02***
Date Sampled: *06/23/10 16:55*
Date Received: *06/29/10*
Sample Matrix: *Surface Water*

Lead 210, total — Prep Method:
EICHROM, OTW01

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210, total	07/14/10 11:57		0.48	1.6	3.2	pCi/L	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes, total — Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/12/10 0:05		0.01	0.07	0.44	pCi/L		jjg

Thorium 230, total — Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230, total	07/09/10 12:11		0.91	0.45	0.64	pCi/L	*	mwm

Uranium, Isotopic Total — Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234, total	07/16/10 9:04		-0.14	1.7	1.1	pCi/L	*	mwm
Uranium 235, total	07/16/10 9:04		-0.73	0.8	1.1	pCi/L	*	mwm
Uranium 238, total	07/16/10 9:04		0.8	0.9	1.1	pCi/L	*	mwm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services
Project ID: K1006636

ACZ Project ID: ***L82973***

Lead 210, total EICHROM, OTW01 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286066																
L82973-02MS	MS	07/14/10	RC100623-1	77.29	0.48	1.6	3.2	59	3.2	3.1	75.7	47	102			
WG285343LCSW	LCSW	07/14/10	RC100623-1	77.29				60	3	2.7	77.6	47	102			
WG285343PBW	PBW	07/14/10						.5	1.5	3.1			6.2			
L82973-01DUP	DUP-RER	07/14/10			0.91	1.7	3.3	.58	1.4	2.9				0.15	2	

Radium 226 + Alpha Emitting Radium M9315 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286203																
WG285650PBW	PBW	07/12/10						0	0.05	0.42			0.84			
WG285650LCSW	LCSW	07/12/10	RC100624-2	23.92				25	1.1	0.43	104.5	71	121			
L82973-01DUP	DUP-RER	07/12/10			0.01	0.06	0.42	.06	0.08	0.42				0.5	2	
L82973-02MS	MS	07/12/10	RC100624-2	23.92	0.01	0.07	0.44	25	1.1	0.42	104.5	71	121			

Thorium 230, total ESM 4506 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286141																
WG285447PBW	PBW	07/09/10						.07	0.3	0.57			1.14			
WG285447LCSW	LCSW	07/09/10	RC091215-1	162.12				170	4.5	0.62	104.9	90	120			
L82973-01DUP	DUP-RER	07/09/10			1.5	0.48	0.66	1.3	0.56	0.65				0.27	2	
L82973-02MS	MS	07/09/10	RC091215-1	162.12	0.91	0.45	0.64	160	4.5	0.64	98.1	90	120			

Uranium 234 Eichrom pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286268																
WG285975PBW	PBW	07/16/10						.58	1.4	1.1			2.2			
WG285975LCSW	LCSW	07/16/10	RC100223-2	165.63				180	13	1.7	108.7	89	132			
L82973-01DUP	DUP-RER	07/16/10			-0.21	1.6	1	-.27	1.7	0.97				0.03	2	
L83216-04DUP	DUP-RER	07/16/10			3.5	1.9	1.1	1.8	1.9	1				0.63	2	
L83111-01MS	MS	07/16/10	RC100223-2	165.63	-0.57	1.9	1.1	160	12	1.7	96.9	89	132			

Uranium 235 Eichrom pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286268																
WG285975PBW	PBW	07/16/10						0	0.87	1.1			2.2			
WG285975LCSW	LCSW	07/16/10	RC100223-2	7.91				8	3.1	1.7	101.1	45	150			
L82973-01DUP	DUP-RER	07/16/10			-0.34	0.88	1	0	0.74	0.97				0.3	2	
L83216-04DUP	DUP-RER	07/16/10			0.63	0.59	1.1	-.24	0.6	1				1.03	2	
L83111-01MS	MS	07/16/10	RC100223-2	7.91	-0.13	0.79	1.1	5.7	2.5	1.7	73.7	45	150			

Radiochemistry QC Summary

Columbia Analytical Services
Project ID: K1006636

ACZ Project ID: ***L82973***

Uranium 238 Eichrom pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286268																
WG285975PBW	PBW	07/16/10						.84	0.91	1.1			2.2			
WG285975LCSW	LCSW	07/16/10	RC100223-2	171.94				175	12	1.7	101.8	87	132			
L82973-01DUP	DUP-RER	07/16/10			-0.35	1	1	.89	0.99	0.97				0.88	2	
L83216-04DUP	DUP-RER	07/16/10			3.63	1.5	1.1	2.1	1.4	1				0.75	2	
L83111-01MS	MS	07/16/10	RC100223-2	171.94	2.63	1.5	1.1	168	12	1.7	96.2	87	132			

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadChem Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L82973***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lead 210, total	EICHROM, OTW01
Thorium 230, total	ESM 4506
Uranium 234, total	Eichrom
Uranium 235, total	Eichrom
Uranium 238, total	Eichrom

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006636

ACZ Project ID: L82973
Date Received: 06/29/2010 10:31
Received By: gac
Date Printed: 6/30/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA1117		2	10
NA1118		5	12

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006636

ACZ Project ID: L82973
Date Received: 06/29/2010 10:31
Received By: gac
Date Printed: 6/30/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L82973-01	BG-121 COMP	Y										
L82973-02	BG-122 COMP	Y										

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

Project Number: K1006636
Project Manager: Lynda Huckestein

C82973

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006636-001	BG-10 0-2 COMP	1-8oz	Soil	6/23/10	1250	ACZ	✓	✓	✓	✓
K1006636-002	BG-10 2-12 COMP	"	Soil	6/23/10	1300	ACZ				
K1006636-003	BG-10 12-18 COMP	"	Soil	6/23/10	1310	ACZ				
K1006636-004	BG-121 COMP	2-1 gal. Cubs	Water	6/23/10	1330	ACZ				
K1006636-005	BG-14 0-2 COMP	1-8oz	Soil	6/23/10	1625	ACZ				
K1006636-006	BG-14-2-12 COMP	"	Soil	6/23/10	1635	ACZ				
K1006636-007	BG-14 12-18 COMP	"	Soil	6/23/10	1645	ACZ				
K1006636-008	BG-122 COMP	2-1 gal Cubs	Water	6/23/10	1655	ACZ				

Test Comments

MISC_OUT_1 - None	K1006636-001,2,3,4,5,6,7,8	Lead 210/Eichrom to ACZ
MISC_OUT_2 - None	K1006636-001,2,3,4,5,6,7,8	Uranium-isotopic/Eichrom
MISC_OUT_3 - None	K1006636-001,2,3,4,5,6,7,8	Thorium-isotopic/ESM 4506
MISC_OUT_4 - None	K1006636-001,2,3,4,5,6,7,8	Radium 226 ~~and 228~~/M9315 ~~and M9320~~

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Follow Rhodia / Barr QAPP

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
✓ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 07/13/10

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
POL/MDL/J Y
EDD

Invoice Information
PO# K1006636
Bill to

Relinquished By: _____ 6/28/10 0930
Received By: _____ 6-29-10 1030
Airbill Number: _____

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286066

Project:
SDG#:
SOP#: rc017

Instrument: PREP
Matrix Class: LIQUID
List Type: QC-PB-210
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/1/2010
Analysis Date: 7/14/2010
Start Time:
End Time:
Approved: MWM 7-15-10
Approved: HB 7-15-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 pCi/L	Error (+ -)	LLD pCi/L
1	wg285343PBW		500	9.0242	9.0425	0.0183	0.821	0.9150	0.50	1.54	3.07
2	wg285343LCSW	rc100623-1	500	8.9938	9.0120	0.0182	0.816	0.9100	59.73	3.03	2.74
3	L82893-01	LC28-GROUNDWA	500	8.9826	8.9961	0.0135	0.605	0.6750	0.89	1.92	3.80
4	L82906-01	DAVIS WELL	500	9.0018	9.0206	0.0188	0.843	0.9400	0.57	1.35	2.67
5	L82941-01	MW-8	500	8.9996	9.0178	0.0182	0.816	0.9100	0.37	1.48	2.95
6	L82941-02	DUPLICATE	500	8.9799	8.9973	0.0174	0.780	0.8700	0.00	1.77	3.57
7	L82973-01	BG-121 COMP	500	9.0008	9.0165	0.0157	0.704	0.7850	0.91	1.65	3.26
8	L82973-02	BG-122 COMP	500	9.0079	9.0237	0.0158	0.709	0.7900	0.48	1.62	3.23
9	L82973-01DUP		500	8.9601	8.9776	0.0175	0.785	0.8750	0.58	1.44	2.86
10	L82973-02MS	rc100623-1	500	9.0318	9.0492	0.0174	0.780	0.8700	58.57	3.15	3.12
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
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									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC015.01.09.VER02

Template: pb-210-eichrom

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

HB 7/16/10

Seq #	ACZ Sample No.	GR CPM Beta	Det #	BG β	NET CPM β	ADJ CPM β	Start Ingrow	Analysis Time	Ingrow minutes	Efficiency Beta	Det #	Det BG β
1	wg285343PBW	2.41	1	2.29	0.12	0.12	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	1	2.29
2	wg285343LCSW	16.21	2	1.81	14.40	14.40	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	2	1.81
3	L82893-01	2.07	3	1.91	0.16	0.16	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	3	1.91
4	L82906-01	1.97	4	1.83	0.14	0.14	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	4	1.83
5	L82941-01	2.19	5	2.10	0.09	0.09	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	5	2.10
6	L82941-02	2.80	6	2.80	0.00	0.00	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	6	2.80
7	L82973-01	2.09	7	1.90	0.19	0.19	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	7	1.90
8	L82973-02	1.99	8	1.89	0.10	0.10	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	8	1.89
9	L82973-01DUP	1.95	9	1.82	0.13	0.13	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	9	1.82
10	L82973-02MS	15.64	10	2.14	13.50	13.50	7/1/2010 14:50	7/14/2010 11:57	18592	0.3197	10	2.14
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		
		0.00								0.3197		

Decay Equation for Pb210:	Pb-210
Standard Preparation Date	4/1/2002
Initial True Value (pCi/mL)	100.00
Decayed Value (pCi/mL)	77.29

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-15-10

Approved: MTB
Date: 7/15/10

Work Group:	WG286066
Sample Type:	L.qu.d
Analysis Date:	7-14-10
Analyst:	MWM
Prep Date:	7-1-10

Weekly background file: Back 4509
Daily background file: Back 4514

Alpha performance file: –
Beta performance file: Perb 2254

GAB dry date/time: –

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	**Performance Check**	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286066

Date Reported: 15-Jul-10
Run ID: R733445
Date Analyzed: 14-Jul-10
ICAL Workgroup:
Instrument ID: PREP

L82893-01

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0.89	1		pCi/L	++	3.8	1.9		TB

L82906-01

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0.57	1		pCi/L	++	2.7	1.4		TB

L82941-01

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0.37	1		pCi/L	++	3	1.5		TB

L82941-02

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0	1		pCi/L	++	3.6	1.8		TB

L82973-01

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0.91	1		pCi/L	++	3.3	1.7		TB

L82973-01DUP

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.58	1		pCi/L	++	2.9	1.4		
SREV	LEAD 210	RER	0.15	1		%	++	4	5		
FAIL	LEAD 210	RPD	44.3	1		pCi/L	ALRT	2.9	1.4		

L82973-02

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0.48	1		pCi/L	++	3.2	1.6		TB

L82973-02MS

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	59	1		pCi/L	++	3.1	3.2	RC100623-1	
SREV	LEAD 210	REC	75.7	1		%	++	3.1	3.2	RC100623-1	
SREV	LEAD 210	TRUE	77.29345	1		pCi/L	++	3.1	3.2	RC100623-1	

WG285343LCSW

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	60	1		pCi/L	++	2.7	3	RC100623-1	
SREV	LEAD 210	REC	77.6	1		%	++	2.7	3	RC100623-1	
SREV	LEAD 210	TRUE	77.29345	1		pCi/L	++	2.7	3	RC100623-1	

WG285343PBW

Tag: Measured: 7/14/2010 11:57:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.5	1		pCi/L	++	3.1	1.5		

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG285343

Project: _____
SDG#: _____
SOP#: _____

Instrument: PREP
Matrix Class: LIQUID
List Type: QC-PB-210
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-1-10 8:30
Analysis Date: _____
Start Time: _____
End Time: _____
Approved: _____
Approved: _____

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 pCi/L	Error (+ -)	LLD pCi/L
1	PBW		500						#DIV/0!		
2	LCSW								#DIV/0!		
3	L82893-01	LC28-GROUNDWATER-NR							#DIV/0!		
4	L82906-01	DAVIS WELL							#DIV/0!		
5	L82941-01	MW-8							#DIV/0!		
6	L82941-02	DUPLICATE							#DIV/0!		
7	L82973-01	BG-121 COMP							#DIV/0!		
8	L82973-02	BG-122 COMP							#DIV/0!		
9	DUP 73-01								#DIV/0!		
10	MS 73-02								#DIV/0!		
									#DIV/0!		
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									#DIV/0!		
									#DIV/0!		

Comments: _____

FRMRC015.01.09.VER02

Template: pb-210-eichrom

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

Radioactive Standards

LCS & MS 100623-1

Ingrow 7-1-10 14:50

Lead Carrier	100625-1	Sulfuric acid	34642
Iron Chloride	090615-1	Nitric Acid	33519
Nitric Acid 1N	33519	0.1N HNO_3	33519
NH_4OH	34091	2N HNO_3	—
		H_2O_2	—

COMMENTS:

LB770 Number 1 User File: Lead 210 Sample Data File: 0714-01
Sample Set: WG285343 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = **1600**
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	**0.000**	**20.0**	**0.000**	**20.0**
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.267	0.300	0.222	0.267	0.256	0.456	0.289	0.289	0.244	0.389
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.29	1.81	1.91	1.83	2.10	2.80	1.90	1.89	1.82	2.14
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample ***Results***

Measurement Date 07-14-110 Time 11:56:30
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] **1170**

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	**4699**	**WG285343PBW**	**0.000**	**0.000**	**1**	**0.31**	**0.120**	**> 100**	**1**	**0.80**
2	4700	WG285343LCSW	0.000	0.000	1	0.33	14.4	9.33	1	0.72
3	4701	L82893-01	0.000	0.000	1	0.29	0.159	> 100	1	0.74
4	4702	L82906-01	0.000	0.000	1	0.31	0.143	> 100	1	0.73
5	4703	L82941-01	0.000	0.000	1	0.31	0.088	> 100	1	0.77
6	4704	L82941-02	0.000	0.000	1	0.39	0.000	0.000	1	**0.88**
7	4705	L82973-01	0.000	0.000	1	0.32	0.190	> 100	1	0.74
8	4706	L82973-02	0.000	0.000	1	0.32	0.101	> 100	1	0.74
9	4707	L82973-01DUP	0.000	0.000	1	0.30	0.134	> 100	1	**0.72**
10	4708	L82973-02MS	0.000	0.000	1	0.37	13.5	9.86	1	0.78

MDA = Minimum Detectable Activity [cpm]

Detectors with Trend:1b

ACZ Laboratories, Inc.
Thorium in Water
ESM 4506

WG286141

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/2/2010
Analysis Date: 7/9/2010
Start Time:
End Time:
Approved: MWM 7-15-10
Approved: MTB 7-15-10

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/L	Error (+ -)	LLD pCi/L	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/L	Error (+ -)	LLD pCi/L	Th 232 Backgroun	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/L	Error (+ -)	LLD pCi/L
1	WG285447PB		500	1.0000	9.52	756	0.795	14.8849	15.1200	0	**0.01**	**0.29**	0.22	9.5825	22.4200	13	**0.07**	**0.30**	0.57	3.9591	6.8200	3	**0.07**	**0.17**	0.22
2	WG285447LC	RC091215-1	500	1.0000	9.52	704	0.740			0	**0.00**	**0.00**	0.24	6.4109	6365.7400	6359	**171.72**	**4.53**	0.62			0	**0.00**	**0.00**	0.24
3	L82906-01	DAVIS WELL	500	1.0000	9.52	705	0.741			0	**0.00**	**0.00**	0.24	0.0000	90.4200	90	**2.18**	**0.54**	0.62			0	**0.00**	**0.00**	0.24
4	L82917-07	SW04-SA-10	300	1.0000	9.52	697	0.733	0.0000	21.0000	21	**0.96**	**0.44**	0.40	0.0000	82.0000	82	**3.28**	**0.87**	1.04	0.0000	7.0000	7	**0.32**	**0.25**	0.40
5	L82941-01	MW-6	500	1.0000	9.52	756	0.795			0	**0.00**	**0.00**	0.22	11.1783	79.4100	68	**1.47**	**0.50**	0.57			0	**0.00**	**0.00**	0.22
6	L82941-02	DUPLICATE	500	1.0000	9.52	670	0.704			0	**0.00**	**0.00**	0.25	5.5891	52.9200	47	**1.06**	**0.46**	0.65			0	**0.00**	**0.00**	0.25
7	L82973-01	BG-121 COM	500	1.0000	9.52	662	0.696	9.7944	8.9100	-1	**-0.03**	**0.26**	0.25	1.0000	61.3400	60	**1.45**	**0.48**	0.66	1.0000	1.0000	0	**0.00**	**0.09**	0.25
8	L82973-02	BG-122 COM	500	1.0000	9.52	677	0.712			0	**0.00**	**0.00**	0.25	7.5825	49.8300	42	**0.91**	**0.45**	0.64			0	**0.00**	**0.00**	0.25
9	L82973-01DUP		500	1.0000	9.52	663	0.697	17.0658	15.0000	-2	**-0.06**	**0.34**	0.25	15.4242	70.5100	55	**1.30**	**0.56**	0.65	4.9183	5.0000	0	**0.00**	**0.19**	0.25
10	L82973-02MS	RC091215-1	500	1.0000	9.52	681	0.716			0	**0.00**	**0.00**	0.24	9.5825	5875.1100	5866	**163.72**	**4.50**	0.64			0	**0.00**	**0.00**	0.24
										0						0						0			
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										0						0						0			
										0						0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: thorium-liquid

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC022.01.09.ver02

HB 7/16/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-15-10

Work Group: WG256141
Sample Type: L.Qu.d
Analysis Date: 7-9-10
Analyst: MWM
Prep Date: 7-2-10

Approved: MTB
Date: 7-15-10

Weekly background file: 7-6-10
Daily background file: 7-6-10

Alpha performance file: 7-6-10
Beta performance file: -

GAB dry date/time: -

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286141

Date Reported: 16-Jul-10
Run ID: R733734
Date Analyzed: 09-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG285447PBW

Tag: Measured: 7/9/2010 12:01:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 228	FOUND	0.01	1		pCi/L	++	0.22	0.29		
SREV	THORIUM 230	FOUND	0.07	1		pCi/L	++	0.57	0.3		
SREV	THORIUM 232	FOUND	0.07	1		pCi/L	++	0.22	0.17		

WG285447LCSW

Tag: Measured: 7/9/2010 12:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/L	++	0.62	4.5	RC091215-1	
SREV	THORIUM 230	REC	104.9	1		%	++	0.62	4.5	RC091215-1	
SREV	THORIUM 230	TRUE	162.11776	1		pCi/L	++	0.62	4.5	RC091215-1	

L82906-01

Tag: Measured: 7/9/2010 12:03:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.24	0		TB
SREV	THORIUM 230	30-D-ESM	2.2	1		pCi/L	++	0.62	0.54		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.24	0		TB

L82917-07

Tag: Measured: 7/9/2010 12:05:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 228	ISO-ESM	0.96	1		pCi/L	++	0.4	0.44		TB
SREV	THORIUM 230	ISO-ESM	3.3	1		pCi/L	++	1	0.87		TB
SREV	THORIUM 232	ISO-ESM	0.32	1		pCi/L	++	0.4	0.25		TB

L82941-01

Tag: Measured: 7/9/2010 12:06:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.22	0		TB
SREV	THORIUM 230	30-D-ESM	1.5	1		pCi/L	++	0.57	0.5		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.22	0		TB

L82941-02

Tag: Measured: 7/9/2010 12:08:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.25	0		TB
SREV	THORIUM 230	30-D-ESM	1.1	1		pCi/L	++	0.65	0.46		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.25	0		TB

L82973-01

Tag: Measured: 7/9/2010 12:09:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	-0.03	1		pCi/L	++	0.25	0.26		TB
SREV	THORIUM 230	30-T-ESM	1.5	1		pCi/L	++	0.66	0.48		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.25	0.09		TB

L82973-02 Tag: **Measured: 7/9/2010 12:11:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.25	0		TB
SREV	THORIUM 230	30-T-ESM	0.91	1		pCi/L	++	0.64	0.45		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.25	0		TB

L82973-01DUP Tag: **Measured: 7/9/2010 12:12:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 228	FOUND	-0.06	1		pCi/L	++	0.25	0.34		
SREV	THORIUM 228	RER	0.07	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	66.7	1		pCi/L	ALRT	0.25	0.34		
SREV	THORIUM 230	FOUND	1.3	1		pCi/L	++	0.65	0.56		
SREV	THORIUM 230	RER	0.27	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	14.3	1		pCi/L	++	0.65	0.56		
SREV	THORIUM 232	FOUND	0	1		pCi/L	++	0.25	0.19		
SREV	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/L	++	0.25	0.19		

L82973-02MS Tag: **Measured: 7/9/2010 12:13:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	160	1		pCi/L	++	0.64	4.5	RC091215-1	
SREV	THORIUM 230	REC	98.1	1		%	++	0.64	4.5	RC091215-1	
SREV	THORIUM 230	TRUE	162.11776	1		pCi/L	++	0.64	4.5	RC091215-1	

ACZ Laboratories, Inc.
Thorium in Water
ESM 4506

WG285447

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-7-10 10:00
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/L	Error (+ -)	LLD pCi/L	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/L	Error (+ -)	LLD pCi/L	Th 232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/L	Error (+ -)	LLD pCi/L
1	PBW		500	1	0.00					0						0						0			
2	LCSW		1	1	0.00					0						0						0			
3	L82906-01	DAVIS WELL	1	1	0.00					0						0						0			
4	L82917-07	SW04-SA-10	300	1	0.00	High Sediment				0						0						0			
5	L82941-01	MW-8	500	1	0.00					0						0						0			
6	L82941-02	DUPLICATE	1	1	0.00					0						0						0			
7	L82973-01	BG-121 COMP	1	1	0.00					0						0						0			
8	L82973-02	BG-122 COMP	1	1	0.00					0						0						0			
9	DUP 73-01		1	1	0.00					0						0						0			
10	MS 73-02		1	1	0.00					0						0						0			
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Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: thorium-liquid

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC022.01.09.ver02

ECZ LABORATORIES, INC.
Standards/Reagents Information
Radium 226 903.1
Water

wg285447 7/2/2010 9:57 AM

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: _____

PROJECT/WG: _____
Method _____

INSTR: Octete

Approved: _____

Radioactive Standards

LCS & MS 09 12-15-1

Tracer 100322-1

Reagents

Iron chloride	100701-1	Nitric Acid	33519	Ammonium Hydroxide	34091
HCl	34768	Nitric Acid (2N)	33701	Cerous Flouride substrate	100527-3
TOPO	100428-2	Sulfuric Acid 0.3N	33273	Ethanol	33789
Cerium solution	090701-1	HF	33549		

COMMENTS:

rcthorw.xls

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:13:51PM 7/12/2010

Analyst: ORTEC

Sample

Sample: WG285447 PBW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.12 002
:
Description: WG285647/WG285447

Client Name: Undefined
Client Contact:

Tracer

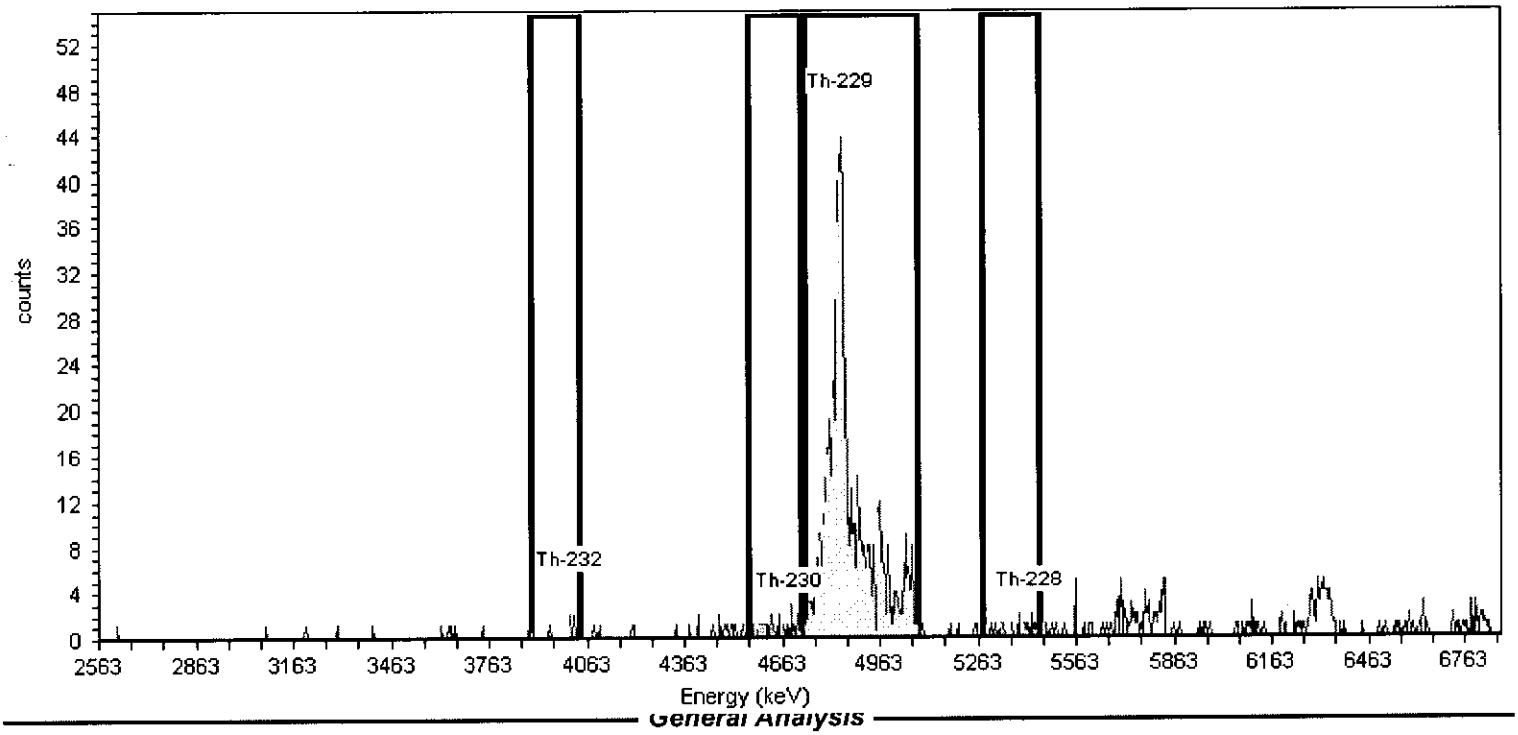
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 148.77%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/12/2010 7:04:45AM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/6/2010 10:55:11AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-06-2010 10:55

Energy Calibration: 2010.07.06 011
Efficiency Calibration:2010.07.06 011
Calibration Date: 7/6/2010 10:43:33AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.87% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/12/2010 7:04:14AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	8.260	100.0	6.82	3.9591	3	3.584E-002	1.237E-001	5.803E-002	1.500E-001
Th-230	4687.000	4561.000	4717.000	5.576	99.7	22.42	9.5825	13	1.614E-001	2.162E-001	9.055E-002	2.151E-001
Th-229	4845.000	4737.000	5080.000	42.641	99.6	769.32	13.0000	756	1.416E+001	1.665E+000	1.056E-001	2.452E-001
Th-228	5423.000	5280.000	5453.000	6.617	99.4	15.12	14.8849	0	2.904E-003	2.072E-001	1.132E-001	2.605E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:54:26AM 7/12/2010

Analyst: ORTEC

Sample

Sample: WG285447 PBW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

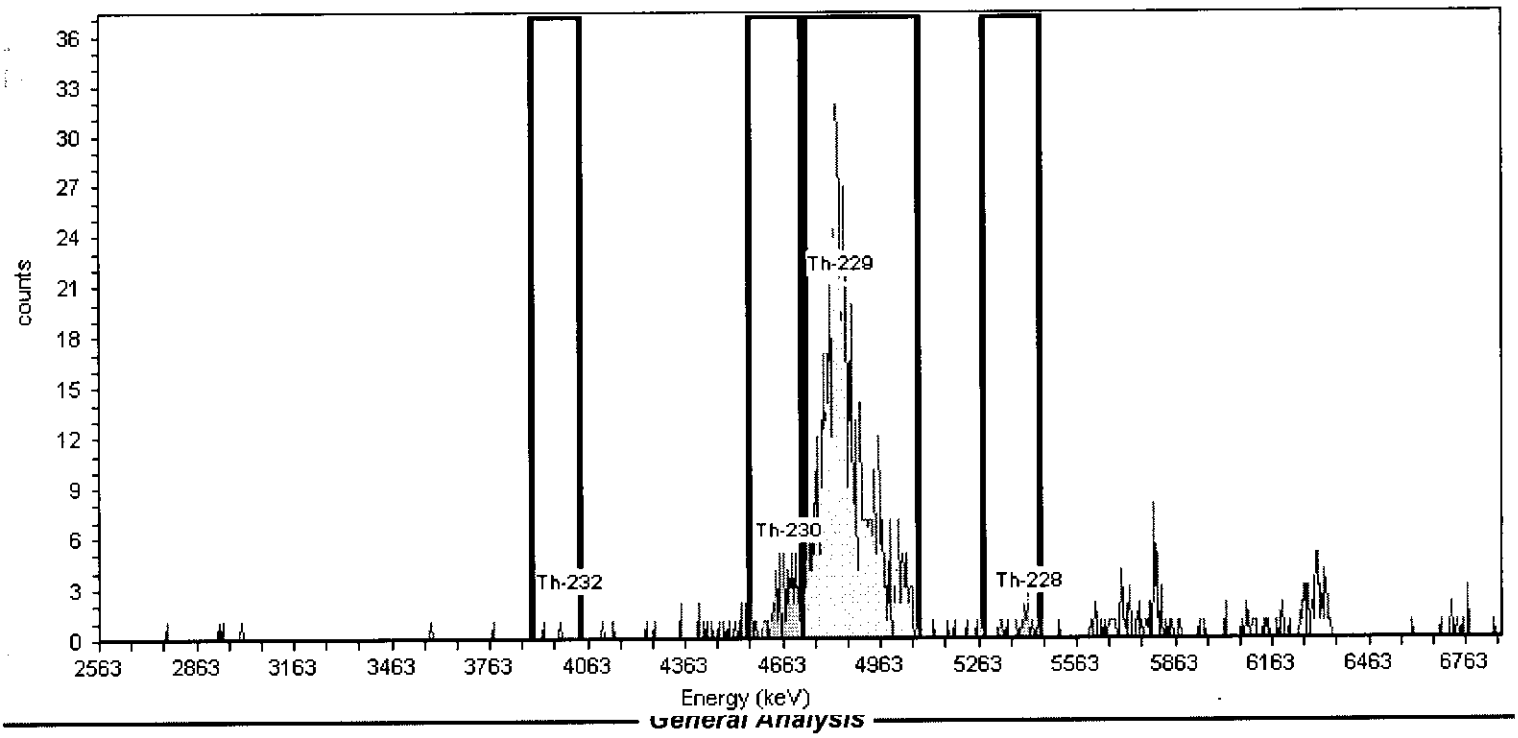
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 137.78%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/9/2010 12:00:38PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/6/2010 10:55:15AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-06-2010 10:55

Energy Calibration: 2010.07.06 001
Efficiency Calibration:2010.07.06 001
Calibration Date: 7/6/2010 10:23:47AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.53% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-228	5423.000	5280.000	5453.000	32.281	99.4	16.12	594.0594	-578	0.000E+000	1.895E+000	1.284E+001	2.573E+001
Th-232	4010.000	3893.000	4040.000	25.163	100.0	2.00	0.0000	2	2.611E-002	6.806E-002	0.000E+000	3.533E-002
Th-230	4687.000	4561.000	4717.000	18.971	99.7	65.58	0.0000	66	8.586E-001	3.696E-001	0.000E+000	3.543E-002
Th-229	4845.000	4737.000	5080.000	75.398	99.6	726.31	0.0000	726	1.312E+001	1.544E+000	0.000E+000	3.547E-002

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:55:07AM 7/12/2010

Analyst: ORTEC

Sample

Sample: WG285447 LCSW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

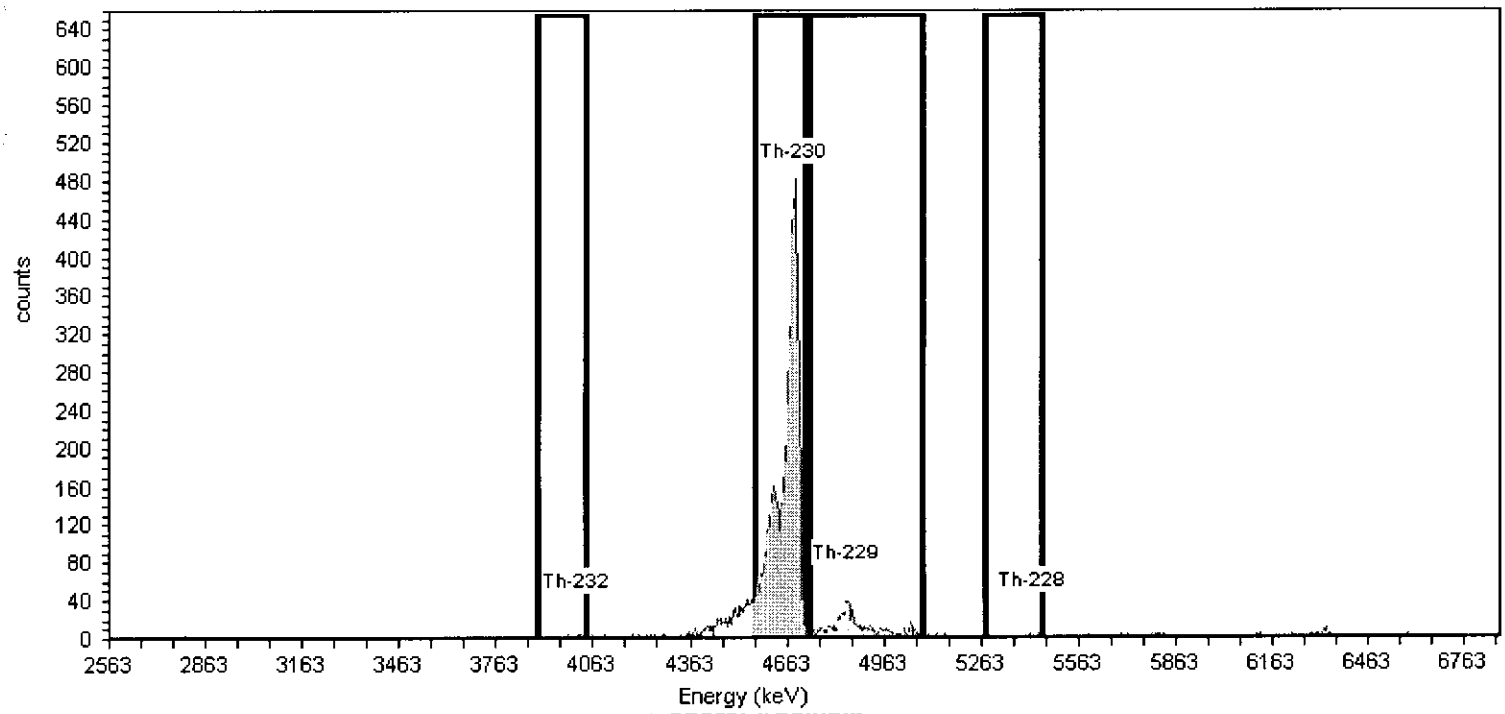
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 134.48%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/9/2010 12:00:43PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/7/2010 7:39:43AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-07-2010 07:39

Energy Calibration: 2010.07.06 002
Efficiency Calibration:2010.07.06 002
Calibration Date: 7/6/2010 10:25:04AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.39% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	14.138	100.0	11.36	0.0000	11	1.531E-001	1.459E-001	0.000E+000	3.646E-002
Th-230	4687.000	4561.000	4717.000	17.128	99.7	6,365.74	6.4109	6,359	8.595E+001	1.884E+001	7.961E-002	1.958E-001
Th-229	4845.000	4737.000	5080.000	44.145	99.6	711.66	8.0000	704	1.280E+001	1.544E+000	8.902E-002	2.147E-001
Th-228	5423.000	5280.000	5453.000	8.384	99.4	10.00	8.9095	1	1.478E-002	1.769E-001	9.413E-002	2.249E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:55:12AM 7/12/2010

Analyst: ORTEC

Sample

Sample: L82906-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

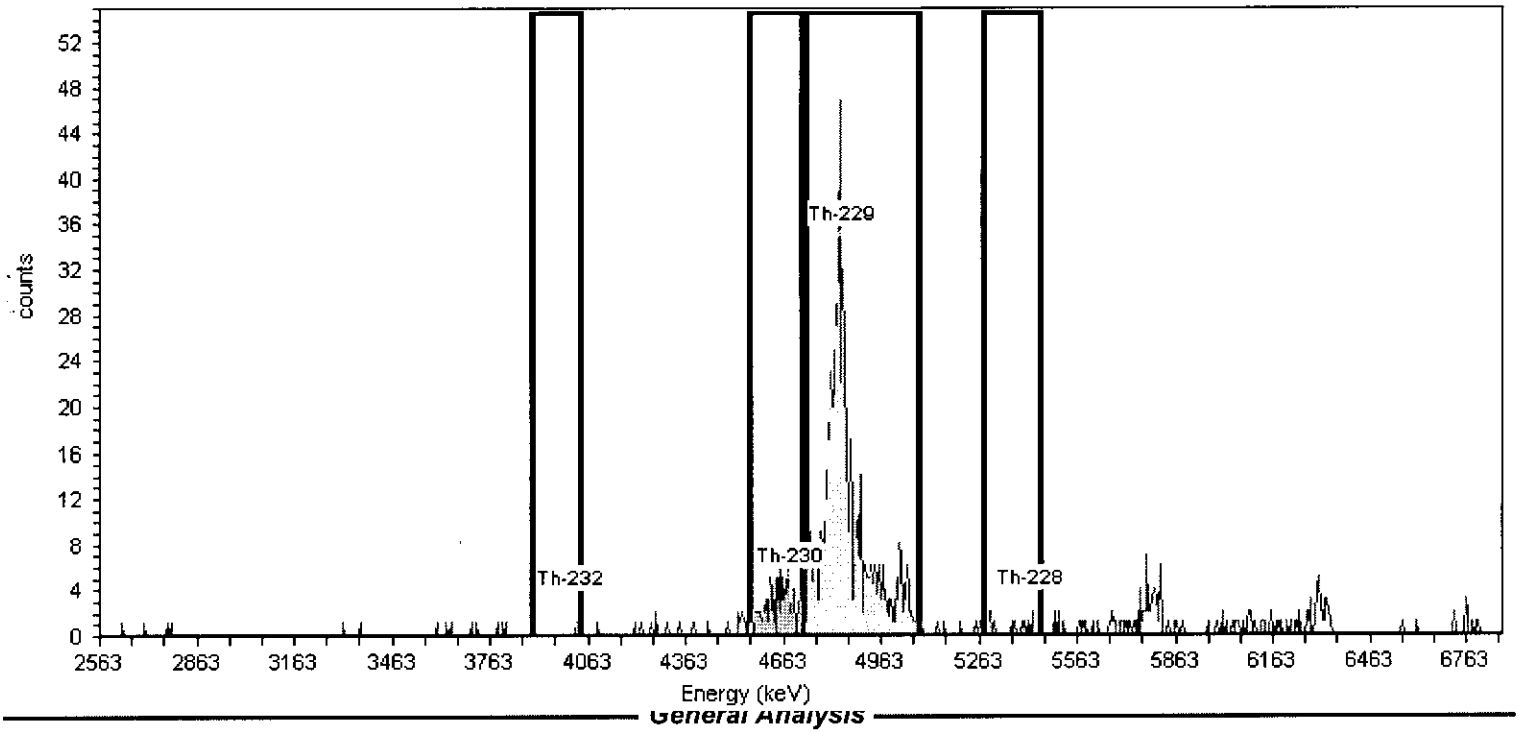
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 131.88%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/9/2010 12:00:26PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/6/2010 10:54:55AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-06-2010 10:54

Energy Calibration: 2010.07.06 004
Efficiency Calibration:2010.07.06 004
Calibration Date: 7/6/2010 10:27:06AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.78% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	8.769	100.0	2.04	0.0000	2	2.746E-002	7.064E-002	0.000E+000	3.641E-002
Th-230	4687.000	4561.000	4717.000	47.095	99.7	90.42	0.0000	90	1.220E+000	4.678E-001	0.000E+000	3.652E-002
Th-229	4845.000	4737.000	5080.000	55.597	99.6	704.60	0.0000	705	1.256E+001	1.498E+000	0.000E+000	3.656E-002
Th-228	5423.000	5280.000	5453.000	140.637	99.4	10.00	0.0000	10	1.354E-001	1.378E-001	0.000E+000	3.663E-002

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:55:16AM 7/12/2010

Analyst: ORTEC

Sample

Sample: L82917-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

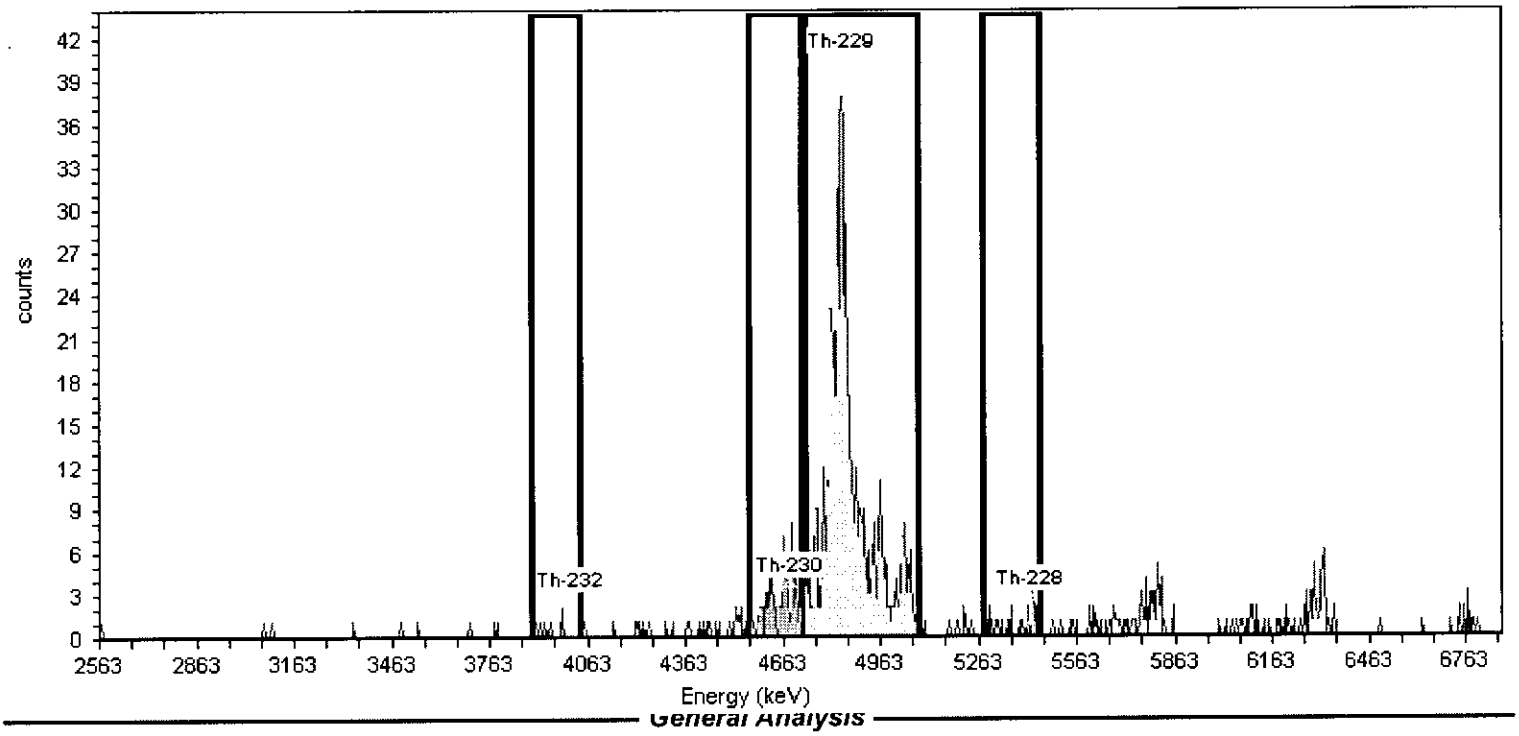
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 139.65%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/9/2010 12:00:30PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/6/2010 10:54:55AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-06-2010 10:54

Energy Calibration: 2010.07.06 005
Efficiency Calibration:2010.07.06 005
Calibration Date: 7/6/2010 10:28:09AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.54% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	90.410	100.0	7.00	0.0000	7	9.527E-002	1.173E-001	0.000E+000	3.683E-002
Th-230	4687.000	4561.000	4717.000	10.682	99.7	82.00	0.0000	82	1.119E+000	4.445E-001	0.000E+000	3.694E-002
Th-229	4845.000	4737.000	5080.000	53.876	99.6	696.67	0.0000	697	1.329E+001	1.599E+000	0.000E+000	3.698E-002
Th-228	5423.000	5280.000	5453.000	6.813	99.4	21.00	0.0000	21	2.875E-001	2.024E-001	0.000E+000	3.705E-002

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:56:28AM 7/12/2010

Analyst: ORTEC

Sample

Sample: L82941-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

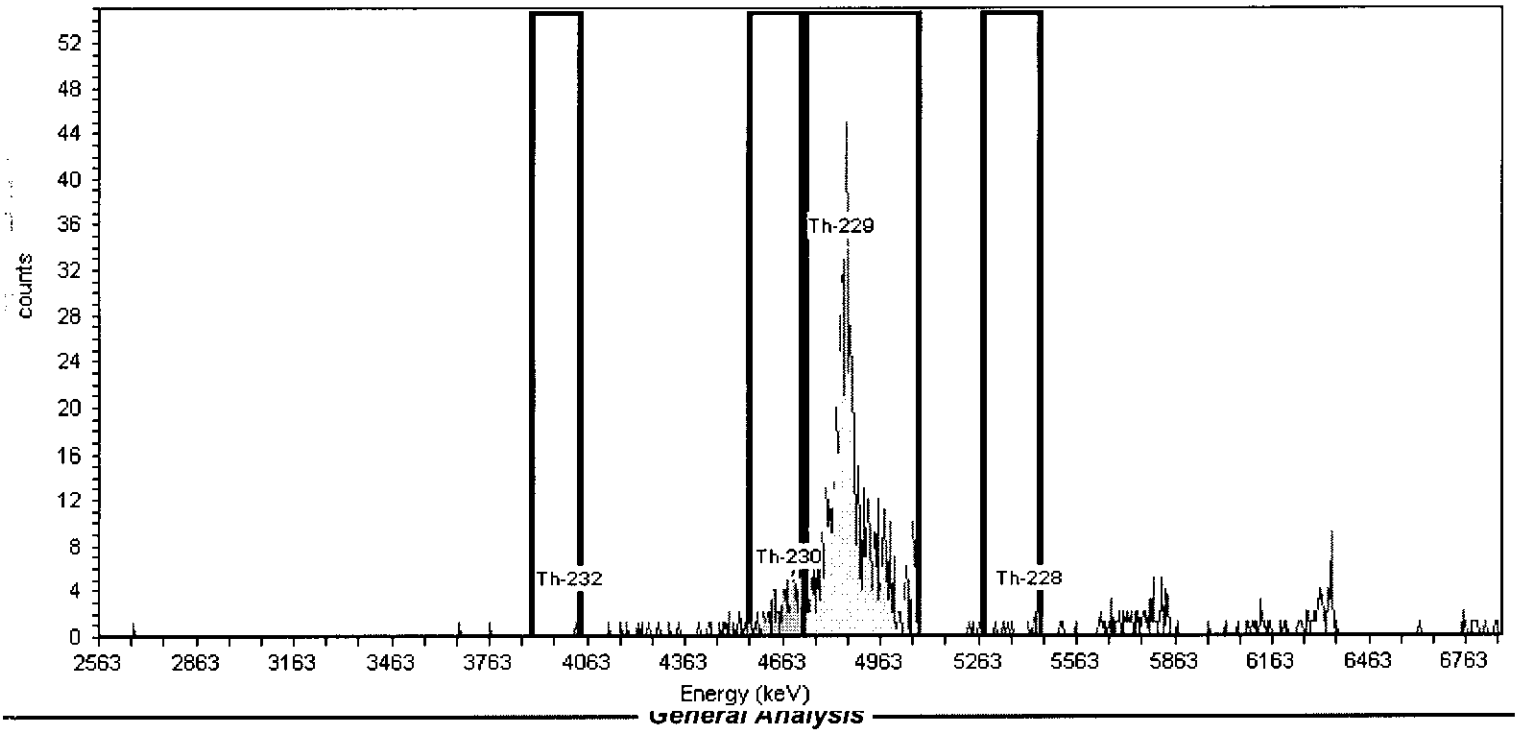
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.45%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/9/2010 12:00:32PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/7/2010 7:39:45AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-07-2010 07:39

Energy Calibration: 2010.07.06 006
Efficiency Calibration:2010.07.06 006
Calibration Date: 7/6/2010 10:29:08AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.02% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	6.023	100.0	1.00	2.0000	-1	0.000E+000	6.523E-002	4.126E-002	1.165E-001
Th-230	4687.000	4561.000	4717.000	21.426	99.7	79.41	11.1783	68	8.584E-001	4.035E-001	9.785E-002	2.297E-001
Th-229	4845.000	4737.000	5080.000	54.508	99.6	768.65	12.6748	756	1.404E+001	1.649E+000	1.043E-001	2.427E-001
Th-228	5423.000	5280.000	5453.000	.000	99.4	12.88	9.0000	4	4.902E-002	1.774E-001	8.806E-002	2.103E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:56:33AM 7/12/2010

Analyst: ORTEC

Sample

Sample: L82941-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

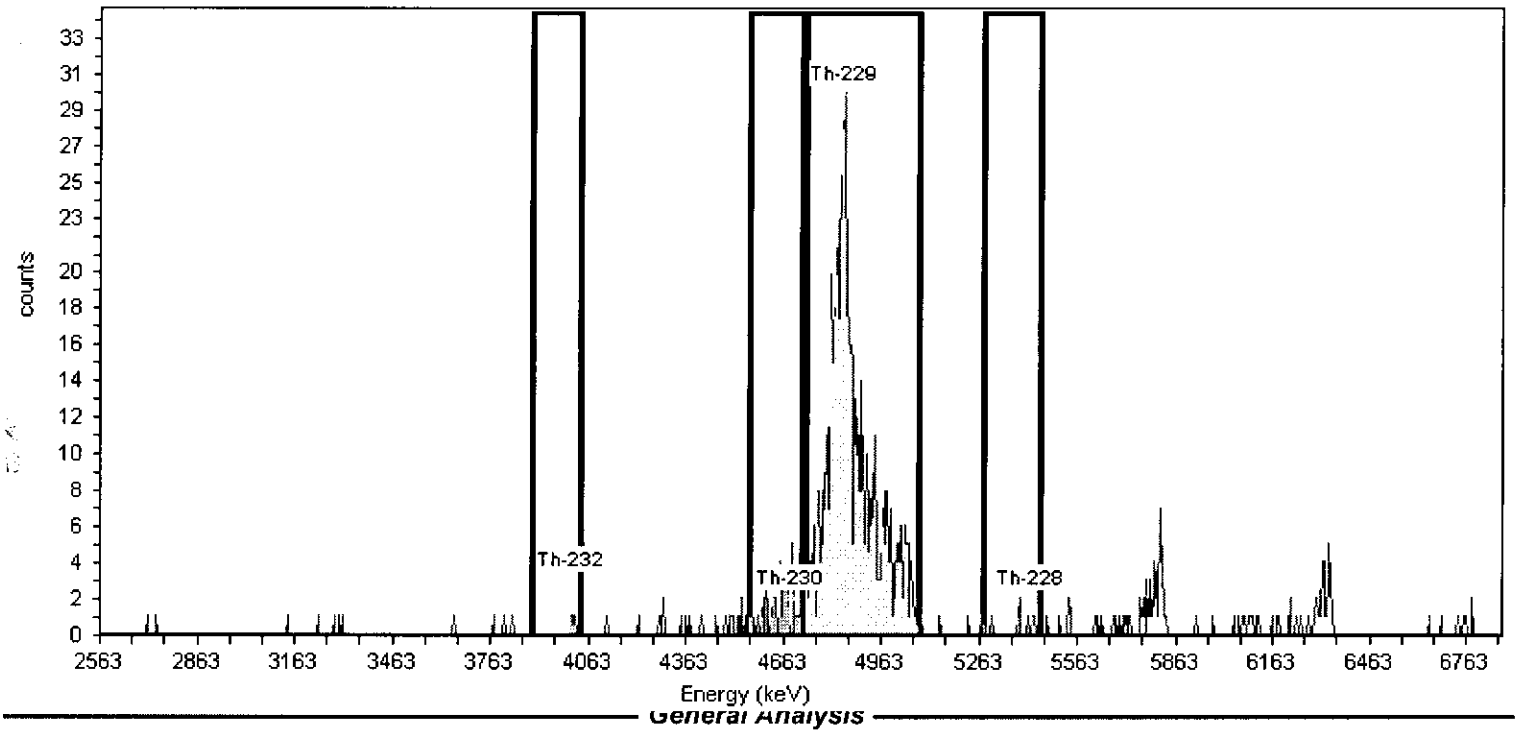
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 126.79%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/9/2010 12:00:35PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/7/2010 7:39:35AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-07-2010 07:39

Energy Calibration: 2010.07.06 007
Efficiency Calibration:2010.07.06 007
Calibration Date: 7/6/2010 10:30:13AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.59% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	8.658	99.7	52.92	5.5891	47	6.714E-001	3.568E-001	7.802E-002	1.944E-001
Th-229	4845.000	4737.000	5080.000	69.786	99.6	681.36	11.0000	670	1.207E+001	1.494E+000	1.096E-001	2.576E-001
Th-228	5423.000	5280.000	5453.000	9.517	99.4	8.91	9.0000	0	0.000E+000	1.807E-001	9.931E-002	2.371E-001
Th-232	4010.000	3893.000	4040.000	6.269	100.0	3.00	4.0000	-1	0.000E+000	1.123E-001	6.581E-002	1.699E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:56:36AM 7/12/2010

Analyst: ORTEC

Sample

Sample: L82973-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

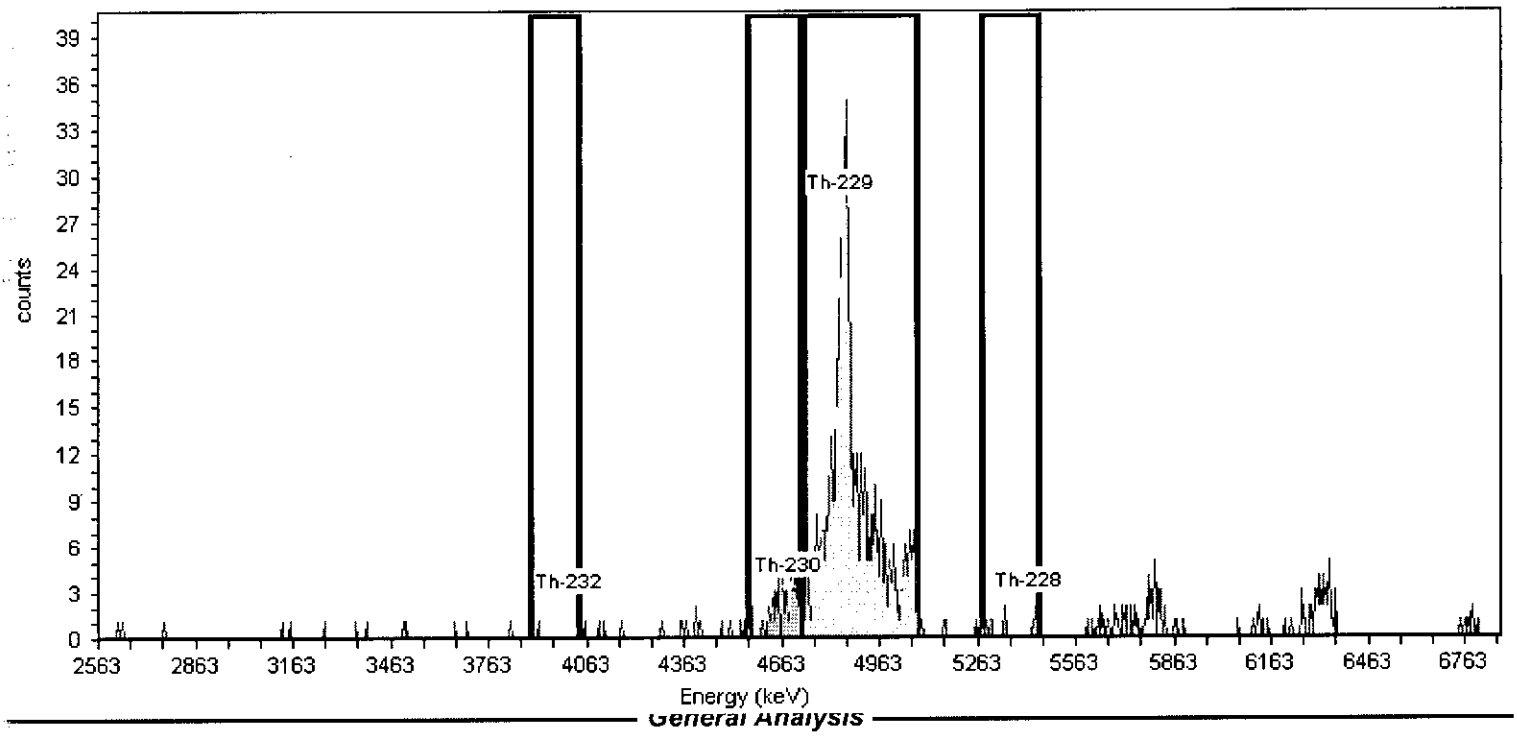
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 128.79%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/9/2010 12:00:37PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/7/2010 7:39:38AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-07-2010 07:39

Energy Calibration: 2010.07.06 008
Efficiency Calibration:2010.07.06 008
Calibration Date: 7/6/2010 10:31:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.08% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	21.255	100.0	1.00	1.0000	0	0.000E+000	6.074E-002	3.330E-002	1.053E-001
Th-230	4687.000	4561.000	4717.000	26.264	99.7	61.34	1.0000	60	8.664E-001	3.890E-001	3.340E-002	1.057E-001
Th-229	4845.000	4737.000	5080.000	41.688	99.6	671.31	9.0000	662	1.226E+001	1.524E+000	1.003E-001	2.395E-001
Th-228	5423.000	5280.000	5453.000	12.619	99.4	8.91	9.7944	-1	0.000E+000	1.869E-001	1.049E-001	2.487E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:00:45PM 7/9/2010

Analyst: ORTEC

Sample

Sample: L82973-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

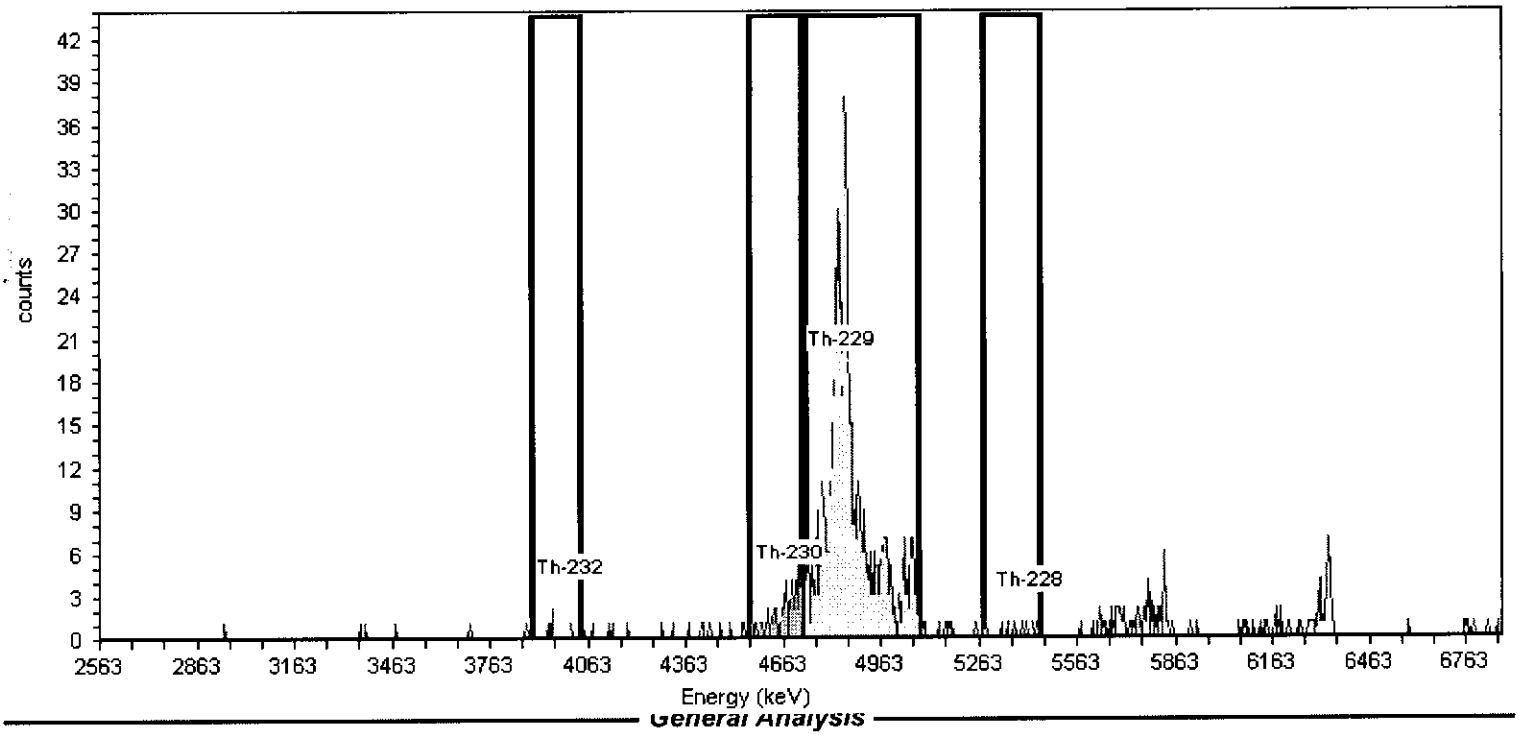
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 136.26%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/9/2010 12:00:40PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/7/2010 7:39:40AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-07-2010 07:39

Energy Calibration: 2010.07.06 009
Efficiency Calibration:2010.07.06 009
Calibration Date: 7/6/2010 10:34:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.46% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	23.448	100.0	4.00	2.0000	2	2.802E-002	1.031E-001	4.610E-002	1.301E-001
Th-230	4687.000	4561.000	4717.000	23.686	99.7	49.83	7.5825	42	5.937E-001	3.446E-001	9.003E-002	2.181E-001
Th-229	4845.000	4737.000	5080.000	53.367	99.6	683.66	7.0000	677	1.297E+001	1.595E+000	8.660E-002	2.113E-001
Th-228	5423.000	5280.000	5453.000	16.908	99.4	10.79	10.1151	1	9.576E-003	1.934E-001	1.043E-001	2.467E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:00:38PM 7/9/2010

Analyst: ORTEC

Sample

Sample: L82973-01 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
:
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

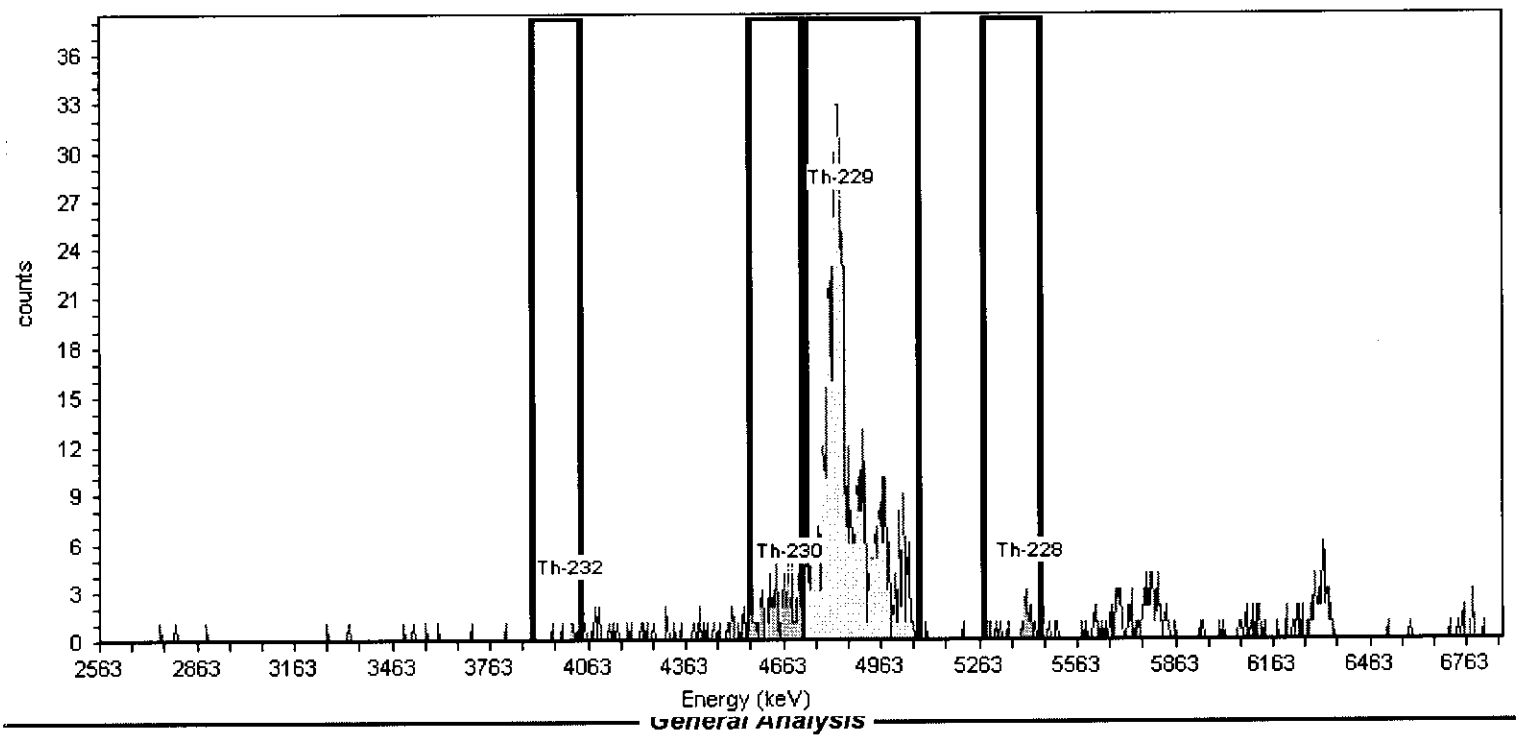
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 128.89%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/9/2010 12:00:44PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/6/2010 10:55:10AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-06-2010 10:55

Energy Calibration: 2010.07.06 010
Efficiency Calibration:2010.07.06 010
Calibration Date: 7/6/2010 10:40:47AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.08% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.952	100.0	5.00	4.9183	0	1.170E-003	1.352E-001	7.382E-002	1.864E-001
Th-230	4687.000	4561.000	4717.000	7.434	99.7	70.51	15.4242	55	7.905E-001	4.348E-001	1.311E-001	3.011E-001
Th-229	4845.000	4737.000	5080.000	51.429	99.6	673.67	11.0000	663	1.227E+001	1.529E+000	1.108E-001	2.606E-001
Th-228	5423.000	5280.000	5453.000	28.863	99.4	15.00	17.0658	-2	0.000E+000	2.446E-001	1.383E-001	3.156E-001

AlphaVision v5.3

Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
6:52:48AM 7/12/2010

Analyst: ORTEC

Sample

Sample: L82973-02 MS Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.09 002
Description: WG285447

Client Name: Undefined
Client Contact:

Tracer

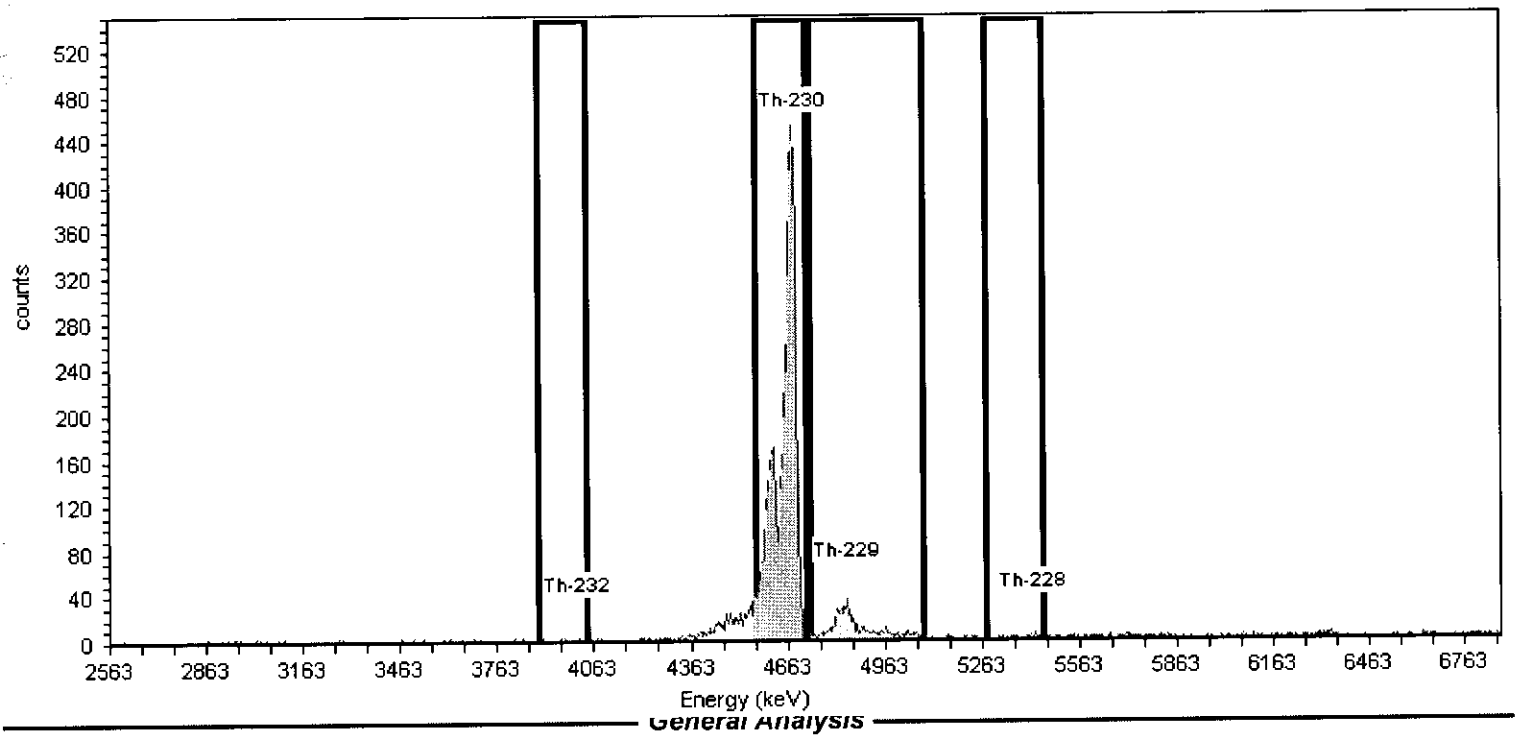
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 133.89%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/9/2010 12:00:46PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/6/2010 10:55:11AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-06-2010 10:55

Energy Calibration: 2010.07.06 011
Efficiency Calibration:2010.07.06 011
Calibration Date: 7/6/2010 10:43:33AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.87% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/9/2010 11:57:33AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	120.663	100.0	4.18	3.9591	0	3.101E-003	1.192E-001	6.448E-002	1.667E-001
Th-230	4687.000	4561.000	4717.000	29.032	99.7	5,875.11	9.5825	5,866	8.195E+001	1.812E+001	1.006E-001	2.390E-001
Th-229	4845.000	4737.000	5080.000	58.268	99.6	693.66	13.0000	681	1.275E+001	1.573E+000	1.173E-001	2.725E-001
Th-228	5423.000	5280.000	5453.000	5.838	99.4	26.88	14.8849	12	1.682E-001	2.742E-001	1.258E-001	2.895E-001

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Water
EPA 9315

WG286203

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 7/8/2010
Analysis Date: 7/12/2010
Start Time:
End Time:
Approved: JSC 7/16/10
Approved: MB 7-16-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/L	Error (+ -)	LLD pCi/L
1	WG285650PBW		1000	9.0588	9.1114	0.0526	2.6300		91.12	0.00	0.05	0.42
2	WG285650LCSW	rc100624-2	1000	9.0835	9.1352	0.0517	2.5850		91.12	24.94	1.10	0.43
3	L82917-07	SW04-SA-10062	1000	9.0892	9.1273	0.0381	1.9050		91.12	14.23	0.97	0.58
4	L82973-01	BG-121 COMP	1000	9.0501	9.1024	0.0523	2.6150		91.12	0.01	0.06	0.42
5	L82973-02	BG-122 COMP	1000	9.0809	9.1305	0.0496	2.4800		91.12	0.01	0.07	0.44
6	L82973-01DUP		1000	9.0682	9.1203	0.0521	2.6050		91.12	0.06	0.08	0.42
7	L82973-02MS	rc100624-2	1000	9.1391	9.1914	0.0523	2.6150		91.12	24.96	1.09	0.42

Comments:

Template: RA-226-L-LB770-2

Ra226 Decay	Date:	
	Time:	
Ba Correction Factor		0.05500
Counting Efficiency:		0.1700
Alpha BG Count @90min		0.24

Warns that Density above 5

HB 7/16/10

ACZ Sample No.	GR CPM Alpha	Detector Alpha	BG CPM Alpha	NET CPM Alpha	Ingrow date & time	Count date & time	Ingrow Factor	Counting Efficiency	Fractional Yield	Detector #	BG alpha
WG285650PBW	0.0440	1	0.0444	-0.0004	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.9564	1	0.0444
WG285650LCSW	22.100	2	0.0417	22.0583	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.9400	2	0.0417
L82917-07	9.322	3	0.0486	9.2734	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.6927	3	0.0486
L82973-01	0.056	4	0.0472	0.0088	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.9509	4	0.0472
L82973-02	0.067	5	0.0625	0.0045	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.9018	5	0.0625
L82973-01DUP	0.100	6	0.0472	0.0528	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.9473	6	0.0472
L82973-02MS	22.380	7	0.0486	22.3314	7/8/2010 14:50	7/12/2010 9:12	2.49	0.1700	0.9509	7	0.0486
			#N/A	#N/A				0.1700		8	
			#N/A	#N/A				0.1700		9	
			#N/A	#N/A				0.1700		10	
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: JSB
Date: ~~7/16/10~~ JSB 7/16/10 7/16/10

Approved: MDB
Date: ~~7-12-10~~ 7-16-10 MDB 7-16-10

Work Group: WG286203
Sample Type: liquid, SW
Analysis Date: 7/12/10
Analyst: TCD
Prep Date: 7/8/10

Weekly background file: Beck 606
Daily background file: Beck 607

Alpha performance file: Pera 907
Beta performance file: N/A

GAB dry date/time: N/A

	Yes	No	NA
1) **FOR SREV**: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286203

Date Reported: 16-Jul-10
Run ID: R733829
Date Analyzed: 12-Jul-10
ICAL Workgroup:
Instrument ID: LB770

WG285650PBW

Tag: Measured: 7/12/2010

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0	1		pCi/L	++	0.42	0.05		

WG285650LCSW

Tag: Measured: 7/12/2010 12:01:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	25	1		pCi/L	++	0.43	1.1	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	104.5	1		%	++	0.43	1.1	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	23.915	1		pCi/L	++	0.43	1.1	RC100624-2	

L82917-07

Tag: Measured: 7/12/2010 12:02:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	14	1		pCi/L	++	0.58	0.97		

L82973-01

Tag: Measured: 7/12/2010 12:04:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	0.01	1		pCi/L	++	0.42	0.06		

L82973-02

Tag: Measured: 7/12/2010 12:05:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	0.01	1		pCi/L	++	0.44	0.07		

L82973-01DUP

Tag: Measured: 7/12/2010 12:07:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.06	1		pCi/L	++	0.42	0.08		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	0.5	1		%	++	1	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	142.9	1		pCi/L	ALRT	0.42	0.08		

L82973-02MS

Tag: Measured: 7/12/2010 12:08:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	25	1		pCi/L	++	0.42	1.1	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	104.5	1		%	++	0.42	1.1	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	23.915	1		pCi/L	++	0.42	1.1	RC100624-2	

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Water
EPA 9315

WG285650

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: PREP

Analyst: tcd
Dept: 50
Prep Date: 7-8-10 9:00
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)	Alpha emitting radium isotopes Hours	Total pCi/L	Error (+ -)	LLD pCi/L
1	PBW ✓		1000								
2	LCSW ✓										
3	L82917-07 ✓	SW04-SA-100623									
4	L82973-01 ✓	BG-121 COMP									
5	L82973-02 ✓	BG-122 COMP									
6	DUP ✓	973-01									
~~7~~	~~DUP~~										
8	MS ✓	973-02									

TCD 7-8-10

TCD 7-16-10

~~Ra226 Decay~~ ingrow
Date: 7-8-10
Time: 14:50

Ba Correction Factor	0.05500
Counting Efficiency:	0.1700
Alpha BG Count @90min	0.24

Warns that Density above 5

Comments:

Template: ra-226-l-lb770

analytical 286203

ACZ LABORATORIES, INC.
Standards/Reagents Information
wg285650
Water 8/2010 8:39 AM

ANALYST: _____

Second analyst: _____

DATE TIME of prep start: _____

PROJECT/WG: _____
Method Ra-226 9315 INSTR: LB770

Radioactive Standards

LCS & MS RC100624-2

Reagents

Barium Carrier:	RC100204-1	EDTA	RC100615-1
Sulfuric Acid	34642	Sulfuric Acid 0.1N	34642
Nitric Acid	33519	Ammonium sulfate	RC100616-1
lead carrier	RC100625-1	Acetic Acid	34982
Sodium hydroxide 10 N	N/A	Citric acid	RC100511-1

COMMENTS:

Sample Measurement Parameters:
Comment: WG285650
User: MWM
Instrument Name: LB770-2
Preset Time: 90:00
Cycles: 1
Outlier warning disabled
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "1.5 hour"
Protocol ID: 6
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 90:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0444 (±0.0079)	0.0167	60
2	21.63	0.0417 (±0.0076)	0.0167	60.0
3	22.23	0.0486 (±0.0082)	0.0167	60.0
4	22.39	0.0472 (±0.0081)	0.0167	60.0
5	20.50	0.0625 (±0.0093)	0.0167	60.0
6	21.48	0.0472 (±0.0081)	0.0167	60.0
7	21.84	0.0486 (±0.0082)	0.0167	60.0
8	21.74	0.0605 (±0.0092)	0.0167	60.0
9	21.77	0.0917 (±0.0113)	0.0167	60.0
10	23.74	0.0478 (±0.0082)	0.0167	60.0

	Beta		
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	13.205 (±0.138)	0.0167	60
2	1.263 (±0.042)	0.0167	60.0
3	1.217 (±0.041)	0.0167	60.0
4	1.246 (±0.042)	0.0167	60.0
5	1.683 (±0.048)	0.0167	60.0
6	3.926 (±0.075)	0.0167	60.0
7	1.372 (±0.044)	0.0167	60.0
8	1.315 (±0.043)	0.0167	60.0
9	1.306 (±0.043)	0.0167	60.0
10	1.678 (±0.048)	0.0167	60.0

Cycle 1 of 1
Start Time: 7/12/2010 9:11:52

Elapsed Time: 90:00
Guard: 1189 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7241	WG285650PBW	0.044 (±50.0%)	0.0019	0.0007	47.15 (±1.62%)	0.0230	0.0112
2	7242	WG285650LCSW	22.10 (±2.24%)	0.0018	0.0007	22.01 (±2.25%)	0.0096	0.0035
3	7243	L82917-07	9.322 (±3.45%)	0.0019	0.0007	9.922 (±3.35%)	0.0084	0.0034
4	7244	L82973-01	0.056 (±44.7%)	0.0019	0.0007	1.689 (±8.11%)	0.0074	0.0035
5	7245	L82973-02	0.067 (±40.8%)	0.0021	0.0008	1.600 (±8.33%)	0.0086	0.0040
6	7246	L82973-01DUP	0.100 (±33.3%)	0.0019	0.0007	11.93 (±3.22%)	0.0128	0.0061
7	7247	L82973-02MS	22.38 (±2.23%)	0.0019	0.0007	22.51 (±2.22%)	0.0099	0.0036
8	7248		0.122 (±30.2%)	0.0021	0.0008	1.422 (±8.84%)	0.0076	0.0036
9	7249		0.100 (±33.3%)	0.0024	0.0010	1.256 (±9.41%)	0.0076	0.0035
10	7250		0.078 (±37.8%)	0.0019	0.0007	1.778 (±7.91%)	0.0085	0.0040

ACZ Laboratories, Inc.
Uranium by Eichrom
Eichrom Industries, ACW02

WG286268

Project:
SDG#:
SOP#: RC020

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/14/2010
Analysis Date: 7/16/2010
Start Time:
End Time:
Approved: MWM 7-21-10
Approved: MTB 7-20-10

MWM
50.00

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235							Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/L	Error (+ -)	LLD pCi/L	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/L	Error (+ -)	LLD pCi/L	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/L	Error (+ -)	LLD pCi/L
1	WG285975PBW		100	1	10.30	861	0.837	12.3488	17.2300	4.881	0.58	1.37	1.05	6.0000	5.9600	-0.040	0.00	0.87	1.05	3.0000	10.0000	7.000	0.84	0.91	1.05
2	WG285975LCSW	RC100223-2	100	1	10.30	524	0.509	14.0000	928.1700	914.170	179.69	12.67	1.72	7.0000	47.9200	40.920	8.04	3.06	1.72	6.0000	895.6700	889.670	174.88	12.40	1.72
3	L82973-01	BG-121 COMP	100	1	10.30	899	0.864	21.1193	19.2900	-1.829	-0.21	1.55	1.01	7.9784	5.0200	-2.958	-0.34	0.88	1.01	10.0000	7.0000	-3.000	-0.35	1.00	1.01
4	L82973-02	BG-122 COMP	100	1	10.30	854	0.830	23.1700	22.0000	-1.170	-0.14	1.70	1.05	8.0216	2.0000	-6.022	-0.73	0.80	1.05	3.0000	9.6700	6.670	0.80	0.90	1.05
5	L83048-01	RESE-1003157	100	1	10.30	678	0.851	18.1700	87.0000	68.830	9.09	2.53	1.03	1.0000	7.0000	6.000	0.71	0.70	1.03	4.0000	64.8600	60.860	7.16	2.05	1.03
6	L83048-02	RESE-1003158	100	1	10.30	880	0.855	11.0000	33.9400	22.940	2.69	1.65	1.02	2.0000	3.0000	1.000	0.12	0.55	1.02	5.9006	9.0000	3.099	0.36	0.95	1.02
7	L83090-01	LPS	100	1	10.30	310	0.301	14.0000	2013.8200	1999.820	664.46	31.42	2.90	7.0000	94.0400	87.040	28.92	7.01	2.90	6.0000	2086.4300	2080.430	691.24	31.92	2.90
8	L83090-02	UTW	100	1	10.30	317	0.308	9.0596	1854.8200	1845.760	599.73	29.46	2.84	4.0000	92.0800	88.080	28.62	6.69	2.84	1.0000	1981.3300	1980.330	643.45	30.38	2.84
9	L83110-01	RESE-1003156	100	1	10.30	907	0.881	8.2296	36.0000	27.770	3.15	1.59	0.99	5.0000	1.9800	-3.020	-0.34	0.63	0.99	5.0000	17.4300	12.430	1.41	1.13	0.99
10	L83111-01	BG-120 COMP	100	1	10.30	821	0.798	27.0000	22.4600	-4.540	-0.57	1.85	1.10	5.0000	4.0000	-1.000	-0.13	0.79	1.10	5.0000	26.0000	21.000	2.63	1.47	1.10
11	L83176-03	31-67 TRB	100	1	10.30	503	0.489	24.0000	84.0000	60.000	12.29	4.47	1.79	4.0216	8.0200	3.998	0.82	1.49	1.79	8.0000	48.0000	40.000	8.19	3.22	1.79
12	L83216-01	CC-301	100	1	10.30	841	0.817	14.0596	18.8300	4.770	0.58	1.47	1.07	5.9649	3.0000	-2.965	-0.36	0.77	1.07	6.0000	19.0000	13.000	1.59	1.29	1.07
13	L83216-02	CC-304	100	1	10.30	849	0.825	9.0000	127.2300	118.230	14.34	2.97	1.06	1.0216	5.9600	4.938	0.60	0.67	1.06	4.0000	58.0000	54.000	6.55	2.01	1.06
14	L83216-03	CC-545	100	1	10.30	926	0.900	10.0000	31.6500	21.650	2.41	1.51	0.97	0.0000	4.0000	4.000	0.44	0.47	0.97	1.0000	15.0000	14.000	1.56	0.93	0.97
15	L83216-04	CC-793	100	1	10.30	824	0.801	13.0000	40.8300	27.830	3.48	1.93	1.09	0.0000	5.0000	5.000	0.63	0.59	1.09	2.0000	31.0000	29.000	3.63	1.51	1.09
16	L83216-05	CC-5000	100	1	10.30	609	0.592	3.0000	27.0000	24.000	4.06	1.95	1.48	2.0000	1.0000	-1.000	-0.17	0.62	1.48	2.0000	11.0000	9.000	1.52	1.28	1.48
17	L82973-01DUP		100	1	10.30	930	0.904	27.0000	24.5400	-2.460	-0.27	1.67	0.97	5.0000	5.0400	0.040	0.00	0.74	0.97	5.0000	13.0000	8.000	0.89	0.99	0.97
18	L83216-04DUP		100	1	10.30	684	0.859	24.0000	39.0600	15.060	1.75	1.94	1.02	4.0216	2.0000	-2.022	-0.24	0.60	1.02	8.0000	26.0000	18.000	2.10	1.43	1.02
19	L83111-01MS	RC100223-2	100	1	10.30	541	0.526	8.2296	840.8800	832.650	158.53	11.65	1.66	5.0000	35.0000	30.000	5.71	2.53	1.66	5.0000	889.0000	884.000	168.30	11.95	1.66
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				

Comments:

Template: uiso-eichrom

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC023.01.09.ver02

7.21.10 GK

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-19-10

Work Group: WG256268
Sample Type: Liquid
Analysis Date: 7-18-10
Analyst: MWM
Prep Date: 7-14-10

Approved: MDB
Date: 7-20-10

Weekly background file: 7-15-10
Daily background file: 7-15-10

Alpha performance file: 7-15-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:07:24AM 7/21/2010

Analyst: ORTEC

Sample

Sample: L83090-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.20 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

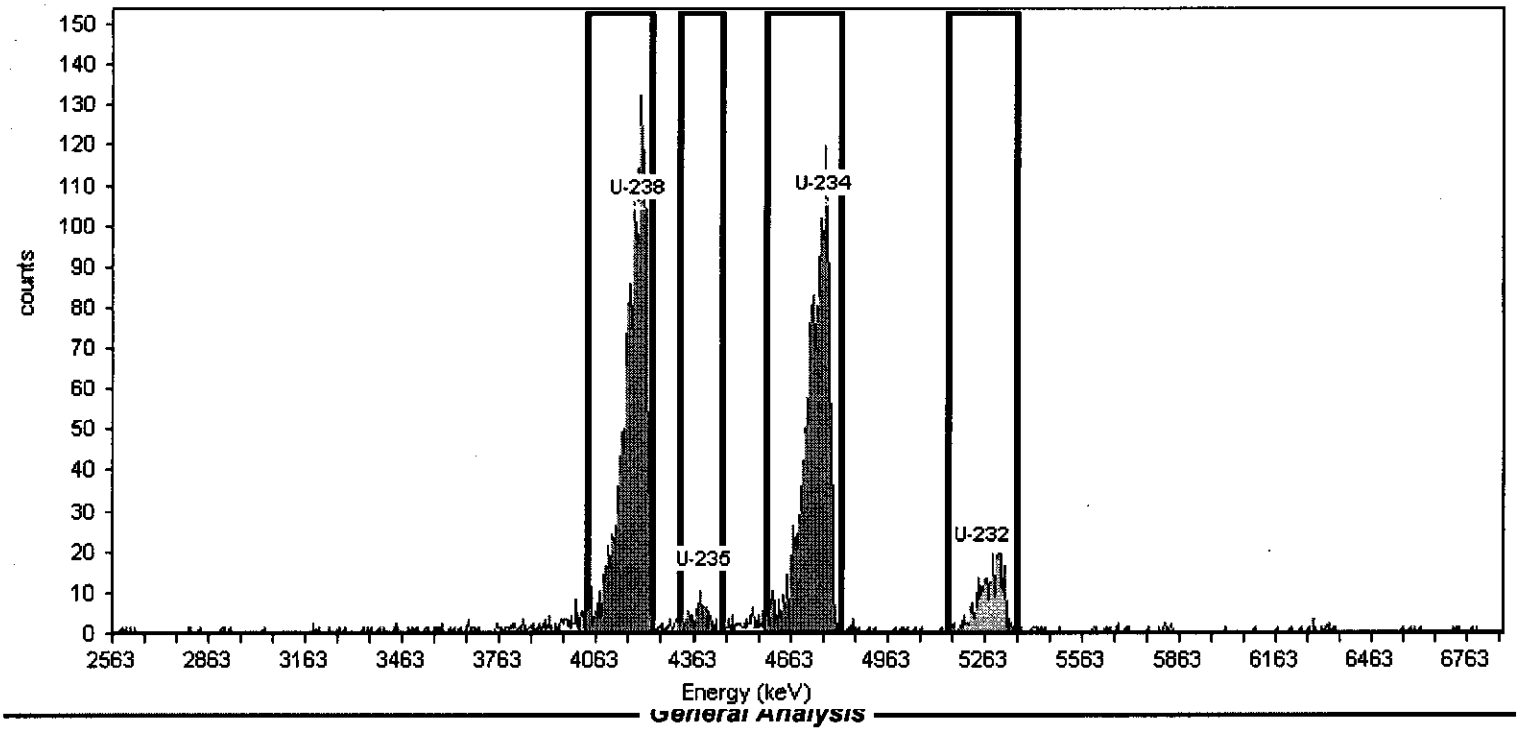
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 24.41%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/20/2010 10:22:04AM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: Interactive ROI Analysis
Decay Correction:7/20/2010 10:21:47AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4395.998	4318.000	4453.000	97.522	80.9	94.04	7.0000	87	3.741E+000	1.604E+000	2.645E-001	6.454E-001
U-234	4765.000	4592.000	4819.000	81.199	100.0	2,013.82	14.0000	2,000	6.951E+001	1.817E+001	3.025E-001	6.991E-001
U-232	5263.000	5153.109	5368.175	80.960	99.8	316.00	6.0000	310	2.880E+000	5.126E-001	2.169E-001	5.368E-001
U-238	4192.997	4037.000	4232.000	27.047	100.2	2,086.43	6.0000	2,080	7.217E+001	1.884E+001	1.977E-001	4.892E-001

ACZ Laboratories, Inc.
Uranium by Eichrom
Eichrom Industries, ACW02

WG295975

Analyst: MWM
Dept: 50
Prep Date: 7-14-10 7:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

MWM
50.00

Project:
SDG#:
SOP#:

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: PREP

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/L	Error (+ -)	LLD pCi/L	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/L	Error (+ -)	LLD pCi/L	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/L	Error (+ -)	LLD pCi/L
1	PBW		100	1	0.00					0.000						0.000						0.000			
2	LCSW				0.00					0.000						0.000						0.000			
3	L82973-01	BG-121 COMP			0.00					0.000						0.000						0.000			
4	L82973-02	BG-122 COMP			0.00					0.000						0.000						0.000			
5	L83048-01	RESE-1003157			0.00					0.000						0.000						0.000			
6	L83048-02	RESE-1003158			0.00					0.000						0.000						0.000			
7	L83090-01	LPS			0.00					0.000						0.000						0.000			
8	L83090-02	UTW			0.00					0.000						0.000						0.000			
9	L83111-01	BG-120 COMP			0.00					0.000						0.000						0.000			
10	L83176-03	31-67 TRB			0.00					0.000						0.000						0.000			
11	L83110-01				0.00					0.000						0.000						0.000			
12	L83216-01				0.00					0.000						0.000						0.000			
13	L83216-02				0.00					0.000						0.000						0.000			
14	L83216-03				0.00					0.000						0.000						0.000			
15	L83216-04				0.00					0.000						0.000						0.000			
16	L83216-05				0.00					0.000						0.000						0.000			
17	DUP 73-01				0.00					0.000						0.000						0.000			
18	DUP 16-04				0.00					0.000						0.000						0.000			
19	MS 11-01				0.00					0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments:

Template: uiso-eichrom

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC023.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Uranium iso
Water

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: wg285975 7/14/2010 7:12 AM

PROJECT/WG: _____
Method _____ INSTR: Octete

Radioactive Standards

LCS & MS 100223-2 Tracer: 100223-1

Reagents

3M Nitric Acid	34534	Aluminum nitrate / 3M nitric acid	100715-1
Nitric Acid (concentrated)	35035	HF	33549
0.05M oxalic acid / 5M HCl	100715-3	Titanium Choride	100629-1
0.01M Hydrochloric acid	35120	Cerium solution	090701-1
9M Hydrochloric acid	33927	Ethanol	33789

COMMENTS:

*12/29/08 MTB adjusted template to error using Gross cpm and specific backgrounds used to calculate net cpm

rcuiso.xls

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:57PM 7/16/2010

Analyst: ORTEC

Sample

Sample: WG285975 PBW Type: Sample
Spectrum #1 Analysis #1

Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001

Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

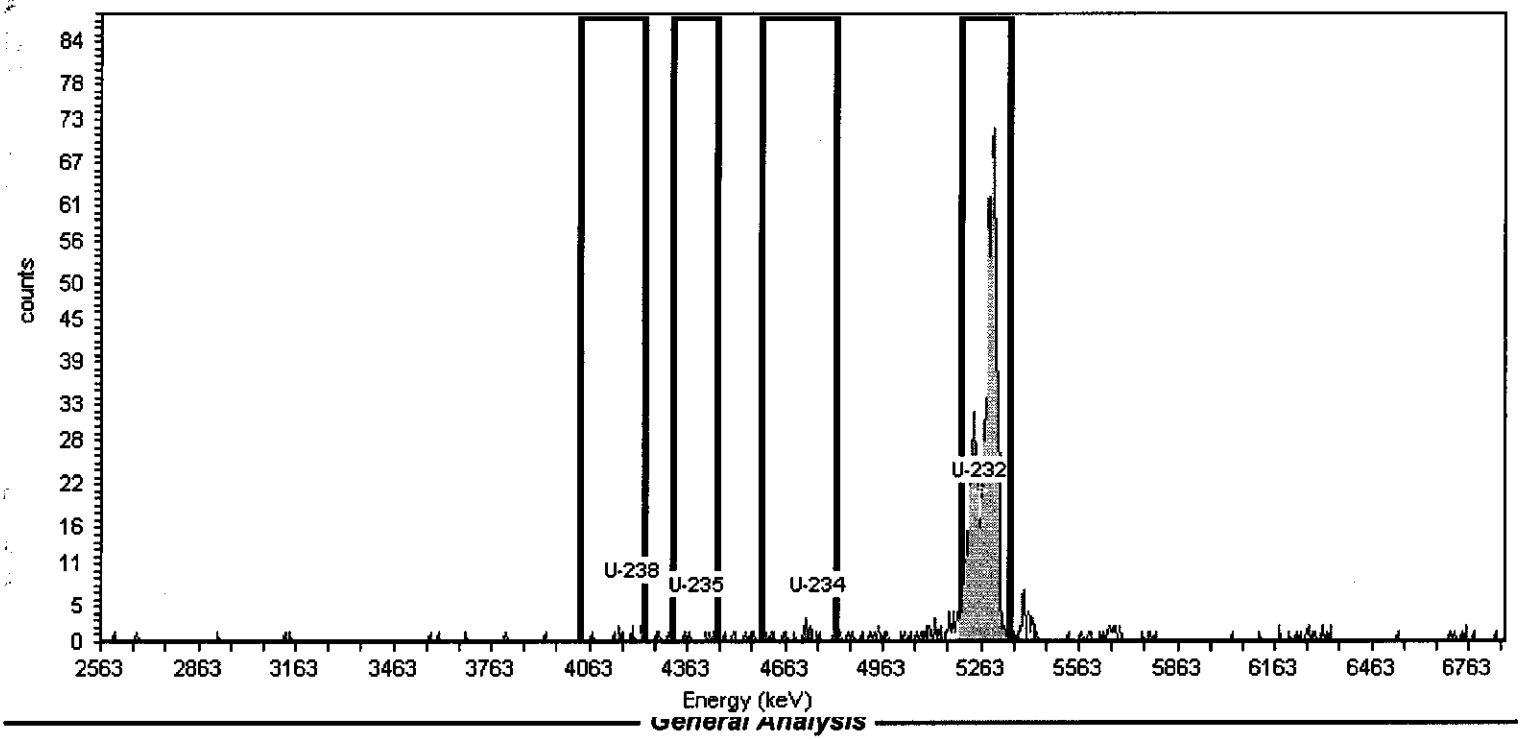
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.34%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/16/2010 8:59:54AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	6.042	100.2	10.00	3.0000	7	8.743E-002	1.363E-001	5.033E-002	1.344E-001
U-235	4396.000	4318.000	4453.000	6.099	80.9	5.96	6.0000	0	-5.432E-004	1.606E-001	8.818E-002	2.182E-001
U-234	4765.000	4592.000	4819.000	26.927	100.0	17.23	12.3488	5	6.107E-002	2.046E-001	1.023E-001	2.385E-001
U-232	5263.000	5203.000	5350.000	37.066	99.8	865.83	4.6900	861	7.946E+000	8.732E-001	6.904E-002	1.752E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:29PM 7/16/2010

Analyst: ORTEC

Sample

Sample: WG285975 LCSW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

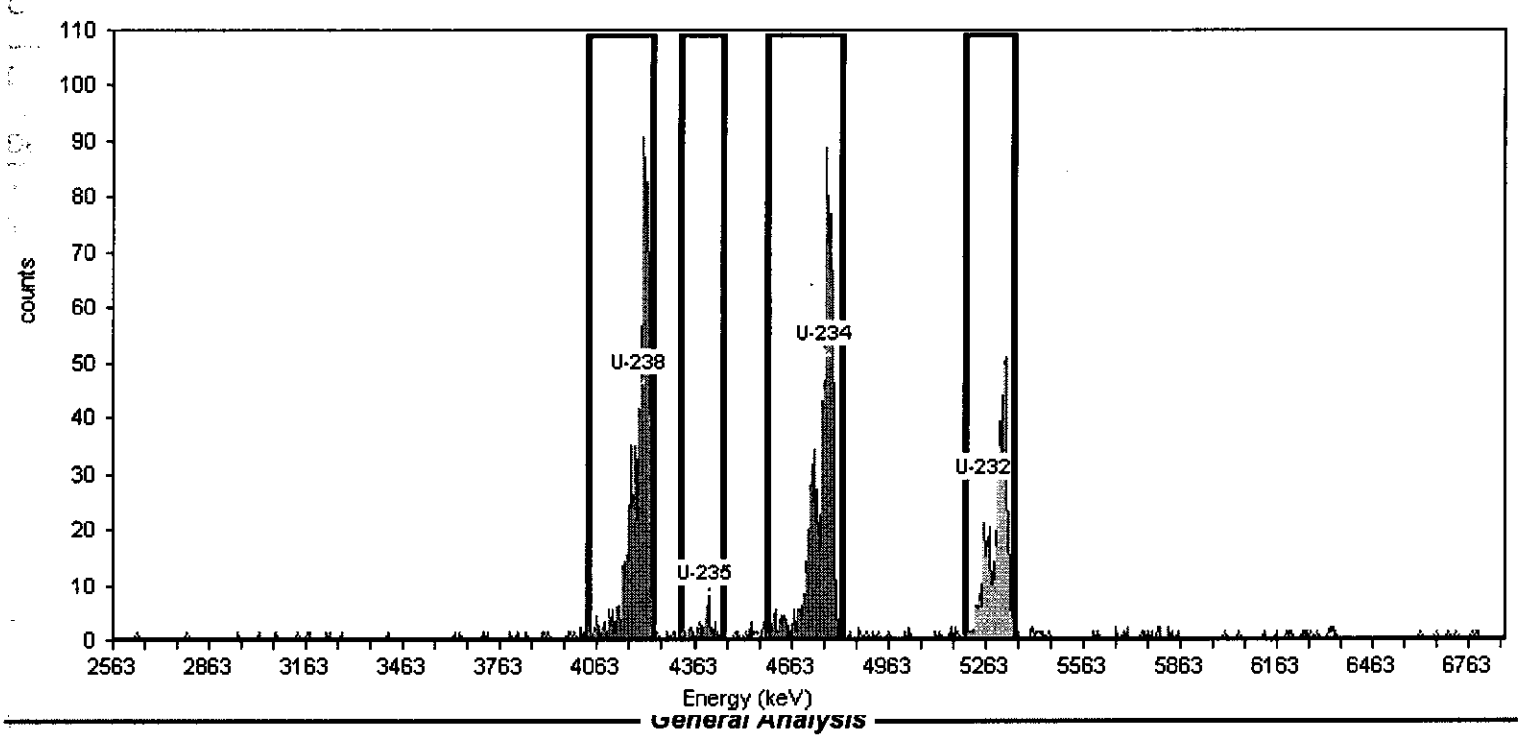
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 41.26%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/16/2010 8:59:56AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.617	100.2	895.67	6.0000	890	1.826E+001	4.522E+000	1.169E-001	2.894E-001
U-235	4396.000	4318.000	4453.000	29.718	80.9	47.92	7.0000	41	1.040E+000	6.122E-001	1.565E-001	3.818E-001
U-234	4765.000	4592.000	4819.000	29.127	100.0	928.17	14.0000	914	1.880E+001	4.651E+000	1.790E-001	4.136E-001
U-232	5263.000	5203.000	5350.000	14.381	99.8	528.10	4.0000	524	4.868E+000	6.703E-001	1.048E-001	2.704E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:37PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L82973-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

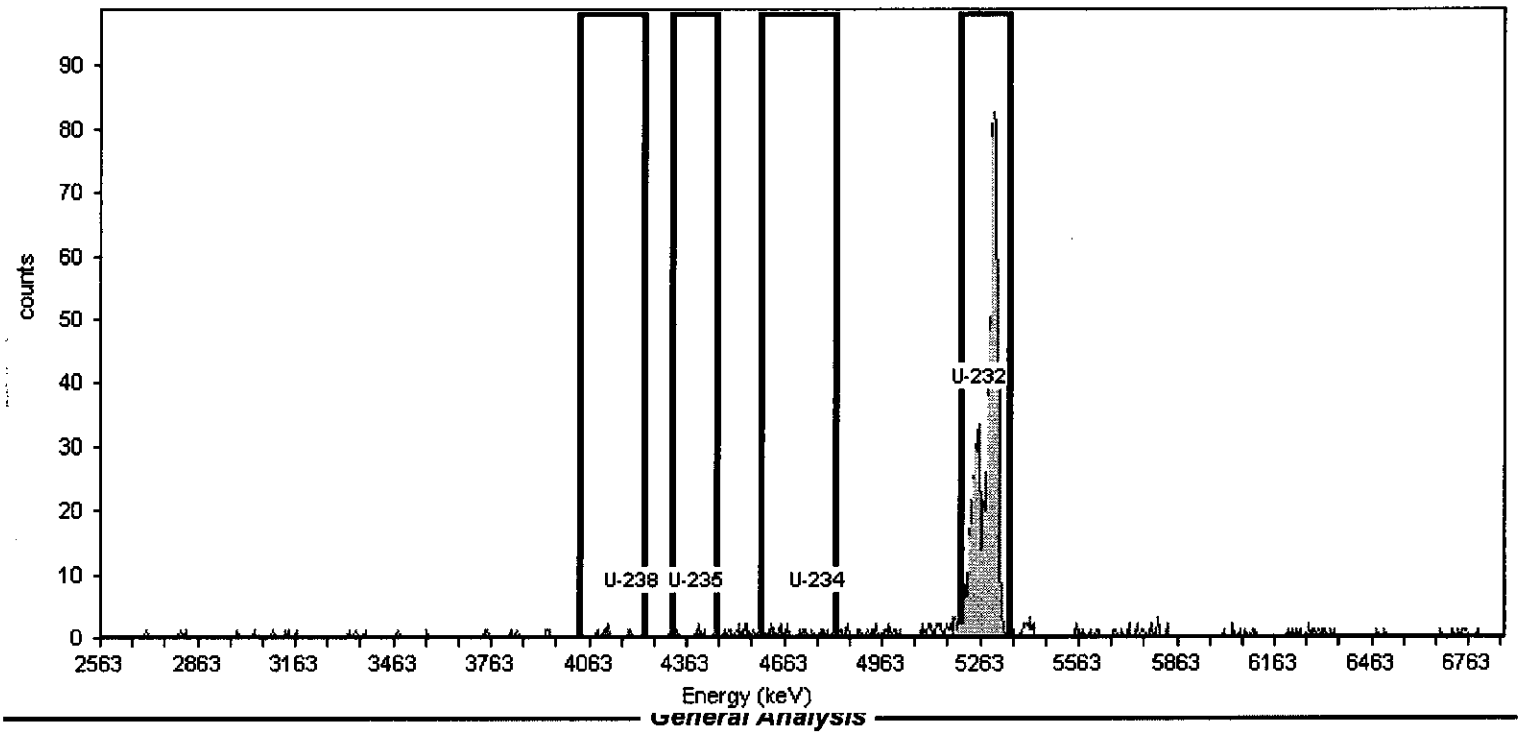
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.01%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/16/2010 8:59:59AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	23.887	100.2	7.00	10.0000	-3	-3.631E-002	1.499E-001	8.904E-002	2.108E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	5.02	7.9784	-3	-4.433E-002	1.625E-001	9.853E-002	2.376E-001
U-234	4765.000	4592.000	4819.000	184.305	100.0	19.29	21.1193	-2	-2.219E-002	2.313E-001	1.296E-001	2.921E-001
U-232	5263.000	5203.000	5350.000	37.661	99.8	895.66	7.0000	889	7.907E+000	8.570E-001	8.173E-002	1.994E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:45PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L82973-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

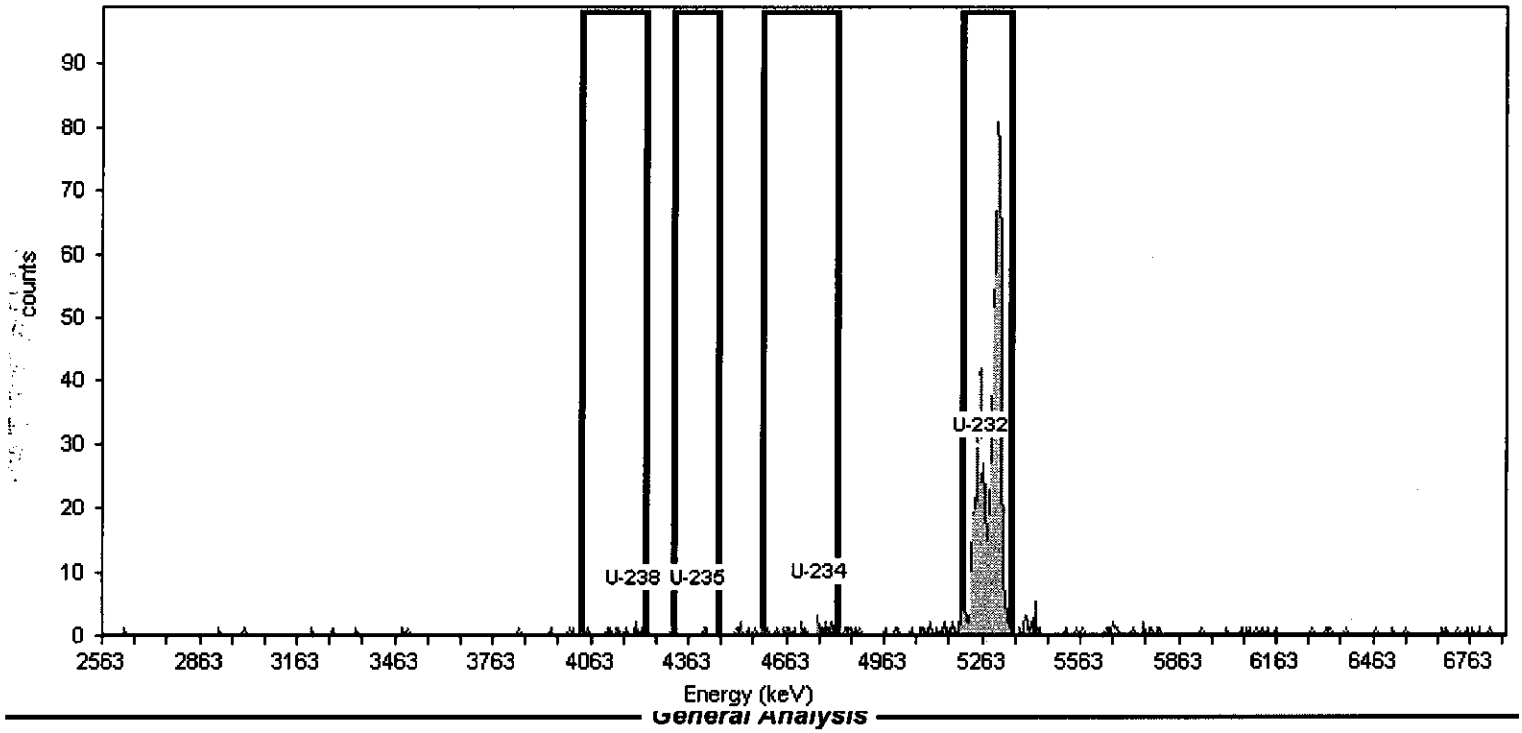
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.95%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/16/2010 9:00:02AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	6.509	100.2	9.67	3.0000	7	8.403E-002	1.357E-001	5.076E-002	1.356E-001
U-235	4396.000	4318.000	4453.000	25.244	80.9	2.00	8.0216	-6	-9.398E-002	1.495E-001	1.028E-001	2.479E-001
U-234	4765.000	4592.000	4819.000	17.810	100.0	22.00	23.1700	-1	-1.477E-002	2.545E-001	1.413E-001	3.168E-001
U-232	5263.000	5203.000	5350.000	26.426	99.8	860.79	7.0000	854	7.900E+000	8.737E-001	8.507E-002	2.075E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

2:00:53PM 7/16/2010

Sample

Sample: L83048-01 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

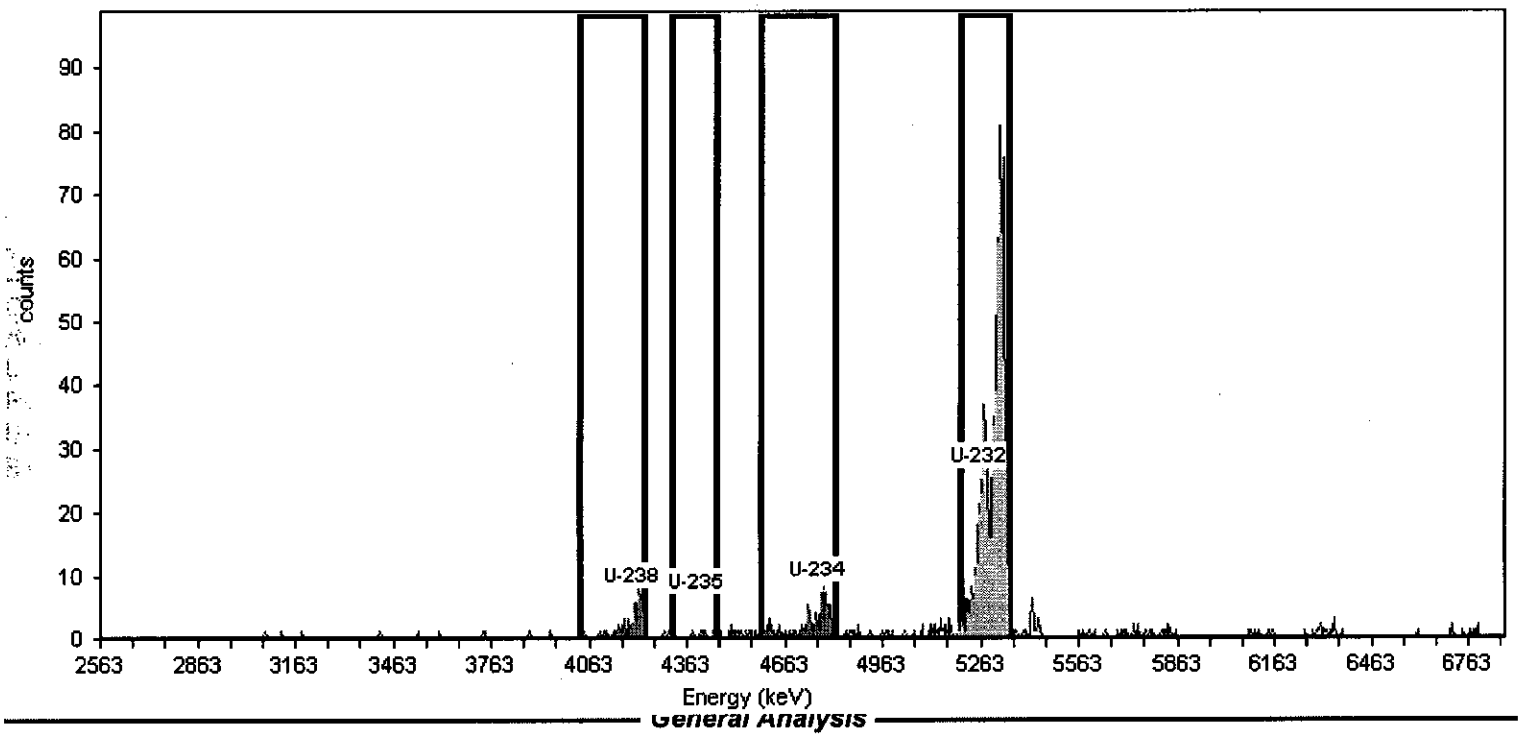
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.35%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/16/2010 8:59:41AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4396.000	4318.000	4453.000	43.209	80.9	7.00	1.0000	6	9.123E-002	1.304E-001	3.537E-002	1.119E-001
U-234	4765.000	4592.000	4819.000	18.419	100.0	87.00	18.1700	69	8.463E-001	4.179E-001	1.219E-001	2.771E-001
U-232	5263.000	5203.000	5350.000	24.225	99.8	884.07	7.6900	876	7.947E+000	8.683E-001	8.686E-002	2.102E-001
U-238	4193.000	4037.000	4232.000	20.841	100.2	64.86	4.0000	61	7.469E-001	3.434E-001	5.710E-002	1.474E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:01:01PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83048-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

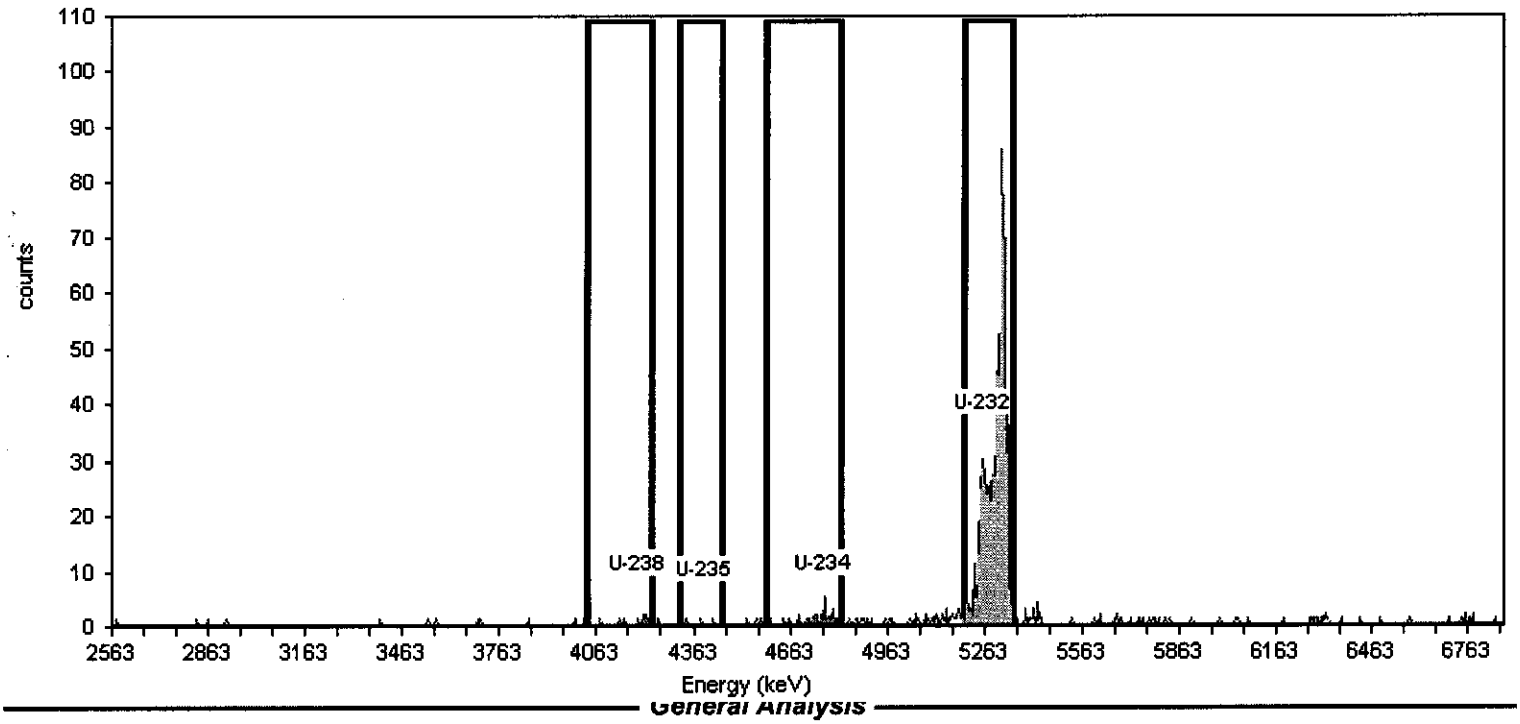
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.30%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/16/2010 8:59:41AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.000	100.2	9.00	5.9006	3	3.786E-002	1.417E-001	6.903E-002	1.711E-001
U-235	4396.000	4318.000	4453.000	34.839	80.9	3.00	2.0000	1	1.513E-002	1.016E-001	4.979E-002	1.405E-001
U-234	4765.000	4592.000	4819.000	13.838	100.0	33.94	11.0000	23	2.808E-001	2.531E-001	9.443E-002	2.220E-001
U-232	5263.000	5203.000	5350.000	15.970	99.8	884.48	4.0000	880	8.060E+000	8.761E-001	6.236E-002	1.610E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:15:37PM 7/20/2010

Analyst: ORTEC

Sample

Sample: L83090-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.20 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

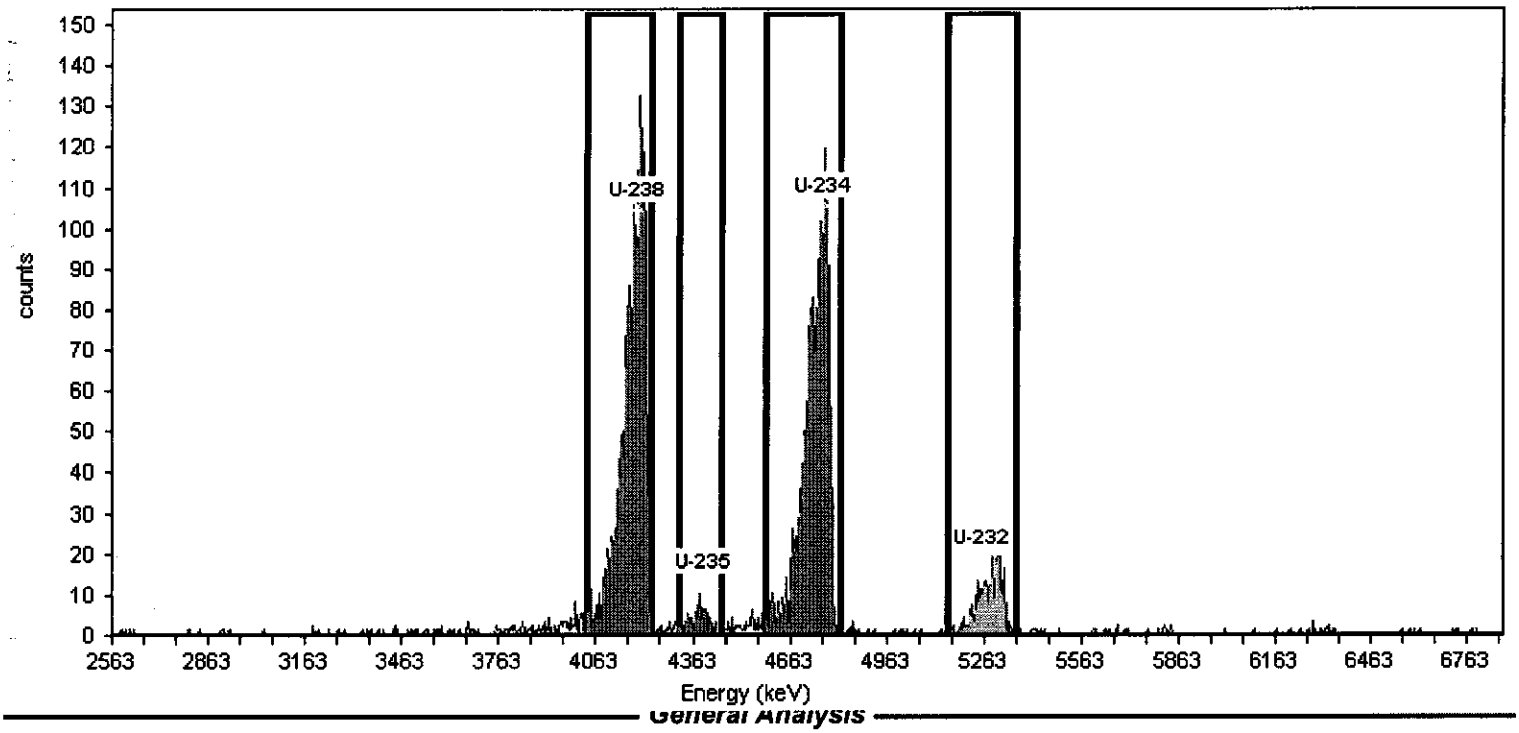
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 24.41%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/20/2010 10:22:04AM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: Interactive ROI Analysis
Decay Correction:7/20/2010 10:21:47AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4395.998	4318.000	4453.000	97.522	80.9	94.04	7.0000	87	3.741E+000	1.604E+000	2.645E-001	6.454E-001
U-234	4765.000	4592.000	4819.000	81.199	100.0	2,013.82	14.0000	2,000	6.951E+001	1.817E+001	3.025E-001	6.991E-001
U-232	5263.000	5153.109	5368.175	80.960	99.8	316.00	6.0000	310	2.880E+000	5.126E-001	2.169E-001	5.368E-001
U-238	4192.997	4037.000	4232.000	27.047	100.2	2,086.43	6.0000	2,080	7.217E+001	1.884E+001	1.977E-001	4.892E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:01:05PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83090-01 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

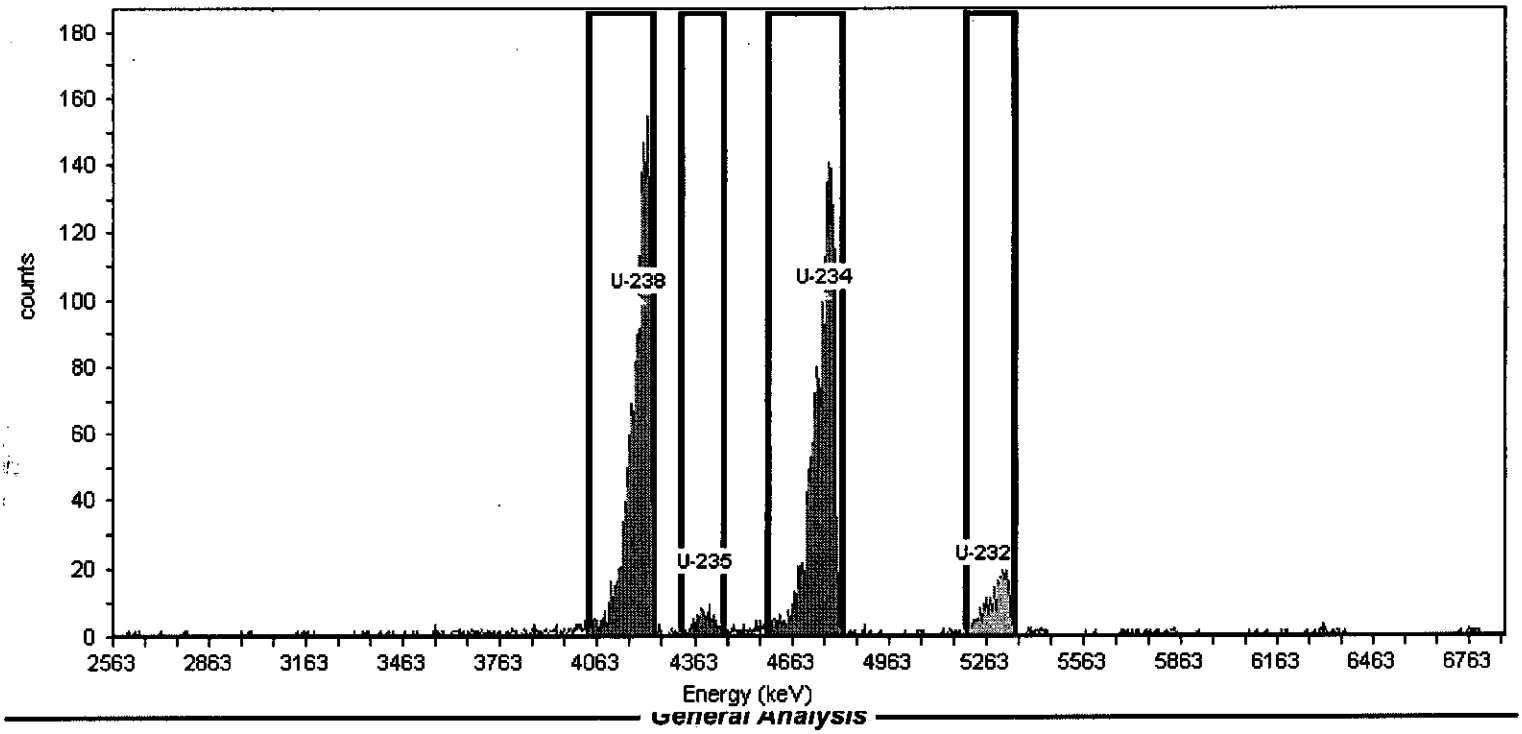
Tracer Nuclide: U-232
Tracer Recovery: 23.13%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/16/2010 8:59:43AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)

low tracer, will rerun



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4396.000	4318.000	4453.000	79.294	80.9	103.06	2.0000	101	4.669E+000	1.860E+000	1.520E-001	4.290E-001
U-234	4765.000	4592.000	4819.000	26.927	100.0	2,058.23	10.0000	2,048	7.652E+001	2.034E+001	2.748E-001	6.508E-001
U-232	5263.000	5203.000	5350.000	22.967	99.8	294.44	6.0000	288	2.729E+000	5.036E-001	2.331E-001	5.770E-001
U-238	4193.000	4037.000	4232.000	22.568	100.2	2,094.48	4.3295	2,090	7.794E+001	2.070E+001	1.805E-001	4.619E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:01:09PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83090-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

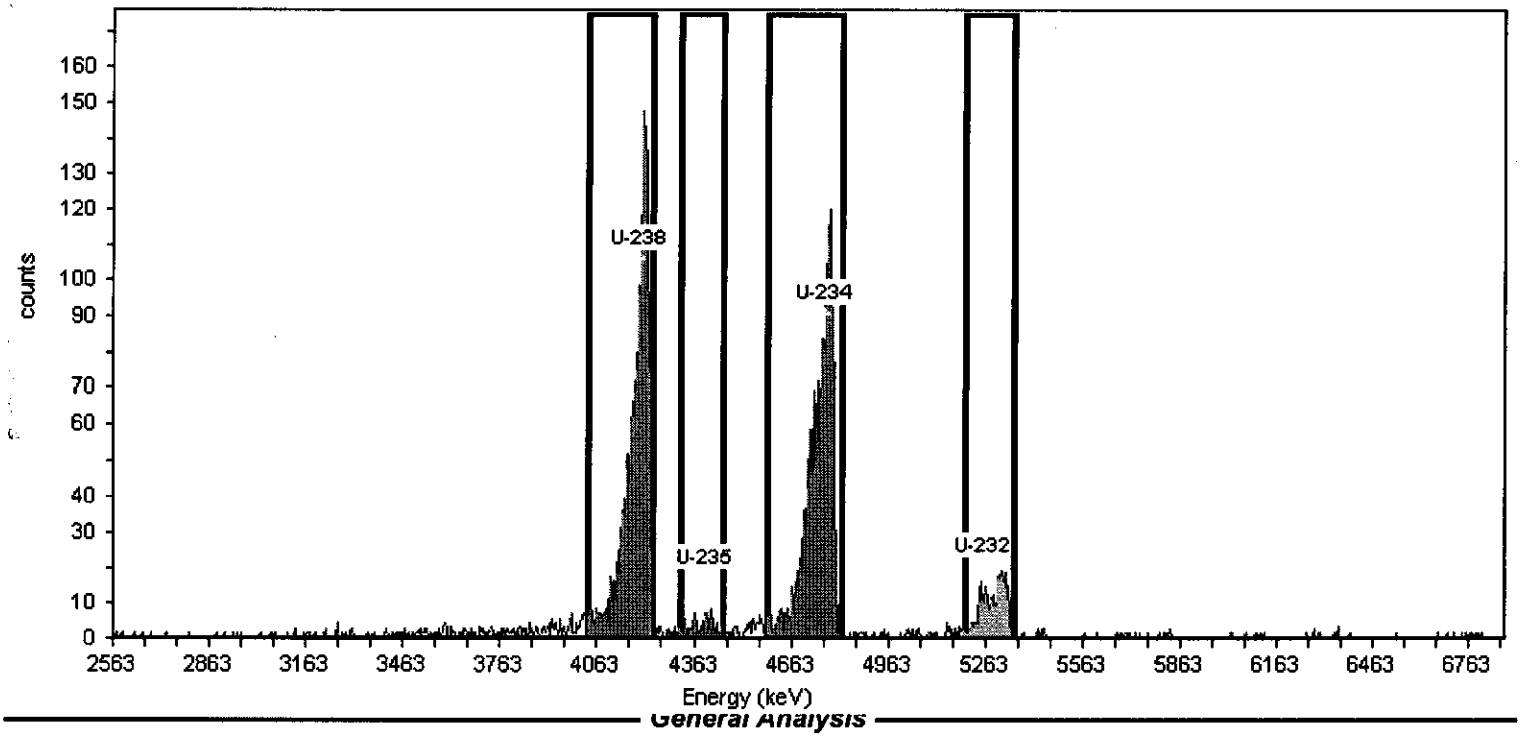
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 24.35%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/16/2010 8:59:45AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	19.059	100.2	1,981.33	1.0000	1,980	6.727E+001	1.744E+001	7.902E-002	2.500E-001
U-235	4396.000	4318.000	4453.000	86.347	80.9	92.08	4.0000	88	3.707E+000	1.547E+000	1.958E-001	5.055E-001
U-234	4765.000	4592.000	4819.000	34.797	100.0	1,854.82	9.0596	1,846	6.282E+001	1.633E+001	2.383E-001	5.687E-001
U-232	5263.000	5203.000	5350.000	20.552	99.8	320.31	3.6900	317	2.874E+000	5.025E-001	1.665E-001	4.339E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:25PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83110-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

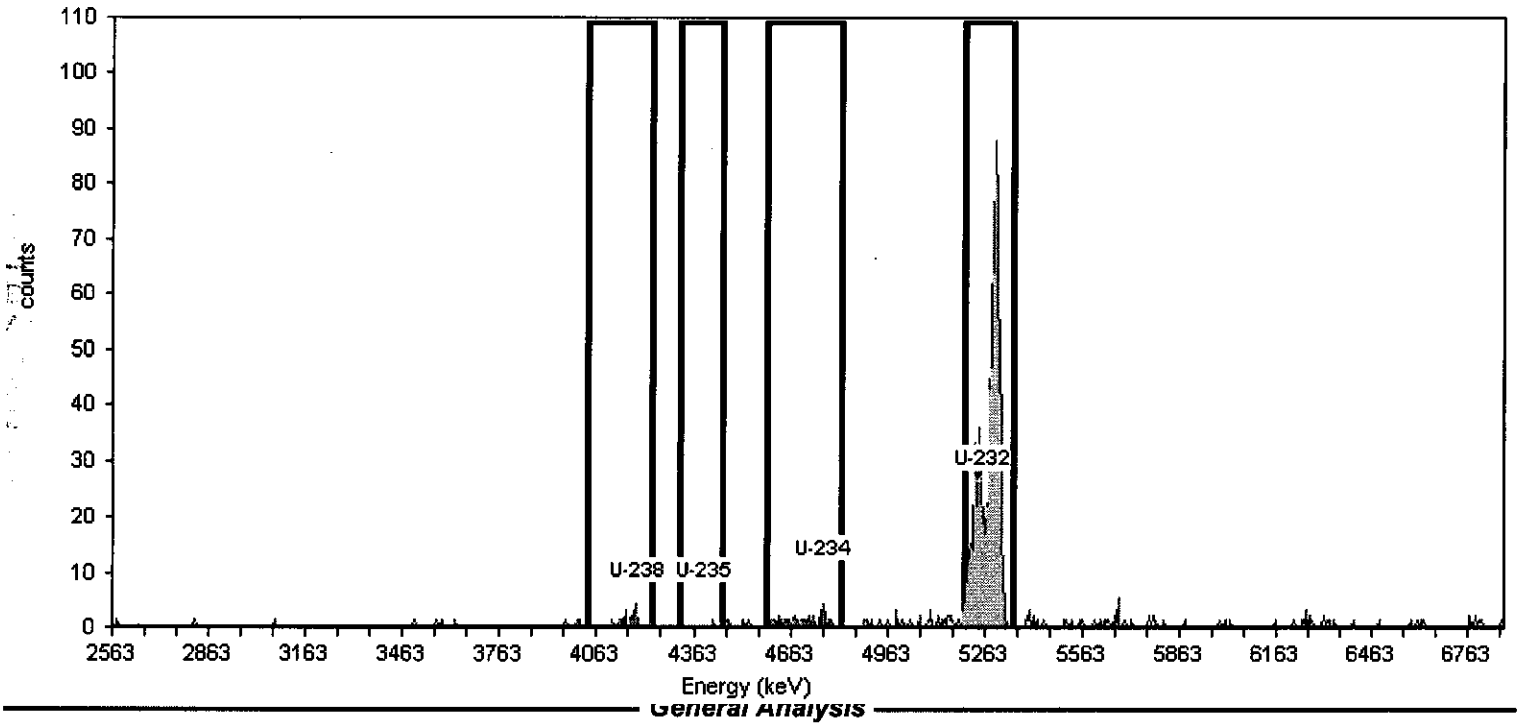
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.55%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/16/2010 8:59:47AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.576	100.2	17.43	5.0000	12	1.474E-001	1.713E-001	6.170E-002	1.555E-001
U-235	4396.000	4318.000	4453.000	22.479	80.9	1.98	5.0000	-3	-4.440E-002	1.168E-001	7.644E-002	1.926E-001
U-234	4765.000	4592.000	4819.000	164.467	100.0	36.00	8.2296	28	3.300E-001	2.469E-001	7.930E-002	1.908E-001
U-232	5263.000	5203.000	5350.000	33.964	99.8	910.49	3.6619	907	8.561E+000	9.202E-001	5.793E-002	1.511E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:13PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83111-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

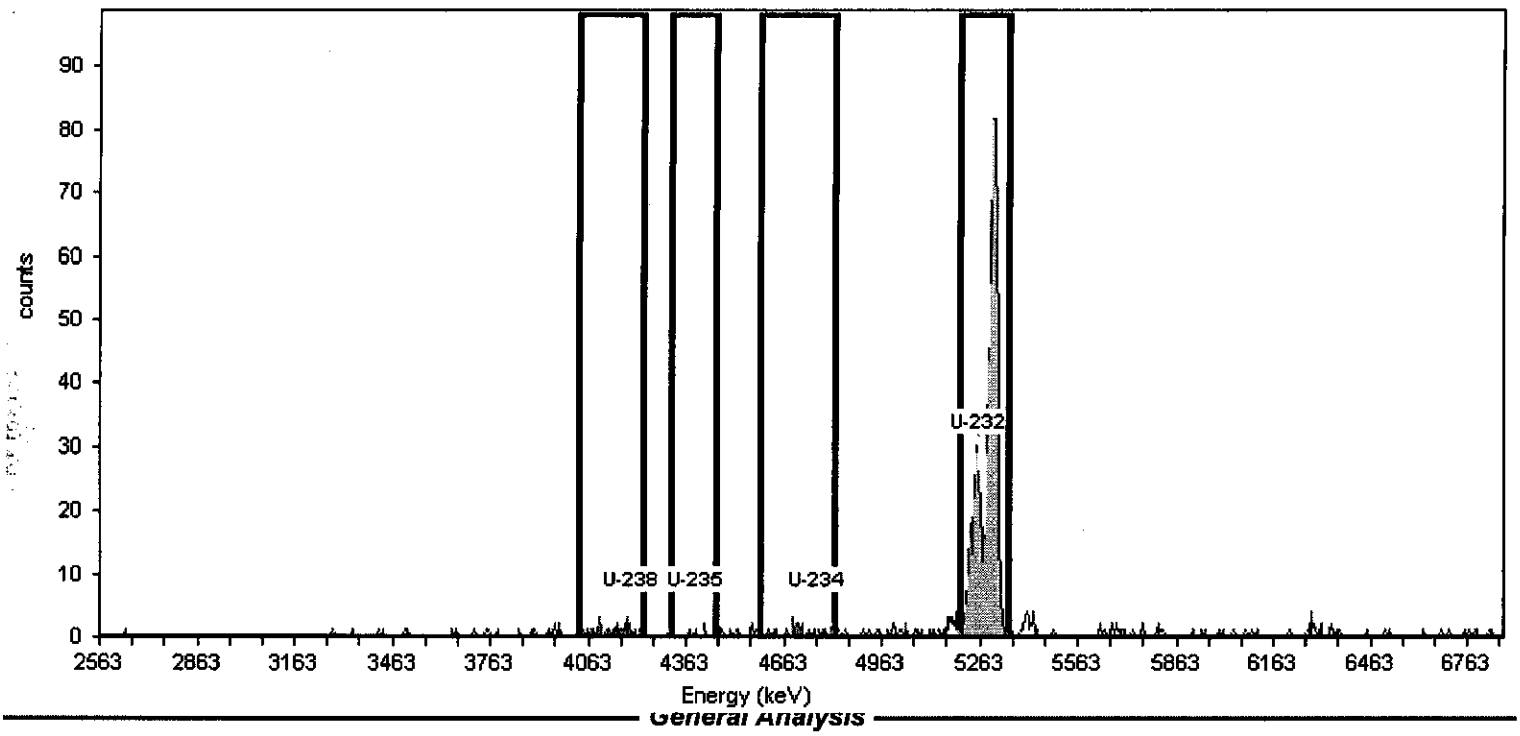
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.74%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/16/2010 8:59:46AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	110.665	100.2	26.00	5.0000	21	2.752E-001	2.265E-001	6.816E-002	1.718E-001
U-235	4396.000	4318.000	4453.000	58.299	80.9	4.00	5.0000	-1	-1.623E-002	1.461E-001	8.445E-002	2.128E-001
U-234	4765.000	4592.000	4819.000	28.605	100.0	22.46	27.0000	-5	-5.961E-002	2.773E-001	1.587E-001	3.529E-001
U-232	5263.000	5203.000	5350.000	32.814	99.8	827.97	7.1409	821	7.758E+000	8.745E-001	8.937E-002	2.176E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:21PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83176-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

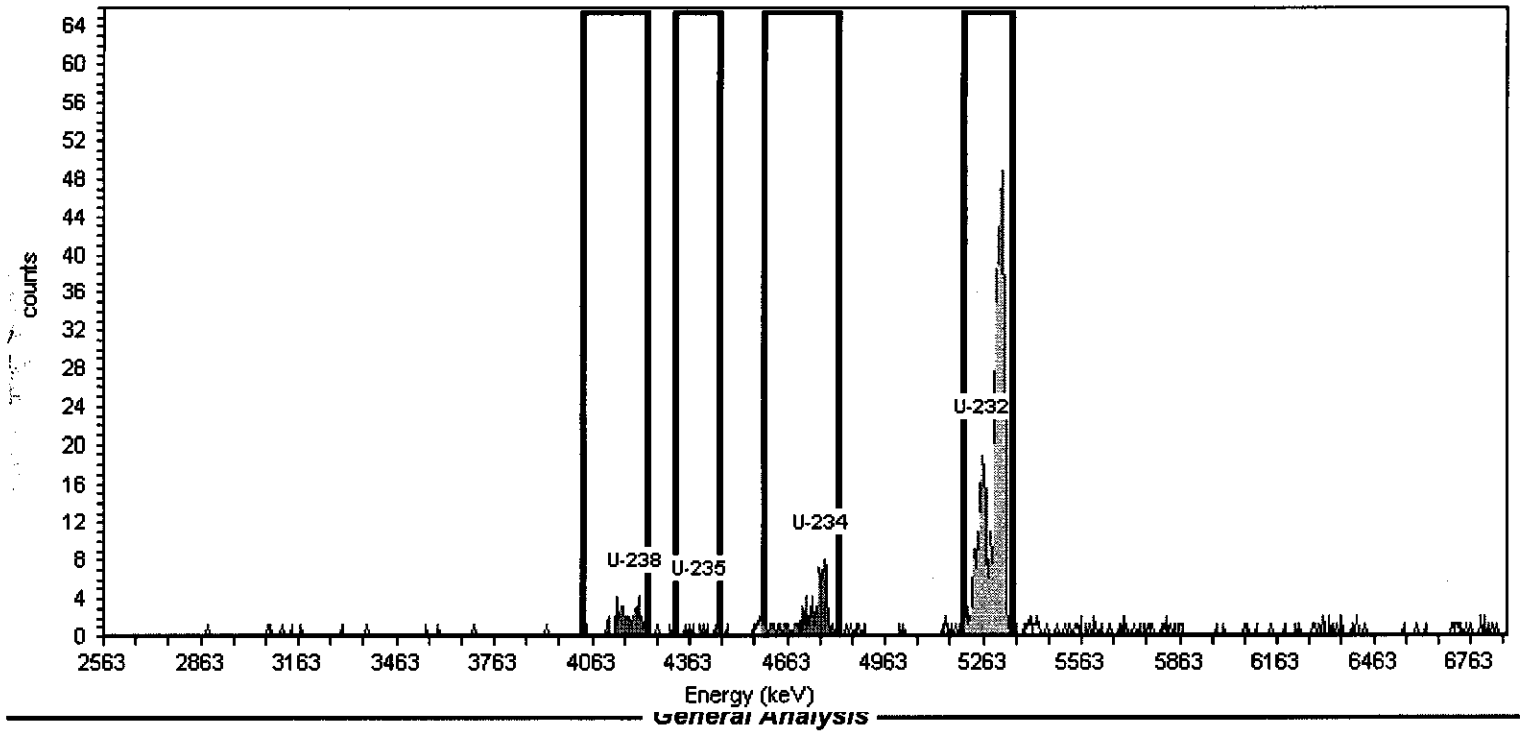
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 42.17%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/16/2010 8:59:46AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	75.084	100.2	48.00	8.0000	40	8.555E-001	5.185E-001	1.407E-001	3.393E-001
U-235	4396.000	4318.000	4453.000	8.579	80.9	8.02	4.0216	4	1.060E-001	2.769E-001	1.236E-001	3.190E-001
U-234	4765.000	4592.000	4819.000	36.898	100.0	84.00	24.0000	60	1.286E+000	7.299E-001	2.442E-001	5.464E-001
U-232	5263.000	5203.000	5350.000	14.504	99.8	510.83	7.9718	503	4.976E+000	7.052E-001	1.541E-001	3.718E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:33PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

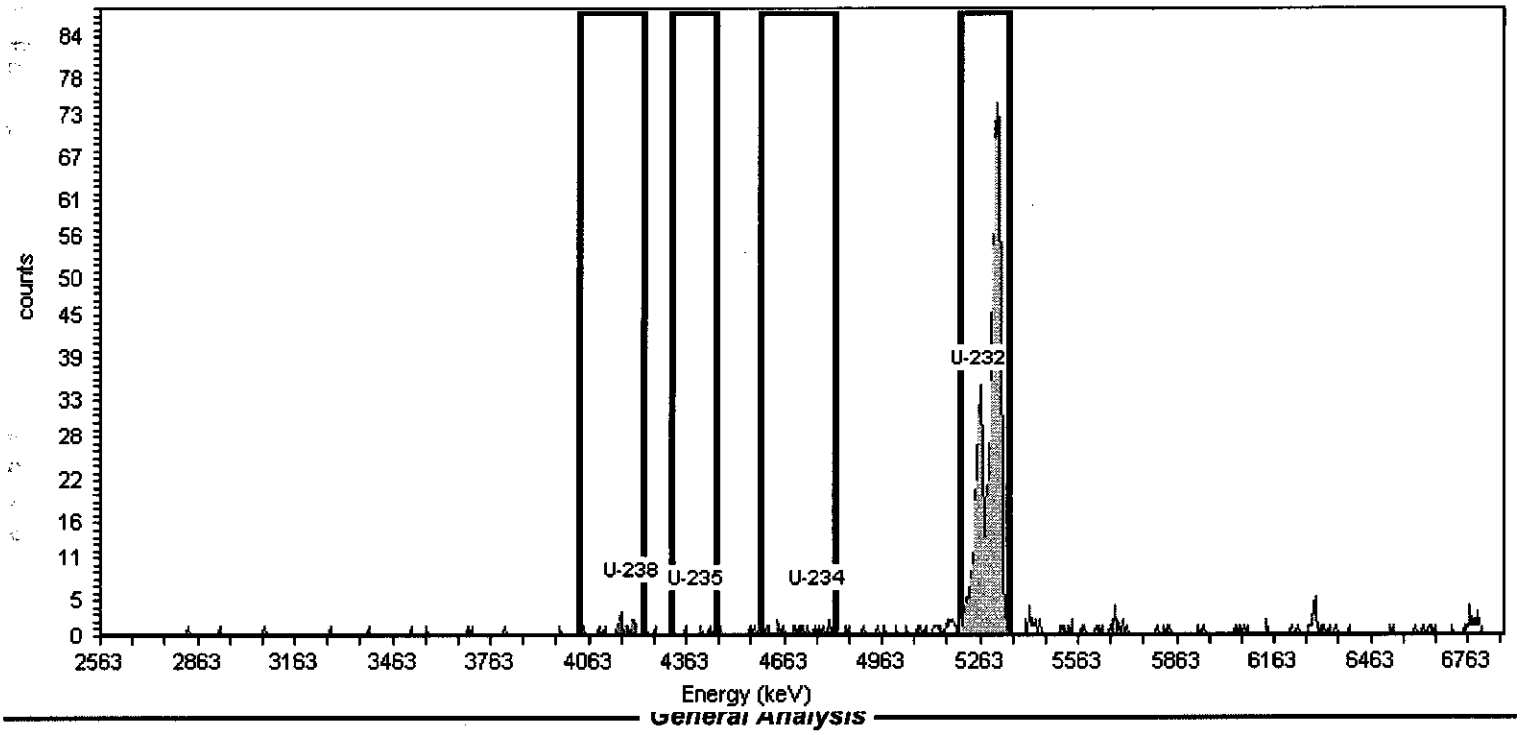
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.76%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/16/2010 8:59:48AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	26.284	100.2	19.00	6.0000	13	1.662E-001	1.950E-001	7.285E-002	1.803E-001
U-235	4396.000	4318.000	4453.000	5.791	80.9	3.00	5.9649	-3	-4.696E-002	1.426E-001	8.999E-002	2.228E-001
U-234	4765.000	4592.000	4819.000	6.115	100.0	18.83	14.0596	5	6.110E-002	2.207E-001	1.117E-001	2.581E-001
U-232	5263.000	5203.000	5350.000	13.703	99.8	855.31	14.0000	841	7.878E+000	8.840E-001	1.221E-001	2.821E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:41PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

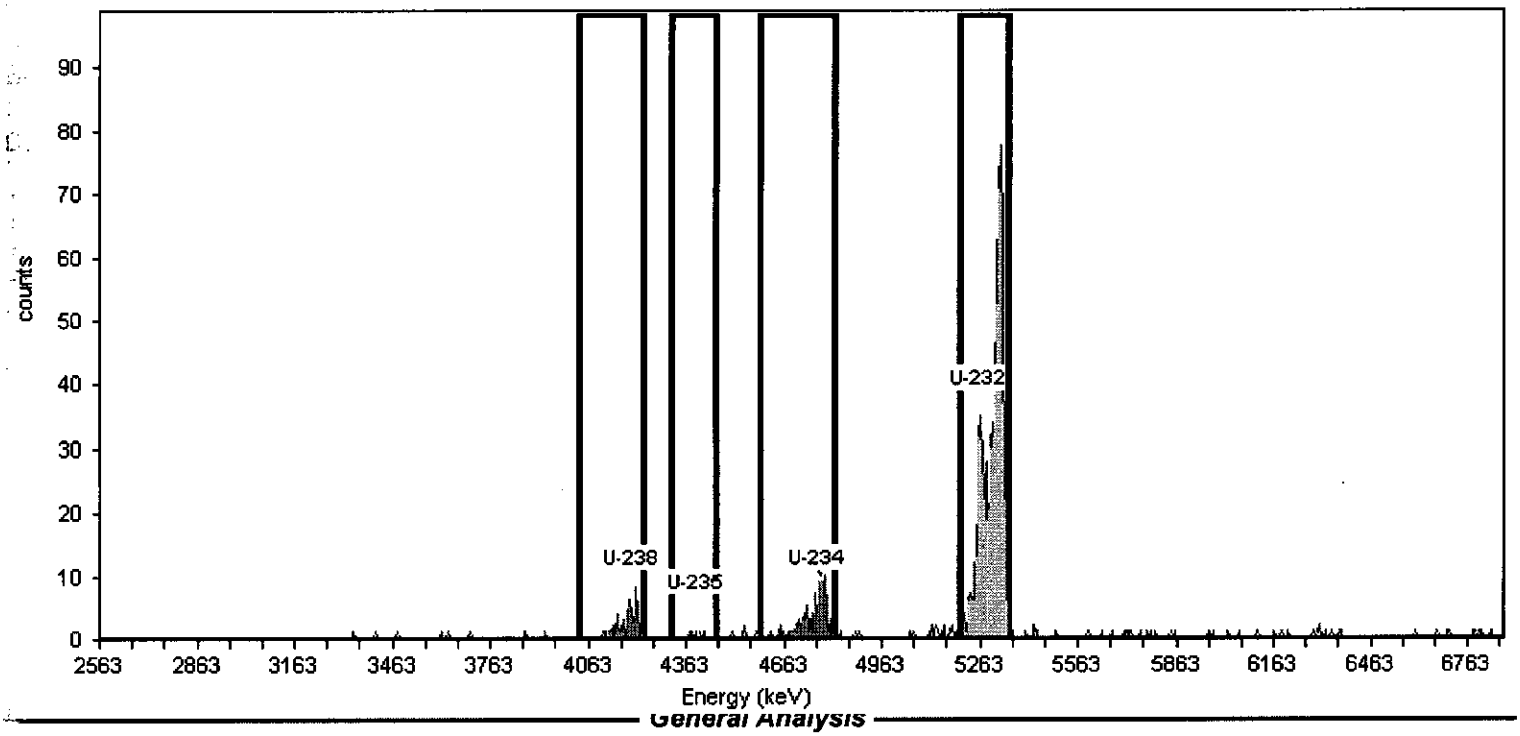
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.74%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/16/2010 8:59:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.619	100.2	58.00	4.0000	54	6.839E-001	3.322E-001	5.893E-002	1.521E-001
U-235	4396.000	4318.000	4453.000	77.448	80.9	5.96	1.0216	5	7.756E-002	1.255E-001	3.690E-002	1.162E-001
U-234	4765.000	4592.000	4819.000	24.189	100.0	127.23	9.0000	118	1.500E+000	5.457E-001	8.856E-002	2.114E-001
U-232	5263.000	5203.000	5350.000	22.364	99.8	853.24	4.0000	849	8.583E+000	9.541E-001	6.465E-002	1.669E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:49PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-03 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

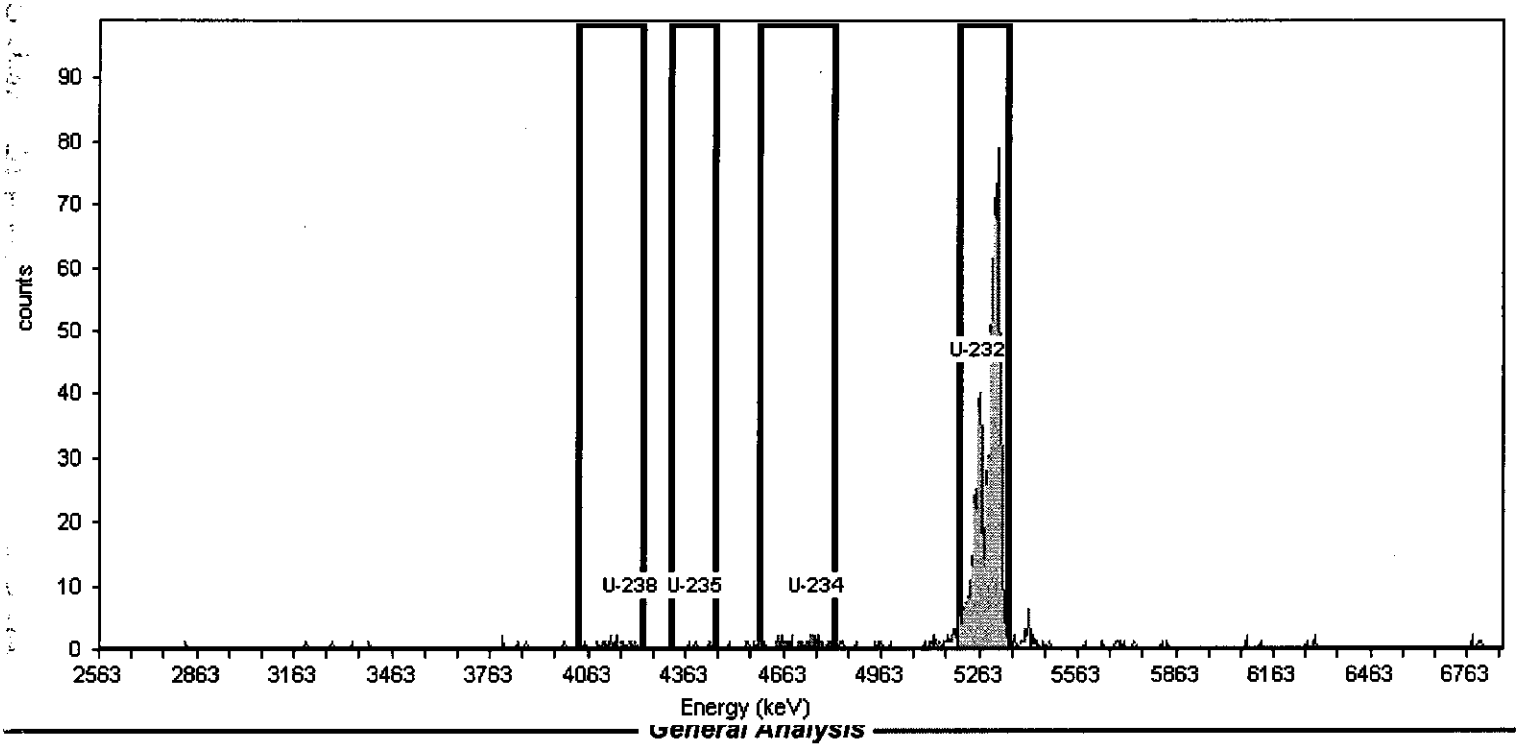
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.52%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/16/2010 8:59:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.020	100.2	15.00	1.0000	14	1.626E-001	1.435E-001	2.702E-002	8.548E-002
U-235	4396.000	4318.000	4453.000	5.764	80.9	4.00	0.0000	4	5.756E-002	9.728E-002	0.000E+000	3.894E-002
U-234	4765.000	4592.000	4819.000	215.494	100.0	31.65	10.0000	22	2.520E-001	2.314E-001	8.561E-002	2.027E-001
U-232	5263.000	5203.000	5350.000	13.883	99.8	936.93	11.0000	926	8.558E+000	9.164E-001	9.833E-002	2.311E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:09PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

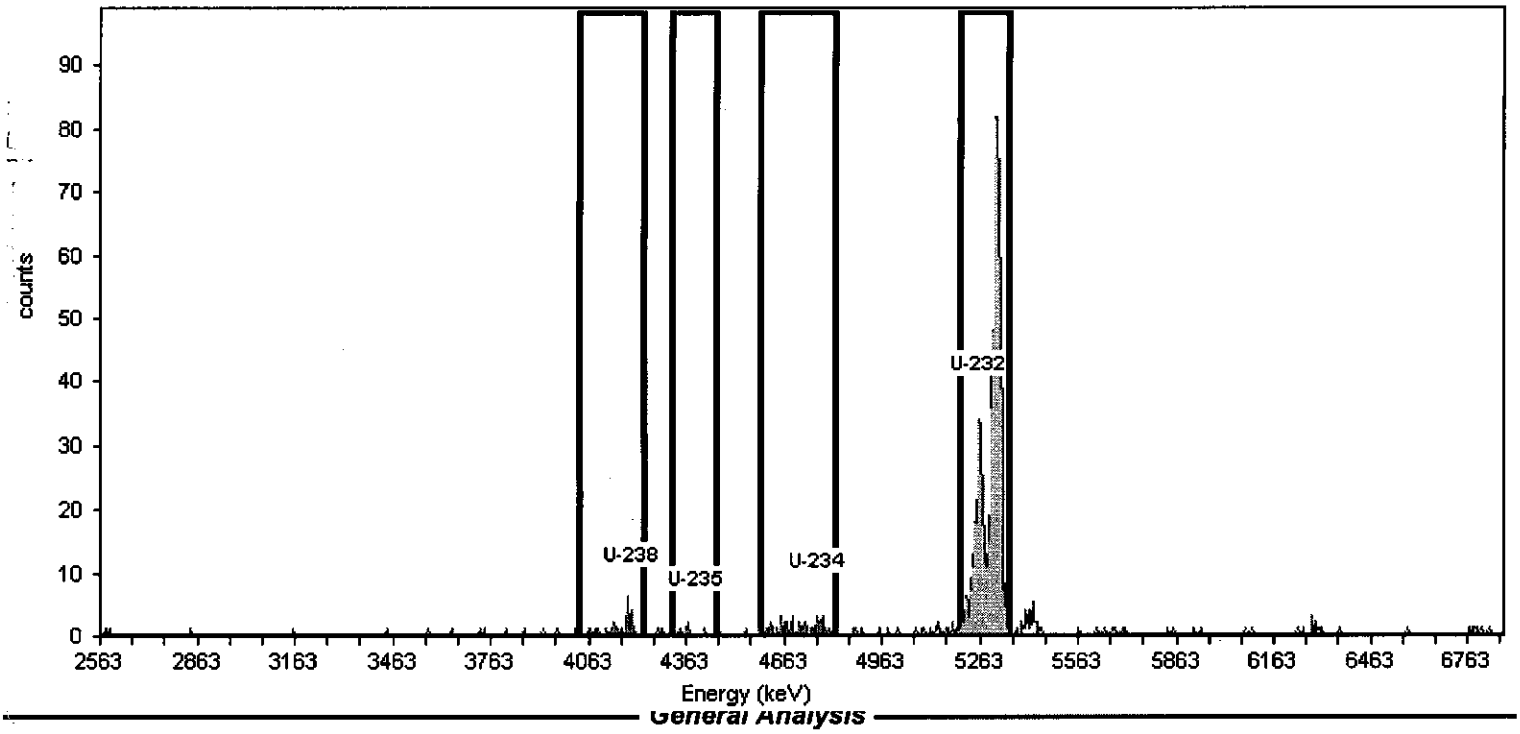
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.92%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/16/2010 8:59:50AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.741	100.2	31.00	2.0000	29	3.784E-001	2.387E-001	4.293E-002	1.212E-001
U-235	4396.000	4318.000	4453.000	27.996	80.9	5.00	0.0000	5	8.084E-002	1.200E-001	0.000E+000	4.375E-002
U-234	4765.000	4592.000	4819.000	139.235	100.0	40.83	13.0000	28	3.639E-001	2.979E-001	1.097E-001	2.547E-001
U-232	5263.000	5203.000	5350.000	15.172	99.8	828.86	4.6900	824	7.897E+000	8.870E-001	7.213E-002	1.830E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:17PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

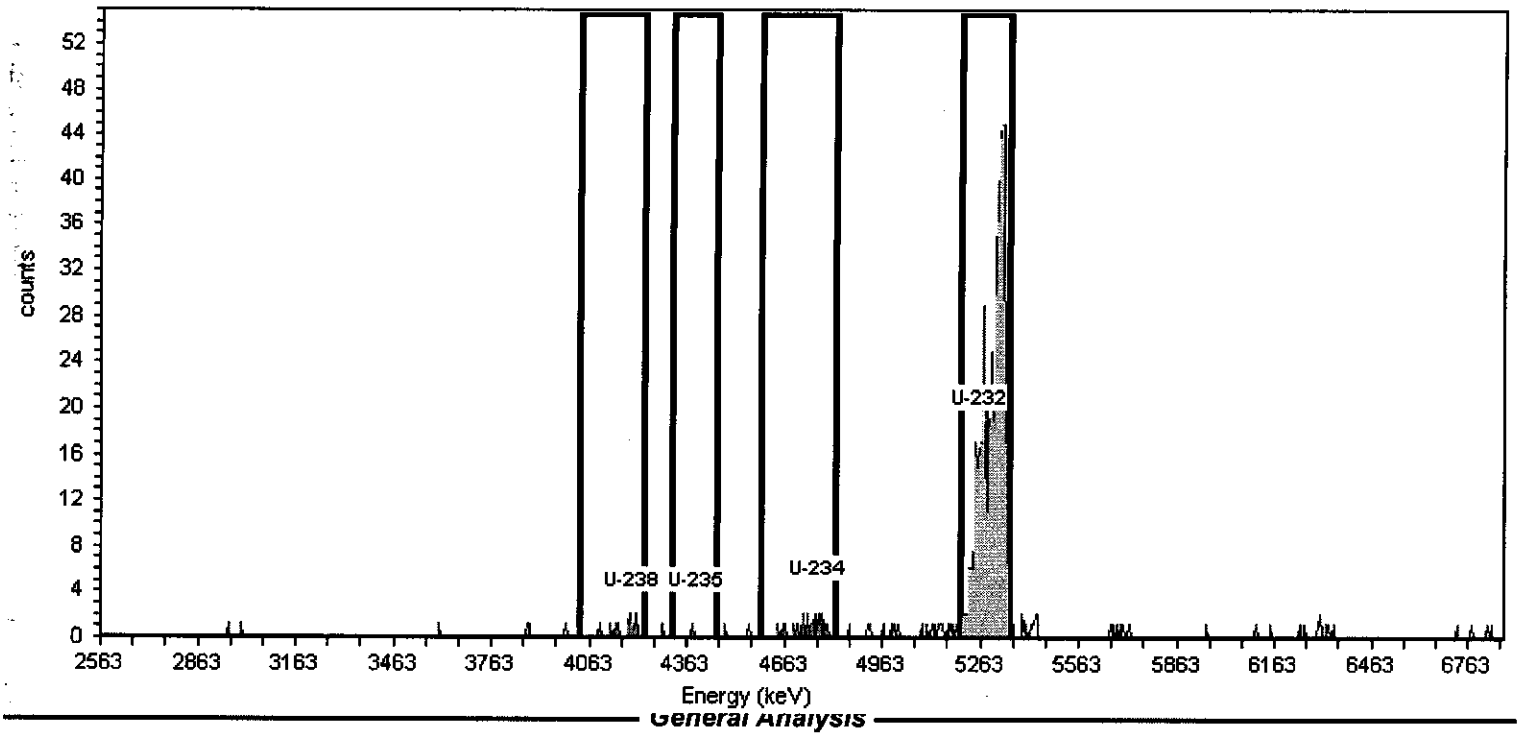
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 47.48%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/16/2010 8:59:51AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	5.841	100.2	11.00	2.0000	9	1.591E-001	1.944E-001	5.815E-002	1.641E-001
U-235	4396.000	4318.000	4453.000	25.143	80.9	1.00	2.0000	-1	-2.190E-002	1.139E-001	7.204E-002	2.033E-001
U-234	4765.000	4592.000	4819.000	84.173	100.0	27.00	3.0000	24	4.250E-001	3.056E-001	7.135E-002	1.906E-001
U-232	5263.000	5203.000	5350.000	25.221	99.8	610.55	2.0000	609	5.602E+000	7.174E-001	6.379E-002	1.801E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

7:55:17PM 7/16/2010

Sample

Sample: DUP 1 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 003
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

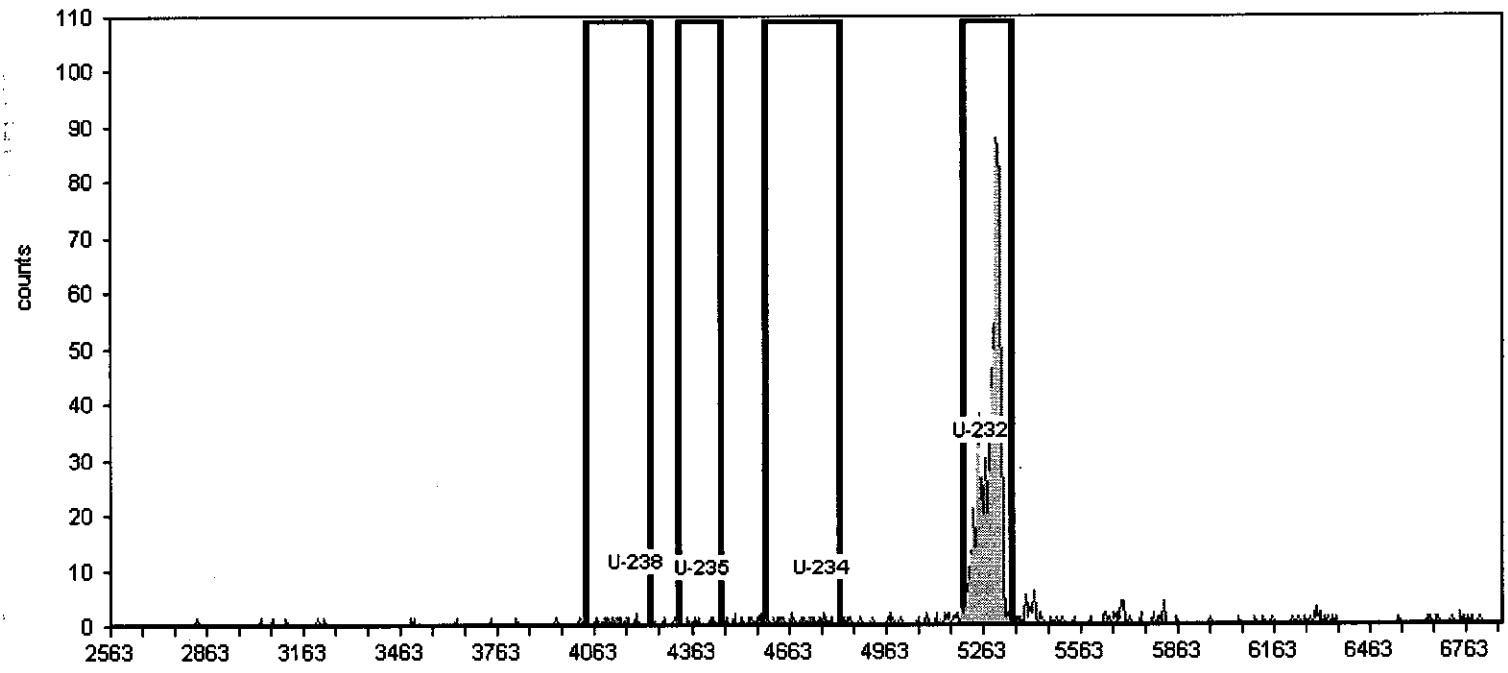
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 74.45%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/16/2010 2:55:24PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 2:54:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	60.832	100.2	13.00	5.0000	8	9.257E-002	1.485E-001	6.019E-002	1.517E-001
U-235	4396.000	4318.000	4453.000	5.928	80.9	5.04	5.0000	0	5.032E-004	1.362E-001	7.457E-002	1.879E-001
U-234	4765.000	4592.000	4819.000	168.000	100.0	24.54	27.0000	-2	-2.851E-002	2.498E-001	1.401E-001	3.116E-001
U-232	5263.000	5203.000	5350.000	37.229	99.8	936.65	7.1409	930	8.785E+000	9.372E-001	7.892E-002	1.922E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:55:21PM 7/16/2010

Analyst: ORTEC

Sample

Sample: DUP 2 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 003
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

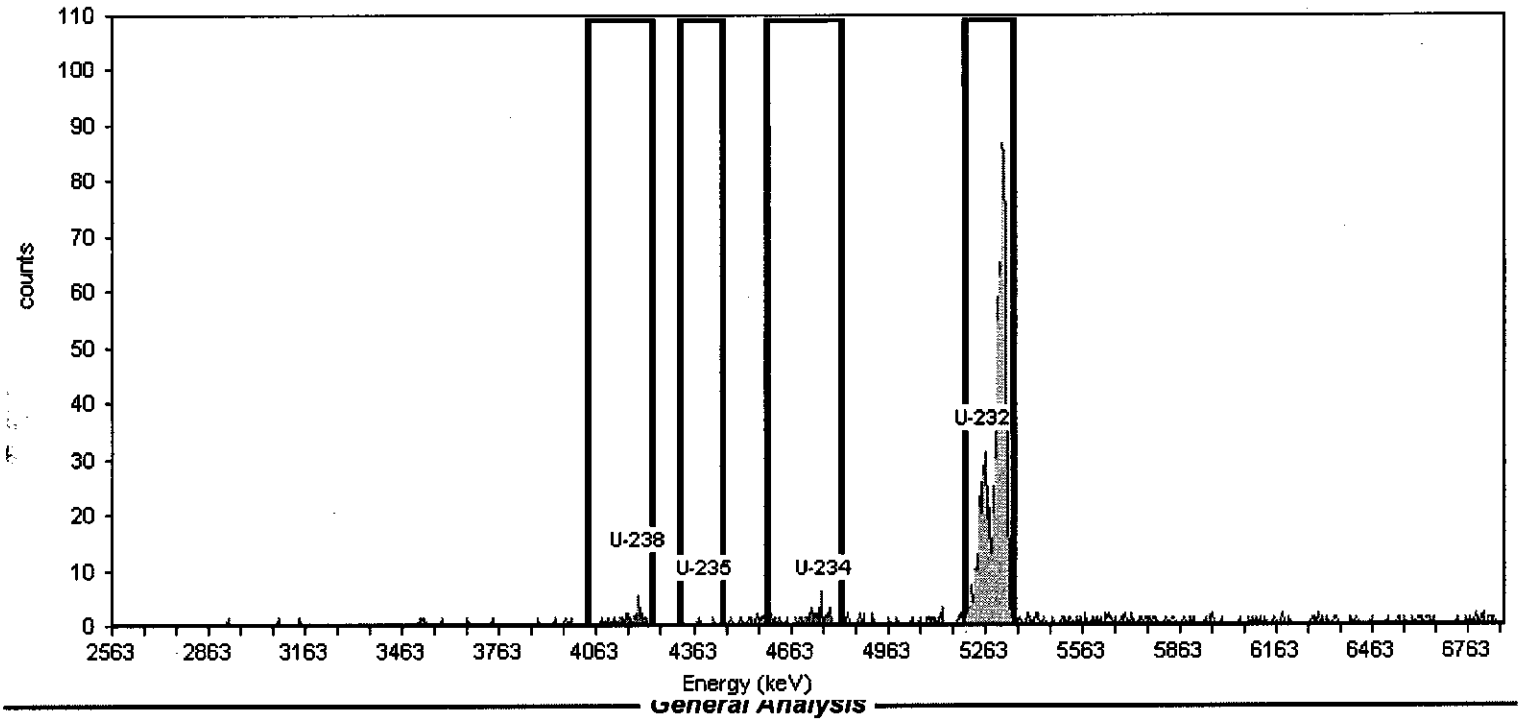
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 74.13%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/16/2010 2:55:26PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 2:54:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	69.829	100.2	26.00	8.0000	18	2.190E-001	2.177E-001	8.005E-002	1.930E-001
U-235	4396.000	4318.000	4453.000	25.147	80.9	2.00	4.0216	-2	-3.047E-002	1.111E-001	7.032E-002	1.814E-001
U-234	4765.000	4592.000	4819.000	53.666	100.0	39.06	24.0000	15	1.836E-001	2.929E-001	1.389E-001	3.108E-001
U-232	5263.000	5203.000	5350.000	14.397	99.8	892.00	7.9718	884	8.747E+000	9.577E-001	8.768E-002	2.115E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:55:25PM 7/16/2010

Analyst: ORTEC

Sample

Sample: MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 003
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

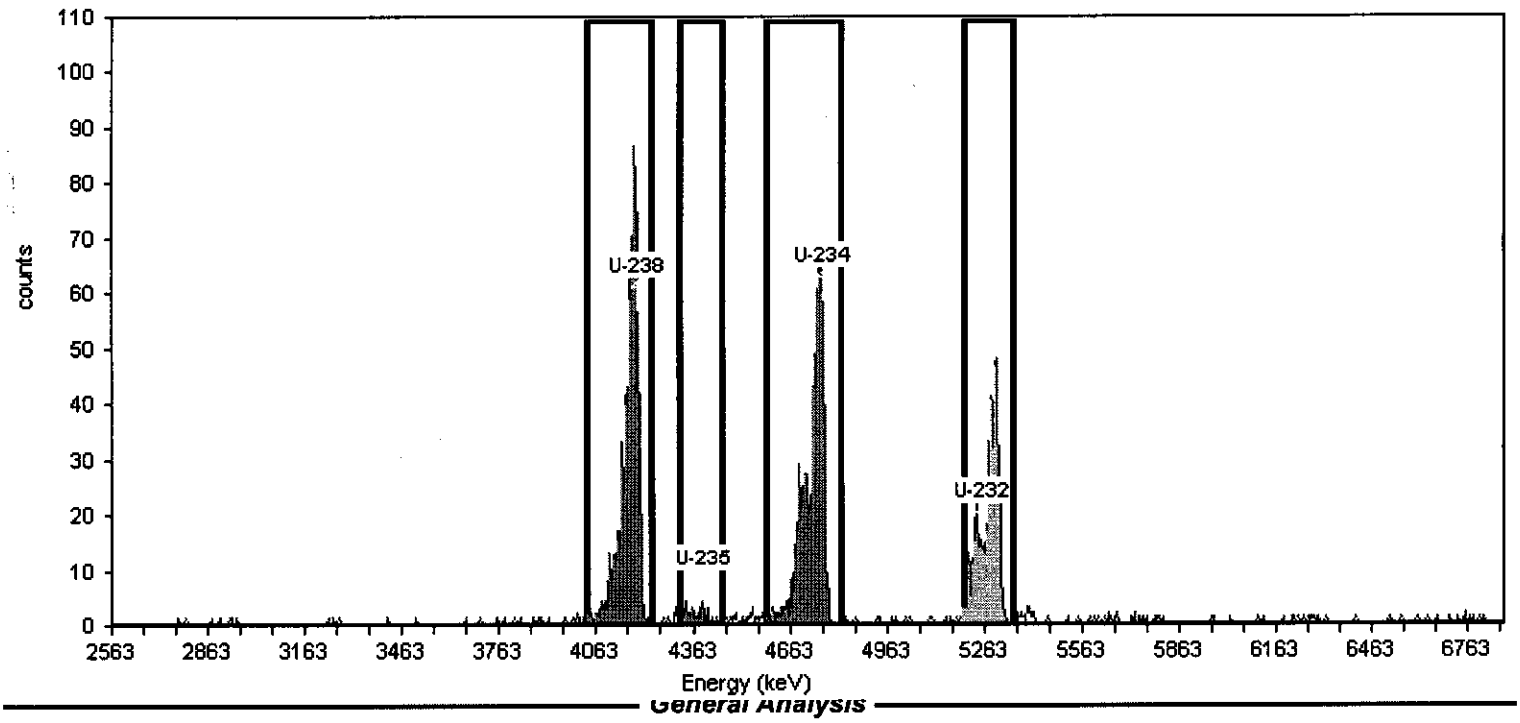
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 43.31%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/16/2010 2:55:28PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 2:54:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	38.527	100.2	889.00	5.0000	884	1.756E+001	4.332E+000	1.034E-001	2.605E-001
U-235	4396.000	4318.000	4453.000	68.477	80.9	35.00	5.0000	30	7.384E-001	4.957E-001	1.280E-001	3.227E-001
U-234	4765.000	4592.000	4819.000	36.129	100.0	840.88	8.2296	833	1.657E+001	4.113E+000	1.328E-001	3.196E-001
U-232	5263.000	5203.000	5350.000	38.122	99.8	545.00	3.6619	541	5.111E+000	6.932E-001	9.704E-002	2.531E-001

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82973

Radiochemistry

WG286066 **pb**

Sample	Date	SCN	LEAD 210
WG285343LCSW	07/14/10 11:57		X
L82893-01	07/14/10 11:57		X
L82906-01	07/14/10 11:57		X
L82941-01	07/14/10 11:57		X
L82941-02	07/14/10 11:57		X
L82973-01	07/14/10 11:57		X
L82973-02	07/14/10 11:57		X
L82973-01DUP	07/14/10 11:57		X
L82973-02MS	07/14/10 11:57		X
WG285343PBW	07/14/10 11:57		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82973

Radiochemistry

WG286141 **Th**

Sample	Date	SCN	THORIUM 228	THORIUM 230	THORIUM 232
WG285447PBW	07/09/10 12:01		X	X	X
WG285447LCSW	07/09/10 12:02			X	
L82906-01	07/09/10 12:03			X	
L82917-07	07/09/10 12:05		X	X	X
L82941-01	07/09/10 12:06			X	
L82941-02	07/09/10 12:08			X	
L82973-01	07/09/10 12:09			X	
L82973-02	07/09/10 12:11			X	
L82973-01DUP	07/09/10 12:12		X	X	X
L82973-02MS	07/09/10 12:13			X	

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82973

Radiochemistry

WG286203 **ra226**

Sample	Date	SCN	MITTING RADIUM I
WG285650PBW	07/12/10 00:00		X
WG285650LCSW	07/12/10 00:01		X
L82917-07	07/12/10 00:02		X
L82973-01	07/12/10 00:04		X
L82973-02	07/12/10 00:05		X
L82973-01DUP	07/12/10 00:07		X
L82973-02MS	07/12/10 00:08		X

ACZ Laboratories, Inc.
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Run Log by Workgroup

Columbia Analytical Services

Project ID: L82973

Radiochemistry

WG286268 **U**

Sample	Date	SCN	URANIUM 234	URANIUM 235	URANIUM 238
WG285975PBW	07/16/10 09:00		X	X	X
WG285975LCSW	07/16/10 09:01		X	X	X
L82973-01	07/16/10 09:02		X	X	X
L82973-02	07/16/10 09:04		X	X	X
L83048-01	07/16/10 09:05		X	X	X
L83048-02	07/16/10 09:07		X	X	X
L83090-01	07/16/10 09:08		X	X	X
L83090-02	07/16/10 09:10		X	X	X
L83110-01	07/16/10 09:11		X	X	X
L83111-01	07/16/10 09:12		X	X	X
L83176-03	07/16/10 09:14		X	X	X
L83216-01	07/16/10 09:15		X	X	X
L83216-02	07/16/10 09:17		X	X	X
L83216-03	07/16/10 09:18		X	X	X
L83216-04	07/16/10 09:20		X	X	X
L83216-05	07/16/10 09:21		X	X	X
L82973-01DUP	07/16/10 09:23		X	X	X
L83216-04DUP	07/16/10 09:24		X	X	X
L83111-01MS	07/16/10 09:25		X	X	X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

July 28, 2010

Report to:
Lynda Huckestein
Columbia Analytical Services
1317 S. 13th Ave.
Kelso, WA 98626

Bill to:
Accounts Payable
Columbia Analytical Services
1317 South 13th Ave.
Kelso, WA 98626

cc: Columbia Analytical Services, Inc.

Project ID: K1006636
ACZ Project ID: L82974

Lynda Huckestein:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 29, 2010. This project has been assigned to ACZ's project number, L82974. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L82974. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 28, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-10 0-2 COMP

ACZ Sample ID: ***L82974-01***
Date Sampled: *06/23/10 12:50*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:05	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:00	meg/brd

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-10 2-12 COMP

ACZ Sample ID: ***L82974-02***
Date Sampled: *06/23/10 13:00*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:10	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:04	meg/brd

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-10 12-18 COMP

ACZ Sample ID: ***L82974-03***
Date Sampled: *06/23/10 13:10*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:15	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:08	meg/brd

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-14 0-2 COMP

ACZ Sample ID: ***L82974-04***
Date Sampled: *06/23/10 16:25*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:21	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:12	meg/brd

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-14-2-12 COMP

ACZ Sample ID: ***L82974-05***
Date Sampled: *06/23/10 16:35*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:26	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:17	meg/brd

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-14 12-18 COMP

ACZ Sample ID: ***L82974-06***
Date Sampled: *06/23/10 16:45*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/12/10 13:31	zsh
Crush and Pulverize	USDA No. 1, 1972							07/14/10 13:21	meg/brd

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(5)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(6)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1)	QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3)	Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L82974***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-10 0-2 COMP
Locator:

ACZ Sample ID: ***L82974-01***
Date Sampled: *06/23/10 12:50*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		0.0	1.4	5.6	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:04		5.5	1.1	1.9	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:49		1.2	0.5	0.56	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:41		0.78	0.36	0.21	pCi/g	*	mwm
Uranium 235	07/26/10 15:41		0.02	0.13	0.21	pCi/g	*	mwm
Uranium 238	07/26/10 15:41		0.92	0.36	0.21	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-10 2-12 COMP
Locator:

ACZ Sample ID: ***L82974-02***
Date Sampled: *06/23/10 13:00*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		0.0	1.4	5.4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:06		7.6	1.3	1.8	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:51		0.5	0.4	0.55	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:43		0.88	0.43	0.21	pCi/g	*	mwm
Uranium 235	07/26/10 15:43		0.0	0.14	0.21	pCi/g	*	mwm
Uranium 238	07/26/10 15:43		1.11	0.39	0.21	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-10 12-18 COMP
Locator:

ACZ Sample ID: ***L82974-03***
Date Sampled: *06/23/10 13:10*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		2.2	1.7	6.6	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:07		5.9	1.2	1.9	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:52		1.6	0.53	0.59	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:44		0.67	0.42	0.22	pCi/g	*	mwm
Uranium 235	07/26/10 15:44		0.18	0.22	0.22	pCi/g	*	mwm
Uranium 238	07/26/10 15:44		0.89	0.4	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-14 0-2 COMP
Locator:

ACZ Sample ID: ***L82974-04***
Date Sampled: *06/23/10 16:25*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		3.3	1.5	5.6	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:09		5.4	1.1	1.8	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:54		0.65	0.38	0.59	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:46		0.67	0.48	0.22	pCi/g	*	mwm
Uranium 235	07/26/10 15:46		-0.03	0.19	0.22	pCi/g	*	mwm
Uraniurn 238	07/26/10 15:46		1.18	0.38	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-14-2-12 COMP
Locator:

ACZ Sample ID: ***L82974-05***
Date Sampled: *06/23/10 16:35*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		5.1	1.4	5.1	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:10		5.6	0.95	1.4	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:55		0.72	0.4	0.6	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:47		0.37	0.41	0.23	pCi/g	*	mwm
Uranium 235	07/26/10 15:47		-0.18	0.21	0.23	pCi/g	*	mwm
Uranium 238	07/26/10 15:47		0.85	0.38	0.23	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006636
Sample ID: BG-14 12-18 COMP
Locator:

ACZ Sample ID: ***L82974-06***
Date Sampled: *06/23/10 16:45*
Date Received: *06/29/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/23/10 13:21		2	1.5	5.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/20/10 12:12		5.6	1	1.5	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/21/10 9:57		0.79	0.42	0.6	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/26/10 15:49		0.7	0.38	0.21	pCi/g	*	mwm
Uranium 235	07/26/10 15:49		0.09	0.14	0.21	pCi/g	*	mwm
Uranium 238	07/26/10 15:49		0.67	0.29	0.21	pCi/g	*	mwm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services ACZ Project ID: ***L82974***

Project ID: K1006636

Lead 210 (3050) Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286634																
WG286254LCSS	LCSS	07/23/10	RC100623-1	77.23				57	2.4	5.7	73.8	47	102			
WG286254PBS	PBS	07/23/10						.93	1.5	5.7			11.4			
L82974-02MS	MS	07/23/10	RC100623-1	77.23	0	1.4	5.4	66	2.5	5.6	85.5	47	102			
L82974-03DUP	DUP-RER	07/23/10			2.2	1.7	6.6	1.8	1.4	5.2				0.18	2	
L82974-01DUP	DUP-RER	07/23/10			0	1.4	5.6	.06	1.2	4.8				0.03	2	

Radium 226 + Alpha Emitting Radium M9315 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286455																
WG286266PBS	PBS	07/20/10						.51	0.35	1.6			3.2			
WG286266LCSS	LCSS	07/20/10	RC100624-2	47.83				43	2.7	1.4	89.9	71	121			
L82974-01DUP	DUP-RER	07/20/10			5.5	1.1	1.9	5.4	1.1	1.7				0.06	2	
L82974-02DUP	DUP-RER	07/20/10			7.6	1.3	1.8	4.7	0.95	1.6				1.8	2	
L82974-03MS	MS	07/20/10	RC100624-2	47.83	5.9	1.2	1.9	51	3.2	1.7	94.3	71	121			

Thorium 230 (3050) ESM 4506 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286554																
WG286328PBS	PBS	07/21/10						-.2	0.33	0.66			1.32			
WG286328LCSS	LCSS	07/21/10	RC091215-1	162.12				170	4.5	0.6	104.9	90	120			
L82974-01DUP	DUP-RER	07/21/10			1.2	0.5	0.56	1	0.47	0.54				0.29	2	
L82974-03DUP	DUP-RER	07/21/10			1.6	0.53	0.59	.74	0.45	0.57				1.24	2	
L82974-02MS	MS	07/21/10	RC091215-1	162.12	0.5	0.4	0.55	170	4.6	0.64	104.6	90	120			

Uranium 234 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286781																
WG286325PBS	PBS	07/26/10						.38	0.41	0.2			0.4			
WG286325LCSS	LCSS	07/26/10	RC100223-2	33.13				37	2.6	0.36	111.7	89	132			
L82974-02DUP	DUP-RER	07/26/10			0.88	0.43	0.21	.74	0.35	0.2				0.25	2	
L82974-03DUP	DUP-RER	07/26/10			0.67	0.42	0.22	.8	0.41	0.2				0.22	2	
L82974-01MS	MS	07/26/10	RC100223-2	33.13	0.78	0.36	0.21	37	2.8	0.39	109.3	89	132			

Uranium 235 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286781																
WG286325PBS	PBS	07/26/10						.02	0.14	0.2			0.4			
WG286325LCSS	LCSS	07/26/10	RC100223-2	1.58				1.5	0.58	0.36	94.9	45	150			
L82974-02DUP	DUP-RER	07/26/10			0	0.14	0.21	.09	0.15	0.2				0.44	2	
L82974-03DUP	DUP-RER	07/26/10			0.18	0.22	0.22	.07	0.16	0.2				0.4	2	
L82974-01MS	MS	07/26/10	RC100223-2	1.58	0.02	0.13	0.21	1.7	0.65	0.39	106.3	45	150			

Columbia Analytical Services
Project ID: K1006636

ACZ Project ID: ***L82974***

Uranium 238 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286781																
WG286325PBS	PBS	07/26/10						-.09	0.21	0.2			0.4			
WG286325LCSS	LCSS	07/26/10	RC100223-2	34.39				36.8	2.6	0.36	107	87	132			
L82974-02DUP	DUP-RER	07/26/10			1.11	0.39	0.21	.62	0.3	0.2				1	2	
L82974-03DUP	DUP-RER	07/26/10			0.89	0.4	0.22	.92	0.36	0.2				0.06	2	
L82974-01MS	MS	07/26/10	RC100223-2	34.39	0.92	0.36	0.21	40.5	2.9	0.39	115.1	87	132			

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadChem Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L82974***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Columbia Analytical Services

ACZ Project ID: ***L82974***

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lead 210 (3050)	Eichrom
Thorium 230 (3050)	ESM 4506
Uranium 234	Eichrom
Uranium 235	Eichrom
Uranium 238	Eichrom

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006636

ACZ Project ID: L82974
Date Received: 06/29/2010 10:31
Received By: gac
Date Printed: 6/30/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
NA11117		2	10

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006636

ACZ Project ID: L82974
Date Received: 06/29/2010 10:31
Received By: gac
Date Printed: 6/30/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L82974-01	BG-10 0-2 COMP									X		
L82974-02	BG-10 2-12 COMP									X		
L82974-03	BG-10 12-18 COMP									X		
L82974-04	BG-14 0-2 COMP									X		
L82974-05	BG-14-2-12 COMP									X		
L82974-06	BG-14 12-18 COMP									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

Project Number: K1006636
Project Manager: Lynda Huckestein

C82974

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006636-001	BG-10 0-2 COMP	1-8oz	Soil	6/23/10	1250	ACZ	✓	✓	✓	✓
K1006636-002	BG-10 2-12 COMP	"	Soil	6/23/10	1300	ACZ				
K1006636-003	BG-10 12-18 COMP	"	Soil	6/23/10	1310	ACZ				
K1006636-004	BG-121 COMP	2-1gal. Cube	Water	6/23/10	1330	ACZ				
K1006636-005	BG-14 0-2 COMP	1-8oz	Soil	6/23/10	1625	ACZ				
K1006636-006	BG-14-2-12 COMP	"	Soil	6/23/10	1635	ACZ				
K1006636-007	BG-14 12-18 COMP	"	Soil	6/23/10	1645	ACZ				
K1006636-008	BG-122 COMP	2-1gal Cube	Water	6/23/10	1655	ACZ				

760

Test Comments

MISC_OUT_1 - None	K1006636-001,2,3,4,5,6,7,8	Lead 210/Eichrom to ACZ
MISC_OUT_2 - None	K1006636-001,2,3,4,5,6,7,8	Uranium-isotopic/Eichrom
MISC_OUT_3 - None	K1006636-001,2,3,4,5,6,7,8	Thorium-isotopic/ESM 4506
MISC_OUT_4 - None	K1006636-001,2,3,4,5,6,7,8	Radium 226 ~~and 228~~/M9315 ~~and M9320~~

COPY

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Follow Rhodia / Barr QAPP

Turnaround Requirements

____RUSH (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

✓ STANDARD

Requested FAX Date: _____

Requested Report Date: 07/13/10

Report Requirements

____ I. Results Only

____ II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

✓ IV. Data Validation Report with Raw Data

POL/MDL/J Y

EDD

Invoice Information

PO# K1006636

Bill to

Relinquished By: _____ 6/28/10 0930

Received By: _____ 6-29-10

Airbill Number: _____

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: zsh
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time: 07/12/2010 13:00
End Date/Time: 07/12/2010 14:30

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L82935-01	CRP-1-SEDIMENT	as-rec		SAVE SX	07/12/10 13:00	7/12/2010	
2	L82974-01	BG-10 0-2 COMP	as-rec			07/12/10 13:05	7/12/2010	
3	L82974-02	BG-10 2-12 COMP	as-rec			07/12/10 13:10	7/12/2010	
4	L82974-03	BG-10 12-18 COMP	as-rec			07/12/10 13:15	7/12/2010	
5	L82974-04	BG-14 0-2 COMP	as-rec			07/12/10 13:21	7/12/2010	
6	L82974-05	BG-14-2-12 COMP	as-rec			07/12/10 13:26	7/12/2010	
7	L82974-06	BG-14 12-18 COMP	as-rec			07/12/10 13:31	7/12/2010	
8	L82975-01	BG-5 0-2 COMP	as-rec			07/12/10 13:37	7/12/2010	
9	L82975-02	BG-5 2-12 COMP	as-rec			07/12/10 13:42	7/12/2010	
10	L82975-03	BG-5 12-18 COMP	as-rec			07/12/10 13:47	7/12/2010	
11	L82975-04	BG-9 0-2 COMP	as-rec			07/12/10 13:53	7/12/2010	
12	L82975-05	BG-9 2-12 COMP	as-rec			07/12/10 13:58	7/12/2010	
13	L82975-06	BG-9 12-18 COMP	as-rec			07/12/10 14:03	7/12/2010	
14	L82975-07	BG-13 0-2 COMP	as-rec			07/12/10 14:08	7/12/2010	
15	L82975-08	BG-13 2-12 COMP	as-rec			07/12/10 14:14	7/12/2010	
16	L82975-09	BG-13 12-18 COMP	as-rec			07/12/10 14:19	7/12/2010	
17	**L83116-01**	LOWERSEDPOND-4	as-rec	30		07/12/10 14:24	7/12/2010	
18	**L83156-01**	10-041	as-rec	30		07/12/10 14:30	7/12/2010	

Report Comments: _____

Internal Comments _____

AREV: ZSH 7-12-10
Initials, Date

SREV: BRD 7-12-10
Initials, Date

7/12/2010 2:31:40 PM 71010 HB
7/14/10

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: zsh
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time: 07/12/2010 13:00
End Date/Time: 07/12/2010 14:30

Sample	Login Comments
L82935-01	SJ || in inorganic walk-in
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in
L83116-01	ZIPLOCK ||
L83156-01	SJ(3) || In Inorganic cooler.

Report Comments: _____

Internal Comments _____

AREV: ZSH 7.12.10
Initials, Date

SREV: _____
Initials, Date

7/12/2010 2:31:40 PM 71010

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: ZSH
Date: 7-12-10

Approved: BRD
Date: 7.12.10

Analyst: ZACH HOLLADAY

Workgroup: 285851

Analysis Date: 7-12-10

Sample type used: AS-REC, SOIL

Extraction / Digestion / Analysis / Prep / Calc:

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?			✓
3. Were proper volumes of reagents used per final volume?			✓
4. Was the proper sub-sample used (as received, <2000, <500, <250, dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?			✓
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?			✓
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments:

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: ZSH
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time: 7/12/10 1p
End Date/Time:

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L82935-01	CRP-1-SEDIMENT	AS-REC		SAVE SX	7-12-10	7-12-10	
2	L82974-01	BG-10 0-2 COMP						
3	L82974-02	BG-10 2-12 COMP						
4	L82974-03	BG-10 12-18 COMP						
5	L82974-04	BG-14 0-2 COMP						
6	L82974-05	BG-14-2-12 COMP						
7	L82974-06	BG-14 12-18 COMP						
8	L82975-01	BG-5 0-2 COMP						
9	L82975-02	BG-5 2-12 COMP						
10	L82975-03	BG-5 12-18 COMP						
11	L82975-04	BG-9 0-2 COMP						
12	L82975-05	BG-9 2-12 COMP						
13	L82975-06	BG-9 12-18 COMP						
14	L82975-07	BG-13 0-2 COMP						
15	L82975-08	BG-13 2-12 COMP						
16	L82975-09	BG-13 12-18 COMP						
17	**L83116-01**	LOWERSEDPOND-4		30				
18	**L83156-01**	10-041		30				

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/12/2010 12:55:31 PM 71010

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG285851

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/12/2010 12:55
Start Date/Time:
End Date/Time:

Sample	Login Comments
L82935-01	SJ || in inorganic walk-in
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in
L83116-01	ZIPLOCK ||
L83156-01	SJ(3) || In Inorganic cooler.

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/12/2010 12:55:31 PM 71010

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG285851

Date Reported: 12-Jul-10
Run ID: R732887
Date Analyzed: 12-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L82935-01

Tag: Measured: 7/12/2010 1:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-01

Tag: Measured: 7/12/2010 1:05:18 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-02

Tag: Measured: 7/12/2010 1:10:36 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-03

Tag: Measured: 7/12/2010 1:15:54 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-04

Tag: Measured: 7/12/2010 1:21:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-05

Tag: Measured: 7/12/2010 1:26:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82974-06

Tag: Measured: 7/12/2010 1:31:48 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-01

Tag: Measured: 7/12/2010 1:37:06 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-02

Tag: Measured: 7/12/2010 1:42:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-03

Tag: Measured: 7/12/2010 1:47:42 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-04 Tag: Measured: 7/12/2010 1:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-05 Tag: Measured: 7/12/2010 1:58:18 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-06 Tag: Measured: 7/12/2010 2:03:36 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-07 Tag: Measured: 7/12/2010 2:08:54 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-08 Tag: Measured: 7/12/2010 2:14:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L82975-09 Tag: Measured: 7/12/2010 2:19:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83116-01 Tag: Measured: 7/12/2010 2:24:48 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83156-01 Tag: Measured: 7/12/2010 2:30:06 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: MEG/BRD 7/16/2010
Initials, Date

SREV: AS 7-16-10
Initials, Date

7/16/2010 10:04:41 AM 71610

KSJ 7/16/10

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: MEG
Date: 7/16/2010

Approved:
Date: 7-16-10

Analyst: MEG

Workgroup: 286012

Analysis Date: 7/15/2010

Sample type used: <2000

Extraction / Digestion / Analysis / Prep / Calc: 3050

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?	✓		
3. Were proper volumes of reagents used per final volume?	✓		
4. Was the proper sub-sample used (as received, <2000, <500, <250, dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?	✓		
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?			

Standard/Reagent	PCN/SCN	Expiration Date

Comments: _____

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# : 286012

Analyst: MEG
Date: 7/15/2010
Time In: 18:00
Time Out:

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	#DIV/0!			#DIV/0!
82974-1	1.221	4.279	4.265	#DIV/0!			#DIV/0!
82974-1 DUP	1.237	4.163	4.151	#DIV/0!			#DIV/0!
-2	1.244	3.219	3.208	#DIV/0!			#DIV/0!
-3	1.243	3.299	3.288	#DIV/0!			#DIV/0!
-4	1.225	4.512	4.500	#DIV/0!			#DIV/0!
-5	1.223	4.873	4.868	#DIV/0!			#DIV/0!
-6	1.229	3.615	3.606	#DIV/0!			#DIV/0!
82975-1	1.223	4.909	4.882	#DIV/0!			#DIV/0!
-2	1.220	4.623	4.600	#DIV/0!			#DIV/0!
-3	1.234	4.915	4.875	#DIV/0!			#DIV/0!
-4	1.237	3.646	3.634	#DIV/0!			#DIV/0!
-5	1.241	5.706	5.659	#DIV/0!			#DIV/0!
-6	1.245	5.756	5.701	#DIV/0!			#DIV/0!
-7	1.245	5.725	5.699	#DIV/0!			#DIV/0!
-8	1.248	4.705	4.689	#DIV/0!			#DIV/0!
-9	1.250	5.608	5.575	#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#VALUE!
				#DIV/0!			#VALUE!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 7/14/10 11 am
End Date/Time: 7/15/10

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE					7.5	5	5	50	0			
2	WG286012PBS2	NONE												
3	L82974-01	BG-10 0-2 COMP	₹2000			0.5								
4	L82974-01DUP	NONE												
5	L82974-02	BG-10 2-12 COMP												
6	L82974-02DUP	NONE												
7	L82974-03	BG-10 12-18 COMP												
8	L82974-03DUP	NONE												
9	L82974-04	BG-14 0-2 COMP												
10	L82974-05	BG-14-2-12 COMP												
11	L82974-06	BG-14 12-18 COMP												
12	L82975-01	BG-5 0-2 COMP												
13	L82975-02	BG-5 2-12 COMP												
14	L82975-03	BG-5 12-18 COMP												
15	L82975-04	BG-9 0-2 COMP												
16	L82975-05	BG-9 2-12 COMP												
17	L82975-06	BG-9 12-18 COMP												
18	L82975-07	BG-13 0-2 COMP												
19	L82975-08	BG-13 2-12 COMP												
20	L82975-09	BG-13 12-18 COMP												

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 11:33:08 AM 71610

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time:
End Date/Time:

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 11:33:08 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286012

Date Reported: 16-Jul-10
Run ID: R733812
Date Analyzed: 14-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

WG286012PBS1

Tag:

Measured: 7/14/2010 11:00:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	0	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

WG286012PBS2

Tag:

Measured: 7/14/2010 12:34:44 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	0	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

L82974-01

Tag:

Measured: 7/14/2010 2:09:28 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.54	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-01DUP

Tag:

Measured: 7/14/2010 3:44:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.54	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L82974-02

Tag:

Measured: 7/14/2010 5:18:56 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.44	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-02DUP

Tag:

Measured: 7/14/2010 6:53:40 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.44	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L82974-03

Tag:

Measured: 7/14/2010 8:28:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.46	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-03DUP

Tag:

Measured: 7/14/2010 10:03:08 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.46	1		%	++				
SREV	SCN VOLUME	PREP	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L82974-04

Tag:

Measured: 7/14/2010 11:37:52 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.63	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-05

Tag:

Measured: 7/15/2010 1:12:36 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.86	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82974-06

Tag:

Measured: 7/15/2010 2:47:20 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.62	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-01

Tag:

Measured: 7/15/2010 4:22:04 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.27	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-02

Tag:

Measured: 7/15/2010 5:56:48 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.32	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-03

Tag:

Measured: 7/15/2010 7:31:32 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.91	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-04

Tag:

Measured: 7/15/2010 9:06:16 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.5	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-05

Tag:

Measured: 7/15/2010 10:41:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.95	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-06

Tag:

Measured: 7/15/2010 12:15:44 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.78	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-07

Tag:

Measured: 7/15/2010 1:50:28 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.42	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-08

Tag:

Measured: 7/15/2010 3:25:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.54	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L82975-09

Tag:

Measured: 7/15/2010 4:59:56 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.24	1		%	++				
SREV	SCN VOLUME	:-3050-RC	0	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG/BRD
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time: 07/14/2010 13:00
End Date/Time: 07/14/2010 14:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L82974-01	BG-10 0-2 COMP	Dry		07/14/10 13:00	7/14/2010	
2	L82974-02	BG-10 2-12 COMP	Dry		07/14/10 13:04	7/14/2010	
3	L82974-03	BG-10 12-18 COMP	Dry		07/14/10 13:08	7/14/2010	
4	L82974-04	BG-14 0-2 COMP	Dry		07/14/10 13:12	7/14/2010	
5	L82974-05	BG-14-2-12 COMP	Dry		07/14/10 13:17	7/14/2010	
6	L82974-06	BG-14 12-18 COMP	Dry		07/14/10 13:21	7/14/2010	
7	L82975-01	BG-5 0-2 COMP	Dry		07/14/10 13:25	7/14/2010	
8	L82975-02	BG-5 2-12 COMP	Dry		07/14/10 13:29	7/14/2010	
9	L82975-03	BG-5 12-18 COMP	Dry		07/14/10 13:34	7/14/2010	
10	L82975-04	BG-9 0-2 COMP	Dry		07/14/10 13:38	7/14/2010	
11	L82975-05	BG-9 2-12 COMP	Dry		07/14/10 13:42	7/14/2010	
12	L82975-06	BG-9 12-18 COMP	Dry		07/14/10 13:47	7/14/2010	
13	L82975-07	BG-13 0-2 COMP	Dry		07/14/10 13:51	7/14/2010	
14	L82975-08	BG-13 2-12 COMP	Dry		07/14/10 13:55	7/14/2010	
15	L82975-09	BG-13 12-18 COMP	Dry		07/14/10 13:59	7/14/2010	

Report Comments: _____

Internal Comments _____

AREV: MEG 7/14/2010
Initials, Date

SREV: BRD 7/16/10
Initials, Date

7/14/2010 7:46:22 PM 71610

KBS 7/19/10

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG/BRD
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time: 07/14/2010 13:00
End Date/Time: 07/14/2010 14:00

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 7:46:22 PM 71610

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: MEG
Date: 7/14/2010

Approved: BRD
Date: 7/16/10

Analyst: MEG

Workgroup: 286023

Analysis Date: 7/14/2010

Sample type used: DRY

Extraction / Digestion / Analysis / ~~Prep~~ Calc: SP- CP

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?			✓
3. Were proper volumes of reagents used per final volume?			✓
4. Was the proper sub-sample used (as received, <2000, <500, <250, (dry))?	✓		
5. Were the dilution factor calculation checked (final volume, weight, %solid)?			✓
6. Did the RPD pass? BRD 7/16/10	✓		✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments: _____

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time: 7/14/2010 13:00
End Date/Time: 7/14/2010 14:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L82974-01	BG-10 0-2 COMP	DRY		7/14/2010	7/14/2010	
2	L82974-02	BG-10 2-12 COMP					
3	L82974-03	BG-10 12-18 COMP					
4	L82974-04	BG-14 0-2 COMP					
5	L82974-05	BG-14-2-12 COMP					
6	L82974-06	BG-14 12-18 COMP					
7	L82975-01	BG-5 0-2 COMP					
8	L82975-02	BG-5 2-12 COMP					
9	L82975-03	BG-5 12-18 COMP					
10	L82975-04	BG-9 0-2 COMP					
11	L82975-05	BG-9 2-12 COMP					
12	L82975-06	BG-9 12-18 COMP					
13	L82975-07	BG-13 0-2 COMP					
14	L82975-08	BG-13 2-12 COMP					
15	L82975-09	BG-13 12-18 COMP					

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 12:48:15 PM 71610

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286023

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/14/2010 12:48
Start Date/Time:
End Date/Time:

Sample	Login Comments
L82974-01	SJ || in inorganic walk-in
L82974-02	SJ || in inorganic walk-in
L82974-03	SJ || in inorganic walk-in
L82974-04	SJ || in inorganic walk-in
L82974-05	SJ || in inorganic walk-in
L82974-06	SJ || in inorganic walk-in
L82975-01	SJ || in inorganic walk-in
L82975-02	SJ || in inorganic walk-in
L82975-03	SJ || in inorganic walk-in
L82975-04	SJ || in inorganic walk-in
L82975-05	SJ || in inorganic walk-in
L82975-06	SJ(3) || in inorganic walk-in
L82975-07	SJ || in inorganic walk-in
L82975-08	SJ || in inorganic walk-in
L82975-09	SJ || in inorganic walk-in

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 12:48:15 PM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286023

Date Reported: 16-Jul-10
Run ID: R733455
Date Analyzed: 14-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L82974-01

Tag:

Measured: 7/14/2010 1:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-02

Tag:

Measured: 7/14/2010 1:04:17 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-03

Tag:

Measured: 7/14/2010 1:08:34 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-04

Tag:

Measured: 7/14/2010 1:12:51 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-05

Tag:

Measured: 7/14/2010 1:17:08 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82974-06

Tag:

Measured: 7/14/2010 1:21:25 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-01

Tag:

Measured: 7/14/2010 1:25:42 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-02

Tag:

Measured: 7/14/2010 1:29:59 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-03

Tag:

Measured: 7/14/2010 1:34:16 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-04

Tag:

Measured: 7/14/2010 1:38:33 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-05

Tag: Measured: 7/14/2010 1:42:50 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-06

Tag: Measured: 7/14/2010 1:47:07 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-07

Tag: Measured: 7/14/2010 1:51:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-08

Tag: Measured: 7/14/2010 1:55:41 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L82975-09

Tag: Measured: 7/14/2010 1:59:58 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG286455

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 7/19/2010
Analysis Date: 7/20/2010
Start Time:
End Time:
Approved: MWM 7-26-10
Approved: MTB 7-26-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	WG286266PBS		0.5	9.0058	9.0548	0.0490	2.4500		21.95	0.51	0.35	1.55
2	WG286266LCSS	RC100624-2	0.5	9.0732	9.1256	0.0524	2.6200		21.95	42.67	2.65	1.44
3	L82974-01	BG-10 0-2 COM	0.49771	9.0528	9.0931	0.0403	2.0150		21.95	5.51	1.11	1.89
4	L82974-02	BG-10 2-12 CON	0.49722	9.0413	9.0849	0.0436	2.1800		21.95	7.62	1.25	1.75
5	L82974-03	BG-10 12-18 CO	0.49732	8.9539	8.9935	0.0396	1.9800		21.95	5.87	1.16	1.92
6	L82974-04	BG-14 0-2 COM	0.49817	9.0027	9.0459	0.0432	2.1600		21.95	5.42	1.06	1.76
7	L82974-05	BG-14-2-12 CON	0.49932	9.0671	9.123	0.0559	2.7950		21.95	5.64	0.95	1.36
8	L82974-06	BG-14 12-18 CO	0.49811	9.0476	9.097	0.0494	2.4700		21.95	5.63	1.01	1.54
9	L82975-01	BG-5 0-2 COMP	0.49634	9.0565	9.1004	0.0439	2.1950		21.95	8.36	1.32	1.74
10	L82975-02	BG-5 2-12 COM	0.49662	9.0593	9.1138	0.0545	2.7250		21.95	2.93	0.91	1.40
11	L82975-03	BG-5 12-18 CON	0.49457	9.023	9.0622	0.0392	1.9600		23.68	8.25	1.36	1.91
12	L82975-04	BG-9 0-2 COMP	0.49751	9.071	9.1157	0.0447	2.2350		23.68	8.11	1.26	1.66
13	L82975-05	BG-9 2-12 COM	0.49474	9.0836	9.1288	0.0452	2.2600		23.68	5.52	1.04	1.66
14	L82975-06	BG-9 12-18 CON	0.4939	9.105	9.1485	0.0435	2.1750		23.68	5.99	1.10	1.72
15	L82975-07	BG-13 0-2 COM	0.4971	9.0751	9.1163	0.0412	2.0600		23.68	4.24	0.96	1.81
16	L82975-08	BG-13 2-12 CON	0.49769	9.0832	9.1357	0.0525	2.6250		23.68	4.28	0.85	1.42
17	L82975-09	BG-13 12-18 CO	0.49621	9.1344	9.1851	0.0507	2.5350		23.68	3.42	0.79	1.47
18	L82974-01DUP		0.49771	9.057	9.101	0.0440	2.2000		23.68	5.44	1.05	1.69
19	L82974-02DUP		0.49722	9.0849	9.1329	0.0480	2.4000		23.68	4.67	0.95	1.55
20	L82974-03MS	RC100624-2	0.49732	9.0882	9.1322	0.0440	2.2000		23.68	50.85	3.21	1.69

Ra226 Decay Date:
Time:
Ba Correction Factor 0.05500
Counting Efficiency: 0.1700
Alpha BG Count @90min 0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

KBJ 7/29/10

ACZ Sample No.	GR CPM Alpha	Detector Alpha	BG CPM Alpha	NET CPM Alpha	Ingrow date & time	Count date & time	Ingrow Factor	Counting Efficiency	Fractional Yield	Detector #	BG alpha
WG286266PBS	0.1670	1	0.0422	0.1248	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.8909	1	0.0422
WG286266LCSS	11.1600	2	0.0556	11.1044	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.9527	2	0.0556
L82974-01	1.1440	3	0.0464	1.0976	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7327	3	0.0464
L82974-02	1.6890	4	0.0486	1.6404	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7927	4	0.0486
L82974-03	1.2000	5	0.0514	1.1486	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7200	5	0.0514
L82974-04	1.2000	6	0.0422	1.1578	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7855	6	0.0422
L82974-05	1.6330	7	0.0694	1.5636	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	1.0164	7	0.0694
L82974-06	1.4330	8	0.0569	1.3761	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.8982	8	0.0569
L82975-01	1.9110	9	0.1014	1.8096	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.7982	9	0.1014
L82975-02	1.3440	10	0.5560	0.7880	7/19/2010 14:50	7/20/2010 12:02	1.45	0.1700	0.9909	10	0.556
L82975-03	1.6670	1	0.0422	1.6248	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.7127		
L82975-04	1.8890	2	0.0556	1.8334	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8127		
L82975-05	1.3000	3	0.0464	1.2536	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8218		
L82975-06	1.3560	4	0.0486	1.3074	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.7909		
L82975-07	0.9330	5	0.0514	0.8816	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.7491		
L82975-08	1.1780	6	0.0422	1.1358	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.9545		
L82975-09	0.9440	7	0.0694	0.8746	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.9218		
L82974-01DUP	1.2670	8	0.0569	1.2101	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8000		
L82974-02DUP	1.2330	9	0.1014	1.1316	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8727		
L82974-03MS	11.8600	10	0.5560	11.3040	7/19/2010 14:50	7/20/2010 13:46	1.48	0.1700	0.8000		
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-26-10

Approved: MWB
Date: 7-26-10

Work Group: WG286455
Sample Type: Soil
Analysis Date: 7-20-10
Analyst: TCD
Prep Date: 7-19-10

Weekly background file: Back612
Daily background file: Back614

Alpha performance file: Perf412
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV**: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓✓		
8) Are samples flagged for INSX, if applicable?			✓✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓✓
10) Are all calculations based on the correct matrix?	✓✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓✓		
13) Are all associated WG benchsheets locked for editing?	✓✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286455

Date Reported: 26-Jul-10
Run ID: R735452
Date Analyzed: 20-Jul-10
ICAL Workgroup:
Instrument ID: LB770

WG286266PBS

Tag: Measured: 7/20/2010 12:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.51	1		pCi/g	++	1.6	0.35		

WG286266LCSS

Tag: Measured: 7/20/2010 12:03:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	43	1		pCi/g	++	1.4	2.7	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	89.9	1		%	++	1.4	2.7	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	1.4	2.7	RC100624-2	

L82974-01

Tag: Measured: 7/20/2010 12:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.5	1		pCi/g	++	1.9	1.1		

L82974-02

Tag: Measured: 7/20/2010 12:06:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	7.6	1		pCi/g	++	1.8	1.3		

L82974-03

Tag: Measured: 7/20/2010 12:07:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.9	1		pCi/g	++	1.9	1.2		

L82974-04

Tag: Measured: 7/20/2010 12:09:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.4	1		pCi/g	++	1.8	1.1		

L82974-05

Tag: Measured: 7/20/2010 12:10:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.6	1		pCi/g	++	1.4	0.95		

L82974-06

Tag: Measured: 7/20/2010 12:12:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.6	1		pCi/g	++	1.5	1		

L82975-01

Tag: Measured: 7/20/2010 12:13:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	8.4	1		pCi/g	++	1.7	1.3		

L82975-02

Tag: Measured: 7/20/2010 12:14:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.9	1		pCi/g	++	1.4	0.91		

L82975-03

Tag: Measured: 7/20/2010 12:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	8.3	1		pCi/g	++	1.9	1.4		

L82975-04

Tag: Measured: 7/20/2010 12:17:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	8.1	1		pCi/g	++	1.7	1.3		

L82975-05

Tag: Measured: 7/20/2010 12:19:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.5	1		pCi/g	++	1.7	1		

L82975-06

Tag: Measured: 7/20/2010 12:20:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	6	1		pCi/g	++	1.7	1.1		

L82975-07

Tag: Measured: 7/20/2010 12:22:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	4.2	1		pCi/g	++	1.8	0.96		

L82975-08

Tag: Measured: 7/20/2010 12:23:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	4.3	1		pCi/g	++	1.4	0.85		

L82975-09

Tag: Measured: 7/20/2010 12:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	3.4	1		pCi/g	++	1.5	0.79		

L82974-01DUP

Tag: Measured: 7/20/2010 12:26:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	5.4	1		pCi/g	++	1.7	1.1		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	0.06	1		%	++	2	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	1.8	1		pCi/g	++	1.7	1.1		

L82974-02DUP

Tag: Measured: 7/20/2010 12:27:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	4.7	1		pCi/g	++	1.6	0.95		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	1.8	1		%	++	2	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	47.2	1		pCi/g	ALRT	1.6	0.95		

L82974-03MS

Tag: Measured: 7/20/2010 12:29:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	51	1		pCi/g	++	1.7	3.2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	94.3	1		%	++	1.7	3.2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	1.7	3.2	RC100624-2	

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG286266

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: PREP

Analyst: tcd
Dept: 50
Prep Date: 7-19-10 10:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50									
2	LCSS											
3	L82974-01	BG-10 0-2 COMP										
4	L82974-02	BG-10 2-12 COMP										
5	L82974-03	BG-10 12-18 COMP										
6	L82974-04	BG-14 0-2 COMP										
7	L82974-05	BG-14-2-12 COMP										
8	L82974-06	BG-14 12-18 COMP										
9	L82975-01	BG-5 0-2 COMP										
10	L82975-02	BG-5 2-12 COMP										
11	L82975-03	BG-5 12-18 COMP										
12	L82975-04	BG-9 0-2 COMP										
13	L82975-05	BG-9 2-12 COMP										
14	L82975-06	BG-9 12-18 COMP										
15	L82975-07	BG-13 0-2 COMP										
16	L82975-08	BG-13 2-12 COMP										
17	L82975-09	BG-13 12-18 COMP										
18	DUP	74-01										
19	DUP	74-02										
20	MS	74-03										

Ra226 Decay Date:
Time:

Ba Correction Factor 0.05500
Counting Efficiency: 0.1700
Alpha BG Count @90min 0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

ingrowth
7-19-10
14:50

ACZ LABORATORIES, INC.
Standards/Reagents Information
wg286266
Water 9/19/2010 10:02 AM

ANALYST: _____

Second analyst: _____

DATE TIME of prep start: _____

PROJECT/WG: _____
Method Ra-226 9315 INSTR: LB770

Radioactive Standards

LCS & MS rc100624-2

Reagents

Barium Carrier:	rc100204-1	EDTA	rc100712-1
Sulfuric Acid	34642	Sulfuric Acid 0.1N	34642
Nitric Acid	35035	Ammonium sulfate	rc100616-1
lead carrier	rc100713-1	Acetic Acid	34657
Sodium hydroxide 10 N		Citric acid	rc100511-1

COMMENTS:

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
			0.00000			#DIV/0!
82974-01	0.995421844	0.5	0.49771	50	50	0.497711
82974-02	0.99443038	0.5	0.49722	50	50	0.497215
82974-03	0.994649805	0.5	0.49732	50	50	0.497325
82974-04	0.996349255	0.5	0.49817	50	50	0.498175
82974-05	0.998630137	0.5	0.49932	50	50	0.499315
82974-06	0.996227997	0.5	0.49811	50	50	0.498114
82975-01	0.992674986	0.5	0.49634	50	50	0.496337
82975-02	0.993241258	0.5	0.49662	50	50	0.496621
82975-03	0.989133388	0.5	0.49457	50	50	0.494567
82975-04	0.99501868	0.5	0.49751	50	50	0.497509
82975-05	0.989473684	0.5	0.49474	50	50	0.494737
82975-06	0.987807581	0.5	0.49390	50	50	0.493904
82975-07	0.994196429	0.5	0.49710	50	50	0.497098
82975-08	0.99537171	0.5	0.49769	50	50	0.497686
82975-09	0.992427719	0.5	0.49621	50	50	0.496214
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

Sample Measurement Parameters:
Comment: WG286266
User: tcd
Instrument Name: LB770-2
Preset Time: 90:00
Cycles: 1
Outlier warning disabled
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "1.5 hour"
Protocol ID: 6
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 90:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0422 (±0.0077)	0.0167	60
2	21.63	0.0556 (±0.0088)	0.0167	60.0
3	22.23	0.0464 (±0.0081)	0.0167	60.0
4	22.39	0.0486 (±0.0082)	0.0167	60.0
5	20.50	0.0514 (±0.0084)	0.0167	60.0
6	21.48	0.0422 (±0.0077)	0.0167	60.0
7	21.84	0.0694 (±0.0098)	0.0167	60.0
8	21.74	0.0569 (±0.0089)	0.0167	60.0
9	21.77	0.1014 (±0.0119)	0.0167	60.0
10	23.74	0.0556 (±0.0088)	0.0167	60.0

	Beta		
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	3.6006 (±0.0712)	0.0167	60
2	1.2639 (±0.0419)	0.0167	60.0
3	1.2792 (±0.0422)	0.0167	60.0
4	1.2250 (±0.0412)	0.0167	60.0
5	1.6167 (±0.0474)	0.0167	60.0
6	1.7112 (±0.0488)	0.0167	60.0
7	1.3000 (±0.0425)	0.0167	60.0
8	1.3653 (±0.0435)	0.0167	60.0
9	1.3559 (±0.0437)	0.0167	60.0
10	1.6833 (±0.0484)	0.0167	60.0

Cycle 1 of 1
Start Time: 7/20/2010 12:02:10

Elapsed Time: 90:00
Guard: 1173 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7291	pbs	0.167 (±25.8%)	0.0018	0.0007	10.31 (±3.46%)	0.0123	0.0059
2	7292	lcs	11.16 (±3.16%)	0.0020	0.0008	8.011 (±3.72%)	0.0087	0.0035
3	7293	L82974-01	1.144 (±9.85%)	0.0019	0.0007	3.189 (±5.90%)	0.0077	0.0035
4	7294	L82974-02	1.689 (±8.11%)	0.0019	0.0007	3.744 (±5.45%)	0.0076	0.0034
5	7295	L82974-03	1.200 (±9.62%)	0.0020	0.0007	3.256 (±5.84%)	0.0085	0.0039
6	7296	L82974-04	1.200 (±9.62%)	0.0018	0.0007	3.056 (±6.03%)	0.0087	0.0041
7	7297	L82974-05	1.633 (±8.25%)	0.0022	0.0008	4.033 (±5.25%)	0.0078	0.0035
8	7298	L82974-06	1.433 (±8.80%)	0.0020	0.0008	3.722 (±5.46%)	0.0079	0.0036
9	7299	L82975-01	1.911 (±7.62%)	0.0025	0.0010	3.456 (±5.67%)	0.0079	0.0036
10	7300	L82975-02	1.344 (±9.09%)	0.0020	0.0008	4.089 (±5.21%)	0.0087	0.0040

Sample Measurement Parameters:
Comment: WG286266
User: tcd
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 7/20/2010 13:46:29

Elapsed Time: 90:00
Guard: 1179 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7301	L82975-03	1.667 (±8.16%)	0.0018	0.0007	12.69 (±3.12%)	0.0123	0.0059
2	7302	L82975-04	1.889 (±7.67%)	0.0020	0.0008	4.056 (±5.23%)	0.0077	0.0035
3	7303	L82975-05	1.300 (±9.25%)	0.0019	0.0007	3.189 (±5.90%)	0.0077	0.0035
4	7304	L82975-06	1.356 (±9.05%)	0.0019	0.0007	3.700 (±5.48%)	0.0075	0.0034
5	7305	L82975-07	0.933 (±10.9%)	0.0020	0.0007	2.978 (±6.11%)	0.0085	0.0039
6	7306	L82975-08	1.178 (±9.71%)	0.0018	0.0007	3.456 (±5.67%)	0.0087	0.0041
7	7307	L82975-09	0.944 (±10.8%)	0.0022	0.0008	3.056 (±6.03%)	0.0077	0.0035
8	7308	L82974-01DUP	1.267 (±9.37%)	0.0020	0.0008	3.567 (±5.58%)	0.0079	0.0036
9	7309	L82974-02DUP	1.233 (±9.49%)	0.0025	0.0010	3.200 (±5.89%)	0.0079	0.0036
10	7310	L82974-03MS	11.86 (±3.06%)	0.0020	0.0008	9.378 (±3.44%)	0.0098	0.0040

ACZ Laboratories, Inc.
Thorium in Soil
ESM 4506

WG286554

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/20/2010
Analysis Date: 7/21/2010
Start Time:
End Time:
Approved: MWM 7-26-10
Approved: MCB 7-26-10

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g	Th232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
1	WG286328PBS		0.5	1.0000	9.52	662	0.696			0			0.25	13.5891	16.5900	3	-0.20	0.33	0.66			0	0.00	0.00	0.25
2	WG286328LC	RC091215-1	0.5	1.0000	9.52	718	0.755			0	0.00	0.00	0.23	9.5891	6542.5200	6533	172.98	4.51	0.60			0	0.00	0.00	0.23
3	L82974-01	BG-10 0-2 C	0.497718	1.0000	9.52	774	0.814			0	0.00	0.00	0.22	17.0000	74.5800	58	1.18	0.50	0.56			0	0.00	0.00	0.22
4	L82974-02	BG-10 2-12 (	0.497215	1.0000	9.52	799	0.840			0	0.00	0.00	0.21	16.4175	46.9900	31	0.50	0.40	0.55			0	0.00	0.00	0.21
5	L82974-03	BG-10 12-18	0.497325	1.0000	9.52	738	0.776			0	0.00	0.00	0.23	12.0000	84.2600	72	1.62	0.53	0.59			0	0.00	0.00	0.23
6	L82974-04	BG-14 0-2 C	0.496175	1.0000	9.52	734	0.772			0	0.00	0.00	0.23	7.4042	42.0900	35	0.65	0.38	0.59			0	0.00	0.00	0.23
7	L82974-05	BG-14-2-12 (	0.496315	1.0000	9.52	721	0.758			0	0.00	0.00	0.23	7.1716	44.1600	37	0.72	0.40	0.60			0	0.00	0.00	0.23
8	L82974-06	BG-14 12-18	0.496114	1.0000	9.52	721	0.758			0	0.00	0.00	0.23	8.4175	48.0000	40	0.79	0.42	0.60			0	0.00	0.00	0.23
9	L82975-01	BG-5 0-2 CC	0.496337	1.0000	9.52	280	0.294			0	0.00	0.00	0.60	13.5891	17.0000	3	-0.44	0.80	1.56			0	0.00	0.00	0.60
10	L82975-02	BG-5 2-12 C	0.496621	1.0000	9.52	713	0.750			0	0.00	0.00	0.23	18.1716	43.4200	25	0.41	0.44	0.61			0	0.00	0.00	0.23
11	L82975-03	BG-5 12-18 (	0.494567	1.0000	9.52	729	0.767			0	0.00	0.00	0.23	7.0000	37.5900	31	0.55	0.37	0.60			0	0.00	0.00	0.23
12	L82975-04	BG-9 0-2 CC	0.497509	1.0000	9.52	713	0.750			0	0.00	0.00	0.23	11.4109	37.0000	26	0.42	0.39	0.61			0	0.00	0.00	0.23
13	L82975-05	BG-9 2-12 C	0.494737	1.0000	9.52	695	0.731			0	0.00	0.00	0.24	6.0000	51.8200	46	1.00	0.44	0.63			0	0.00	0.00	0.24
14	L82975-06	BG-9 12-18 (	0.493904	1.0000	9.52	724	0.761			0	0.00	0.00	0.23	9.0000	52.5800	44	0.90	0.44	0.61			0	0.00	0.00	0.23
15	L82975-07	BG-13 0-2 C	0.497098	1.0000	9.52	698	0.734			0	0.00	0.00	0.24	10.0000	53.5900	44	0.93	0.46	0.63			0	0.00	0.00	0.24
16	L82975-08	BG-13 2-12 (	0.497686	1.0000	9.52	702	0.738			0	0.00	0.00	0.24	4.0000	41.4100	37	0.75	0.39	0.62			0	0.00	0.00	0.24
17	L82975-09	BG-13 12-18	0.496214	1.0000	9.52	727	0.764			0	0.00	0.00	0.23	9.5891	68.5900	59	1.30	0.49	0.60			0	0.00	0.00	0.23
18	L82974-01DUP		0.497711	1.0000	9.52	804	0.845			0	0.00	0.00	0.21	17.0000	70.4200	53	1.04	0.47	0.54			0	0.00	0.00	0.21
19	L82974-03DUP		0.497325	1.0000	9.52	767	0.806			0	0.00	0.00	0.22	16.4175	56.0000	40	0.74	0.45	0.57			0	0.00	0.00	0.22
20	L82974-02MS	RC091215-1	0.497215	1.0000	9.52	681	0.716			0	0.00	0.00	0.25	12.0000	5988.0700	5976	167.74	4.57	0.64			0	0.00	0.00	0.25
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC021.01.09.ver02

KSJ 7/26/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-26-10

Work Group: WG286554
Sample Type: Sol. d
Analysis Date: 7-21-10
Analyst: MWM
Prep Date: 7-20-10

Approved: MTB
Date: 7-26-10

Weekly background file: 7-15-10
Daily background file: 7-15-10

Alpha performance file: 7-15-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?			
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286554

Date Reported: 26-Jul-10
Run ID: R735535
Date Analyzed: 21-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286328PBS

Tag: Measured: 7/21/2010 9:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	-0.2	1		pCi/g	++	0.66	0.33		
SREV	THORIUM 232	FOUND	0	1		pCi/g	++	0.25	0		

WG286328LCSS

Tag: Measured: 7/21/2010 9:48:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	0.6	4.5	RC091215-1	
SREV	THORIUM 230	REC	104.9	1		%	++	0.6	4.5	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	0.6	4.5	RC091215-1	

L82974-01

Tag: Measured: 7/21/2010 9:49:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.22	0		TB
SREV	THORIUM 230	ESM-3050	1.2	1		pCi/g	++	0.56	0.5		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.22	0		TB

L82974-02

Tag: Measured: 7/21/2010 9:51:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.21	0		TB
SREV	THORIUM 230	ESM-3050	0.5	1		pCi/g	++	0.55	0.4		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.21	0		TB

L82974-03

Tag: Measured: 7/21/2010 9:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	1.6	1		pCi/g	++	0.59	0.53		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-04

Tag: Measured: 7/21/2010 9:54:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.65	1		pCi/g	++	0.59	0.38		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-05

Tag: Measured: 7/21/2010 9:55:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.72	1		pCi/g	++	0.6	0.4		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-06 Tag: **Measured: 7/21/2010 9:57:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.79	1		pCi/g	++	0.6	0.42		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-01 Tag: **Measured: 7/21/2010 9:58:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.6	0		TB
SREV	THORIUM 230	ESM-3050	-0.44	1		pCi/g	++	1.6	0.8		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.6	0		TB

L82975-02 Tag: **Measured: 7/21/2010 9:59:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.41	1		pCi/g	++	0.61	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-03 Tag: **Measured: 7/21/2010 10:01:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.55	1		pCi/g	++	0.6	0.37		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-04 Tag: **Measured: 7/21/2010 10:02:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.42	1		pCi/g	++	0.61	0.39		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-05 Tag: **Measured: 7/21/2010 10:04:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	1	1		pCi/g	++	0.63	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L82975-06 Tag: **Measured: 7/21/2010 10:05:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.9	1		pCi/g	++	0.61	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82975-07 Tag: **Measured: 7/21/2010 10:07:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.93	1		pCi/g	++	0.63	0.46		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L82975-08 Tag: Measured: 7/21/2010 10:08:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.75	1		pCi/g	++	0.62	0.39		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L82975-09 Tag: Measured: 7/21/2010 10:10:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	1.3	1		pCi/g	++	0.6	0.49		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L82974-01DUP Tag: Measured: 7/21/2010 10:11:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0.21	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0.21	0		
SREV	THORIUM 230	FOUND	1	1		pCi/g	++	0.54	0.47		
SREV	THORIUM 230	RER	0.29	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	18.2	1		pCi/g	++	0.54	0.47		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0.21	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0.21	0		

L82974-03DUP Tag: Measured: 7/21/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0.22	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0.22	0		
SREV	THORIUM 230	FOUND	0.74	1		pCi/g	++	0.57	0.45		
SREV	THORIUM 230	RER	1.24	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	73.5	1		pCi/g	ALRT	0.57	0.45		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0.22	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0.22	0		

L82974-02MS Tag: Measured: 7/21/2010 10:14:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	0.64	4.6	RC091215-1	
SREV	THORIUM 230	REC	104.6	1		%	++	0.64	4.6	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	0.64	4.6	RC091215-1	

ACZ Laboratories, Inc.
Thorium in Soil
ESM 4506

WG286328

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-20-10 9:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g	Th232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50mL	1	0.00					0						0						0			
2	LCSS				0.00					0						0						0			
3	L82974-01	BG-10 0-2 COMP			0.00					0						0						0			
4	L82974-02	BG-10 2-12 C			0.00					0						0						0			
5	L82974-03	BG-10 12-18 COMP			0.00					0						0						0			
6	L82974-04	BG-14 0-2 COMP			0.00					0						0						0			
7	L82974-05	BG-14-2-12 COMP			0.00					0						0						0			
8	L82974-06	BG-14 12-18 COMP			0.00					0						0						0			
9	L82975-01	BG-5 0-2 COMP			0.00					0						0						0			
10	L82975-02	BG-5 2-12 COMP			0.00					0						0						0			
11	L82975-03	BG-5 12-18 COMP			0.00					0						0						0			
12	L82975-04	BG-9 0-2 COMP			0.00					0						0						0			
13	L82975-05	BG-9 2-12 COMP			0.00					0						0						0			
14	L82975-06	BG-9 12-18 COMP			0.00					0						0						0			
15	L82975-07	BG-13 0-2 COMP			0.00					0						0						0			
16	L82975-08	BG-13 2-12 COMP			0.00					0						0						0			
17	L82975-09	BG-13 12-18 COMP			0.00					0						0						0			
18	DUP 4-01				0.00					0						0						0			
19	DUP 4-03				0.00					0						0						0			
20	MS 4-02				0.00					0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC021.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Radium 226 903.1
Water

wg286328 7/20/2010 8:03 AM

ANALYST:
Second analyst:
DATE TIME of prep start:

PROJECT/WG:
Method

INSTR: Octete

Approved:

Radioactive Standards

LCS & MS 091215-1

Tracer 100322-1

Reagents

Iron chloride 100701-1	Nitric Acid —	Ammonium Hydroxide. 34092/34804
HCl 35120	Nitric Acid (2N) 33035	Cerous Flouride substrate 100527-3
TOPO 100708-1	Sulfuric Acid 0.3N 33273	Ethanol 33789
Cerium solution 100720-1	HF 33549	

COMMENTS:
Filter broke @ step 11.21 for Sx #9

RCTHOR-S.xls

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
			0.00000			#DIV/0!
82974-01	0.995421844	0.5	0.49771	50	50	0.497711
82974-02	0.99443038	0.5	0.49722	50	50	0.497215
82974-03	0.994649805	0.5	0.49732	50	50	0.497325
82974-04	0.996349255	0.5	0.49817	50	50	0.498175
82974-05	0.998630137	0.5	0.49932	50	50	0.499315
82974-06	0.996227997	0.5	0.49811	50	50	0.498114
82975-01	0.992674986	0.5	0.49634	50	50	0.496337
82975-02	0.993241258	0.5	0.49662	50	50	0.496621
82975-03	0.989133388	0.5	0.49457	50	50	0.494567
82975-04	0.99501868	0.5	0.49751	50	50	0.497509
82975-05	0.989473684	0.5	0.49474	50	50	0.494737
82975-06	0.987807581	0.5	0.49390	50	50	0.493904
82975-07	0.994196429	0.5	0.49710	50	50	0.497098
82975-08	0.99537171	0.5	0.49769	50	50	0.497686
82975-09	0.992427719	0.5	0.49621	50	50	0.496214
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:50PM 7/21/2010

Analyst: ORTEC

Sample

Sample: WG286328 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

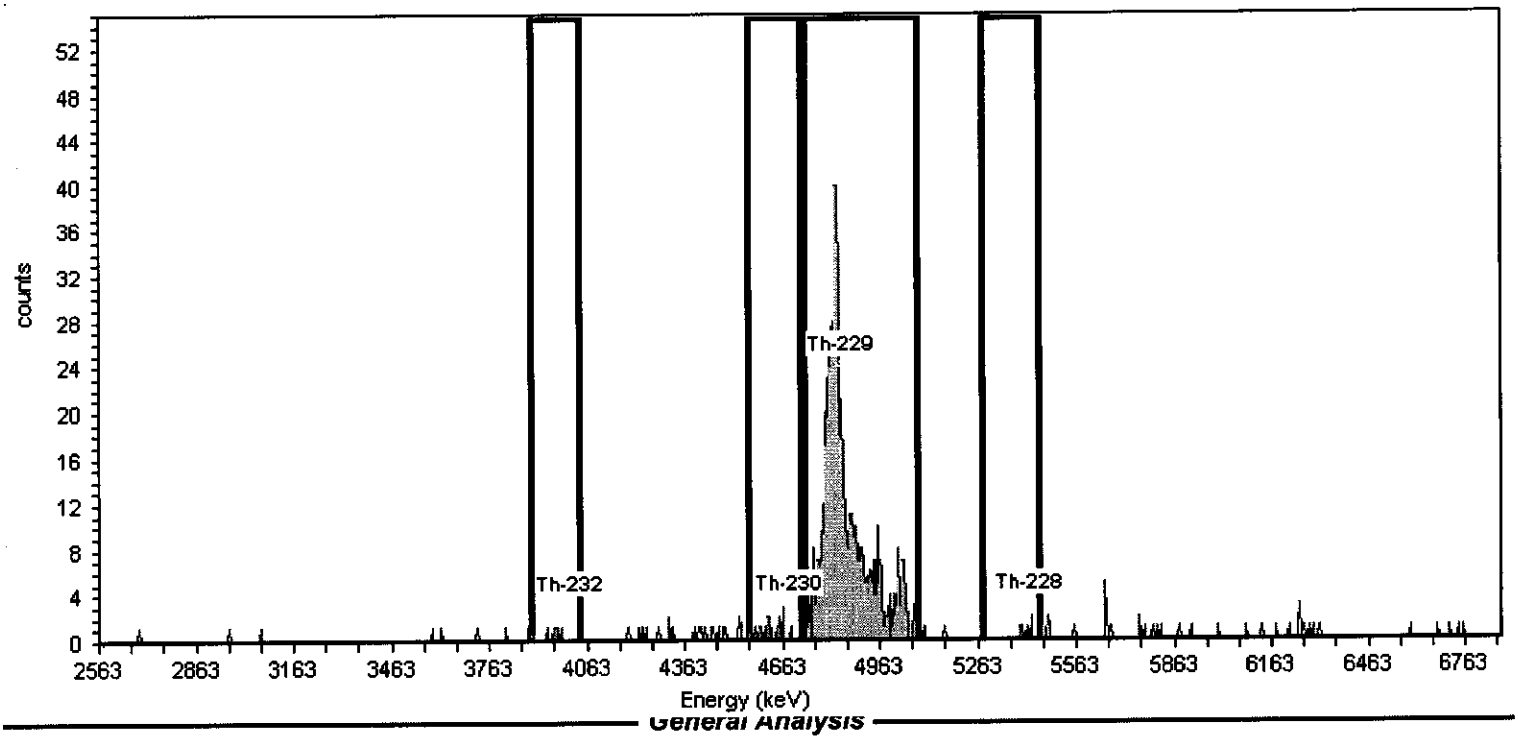
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 130.72%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/21/2010 9:47:40AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	.000	100.0	5.82	2.0000	4	5.466E-002	1.207E-001	4.710E-002	1.329E-001
Th-230	4687.000	4561.000	4717.000	64.223	99.7	16.59	13.5891	3	4.308E-002	2.368E-001	1.231E-001	2.851E-001
Th-229	4845.000	4737.000	5080.000	47.675	99.6	675.33	13.0000	662	1.244E+001	1.556E+000	1.206E-001	2.800E-001
Th-228	5423.000	5280.000	5453.000	48.925	99.4	5.12	14.0000	-9	0.000E+000	1.910E-001	1.254E-001	2.897E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:53PM 7/21/2010

Analyst: ORTEC

Sample

Sample: WG286328 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

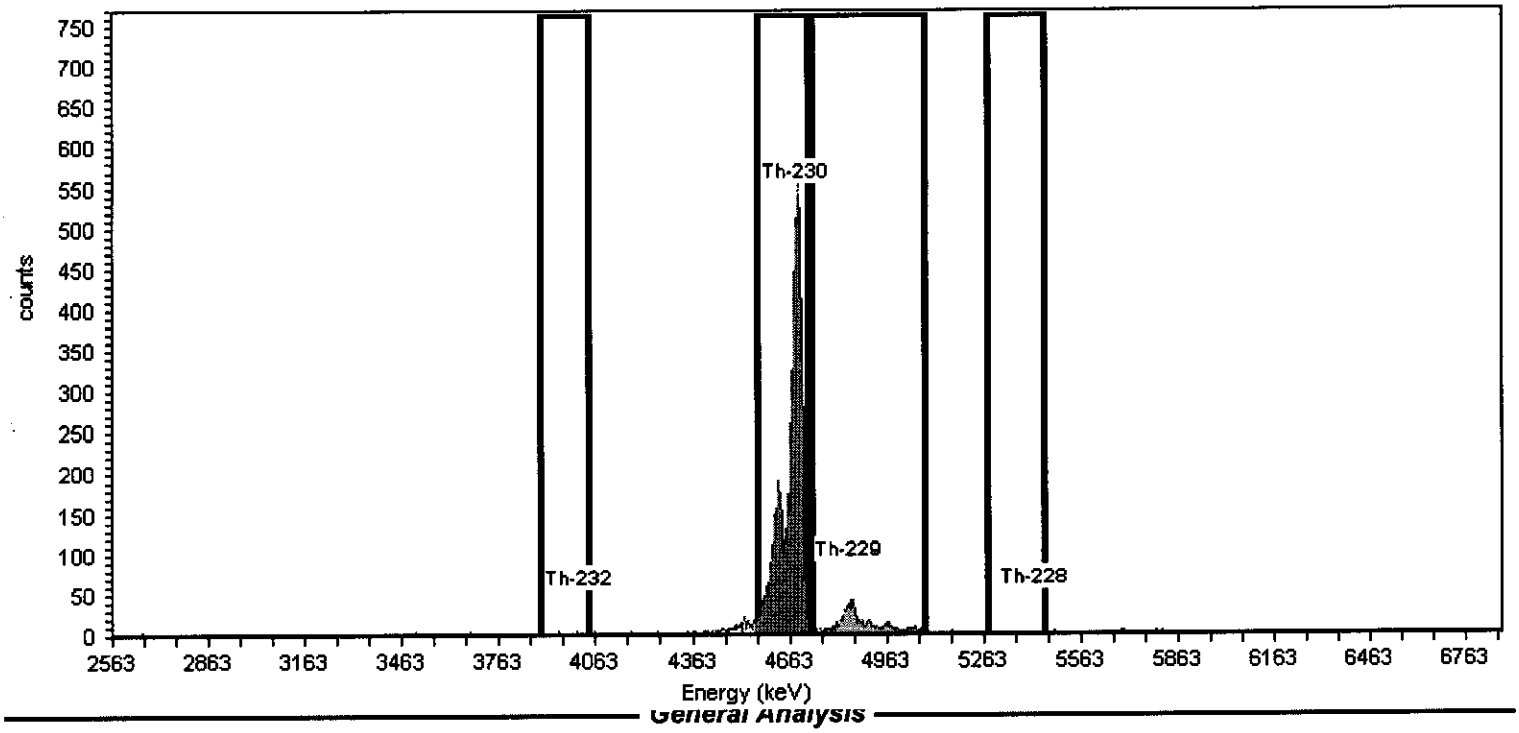
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.66%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/21/2010 9:47:42AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	46.696	100.0	11.96	6.0409	6	7.815E-002	1.689E-001	7.551E-002	1.867E-001
Th-230	4687.000	4561.000	4717.000	17.946	99.7	6,542.52	9.5891	6,533	8.653E+001	1.895E+001	9.542E-002	2.267E-001
Th-229	4845.000	4737.000	5080.000	51.371	99.6	729.01	11.0000	718	1.358E+001	1.632E+000	1.023E-001	2.405E-001
Th-228	5423.000	5280.000	5453.000	5.763	99.4	5.00	4.0000	1	1.328E-002	1.196E-001	6.181E-002	1.596E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:57PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

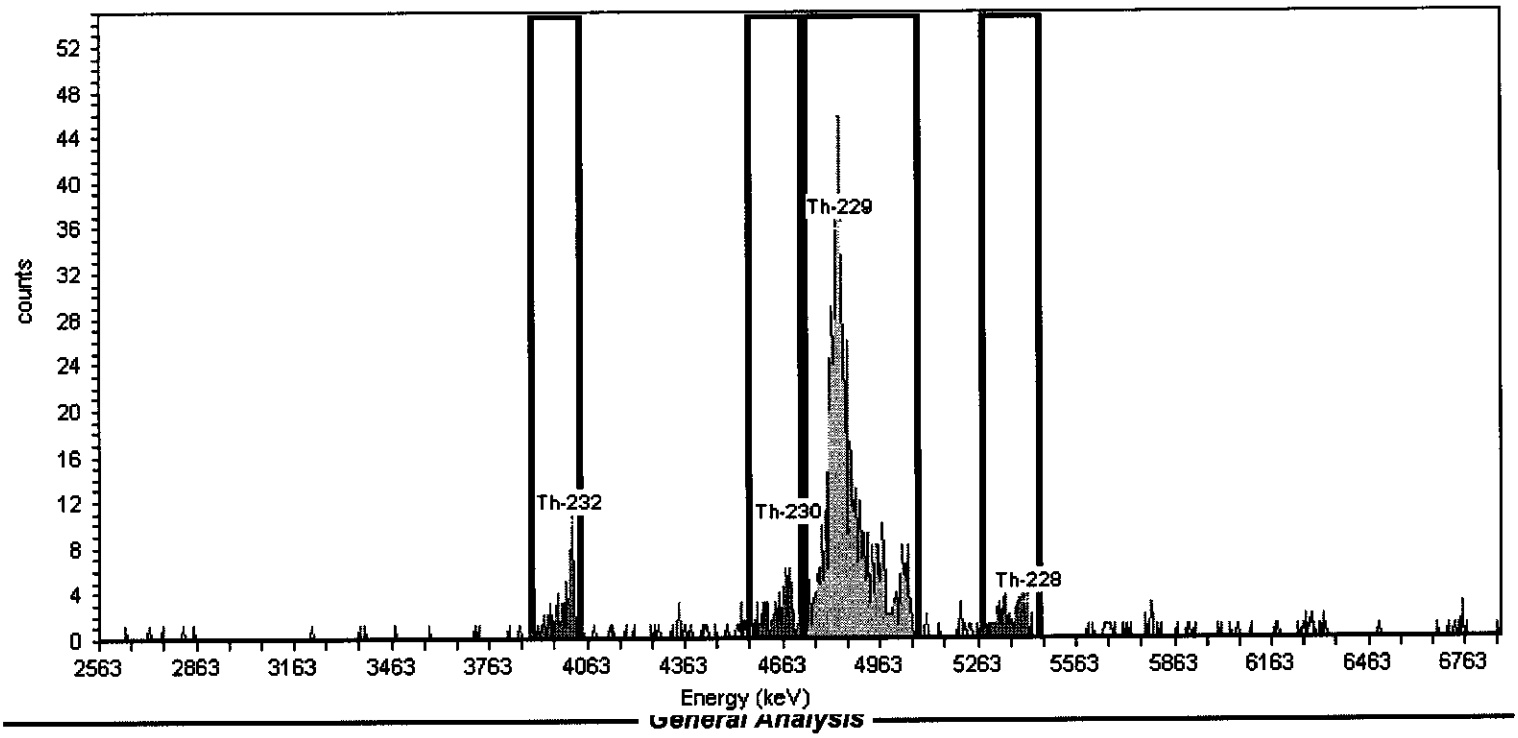
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.38%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/21/2010 9:47:27AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	24.016	99.7	74.58	17.0000	58	7.071E-001	3.835E-001	1.178E-001	2.688E-001
Th-229	4845.000	4737.000	5080.000	48.645	99.6	784.33	10.0000	774	1.403E+001	1.623E+000	9.045E-002	2.142E-001
Th-228	5423.000	5280.000	5453.000	94.035	99.4	67.09	9.0000	58	7.156E-001	3.566E-001	8.597E-002	2.053E-001
Th-232	4010.000	3893.000	4040.000	6.818	100.0	66.82	6.8182	60	7.347E-001	3.520E-001	7.438E-002	1.819E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:49:01PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

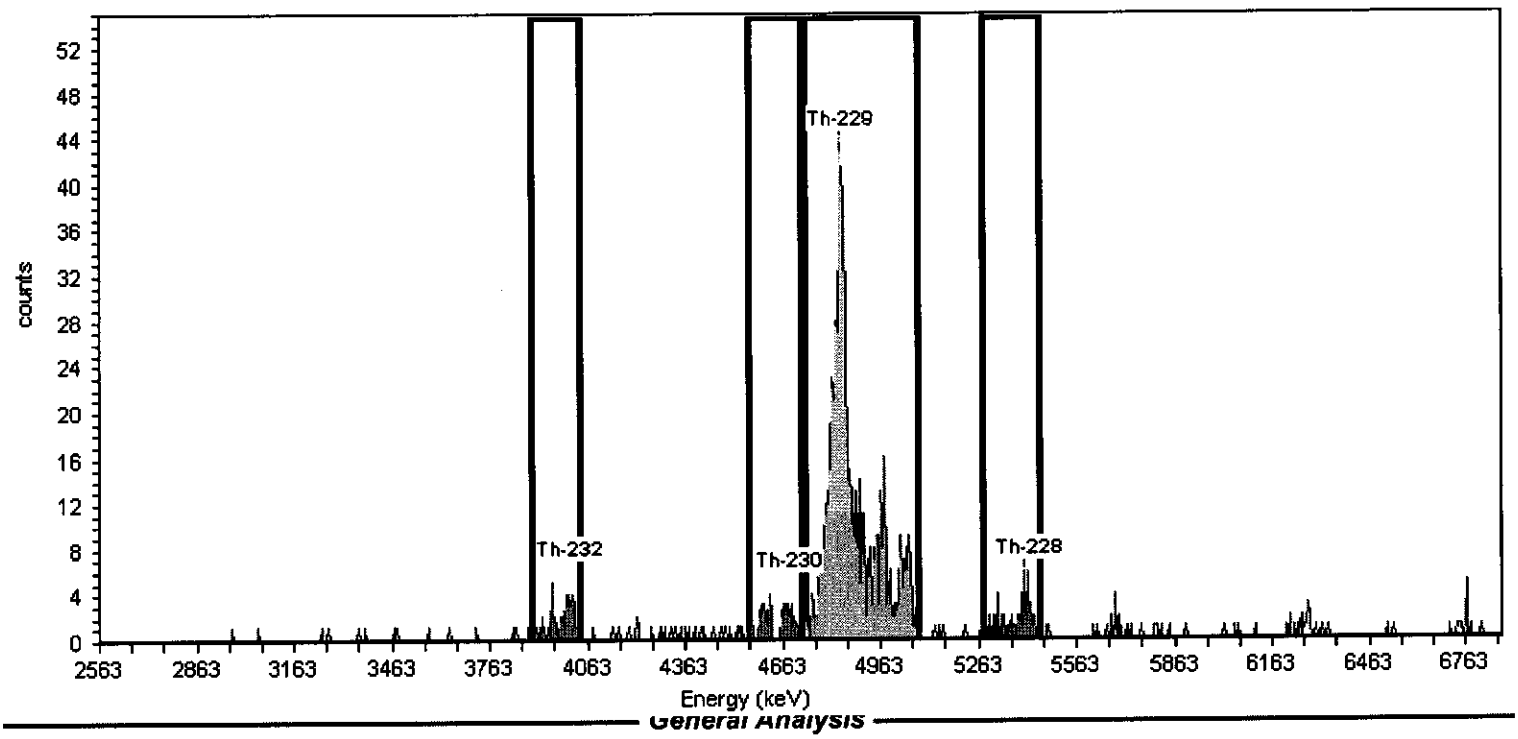
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 158.20%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/21/2010 9:47:28AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	19.208	100.0	48.00	3.0000	45	5.338E-001	2.784E-001	4.780E-002	1.277E-001
Th-230	4687.000	4561.000	4717.000	30.192	99.7	46.99	16.4175	31	3.638E-001	2.946E-001	1.121E-001	2.565E-001
Th-229	4845.000	4737.000	5080.000	43.785	99.6	813.34	14.0000	799	1.506E+001	1.728E+000	1.037E-001	2.396E-001
Th-228	5423.000	5280.000	5453.000	43.479	99.4	52.00	14.9095	37	4.426E-001	3.076E-001	1.072E-001	2.467E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:11PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

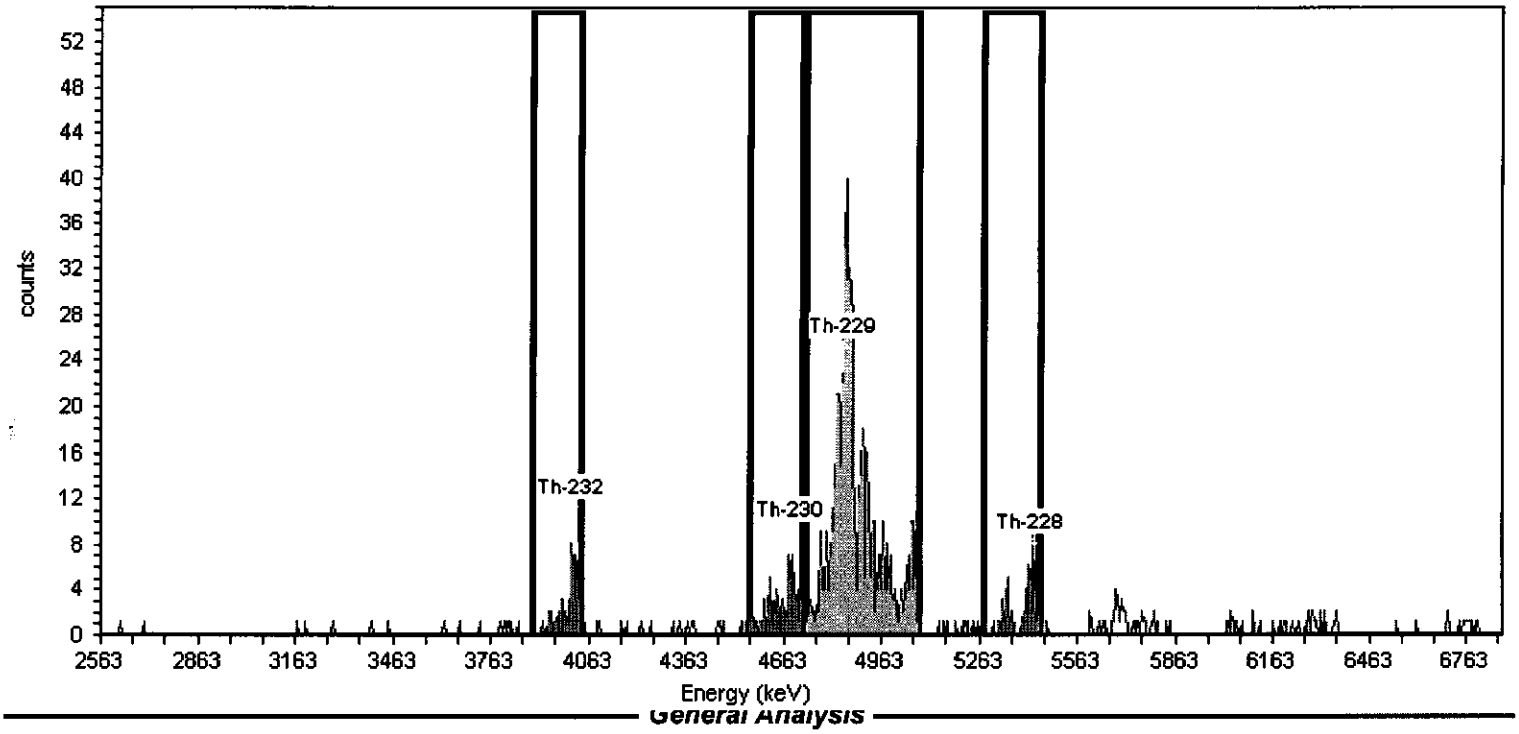
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.21%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/21/2010 9:47:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	28.217	100.0	68.96	3.0000	66	8.471E-001	3.741E-001	5.175E-002	1.382E-001
Th-230	4687.000	4561.000	4717.000	20.603	99.7	84.26	12.0000	72	9.308E-001	4.287E-001	1.038E-001	2.425E-001
Th-229	4845.000	4737.000	5080.000	49.836	99.6	752.65	14.3369	738	1.363E+001	1.622E+000	1.136E-001	2.621E-001
Th-228	5423.000	5280.000	5453.000	13.216	99.4	69.86	12.7944	57	7.373E-001	3.864E-001	1.075E-001	2.500E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:23PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

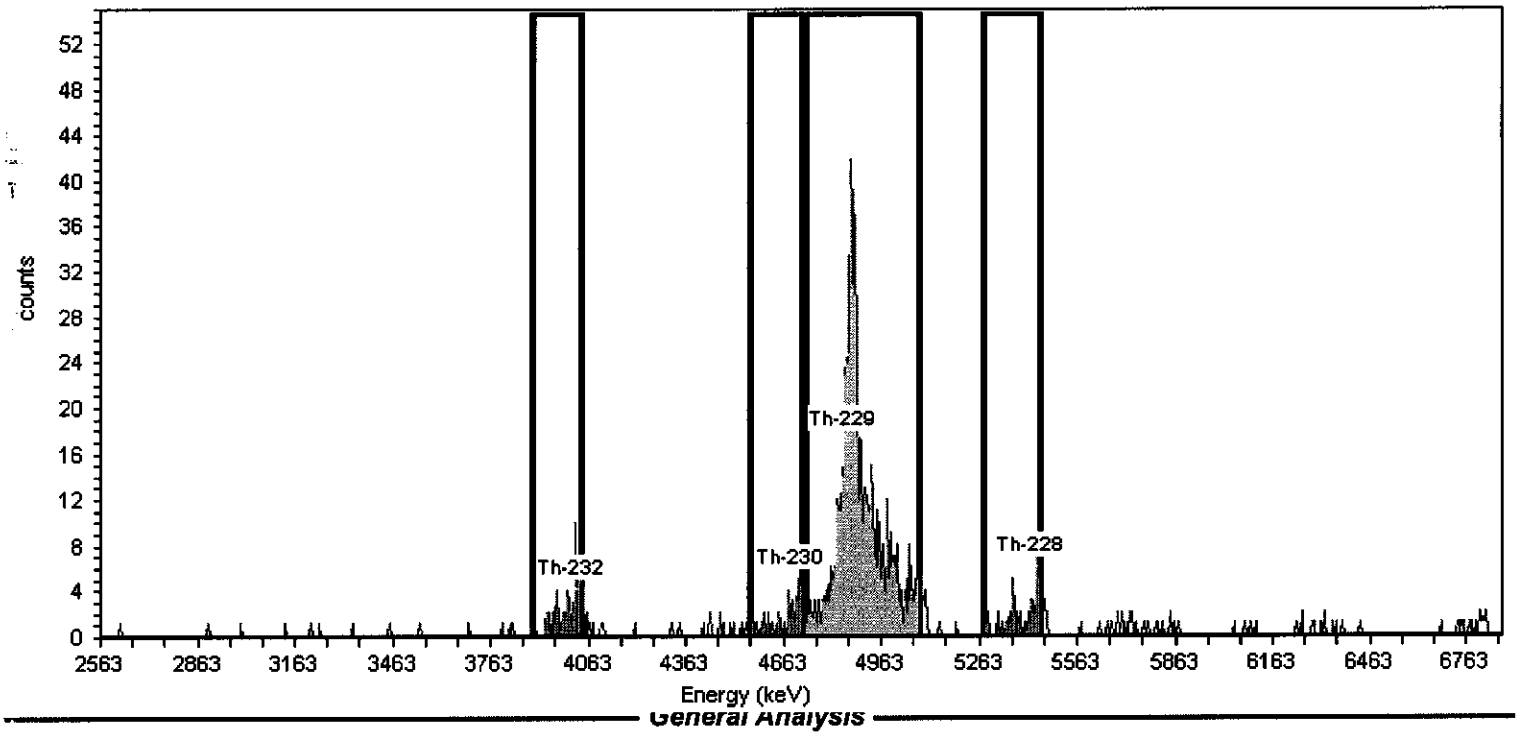
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.72%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/21/2010 9:47:33AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	29.747	99.7	42.09	7.4042	35	4.494E-001	2.900E-001	8.202E-002	1.991E-001
Th-229	4845.000	4737.000	5080.000	45.838	99.6	743.99	10.0000	734	1.368E+001	1.625E+000	9.542E-002	2.259E-001
Th-228	5423.000	5280.000	5453.000	13.615	99.4	59.63	9.8849	50	6.465E-001	3.535E-001	9.505E-002	2.253E-001
Th-232	4010.000	3893.000	4040.000	7.498	100.0	66.98	4.9591	62	8.011E-001	3.711E-001	6.692E-002	1.688E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:30PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

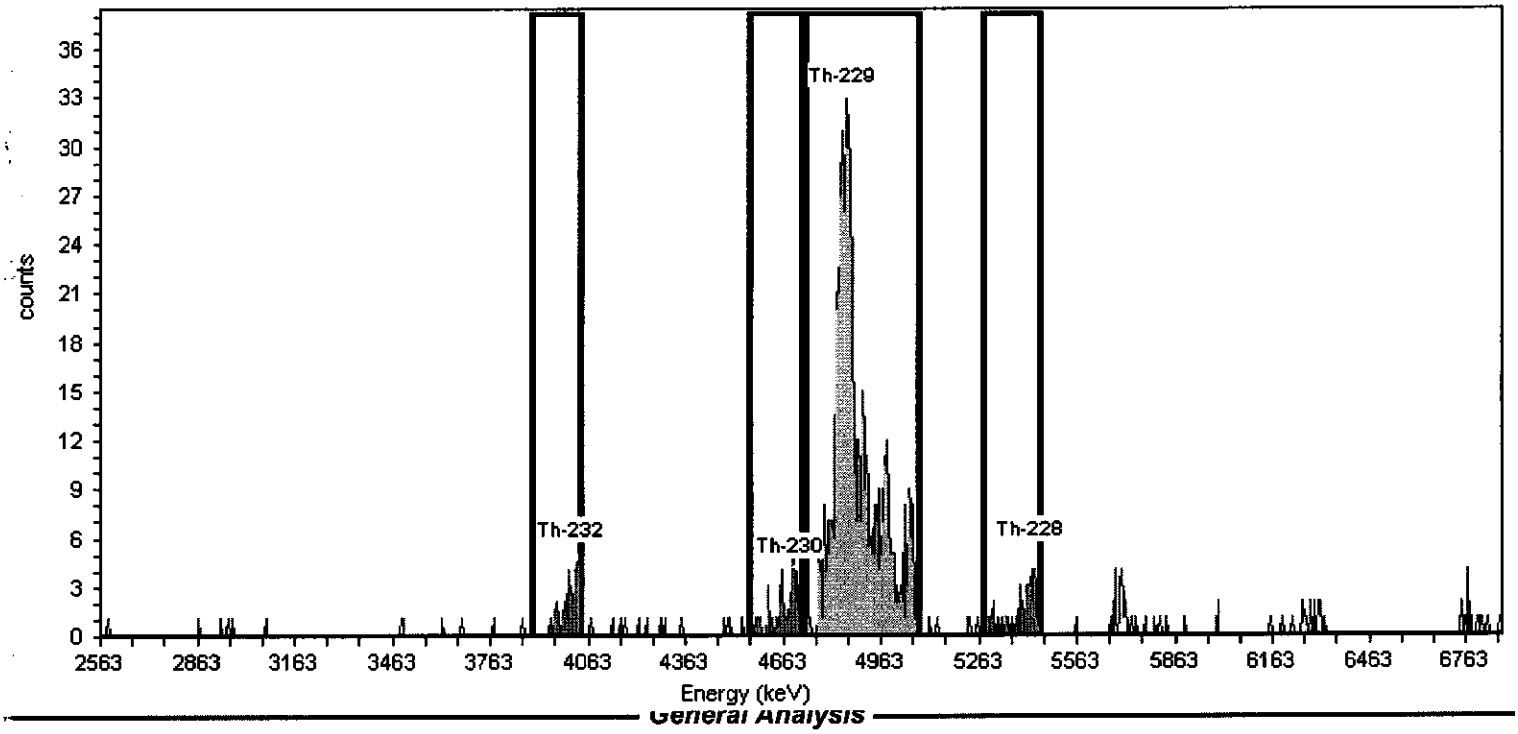
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 145.92%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/21/2010 9:47:35AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	81.940	100.0	46.92	0.9591	46	6.044E-001	3.025E-001	2.996E-002	9.551E-002
Th-230	4687.000	4561.000	4717.000	26.123	99.7	44.16	7.1716	37	4.880E-001	3.024E-001	8.218E-002	2.000E-001
Th-229	4845.000	4737.000	5080.000	58.634	99.6	729.65	8.6631	721	1.389E+001	1.663E+000	9.041E-002	2.166E-001
Th-228	5423.000	5280.000	5453.000	15.233	99.4	45.00	9.0000	36	4.763E-001	3.092E-001	9.233E-002	2.205E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:38PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82974-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

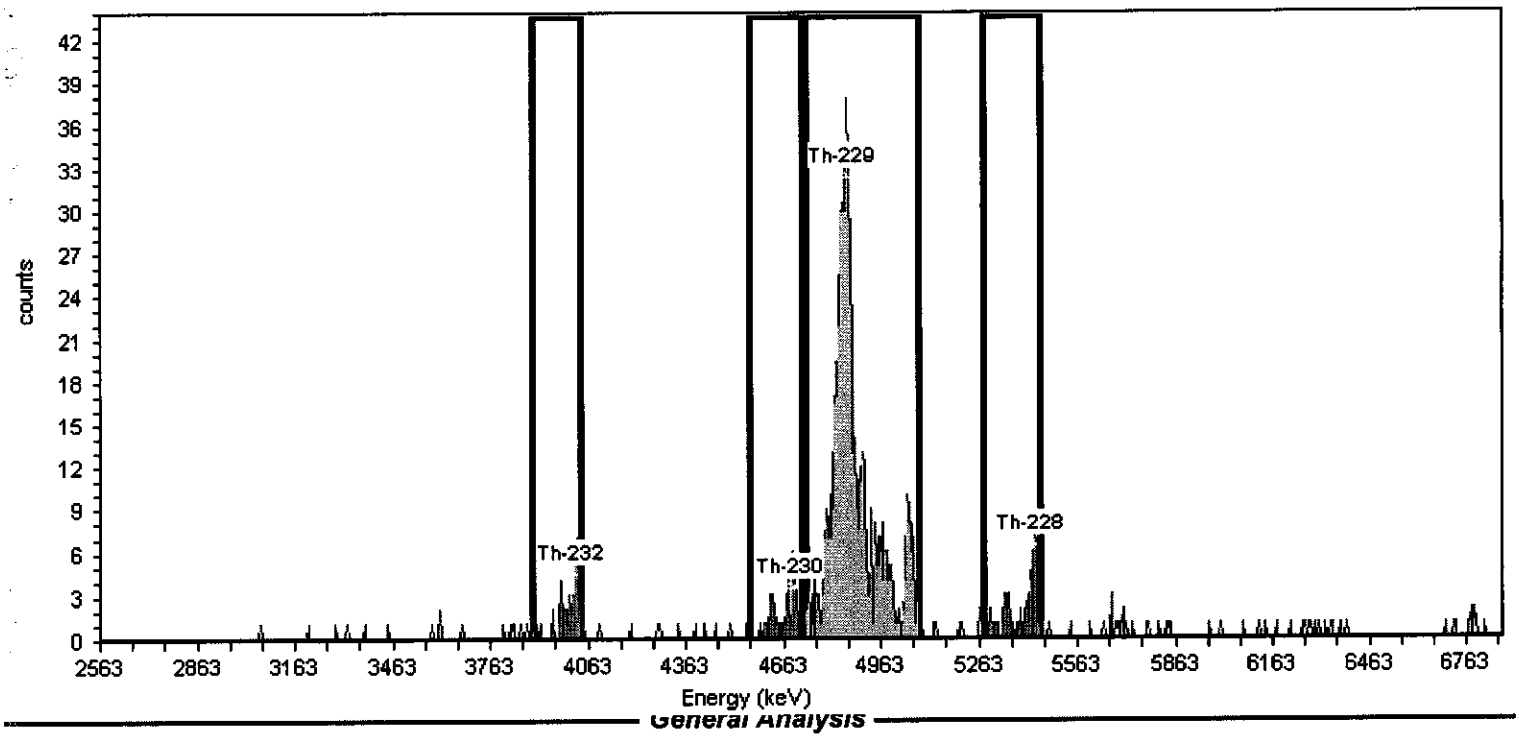
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 139.91%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/21/2010 9:47:37AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	18.033	100.0	51.70	1.0000	51	6.670E-001	3.207E-001	3.061E-002	9.682E-002
Th-230	4687.000	4561.000	4717.000	16.642	99.7	48.00	8.4175	40	5.223E-001	3.180E-001	8.907E-002	2.138E-001
Th-229	4845.000	4737.000	5080.000	53.191	99.6	736.66	16.0000	721	1.332E+001	1.606E+000	1.229E-001	2.816E-001
Th-228	5423.000	5280.000	5453.000	13.925	99.4	63.12	9.0000	54	7.163E-001	3.710E-001	9.238E-002	2.206E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:23AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

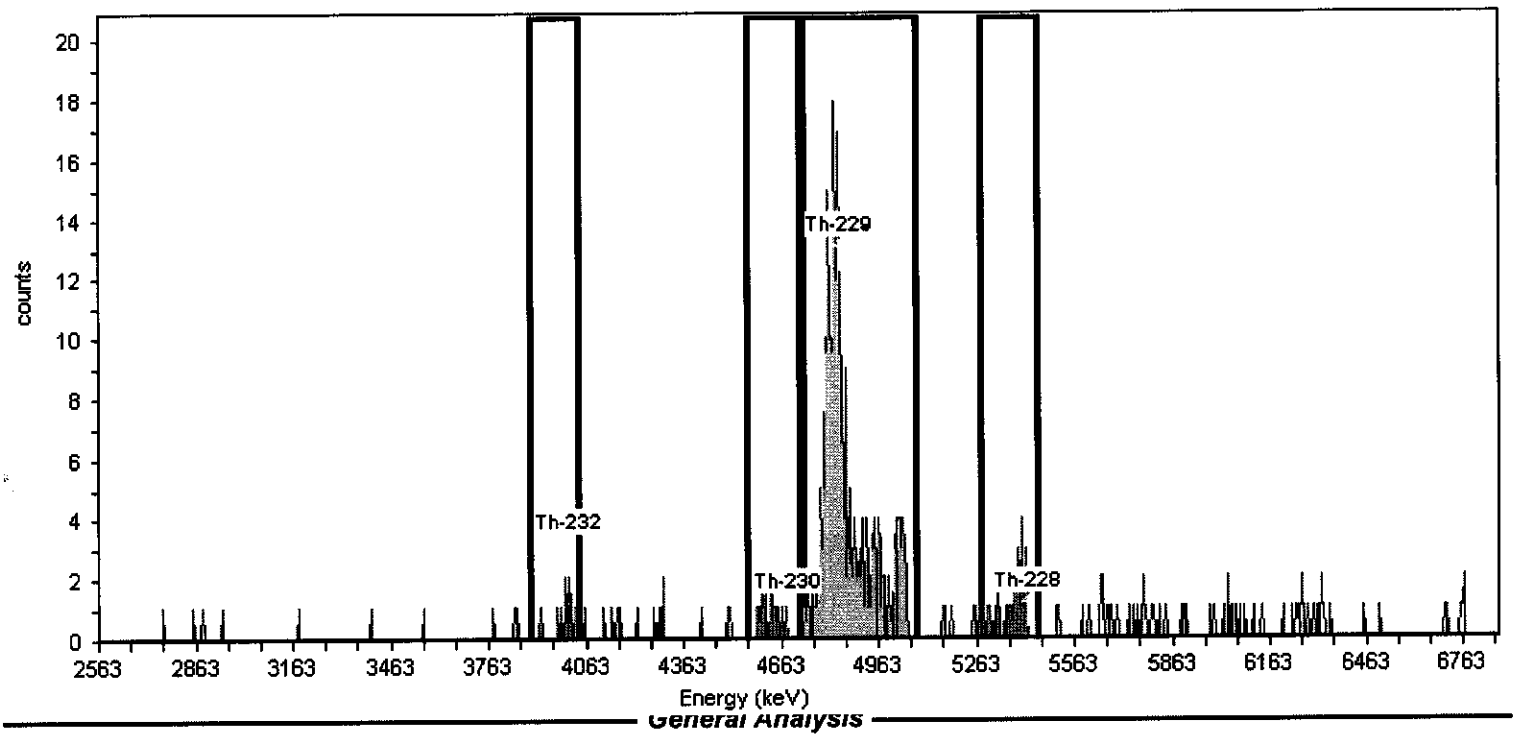
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 55.26%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/21/2010 3:26:34PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	37.459	100.0	12.00	2.0000	10	3.386E-001	3.903E-001	1.114E-001	3.144E-001
Th-230	4687.000	4561.000	4717.000	57.294	99.7	17.00	13.5891	3	1.158E-001	5.644E-001	2.913E-001	6.745E-001
Th-229	4845.000	4737.000	5080.000	56.538	99.6	293.00	13.0000	280	5.261E+000	1.007E+000	2.852E-001	6.624E-001
Th-228	5423.000	5280.000	5453.000	43.170	99.4	30.88	14.0000	17	5.752E-001	7.011E-001	2.965E-001	6.853E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:41:00PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

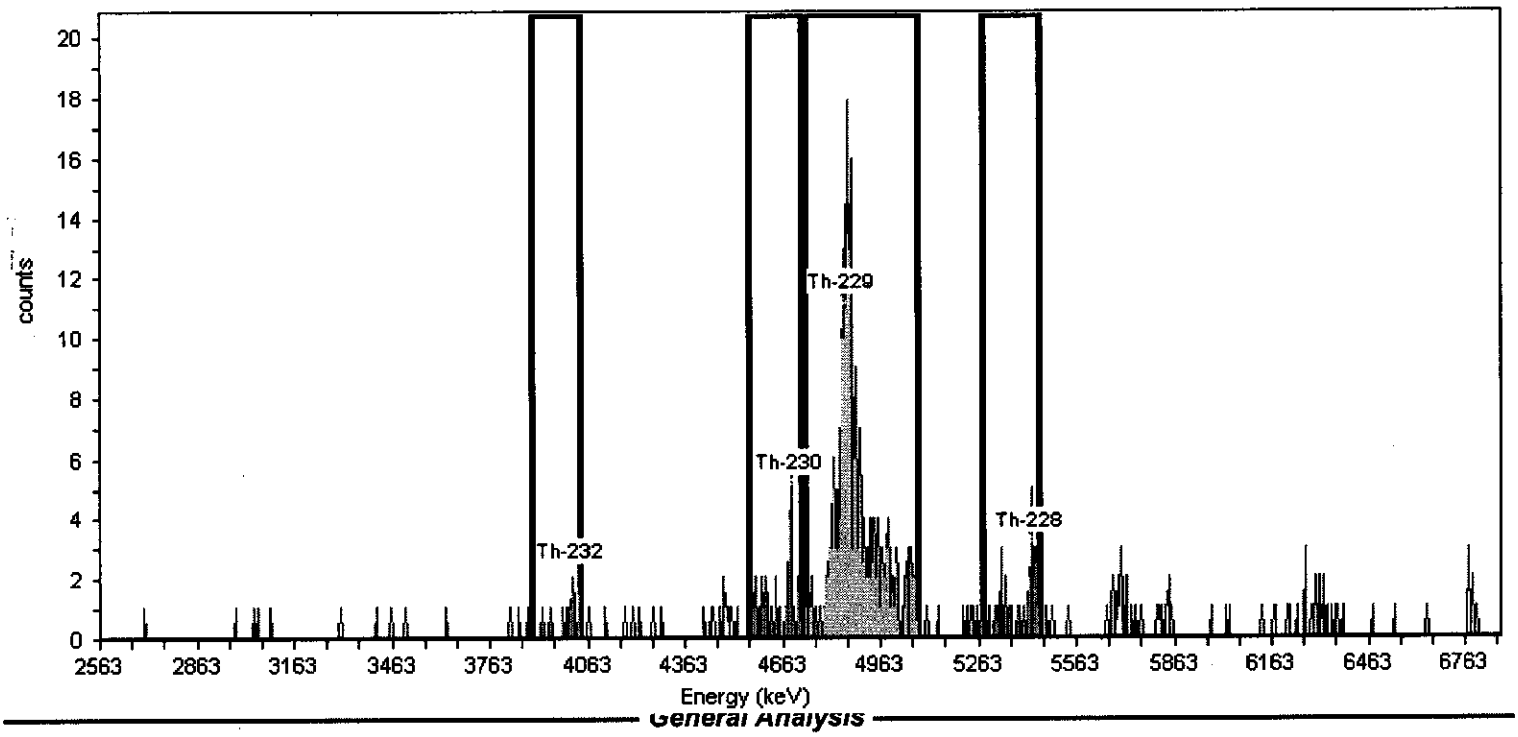
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 50.69%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/22/2010 3:40:57PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/22/2010 3:40:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	18.637	100.0	13.00	3.0000	10	3.628E-001	4.461E-001	1.462E-001	3.905E-001
Th-230	4687.000	4561.000	4717.000	6.546	99.7	33.42	12.0000	21	7.793E-001	7.647E-001	2.932E-001	6.850E-001
Th-229	4845.000	4737.000	5080.000	39.424	99.6	275.69	14.3369	261	4.826E+000	9.616E-001	3.209E-001	7.403E-001
Th-228	5423.000	5280.000	5453.000	18.376	99.4	31.00	12.7944	18	6.645E-001	7.462E-001	3.037E-001	7.062E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:03PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

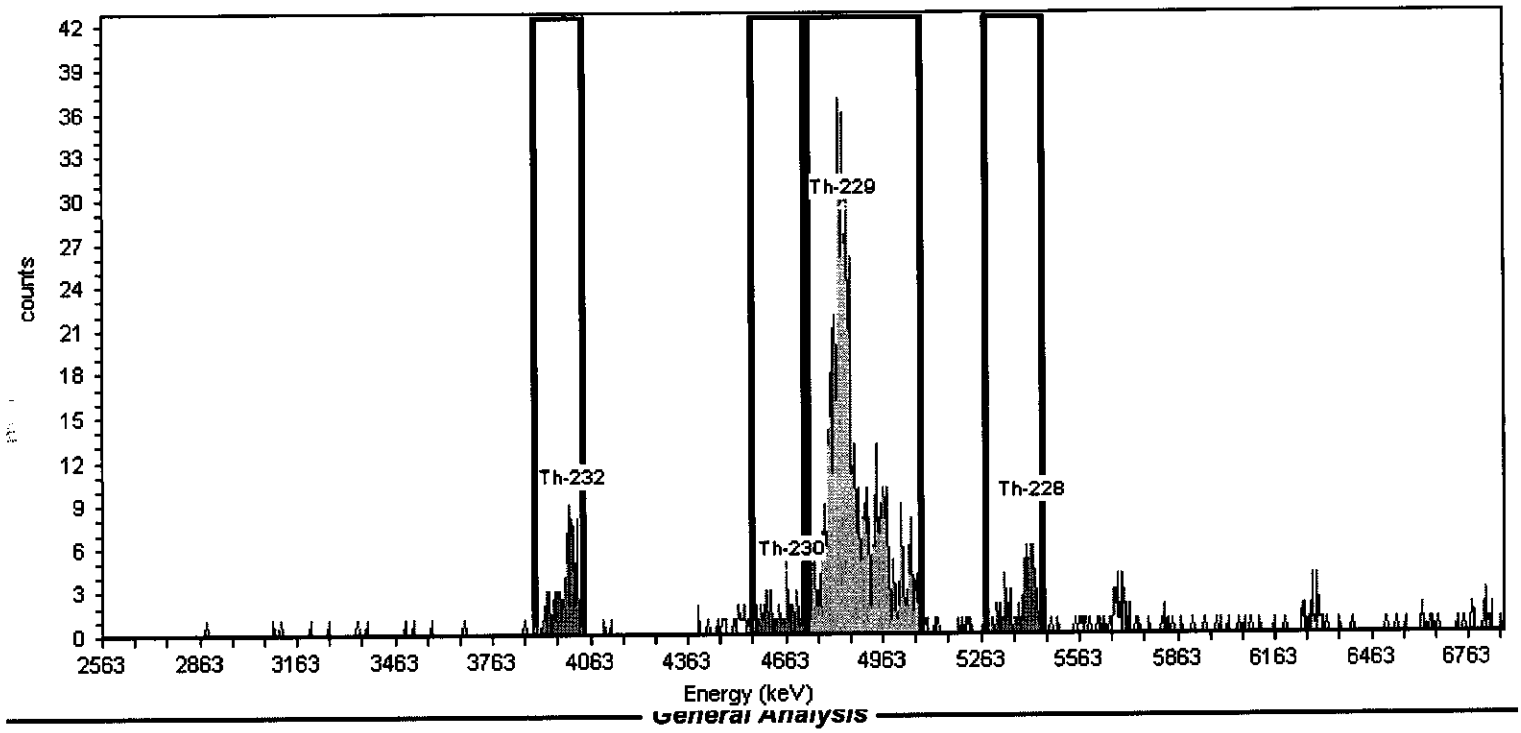
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 150.98%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/21/2010 9:47:40AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	22.199	100.0	87.82	4.0000	84	1.114E+000	4.521E-001	6.184E-002	1.597E-001
Th-230	4687.000	4561.000	4717.000	6.959	99.7	43.42	18.1716	25	3.366E-001	3.223E-001	1.322E-001	3.005E-001
Th-229	4845.000	4737.000	5080.000	56.665	99.6	729.33	16.0000	713	1.437E+001	1.749E+000	1.242E-001	2.845E-001
Th-228	5423.000	5280.000	5453.000	34.983	99.4	73.00	14.0000	59	7.890E-001	4.114E-001	1.164E-001	2.690E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:16:50PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

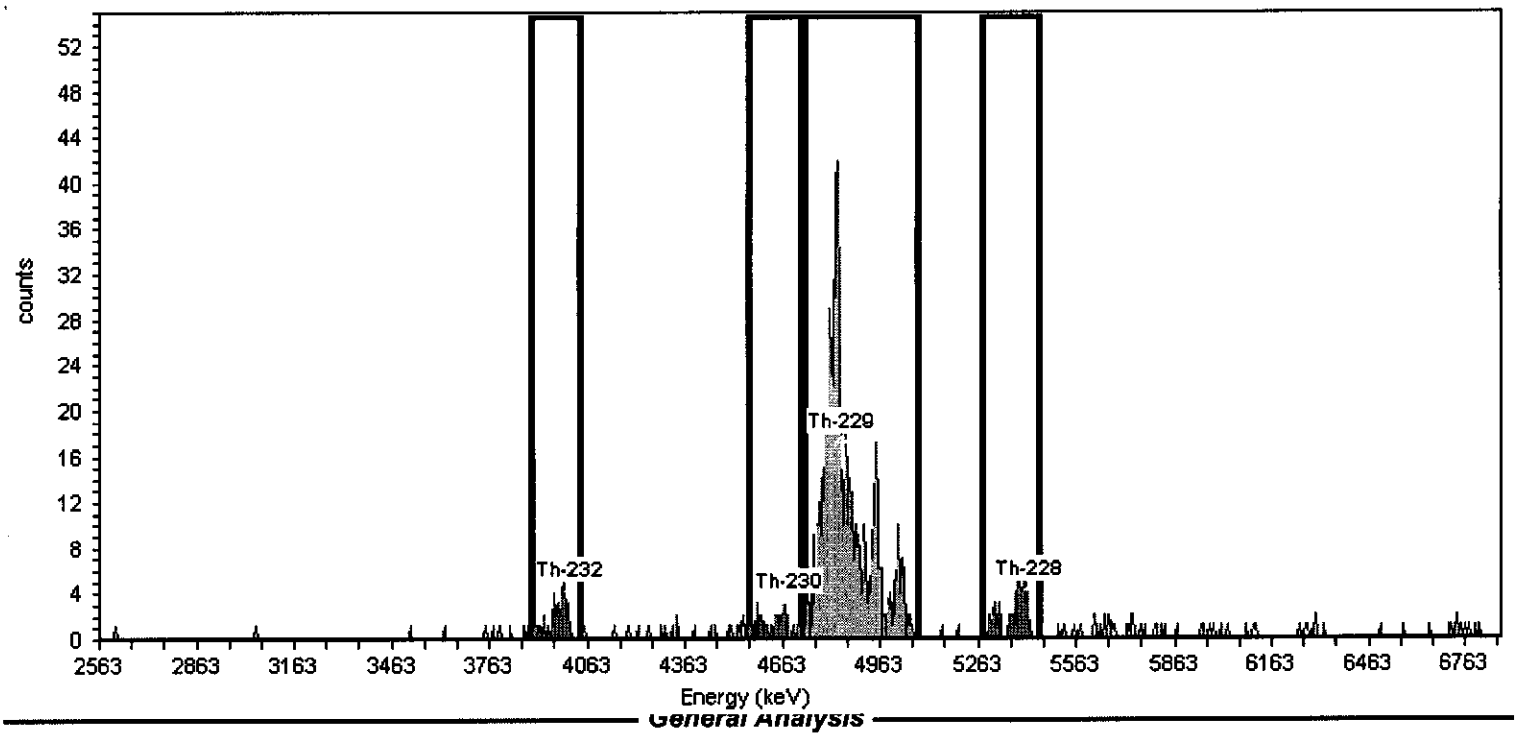
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.28%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/21/2010 9:47:42AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	46.376	100.0	44.18	0.0000	44	5.744E-001	2.900E-001	0.000E+000	3.518E-002
Th-230	4687.000	4561.000	4717.000	117.053	99.7	37.59	7.0000	31	3.989E-001	2.750E-001	8.026E-002	1.958E-001
Th-229	4845.000	4737.000	5080.000	49.207	99.6	744.65	15.3369	729	1.402E+001	1.683E+000	1.189E-001	2.732E-001
Th-228	5423.000	5280.000	5453.000	41.549	99.4	69.00	18.1151	51	6.655E-001	3.934E-001	1.295E-001	2.944E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:17:12PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

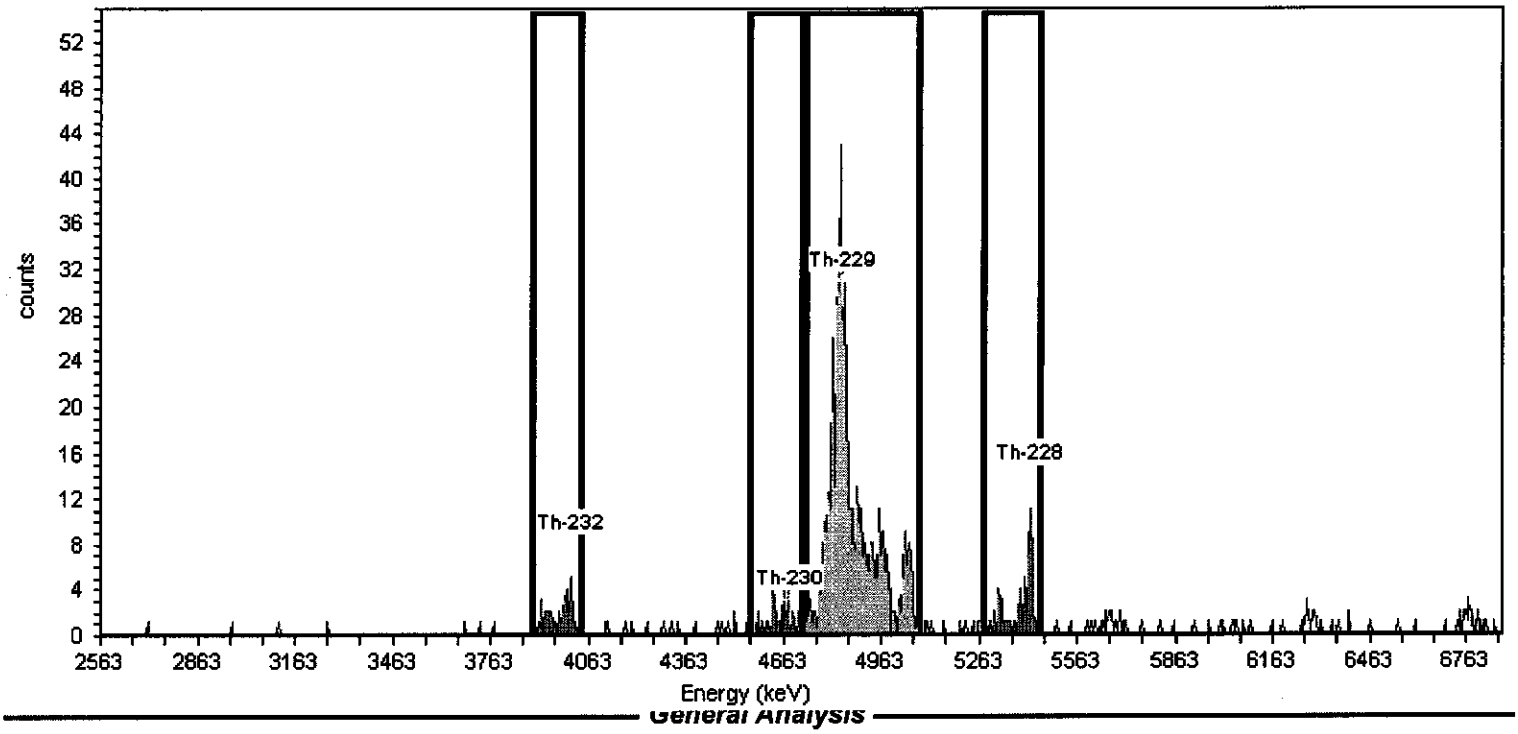
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.81%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/21/2010 9:47:28AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	90.666	100.0	49.96	3.0000	47	6.245E-001	3.202E-001	5.358E-002	1.432E-001
Th-230	4687.000	4561.000	4717.000	64.326	99.7	37.00	11.4109	26	3.413E-001	2.880E-001	1.048E-001	2.457E-001
Th-229	4845.000	4737.000	5080.000	43.493	99.6	727.66	14.6748	713	1.360E+001	1.647E+000	1.190E-001	2.741E-001
Th-228	5423.000	5280.000	5453.000	32.139	99.4	78.00	18.1809	60	8.003E-001	4.300E-001	1.327E-001	3.016E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:07PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

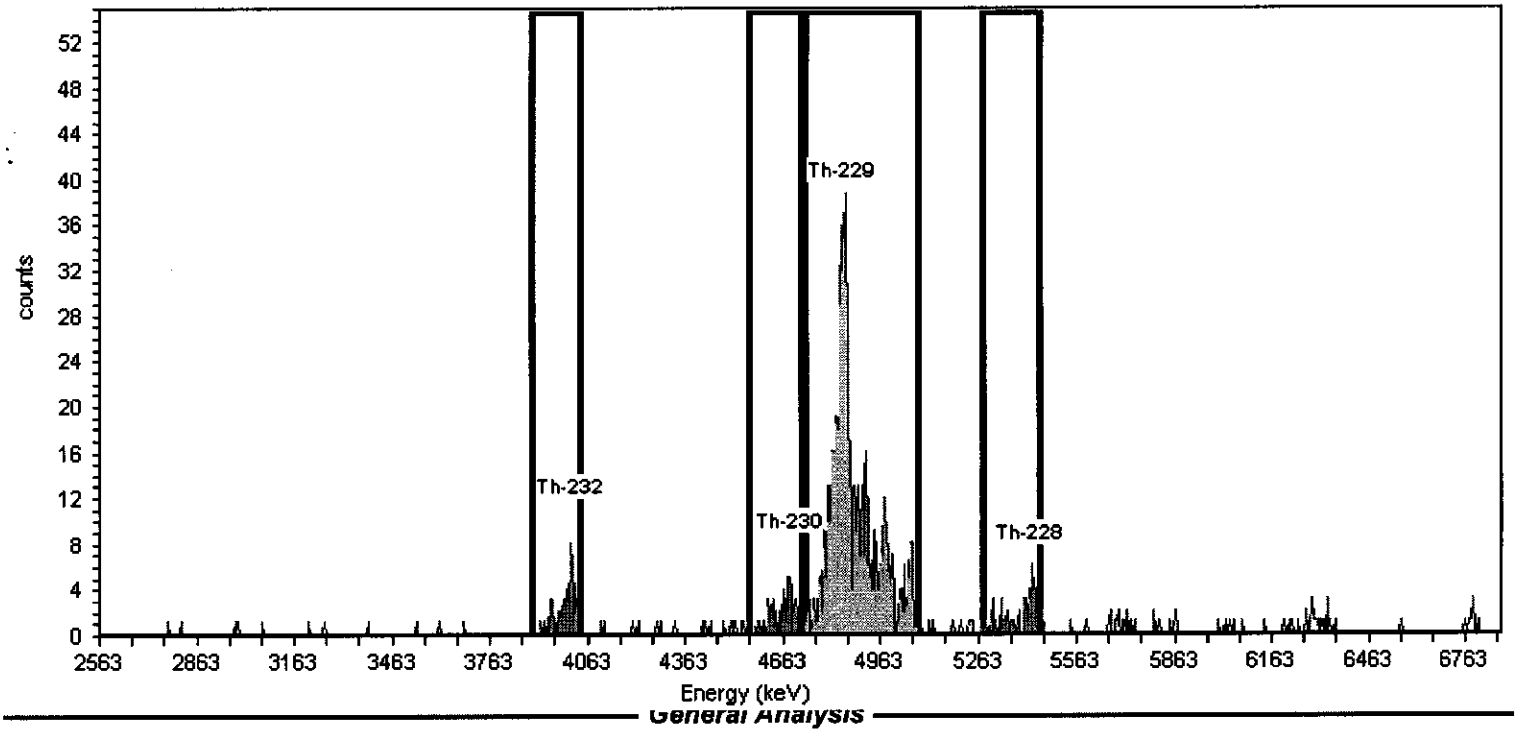
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 150.18%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/21/2010 9:47:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	10.614	100.0	60.00	1.0000	59	8.053E-001	3.645E-001	3.175E-002	1.004E-001
Th-230	4687.000	4561.000	4717.000	16.927	99.7	51.82	6.0000	46	6.273E-001	3.407E-001	7.801E-002	1.931E-001
Th-229	4845.000	4737.000	5080.000	44.687	99.6	702.66	8.0000	695	1.430E+001	1.746E+000	9.018E-002	2.174E-001
Th-228	5423.000	5280.000	5453.000	17.176	99.4	54.00	9.0000	45	6.179E-001	3.534E-001	9.583E-002	2.288E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:34PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

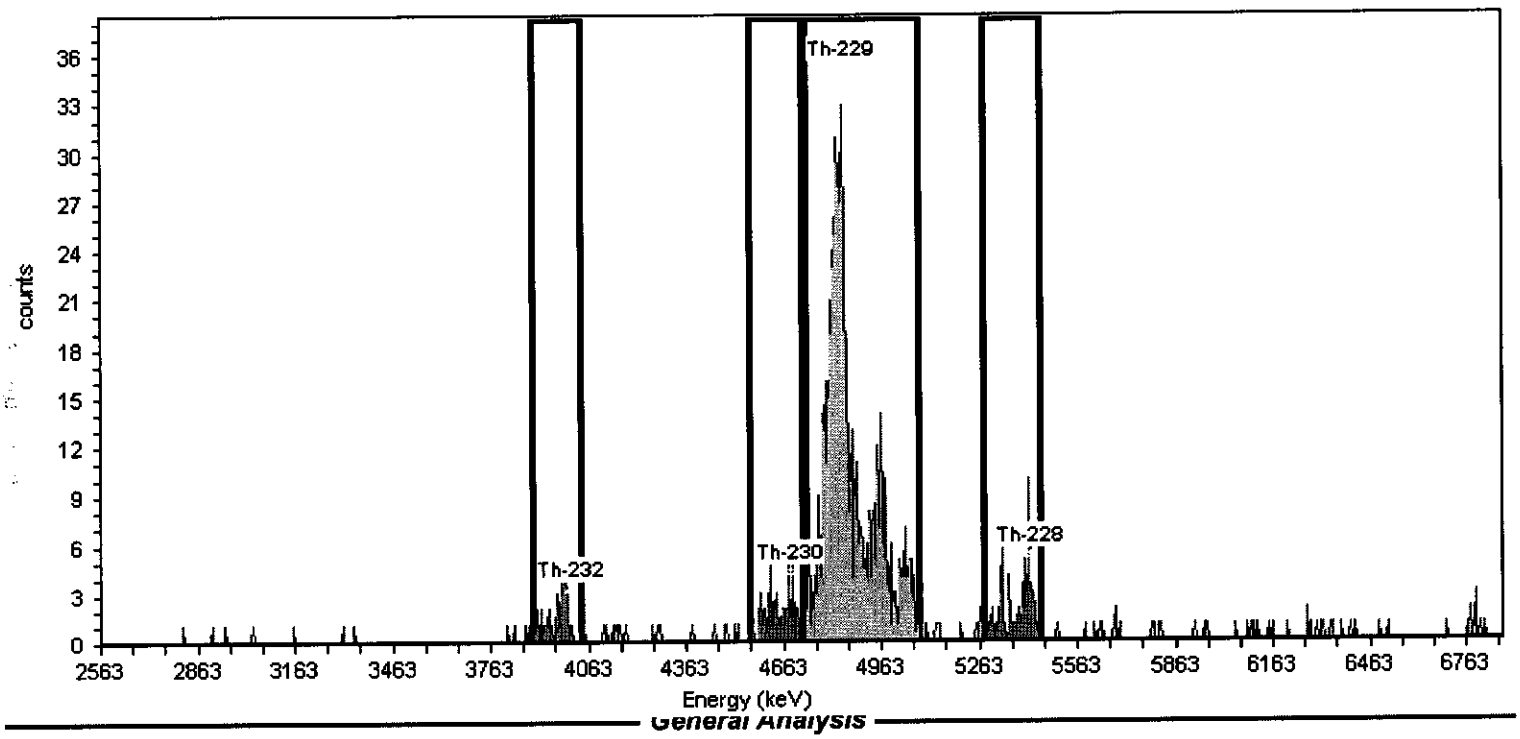
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.19%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/21/2010 9:47:33AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	29.600	100.0	38.14	1.0000	37	4.862E-001	2.670E-001	3.045E-002	9.633E-002
Th-230	4687.000	4561.000	4717.000	7.086	99.7	52.58	9.0000	44	5.722E-001	3.327E-001	9.163E-002	2.188E-001
Th-229	4845.000	4737.000	5080.000	58.640	99.6	729.31	5.0000	724	1.363E+001	1.619E+000	6.837E-002	1.723E-001
Th-228	5423.000	5280.000	5453.000	34.305	99.4	70.09	10.7944	59	7.809E-001	3.930E-001	1.007E-001	2.370E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:27PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

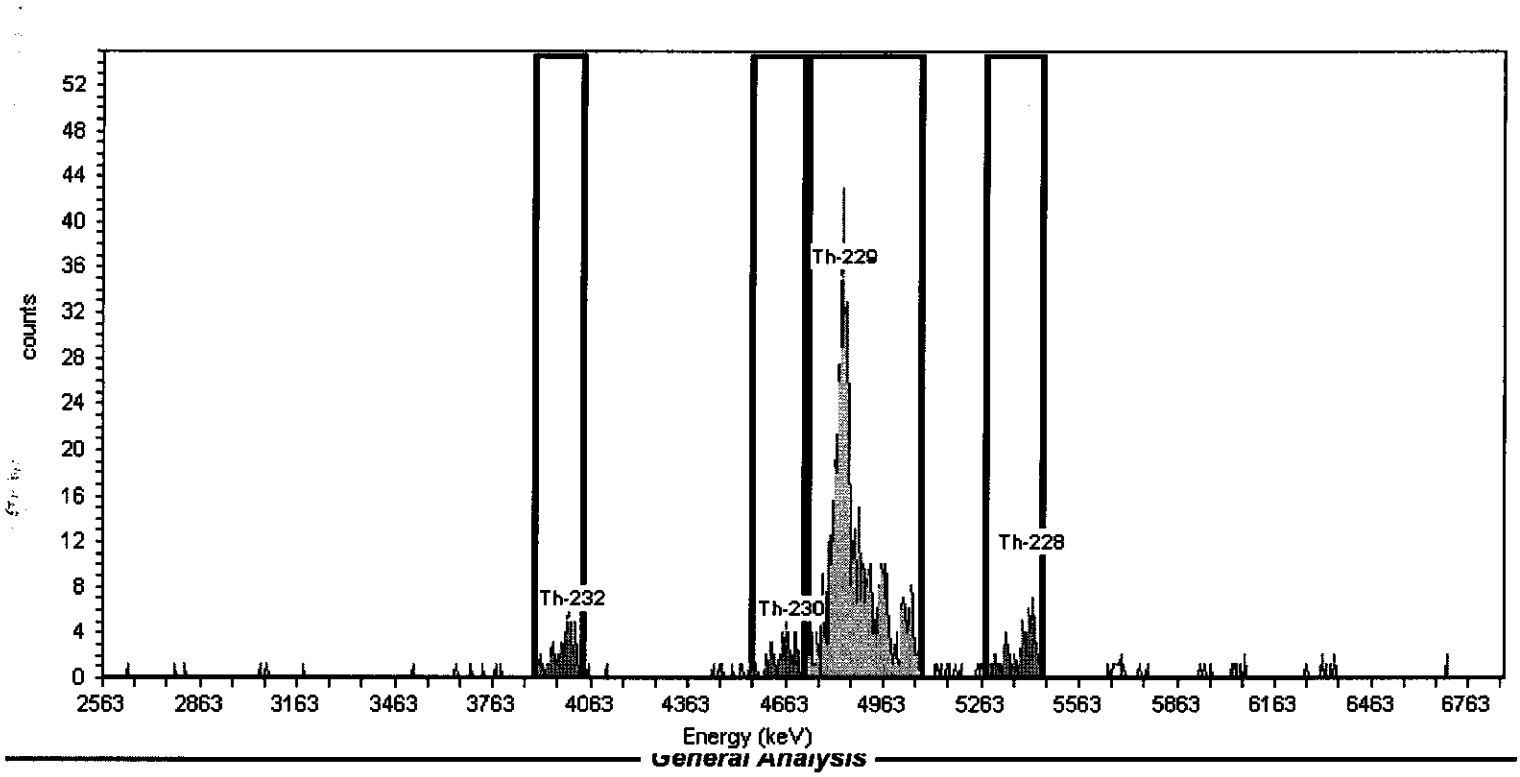
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.13%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/21/2010 9:47:36AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	35.124	100.0	65.00	5.0409	60	8.141E-001	3.838E-001	7.092E-002	1.786E-001
Th-230	4687.000	4561.000	4717.000	45.766	99.7	53.59	10.0000	44	5.936E-001	3.502E-001	1.002E-001	2.372E-001
Th-229	4845.000	4737.000	5080.000	45.043	99.6	706.34	8.0000	698	1.363E+001	1.655E+000	8.970E-002	2.163E-001
Th-228	5423.000	5280.000	5453.000	42.513	99.4	78.00	12.8849	65	8.894E-001	4.356E-001	1.141E-001	2.651E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:48:42PM 7/21/2010

Analyst: ORTEC

Sample

Sample: L82975-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 001
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

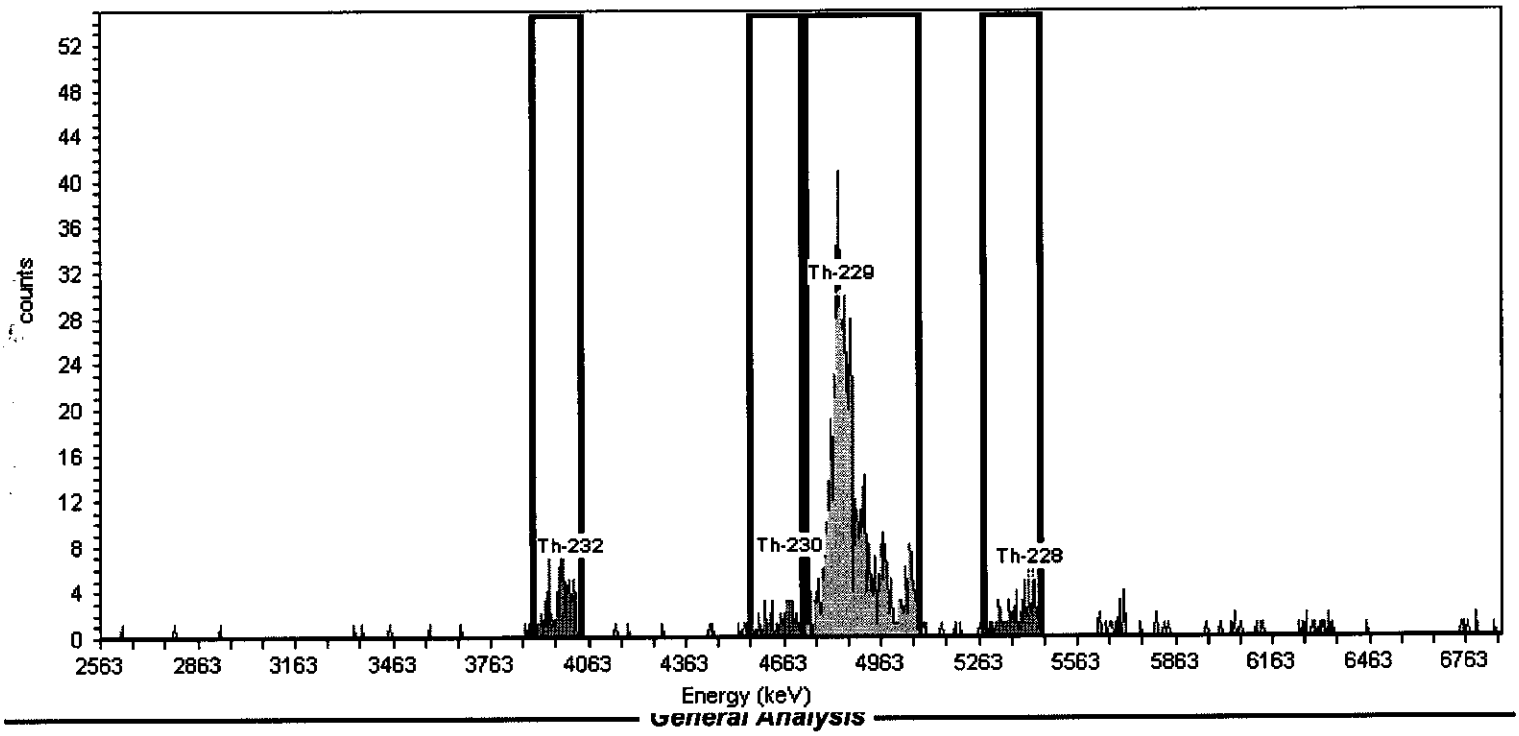
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 138.30%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/21/2010 9:47:38AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 9:43:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	49.357	100.0	78.00	0.0000	78	1.053E+000	4.258E-001	0.000E+000	3.653E-002
Th-230	4687.000	4561.000	4717.000	15.415	99.7	41.41	4.0000	37	5.066E-001	2.948E-001	6.300E-002	1.626E-001
Th-229	4845.000	4737.000	5080.000	63.103	99.6	708.34	6.0000	702	1.317E+001	1.588E+000	7.724E-002	1.912E-001
Th-228	5423.000	5280.000	5453.000	9.115	99.4	71.91	1.1151	71	9.615E-001	4.054E-001	3.336E-002	1.035E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:31AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

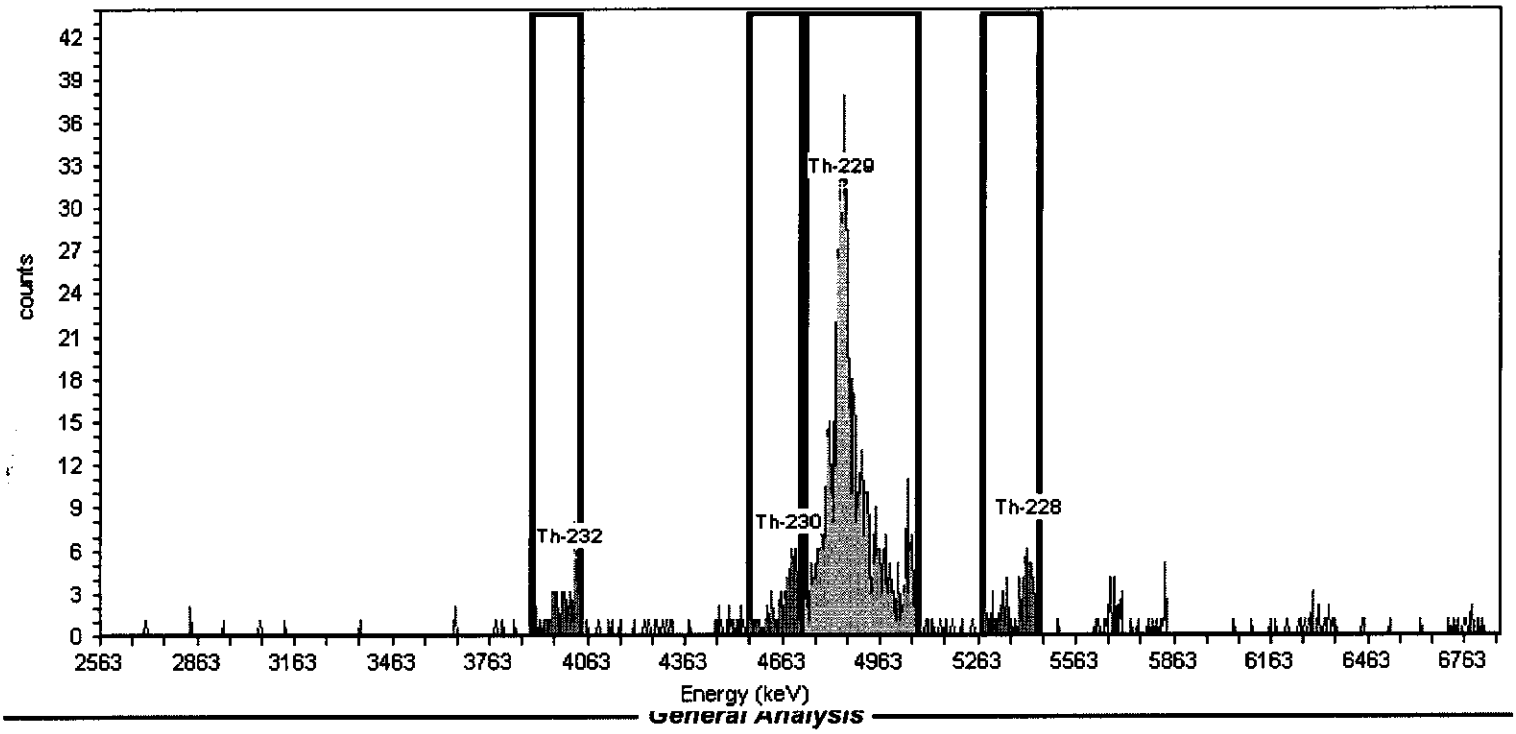
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 144.51%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/21/2010 3:26:37PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	32.653	100.0	65.00	6.0409	59	7.686E-001	3.689E-001	7.454E-002	1.843E-001
Th-230	4687.000	4561.000	4717.000	20.162	99.7	68.59	9.5891	59	7.714E-001	3.846E-001	9.419E-002	2.238E-001
Th-229	4845.000	4737.000	5080.000	48.010	99.6	738.34	11.0000	727	1.376E+001	1.644E+000	1.010E-001	2.374E-001
Th-228	5423.000	5280.000	5453.000	30.953	99.4	68.00	4.0000	64	8.393E-001	3.797E-001	6.102E-002	1.575E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:27AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-01 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

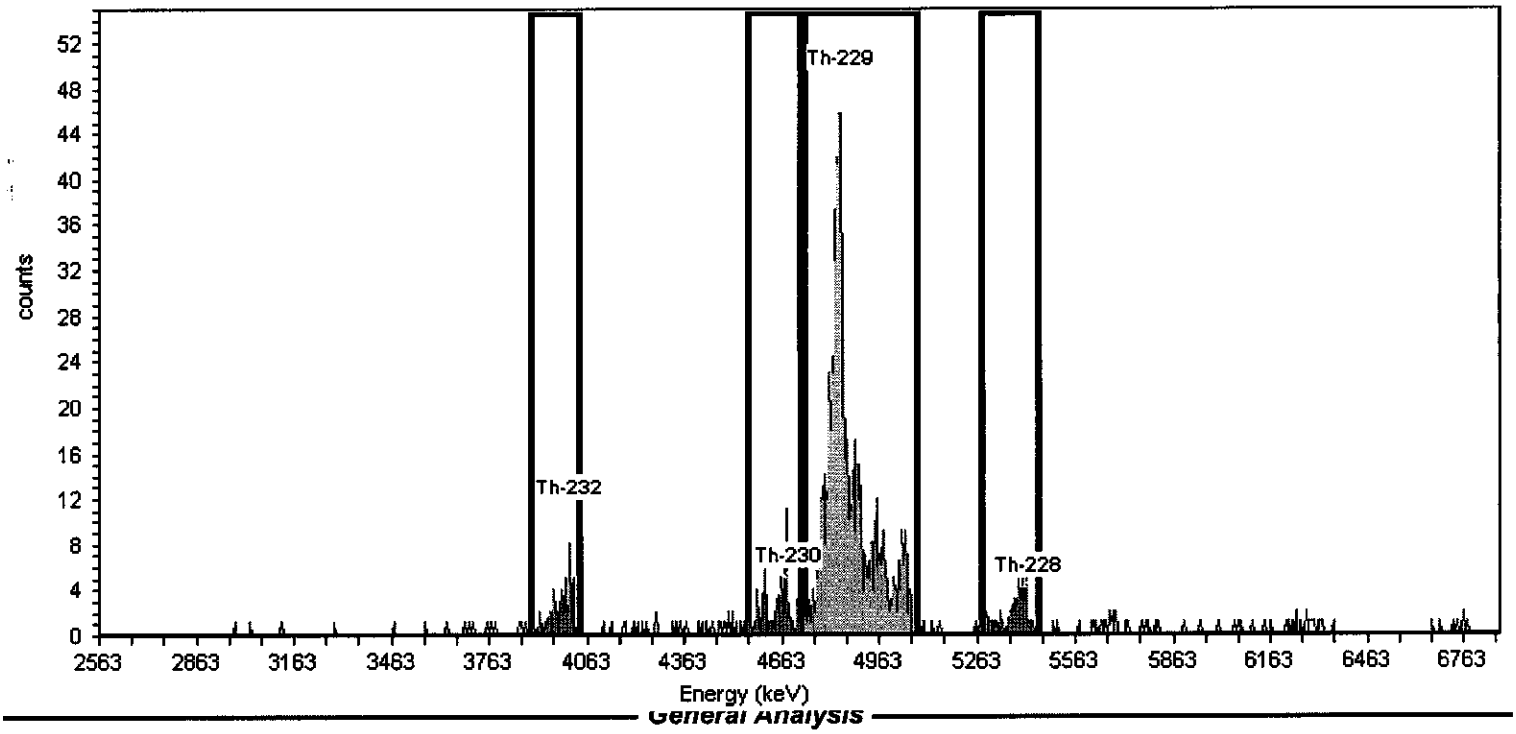
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 153.09%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/21/2010 3:26:38PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	7.397	100.0	56.18	6.8182	49	5.819E-001	3.066E-001	7.161E-002	1.751E-001
Th-230	4687.000	4561.000	4717.000	42.666	99.7	70.42	17.0000	53	6.317E-001	3.577E-001	1.134E-001	2.588E-001
Th-229	4845.000	4737.000	5080.000	40.490	99.6	814.34	10.0000	804	1.457E+001	1.657E+000	8.707E-002	2.062E-001
Th-228	5423.000	5280.000	5453.000	47.574	99.4	58.00	9.0000	49	5.811E-001	3.162E-001	8.277E-002	1.976E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:35AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-03 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

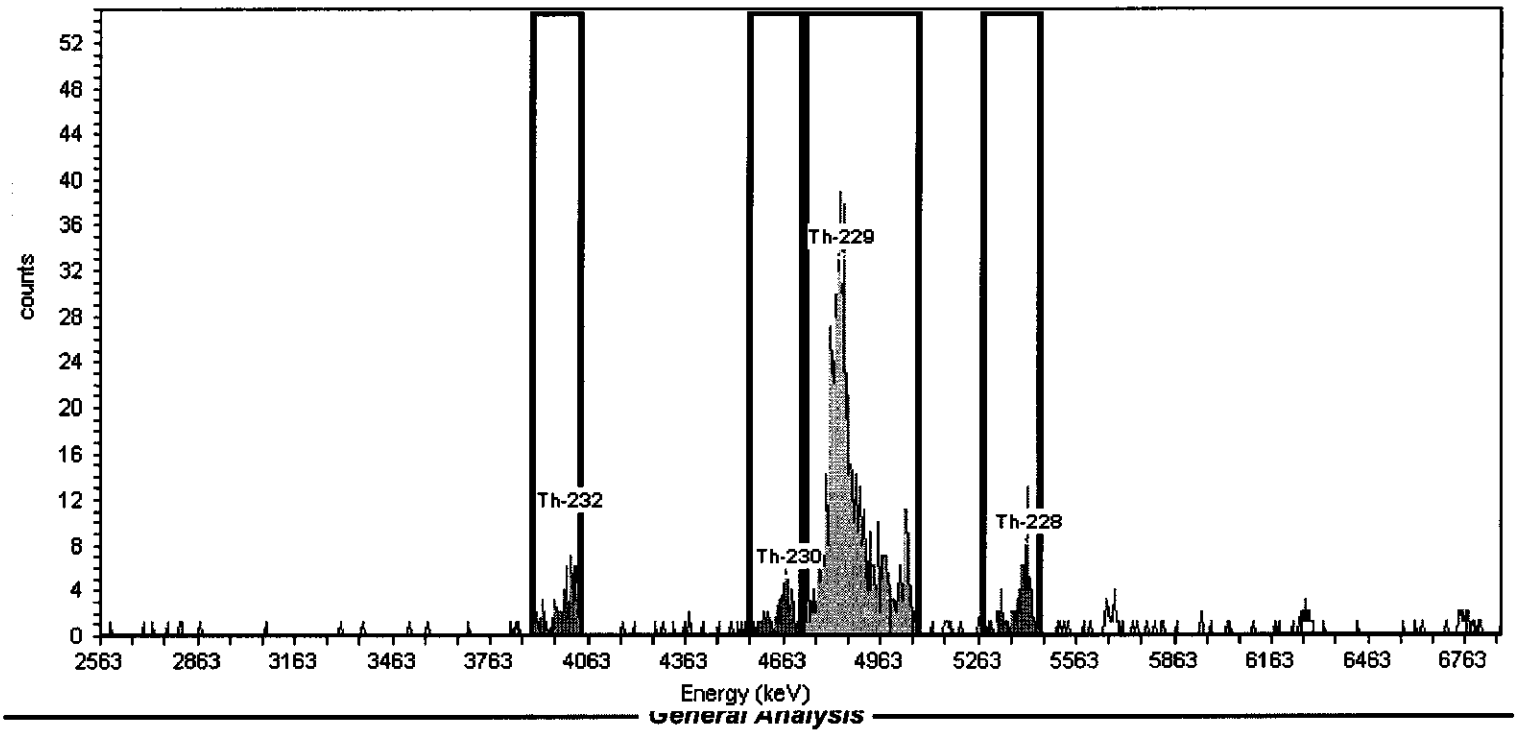
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 151.86%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/21/2010 3:26:41PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-228	5423.000	5280.000	5453.000	37.133	99.4	80.00	14.9095	65	8.092E-001	4.025E-001	1.117E-001	2.570E-001
Th-232	4010.000	3893.000	4040.000	21.166	100.0	71.18	3.0000	68	8.425E-001	3.667E-001	4.979E-002	1.330E-001
Th-230	4687.000	4561.000	4717.000	40.000	99.7	56.00	16.4175	40	4.906E-001	3.334E-001	1.168E-001	2.672E-001
Th-229	4845.000	4737.000	5080.000	56.847	99.6	781.31	14.0000	767	1.446E+001	1.691E+000	1.080E-001	2.496E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:32:25AM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-02 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.21 003
:
Description: WG286328

Client Name: Undefined
Client Contact:

Tracer

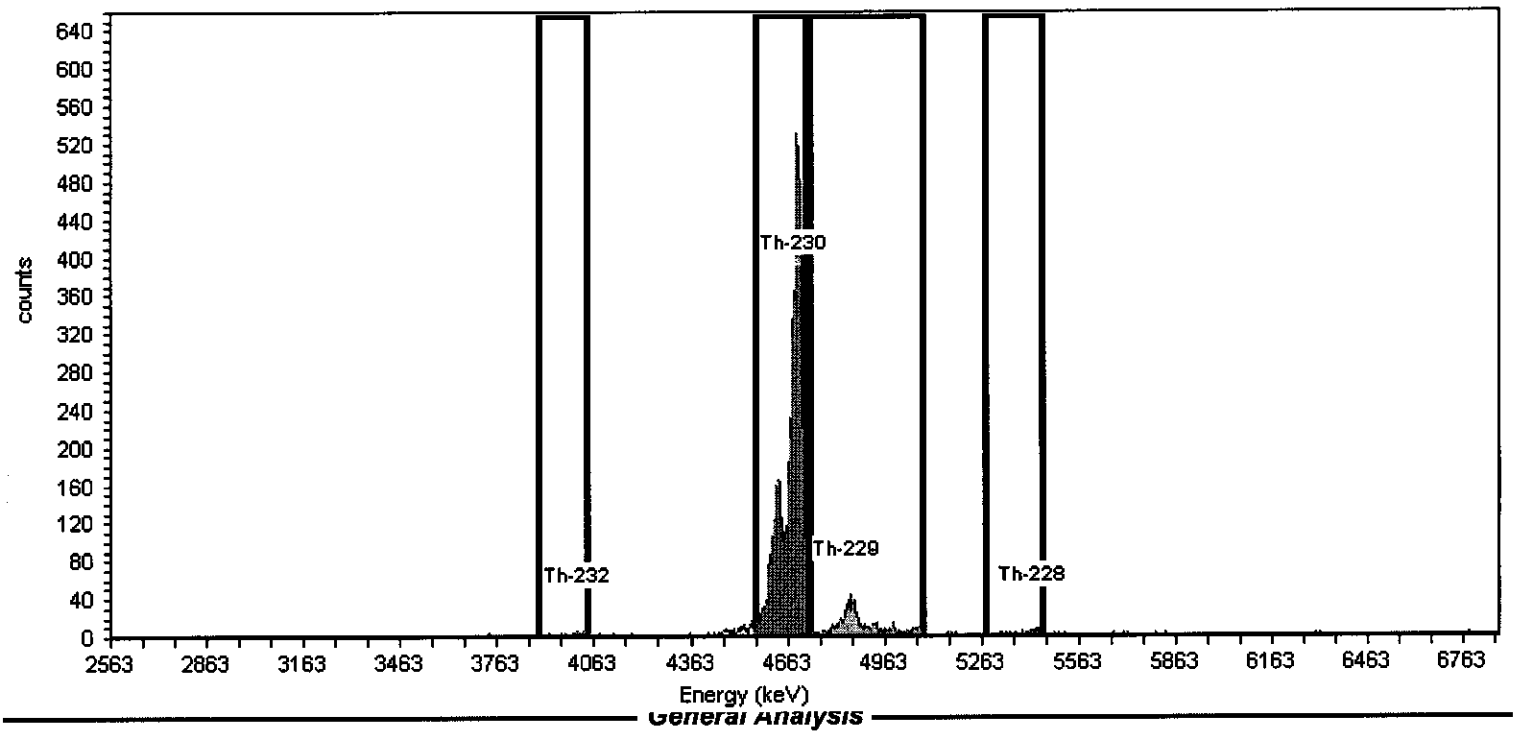
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 132.09%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/21/2010 3:26:42PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/21/2010 3:25:22PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-230	4687.000	4561.000	4717.000	27.230	99.7	5,988.07	12.0000	5,976	8.345E+001	1.845E+001	1.125E-001	2.629E-001
Th-229	4845.000	4737.000	5080.000	45.930	99.6	695.35	14.3369	681	1.258E+001	1.553E+000	1.231E-001	2.841E-001
Th-228	5423.000	5280.000	5453.000	9.549	99.4	63.23	12.7944	50	7.064E-001	3.973E-001	1.166E-001	2.710E-001
Th-232	4010.000	3893.000	4040.000	.000	100.0	62.10	3.0000	59	8.228E-001	3.816E-001	5.610E-002	1.499E-001

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286634

Analyst: MWM
Dept: 55
Prep Date: 7/19/2010
Analysis Date: 7/23/2010
Start Time:
End Time:
Approved: MWM 7-26-10
Approved: MRB 7-26-10

Project:
SDG#:
SOP#: rc017

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: ANALYTICAL

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 ~~Error~~ pCi/g	LLD (+ -)	LLD pCi/g
1	wg286254PBS		0.5000	9.0805	9.0981	**0.0176**	**0.789**	**0.8800**	0.93	1.47	5.68
2	wg286254LCSS	rc100623-1	0.5000	9.0626	9.0806	**0.0180**	**0.807**	**0.9000**	56.59	2.39	5.70
3	L82974-01	BG-10 0-2 COMP	0.4977	9.0946	9.1125	**0.0179**	**0.803**	**0.8950**	0.00	1.42	5.59
4	L82974-02	BG-10 2-12 COMP	0.4972	9.0717	9.0892	**0.0175**	**0.785**	**0.8750**	0.00	1.37	5.38
5	L82974-03	BG-10 12-18 COMP	0.4973	9.0475	9.0619	**0.0144**	**0.646**	**0.7200**	2.23	1.73	6.59
6	L82974-04	BG-14 0-2 COMP	0.4982	9.0778	9.0963	**0.0185**	**0.830**	**0.9250**	3.34	1.49	5.57
7	L82974-05	BG-14-2-12 COMP	0.4993	9.0727	9.0904	**0.0177**	**0.794**	**0.8850**	5.13	1.41	5.07
8	L82974-06	BG-14 12-18 COMP	0.4981	9.0527	9.0693	**0.0166**	**0.744**	**0.8300**	1.97	1.53	5.82
9	L82975-01	BG-5 0-2 COMP	0.4963	9.1062	9.1247	**0.0185**	**0.830**	**0.9250**	0.00	1.39	5.45
10	L82975-02	BG-5 2-12 COMP	0.4966	9.1214	9.1395	**0.0181**	**0.812**	**0.9050**	2.62	1.50	5.68
11	L82975-03	BG-5 12-18 COMP	0.4946	9.0475	9.0657	**0.0182**	**0.816**	**0.9100**	0.00	1.41	5.49
12	L82975-04	BG-9 0-2 COMP	0.4975	9.0774	9.0951	**0.0177**	**0.794**	**0.8850**	0.00	1.48	5.76
13	L82975-05	BG-9 2-12 COMP	0.4947	9.0572	9.0752	**0.0180**	**0.807**	**0.9000**	0.00	1.42	5.52
14	L82975-06	BG-9 12-18 COMP	0.4939	9.0894	9.1069	**0.0175**	**0.785**	**0.8750**	0.95	1.40	5.35
15	L82975-07	BG-13 0-2 COMP	0.4971	9.0612	9.0787	**0.0175**	**0.785**	**0.8750**	4.62	1.49	5.36
16	L82975-08	BG-13 2-12 COMP	0.4977	9.0755	9.0952	**0.0197**	**0.883**	**0.9850**	1.32	1.36	5.17
17	L82975-09	BG-13 12-18 COMP	0.4962	9.0997	9.1187	**0.0190**	**0.852**	**0.9500**	2.32	1.27	4.70
18	L82974-01DUP		0.4977	9.0697	9.0898	**0.0201**	**0.901**	**1.0050**	0.06	1.23	4.76
19	L82974-03DUP		0.4973	9.0555	9.0748	**0.0193**	**0.865**	**0.9650**	1.79	1.37	5.15
20	L82974-02MS	rc100623-1	0.4972	9.0799	9.0979	**0.0180**	**0.807**	**0.9000**	65.50	2.52	5.64
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

KBJ 7/26/10

Seq #	*ACZ Sample No.*	GR CPM Beta	Det #	BG β	NET CPM β	ADJ CPM β	Start Ingrow	Analysis Time	Ingrow minutes	Efficiency Beta	Det #	Det BG β
1	*wg286254PBS*	2.03	1	1.92	0.111	0.11	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	1	1.92
2	*wg286254LCSS*	8.95	2	2.02	6.93	6.93	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	2	2.02
3	*L82974-01*	1.90	3	1.90	0	0.00	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	3	1.9
4	*L82974-02*	1.68	4	1.68	0	0.00	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	4	1.68
5	*L82974-03*	1.93	5	1.71	0.217	0.22	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	5	1.71
6	*L82974-04*	2.44	6	2.02	0.419	0.42	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	6	2.02
7	*L82974-05*	2.16	7	1.54	0.617	0.62	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	7	1.54
8	*L82974-06*	2.00	8	1.78	0.222	0.22	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	8	1.78
9	*L82975-01*	1.92	9	1.92	0	0.00	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	9	1.92
10	*L82975-02*	2.32	10	2.00	0.32	0.32	7/19/2010 13:20	7/23/2010 13:21	5806	**0.3197**	10	2
11	*L82975-03*	1.92	1	1.92	0	0.00	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
12	*L82975-04*	2.02	2	2.02	0	0.00	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
13	*L82975-05*	1.90	3	1.90	0	0.00	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
14	*L82975-06*	1.79	4	1.68	0.113	0.11	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
15	*L82975-07*	2.26	5	1.71	0.553	0.55	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
16	*L82975-08*	2.20	6	2.02	0.178	0.18	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
17	*L82975-09*	1.84	7	1.54	0.301	0.30	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
18	*L82974-01DUP*	1.79	8	1.78	0.008	0.01	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
19	*L82974-03DUP*	2.16	9	1.92	0.236	0.24	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
20	*L82974-02MS*	10.07	10	2.00	8.07	8.07	7/19/2010 13:20	7/23/2010 14:53	5898	**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		

Decay Equation for Pb210:	Pb-210
Standard Preparation Date	4/1/2002
Initial True Value (pCi/mL)	100.00
Decayed Value (pCi/mL)	77.23

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-26-10

Approved: MWB
Date: 7-26-10

Work Group: WG28634
Sample Type: Sol. d
Analysis Date: 7-23-10
Analyst: MWM
Prep Date: 7-19-10

Weekly background file: Back4516
Daily background file: Back4522

Alpha performance file: —
Beta performance file: Perb2261

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286634

Date Reported: 26-Jul-10
Run ID: R735377
Date Analyzed: 23-Jul-10
ICAL Workgroup:
Instrument ID: PREP

L82974-01

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.6	1.4		TB

L82974-02

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.4	1.4		TB

L82974-03

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.2	1		pCi/g	++	6.6	1.7		TB

L82974-04

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	3.3	1		pCi/g	++	5.6	1.5		TB

L82974-05

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	5.1	1		pCi/g	++	5.1	1.4		TB

L82974-06

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2	1		pCi/g	++	5.8	1.5		TB

L82975-01

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.4		TB

L82975-02

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.6	1		pCi/g	++	5.7	1.5		TB

WG286254LCSS

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	57	1		pCi/g	++	5.7	2.4	RC100623-1	
SREV	LEAD 210	REC	73.8	1		%	++	5.7	2.4	RC100623-1	
SREV	LEAD 210	TRUE	77.23	1		pCi/g	++	5.7	2.4	RC100623-1	

WG286254PBS

Tag: Measured: 7/23/2010 1:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.93	1		pCi/g	++	5.7	1.5		

L82974-01DUP

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.06	1		pCi/g	++	4.8	1.2		
SREV	LEAD 210	RER	0.03	1		%	++	10	5		
FAIL	LEAD 210	RPD	200	1		pCi/g	ALRT	4.8	1.2		

L82974-02MS

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	66	1		pCi/g	++	5.6	2.5	RC100623-1	
SREV	LEAD 210	REC	85.5	1		%	++	5.6	2.5	RC100623-1	
SREV	LEAD 210	TRUE	77.23	1		pCi/g	++	5.6	2.5	RC100623-1	

L82974-03DUP

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	1.8	1		pCi/g	++	5.2	1.4		
SREV	LEAD 210	RER	0.18	1		%	++	10	5		
FAIL	LEAD 210	RPD	20	1		pCi/g	++	5.2	1.4		

L82975-03

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.4		TB

L82975-04

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.8	1.5		TB

L82975-05

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.4		TB

L82975-06

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.95	1		pCi/g	++	5.4	1.4		TB

L82975-07

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	4.6	1		pCi/g	++	5.4	1.5		TB

L82975-08

Tag: Measured: 7/23/2010 2:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.3	1		pCi/g	++	5.2	1.4		TB

L82975-09 **Tag:** **Measured: 7/23/2010 2:53:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.3	1		pCi/g	++	4.7	1.3		TB

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286254

Project:
SDG#:
SOP#:

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-19-10 7:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 Error pCi/g	LLD (+ -)	LLD pCi/g
1	PBS		50mL						#DIV/0!		
2	LCSS								#DIV/0!		
3	L82974-01	BG-10 0-2 COMP							#DIV/0!		
4	L82974-02	BG-10 2-12 COMP							#DIV/0!		
5	L82974-03	BG-10 12-18 COMP							#DIV/0!		
6	L82974-04	BG-14 0-2 COMP							#DIV/0!		
7	L82974-05	BG-14-2-12 COMP							#DIV/0!		
8	L82974-06	BG-14 12-18 COMP							#DIV/0!		
9	L82975-01	BG-5 0-2 COMP							#DIV/0!		
10	L82975-02	BG-5 2-12 COMP							#DIV/0!		
11	L82975-03	BG-5 12-18 COMP							#DIV/0!		
12	L82975-04	BG-9 0-2 COMP							#DIV/0!		
13	L82975-05	BG-9 2-12 COMP							#DIV/0!		
14	L82975-06	BG-9 12-18 COMP							#DIV/0!		
15	L82975-07	BG-13 0-2 COMP							#DIV/0!		
16	L82975-08	BG-13 2-12 COMP							#DIV/0!		
17	L82975-09	BG-13 12-18 COMP							#DIV/0!		
18	DUP 4-01								#DIV/0!		
19	DUP 4-03								#DIV/0!		
20	MS 4-02								#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

Radioactive Standards

Ingrow 7-19-10 13:20

LCS & MS 100623-1

Lead Carrier	100713-1	Sulfuric acid	34642
Iron Chloride	100701-1	Nitric Acid	35035
Nitric Acid 1N	36035	0.1N HNO_3	35035
NH_4OH	34092	2N HNO_3	—
		H_2O_2	—

COMMENTS:

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/16/2010 10:04:41 AM 71610

Calculations for dry weight:

Login #
82974-01
82974-02
82974-03
82974-04
82974-05
82974-06
82975-01
82975-02
82975-03
82975-04
82975-05
82975-06
82975-07
82975-08
82975-09

air dried solid(g)	soils sx wt (g)
0.995421844	0.5
0.99443038	0.5
0.994649805	0.5
0.996349255	0.5
0.998630137	0.5
0.996227997	0.5
0.992674986	0.5
0.993241258	0.5
0.989133388	0.5
0.99501868	0.5
0.989473684	0.5
0.987807581	0.5
0.994196429	0.5
0.99537171	0.5
0.992427719	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.00000			#DIV/0!
0.49771	50	50	0.497711
0.49722	50	50	0.497215
0.49732	50	50	0.497325
0.49817	50	50	0.498175
0.49932	50	50	0.499315
0.49811	50	50	0.498114
0.49634	50	50	0.496337
0.49662	50	50	0.496621
0.49457	50	50	0.494567
0.49751	50	50	0.497509
0.49474	50	50	0.494737
0.49390	50	50	0.493904
0.49710	50	50	0.497098
0.49769	50	50	0.497686
0.49621	50	50	0.496214
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

LB770 Number 1 User File: Lead 210 Sample Data File: 0723-02
Sample Set: WG286254 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

Category	Alpha Low	Alpha High	Beta Low	Beta High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.122	0.267	0.189	0.156	0.233	0.256	0.167	0.267	0.244	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.92	2.02	1.90	1.68	1.71	2.02	1.54	1.78	1.92	2.00
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-23-110 Time 13:20:34
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1167

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	4719	WG286254PBS	0.000	0.000	1	0.23	0.111	> 100	1	0.74
2	4720	WG286254LCSS	0.000	0.000	1	0.31	6.93	15.1	1	0.76
3	4721	L82974-01	0.000	0.000	1	0.27	0.000	0.000	1	0.74
4	4722	L82974-02	0.000	0.000	1	0.25	0.000	0.000	1	0.70
5	4723	L82974-03	0.000	0.000	1	0.30	0.217	> 100	1	0.70
6	4724	L82974-04	0.000	0.000	1	0.31	0.419	> 100	1	0.76
7	4725	L82974-05	0.077	> 100	1	0.26	0.617	99.2	1	0.67
8	4726	L82974-06	0.000	0.000	1	0.31	0.222	> 100	1	0.72
9	4727	L82975-01	0.000	0.000	1	0.30	0.000	0.000	1	0.74
10	4728	L82975-02	0.000	0.000	1	0.29	0.320	> 100	1	0.76

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Lead 210 Sample Data File: 0723-03
Sample Set: WG286254 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = **1600**
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	**0.000**	**20.0**	**0.000**	**20.0**
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.122	0.267	0.189	0.156	0.233	0.256	0.167	0.267	0.244	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.92	2.02	1.90	1.68	1.71	2.02	1.54	1.78	1.92	2.00
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-23-110 Time 14:53:04
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] **1169**

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	4729	L82975-03	0.000	0.000	1	0.23	0.000	0.000	1	0.74
2	4730	L82975-04	0.000	0.000	1	0.31	0.000	0.000	1	0.76
3	4731	L82975-05	0.000	0.000	1	0.27	0.000	0.000	**1**	**0.74**
4	4732	L82975-06	0.000	0.000	1	0.25	0.113	> 100	1	0.70
5	4733	L82975-07	0.000	0.000	1	0.30	0.553	> 100	1	0.70
6	4734	L82975-08	0.000	0.000	1	0.31	0.178	> 100	**1**	**0.76**
7	4735	L82975-09	0.000	0.000	1	0.26	0.301	> 100	1	0.67
8	4736	L82974-01DUP	0.000	0.000	1	0.31	0.008	> 100	1	0.72
9	4737	L82974-03DUP	0.000	0.000	1	0.30	0.236	> 100	**1**	**0.74**
10	4738	L82974-02MS	0.000	0.000	1	0.29	8.07	13.6	1	0.76

MDA = Minimum Detectable Activity [cpm]

Detectors with Trend:1a, 2a, 3a, 4a, 5a, 6a, 7a, 8a, 9a, 10a, 1b, 2b, 3b, 4b, 5b

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG286781

Project:
SDG#:
SOP#: rc020

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/21/2010
Analysis Date: 7/26/2010
Start Time:
End Time:
Approved: MWM 7-28-10
Approved: MTB 7-28-10

MWM
50.00

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	WG286325PBS		0.5	1	10.30	913	0.887	29.340	46.110	16.770	**0.38**	**0.41**	0.20	4.00	5.00	1.000	**0.02**	**0.14**	0.20	12.00	8.00	-4.000	**-0.09**	**0.21**	0.20
2	WG286325LCSS	RC100223-2	0.5	1	10.30	501	0.487	21.000	910.690	889.690	**36.58**	**2.64**	0.36	4.06	40.99	36.933	**1.52**	**0.58**	0.36	5.00	898.77	893.770	**36.75**	**2.60**	0.36
3	L82974-01	BG-10 0-2 COMP	0.49771092	1	10.30	870	0.846	10.060	43.060	33.000	**0.78**	**0.36**	0.21	3.01	4.00	0.987	**0.02**	**0.13**	0.21	6.00	44.86	38.860	**0.92**	**0.36**	0.21
4	L82974-02	BG-10 2-12 COMP	0.49721519	1	10.30	853	0.829	18.000	54.290	36.290	**0.88**	**0.43**	0.21	4.00	4.04	0.040	**0.00**	**0.14**	0.21	7.00	52.57	45.570	**1.11**	**0.39**	0.21
5	L82974-03	BG-10 12-18 COM	0.4973249	1	10.30	816	0.793	17.940	44.230	26.290	**0.67**	**0.42**	0.22	5.00	11.96	6.960	**0.18**	**0.22**	0.22	11.00	46.00	35.000	**0.89**	**0.40**	0.22
6	L82974-04	BG-14 0-2 COMP	0.49817463	1	10.30	837	0.813	29.000	56.060	27.060	**0.67**	**0.48**	0.22	7.00	5.98	-1.020	**-0.03**	**0.19**	0.22	3.00	50.57	47.570	**1.18**	**0.38**	0.22
7	L82974-05	BG-14-2-12 COMP	0.49931507	1	10.30	798	0.776	21.770	36.000	14.230	**0.37**	**0.41**	0.23	11.02	4.00	-7.022	**-0.18**	**0.21**	0.23	8.00	41.00	33.000	**0.85**	**0.38**	0.23
8	L82974-06	BG-14 12-18 COM	0.498114	1	10.30	867	0.843	14.230	43.710	29.480	**0.70**	**0.38**	0.21	2.02	6.00	3.978	**0.09**	**0.14**	0.21	3.00	31.00	28.000	**0.67**	**0.29**	0.21
9	L82975-01	BG-5 0-2 COMP	0.49633749	1	10.30	555	0.539	15.060	55.000	39.940	**1.49**	**0.66**	0.33	9.00	6.00	-3.000	**-0.11**	**0.30**	0.33	6.57	28.00	21.429	**0.80**	**0.46**	0.33
10	L82975-02	BG-5 2-12 COMP	0.49662083	1	10.30	831	0.808	23.000	31.060	8.060	**0.20**	**0.39**	0.22	3.00	5.00	2.000	**0.05**	**0.15**	0.22	4.00	16.00	12.000	**0.30**	**0.23**	0.22
11	L82975-03	BG-5 12-18 COMP	0.49456669	1	10.30	598	0.581	25.060	103.230	78.170	**2.72**	**0.83**	0.30	1.00	9.00	8.000	**0.28**	**0.23**	0.30	8.00	78.33	70.330	**2.45**	**0.68**	0.30
12	L82975-04	BG-9 0-2 COMP	0.49750934	1	10.30	795	0.773	24.000	35.230	11.230	**0.29**	**0.42**	0.23	4.04	5.02	0.985	**0.03**	**0.16**	0.23	8.00	33.67	25.670	**0.67**	**0.35**	0.23
13	L82975-05	BG-9 2-12 COMP	0.49473684	1	10.30	891	0.866	30.459	36.120	5.661	**0.13**	**0.40**	0.20	12.00	7.00	-5.000	**-0.12**	**0.21**	0.20	8.00	32.57	24.570	**0.57**	**0.31**	0.20
14	L82975-06	BG-9 12-18 COMP	0.49390379	1	10.30	689	0.670	30.770	38.770	8.000	**0.24**	**0.53**	0.26	14.04	12.00	-2.035	**-0.06**	**0.32**	0.26	4.43	20.00	15.571	**0.47**	**0.31**	0.26
15	L82975-07	BG-13 0-2 COMP	0.49709821	1	10.30	701	0.681	25.711	41.940	16.229	**0.48**	**0.51**	0.26	11.00	4.02	-6.980	**-0.21**	**0.24**	0.26	7.57	16.43	8.859	**0.26**	**0.30**	0.26
16	L82975-08	BG-13 2-12 COMP	0.49768585	1	10.30	819	0.796	29.340	55.120	25.780	**0.65**	**0.49**	0.22	4.00	10.99	6.990	**0.18**	**0.21**	0.22	12.00	26.33	14.330	**0.36**	**0.33**	0.22
17	L82975-09	BG-13 12-18 COM	0.49621386	1	10.30	528	0.513	21.000	40.710	19.710	**0.77**	**0.65**	0.34	4.06	5.00	0.943	**0.04**	**0.25**	0.34	5.00	16.00	11.000	**0.43**	**0.38**	0.34
18	L82974-02DUP		0.49721519	1	10.30	916	0.890	10.060	42.940	32.880	**0.74**	**0.35**	0.20	3.01	7.00	3.987	**0.09**	**0.15**	0.20	6.00	33.34	27.340	**0.62**	**0.30**	0.20
19	L82974-03DUP		0.4973249	1	10.30	889	0.864	18.000	52.230	34.230	**0.80**	**0.41**	0.20	4.00	7.00	3.000	**0.07**	**0.16**	0.20	7.00	46.57	39.570	**0.92**	**0.36**	0.20
20	L82974-01MS	RC100223-2	0.49771092	1	10.30	459	0.446	17.940	832.770	814.830	**36.74**	**2.76**	0.39	5.00	41.94	36.940	**1.67**	**0.65**	0.39	11.00	910.09	899.090	**40.54**	**2.87**	0.39
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments:

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

HB 7/28/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-28-10

Work Group: WG286781
Sample Type: Sol. d
Analysis Date: 7-26-10
Analyst: MWM
Prep Date: 7-21-10

Approved: MWB
Date: 7-28-10

Weekly background file: 7-26-10
Daily background file: 7-26-10

Alpha performance file: 7-26-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:
PBW failed first run. Reran entire WG and PBW passed.

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286781

Date Reported: 28-Jul-10
Run ID: R735776
Date Analyzed: 26-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286325PBS

Tag: Measured: 7/26/2010 3:39:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.38	1		pCi/g	++	0.2	0.41		
SREV	URANIUM 235	FOUND	0.02	1		pCi/g	++	0.2	0.14		
SREV	URANIUM 238	FOUND	-0.09	1		pCi/g	++	0.2	0.21		

WG286325LCSS

Tag: Measured: 7/26/2010 3:40:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	37	1		pCi/g	++	0.36	2.6	RC100223-2	
SREV	URANIUM 234	REC	111.7	1		%	++	0.36	2.6	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.36	2.6	RC100223-2	
SREV	URANIUM 235	FOUND	1.5	1		pCi/g	++	0.36	0.58	RC100223-2	
SREV	URANIUM 235	REC	94.9	1		%	++	0.36	0.58	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.36	0.58	RC100223-2	
SREV	URANIUM 238	FOUND	36.8	1		pCi/g	++	0.36	2.6	RC100223-2	
SREV	URANIUM 238	REC	107	1		%	++	0.36	2.6	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.36	2.6	RC100223-2	

L82974-01

Tag: Measured: 7/26/2010 3:41:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.78	1		pCi/g	++	0.21	0.36		TB
SREV	URANIUM 235	OM-3050	0.02	1		pCi/g	++	0.21	0.13		TB
SREV	URANIUM 238	OM-3050	0.92	1		pCi/g	++	0.21	0.36		TB

L82974-02

Tag: Measured: 7/26/2010 3:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.88	1		pCi/g	++	0.21	0.43		TB
SREV	URANIUM 235	OM-3050	0	1		pCi/g	++	0.21	0.14		TB
SREV	URANIUM 238	OM-3050	1.11	1		pCi/g	++	0.21	0.39		TB

L82974-03

Tag: Measured: 7/26/2010 3:44:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.67	1		pCi/g	++	0.22	0.42		TB
SREV	URANIUM 235	OM-3050	0.18	1		pCi/g	++	0.22	0.22		TB
SREV	URANIUM 238	OM-3050	0.89	1		pCi/g	++	0.22	0.4		TB

L82974-04

Tag: Measured: 7/26/2010 3:46:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.67	1		pCi/g	++	0.22	0.48		TB
SREV	URANIUM 235	OM-3050	-0.03	1		pCi/g	++	0.22	0.19		TB
SREV	URANIUM 238	OM-3050	1.18	1		pCi/g	++	0.22	0.38		TB

L82974-05

Tag: Measured: 7/26/2010 3:47:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.37	1		pCi/g	++	0.23	0.41		TB
SREV	URANIUM 235	OM-3050	-0.18	1		pCi/g	++	0.23	0.21		TB
SREV	URANIUM 238	OM-3050	0.85	1		pCi/g	++	0.23	0.38		TB

L82974-06

Tag: Measured: 7/26/2010 3:49:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.7	1		pCi/g	++	0.21	0.38		TB
SREV	URANIUM 235	OM-3050	0.09	1		pCi/g	++	0.21	0.14		TB
SREV	URANIUM 238	OM-3050	0.67	1		pCi/g	++	0.21	0.29		TB

L82975-01

Tag: Measured: 7/26/2010 3:50:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1.5	1		pCi/g	++	0.33	0.66		TB
SREV	URANIUM 235	OM-3050	-0.11	1		pCi/g	++	0.33	0.3		TB
SREV	URANIUM 238	OM-3050	0.8	1		pCi/g	++	0.33	0.46		TB

L82975-02

Tag: Measured: 7/26/2010 3:51:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.2	1		pCi/g	++	0.22	0.39		TB
SREV	URANIUM 235	OM-3050	0.05	1		pCi/g	++	0.22	0.15		TB
SREV	URANIUM 238	OM-3050	0.3	1		pCi/g	++	0.22	0.23		TB

L82975-03

Tag: Measured: 7/26/2010 3:53:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	2.7	1		pCi/g	++	0.3	0.83		TB
SREV	URANIUM 235	OM-3050	0.28	1		pCi/g	++	0.3	0.23		TB
SREV	URANIUM 238	OM-3050	2.45	1		pCi/g	++	0.3	0.68		TB

L82975-04

Tag: Measured: 7/26/2010 3:54:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.29	1		pCi/g	++	0.23	0.42		TB
SREV	URANIUM 235	OM-3050	0.03	1		pCi/g	++	0.23	0.16		TB
SREV	URANIUM 238	OM-3050	0.67	1		pCi/g	++	0.23	0.35		TB

L82975-05

Tag: Measured: 7/26/2010 3:56:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.13	1		pCi/g	++	0.2	0.4		TB
SREV	URANIUM 235	OM-3050	-0.12	1		pCi/g	++	0.2	0.21		TB
SREV	URANIUM 238	OM-3050	0.57	1		pCi/g	++	0.2	0.31		TB

L82975-06

Tag: Measured: 7/26/2010 3:57:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.24	1		pCi/g	++	0.26	0.53		TB
SREV	URANIUM 235	OM-3050	-0.06	1		pCi/g	++	0.26	0.32		TB
SREV	URANIUM 238	OM-3050	0.47	1		pCi/g	++	0.26	0.31		TB

L82975-07

Tag: Measured: 7/26/2010 3:59:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.48	1		pCi/g	++	0.26	0.51		TB
SREV	URANIUM 235	OM-3050	-0.21	1		pCi/g	++	0.26	0.24		TB
SREV	URANIUM 238	OM-3050	0.26	1		pCi/g	++	0.26	0.3		TB

L82975-08

Tag: Measured: 7/26/2010 4:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.65	1		pCi/g	++	0.22	0.49		TB
SREV	URANIUM 235	OM-3050	0.18	1		pCi/g	++	0.22	0.21		TB
SREV	URANIUM 238	OM-3050	0.36	1		pCi/g	++	0.22	0.33		TB

L82975-09

Tag: Measured: 7/26/2010 4:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.77	1		pCi/g	++	0.34	0.65		TB
SREV	URANIUM 235	OM-3050	0.04	1		pCi/g	++	0.34	0.25		TB
SREV	URANIUM 238	OM-3050	0.43	1		pCi/g	++	0.34	0.38		TB

L82974-02DUP

Tag: Measured: 7/26/2010 4:03:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.74	1		pCi/g	++	0.2	0.35		
SREV	URANIUM 234	RER	0.25	1		%	++				
FAIL	URANIUM 234	RPD	17.3	1		pCi/g	++	0.2	0.35		
SREV	URANIUM 235	FOUND	0.09	1		pCi/g	++	0.2	0.15		
SREV	URANIUM 235	RER	0.44	1		%	++				
FAIL	URANIUM 235	RPD	200	1		pCi/g	ALRT	0.2	0.15		
SREV	URANIUM 238	FOUND	0.62	1		pCi/g	++	0.2	0.3		
SREV	URANIUM 238	RER	1	1		%	++				
FAIL	URANIUM 238	RPD	56.6	1		pCi/g	ALRT	0.2	0.3		

L82974-03DUP

Tag: Measured: 7/26/2010 4:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.8	1		pCi/g	++	0.2	0.41		
SREV	URANIUM 234	RER	0.22	1		%	++				
FAIL	URANIUM 234	RPD	17.7	1		pCi/g	++	0.2	0.41		
SREV	URANIUM 235	FOUND	0.07	1		pCi/g	++	0.2	0.16		
SREV	URANIUM 235	RER	0.4	1		%	++				
FAIL	URANIUM 235	RPD	88	1		pCi/g	ALRT	0.2	0.16		
SREV	URANIUM 238	FOUND	0.92	1		pCi/g	++	0.2	0.36		
SREV	URANIUM 238	RER	0.06	1		%	++				
FAIL	URANIUM 238	RPD	3.3	1		pCi/g	++	0.2	0.36		

L82974-01MS Tag: **Measured: 7/26/2010 4:06:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	37	1		pCi/g	++	0.39	2.8	RC100223-2	
SREV	URANIUM 234	REC	109.3	1		%	++	0.39	2.8	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.39	2.8	RC100223-2	
SREV	URANIUM 235	FOUND	1.7	1		pCi/g	++	0.39	0.65	RC100223-2	
SREV	URANIUM 235	REC	106.3	1		%	++	0.39	0.65	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.39	0.65	RC100223-2	
SREV	URANIUM 238	FOUND	40.5	1		pCi/g	++	0.39	2.9	RC100223-2	
SREV	URANIUM 238	REC	115.1	1		%	++	0.39	2.9	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.39	2.9	RC100223-2	

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG286325

Project: _____
SDG#: _____
SOP#: _____

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-21-10 7:30
Analysis Date: _____
Start Time: _____
End Time: _____
Approved: _____
Approved: _____

MWM
50.00

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50mL	1	0.00					0.000						0.000						0.000			
2	LCSS				0.00					0.000						0.000						0.000			
3	L82974-01	BG-10 0-2 COMP			0.00					0.000						0.000						0.000			
4	L82974-02	BG-10 2-12 COMP			0.00					0.000						0.000						0.000			
5	L82974-03	BG-10 12-18 COMP			0.00					0.000						0.000						0.000			
6	L82974-04	BG-14 0-2 COMP			0.00					0.000						0.000						0.000			
7	L82974-05	BG-14-2-12 COMP			0.00					0.000						0.000						0.000			
8	L82974-06	BG-14 12-18 COMP			0.00					0.000						0.000						0.000			
9	L82975-01	BG-5 0-2 COMP			0.00					0.000						0.000						0.000			
10	L82975-02	BG-5 2-12 COMP			0.00					0.000						0.000						0.000			
11	L82975-03	BG-5 12-18 COMP			0.00					0.000						0.000						0.000			
12	L82975-04	BG-9 0-2 COMP			0.00					0.000						0.000						0.000			
13	L82975-05	BG-9 2-12 COMP			0.00					0.000						0.000						0.000			
14	L82975-06	BG-9 12-18 COMP			0.00					0.000						0.000						0.000			
15	L82975-07	BG-13 0-2 COMP			0.00					0.000						0.000						0.000			
16	L82975-08	BG-13 2-12 COMP			0.00					0.000						0.000						0.000			
17	L82975-09	BG-13 12-18 COMP			0.00					0.000						0.000						0.000			
18	DUP 4-02				0.00					0.000						0.000						0.000			
19	DUP 4-03				0.00					0.000						0.000						0.000			
20	MS 4-01				0.00					0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments: _____

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Uranium iso
Water

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: wg286325 7/20/2010 7:23 AM

PROJECT/WG: _____
Method _____ INSTR: Octete

Radioactive Standards

LCS & MS 100223-2 Tracer: 100223-1

Reagents

3M Nitric Acid	35035	Aluminum nitrate / 3M nitric acid	100715-1
Nitric Acid (concentrated)	35035	HF	33549
0.05M oxalic acid / 5M HCl	100715-2	Titanium Choride	100629-1
0.01M Hydrochloric acid	34317	Cerium solution	100721-1
9M Hydrochloric acid	33927	Ethanol	33789

COMMENTS:

*12/29/08 MTB adjusted template to error using Gross cpm and specific backgrounds used to calculate net cpm

RSUISO-S.xls

Calculations for dry weight:

Login #
82974-01
82974-02
82974-03
82974-04
82974-05
82974-06
82975-01
82975-02
82975-03
82975-04
82975-05
82975-06
82975-07
82975-08
82975-09

air dried solid(g)	soils sx wt (g)
0.995421844	0.5
0.99443038	0.5
0.994649805	0.5
0.996349255	0.5
0.998630137	0.5
0.996227997	0.5
0.992674986	0.5
0.993241258	0.5
0.989133388	0.5
0.99501868	0.5
0.989473684	0.5
0.987807581	0.5
0.994196429	0.5
0.99537171	0.5
0.992427719	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.00000			#DIV/0!
0.49771	50	50	0.497711
0.49722	50	50	0.497215
0.49732	50	50	0.497325
0.49817	50	50	0.498175
0.49932	50	50	0.499315
0.49811	50	50	0.498114
0.49634	50	50	0.496337
0.49662	50	50	0.496621
0.49457	50	50	0.494567
0.49751	50	50	0.497509
0.49474	50	50	0.494737
0.49390	50	50	0.493904
0.49710	50	50	0.497098
0.49769	50	50	0.497686
0.49621	50	50	0.496214
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

3050

WG286012

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MEG/NRC
ACZ Dept: 20
Create Date: 07/14/2010 11:23
Start Date/Time: 07/14/2010 11:00
End Date/Time: 07/15/2010 17:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286012PBS1	NONE	<2000		07/14/10 11:00	0	7.5	5	5	50	0	0		
2	WG286012PBS2	NONE	<2000		07/14/10 12:34	0	7.5	5	5	50	0	0		
3	L82974-01	BG-10 0-2 COMP	<2000		07/14/10 14:09	0.5	7.5	5	5	50	0	99.54		
4	L82974-01DUP	NONE	<2000		07/14/10 15:44	0.5	7.5	5	5	50	0	99.54		
5	L82974-02	BG-10 2-12 COMP	<2000		07/14/10 17:18	0.5	7.5	5	5	50	0	99.44		
6	L82974-02DUP	NONE	<2000		07/14/10 18:53	0.5	7.5	5	5	50	0	99.44		
7	L82974-03	BG-10 12-18 COMP	<2000		07/14/10 20:28	0.5	7.5	5	5	50	0	99.46		
8	L82974-03DUP	NONE	<2000		07/14/10 22:03	0.5	7.5	5	5	50	0	99.46		
9	L82974-04	BG-14 0-2 COMP	<2000		07/14/10 23:37	0.5	7.5	5	5	50	0	99.63		
10	L82974-05	BG-14-2-12 COMP	<2000		07/15/10 1:12	0.5	7.5	5	5	50	0	99.86		
11	L82974-06	BG-14 12-18 COMP	<2000		07/15/10 2:47	0.5	7.5	5	5	50	0	99.62		
12	L82975-01	BG-5 0-2 COMP	<2000		07/15/10 4:22	0.5	7.5	5	5	50	0	99.27		
13	L82975-02	BG-5 2-12 COMP	<2000		07/15/10 5:56	0.5	7.5	5	5	50	0	99.32		
14	L82975-03	BG-5 12-18 COMP	<2000		07/15/10 7:31	0.5	7.5	5	5	50	0	98.91		
15	L82975-04	BG-9 0-2 COMP	<2000		07/15/10 9:06	0.5	7.5	5	5	50	0	99.5		
16	L82975-05	BG-9 2-12 COMP	<2000		07/15/10 10:41	0.5	7.5	5	5	50	0	98.95		
17	L82975-06	BG-9 12-18 COMP	<2000		07/15/10 12:15	0.5	7.5	5	5	50	0	98.78		
18	L82975-07	BG-13 0-2 COMP	<2000		07/15/10 13:50	0.5	7.5	5	5	50	0	99.42		
19	L82975-08	BG-13 2-12 COMP	<2000		07/15/10 15:25	0.5	7.5	5	5	50	0	99.54		
20	L82975-09	BG-13 12-18 COMP	<2000		07/15/10 16:59	0.5	7.5	5	5	50	0	99.24		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/16/2010 10:04:41 AM 71610

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.223	9.815	1.223	0	0.5	50	#DIV/0!
82974-01	1.221	4.279	4.265	0.995421844	0.5	50	100
82974-01 DUP	1.237	4.163	4.151	0.995898838	0.5	50	100
82974-02	1.244	3.219	3.208	0.99443038	0.5	50	101
82974-03	1.243	3.299	3.288	0.994649805	0.5	50	101
82974-04	1.225	4.512	4.500	0.996349255	0.5	50	100
82974-05	1.223	4.873	4.868	0.998630137	0.5	50	100
82974-06	1.229	3.615	3.606	0.996227997	0.5	50	100
82975-01	1.223	4.909	4.882	0.992674986	0.5	50	101
82975-02	1.22	4.623	4.6	0.993241258	0.5	50	101
82975-03	1.234	4.915	4.875	0.989133388	0.5	50	101
82975-04	1.237	3.646	3.634	0.99501868	0.5	50	101
82975-05	1.241	5.706	5.659	0.989473684	0.5	50	101
82975-06	1.245	5.756	5.701	0.987807581	0.5	50	101
82975-07	1.245	5.725	5.699	0.994196429	0.5	50	101
82975-08	1.248	4.705	4.689	0.99537171	0.5	50	100
82975-09	1.25	5.608	5.575	0.992427719	0.5	50	101

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:52PM 7/26/2010

Analyst: ORTEC

Sample

Sample: WG286325 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

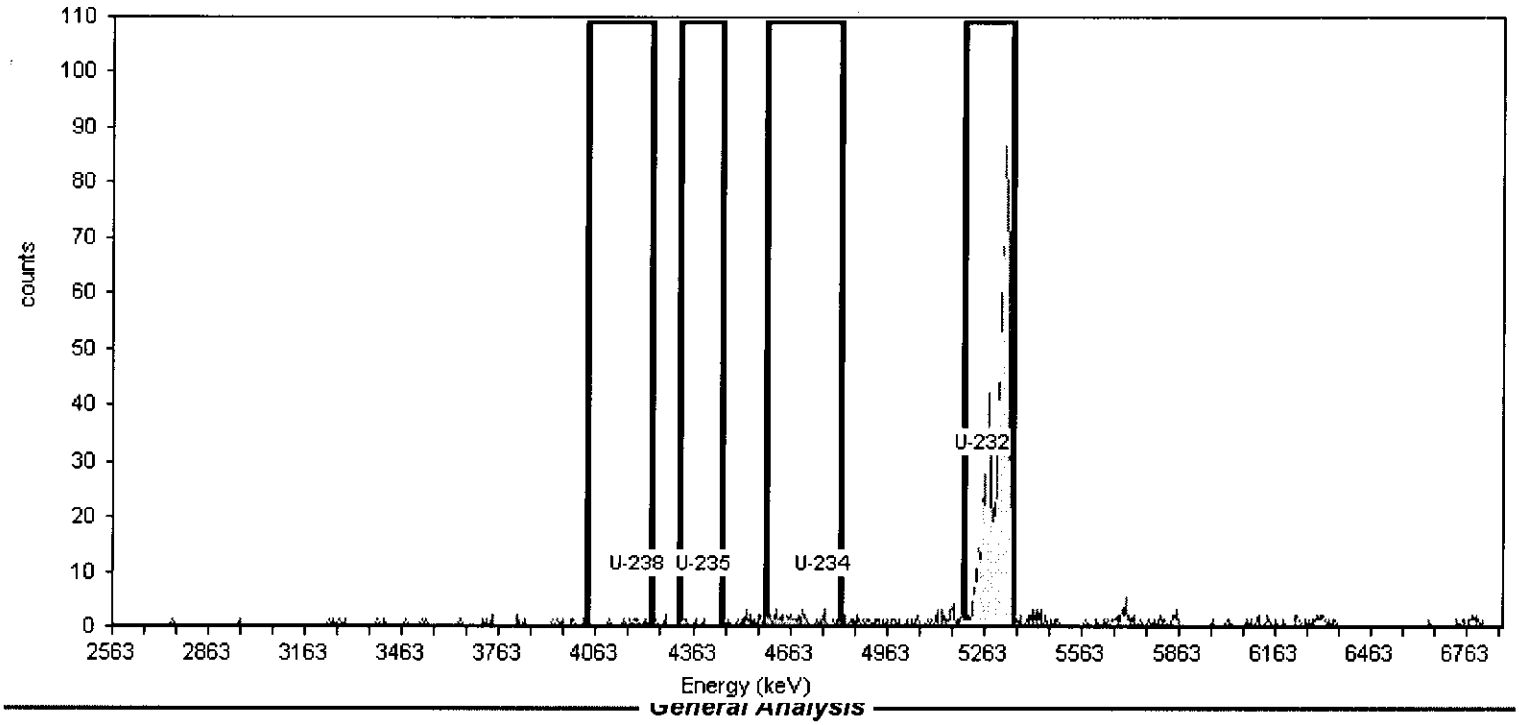
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.37%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/26/2010 3:39:11PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.347	100.2	8.00	12.0000	-4	-4.709E-002	1.583E-001	9.488E-002	2.216E-001
U-235	4396.000	4318.000	4453.000	19.915	80.9	5.00	4.0000	1	1.459E-002	1.313E-001	6.787E-002	1.752E-001
U-234	4765.000	4592.000	4819.000	20.938	100.0	46.11	29.3399	17	1.978E-001	3.102E-001	1.486E-001	3.292E-001
U-232	5263.000	5203.000	5350.000	22.816	99.8	927.58	14.3100	913	8.068E+000	8.695E-001	1.137E-001	2.624E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:37PM 7/26/2010

Analyst: ORTEC

Sample

Sample: WG286325 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

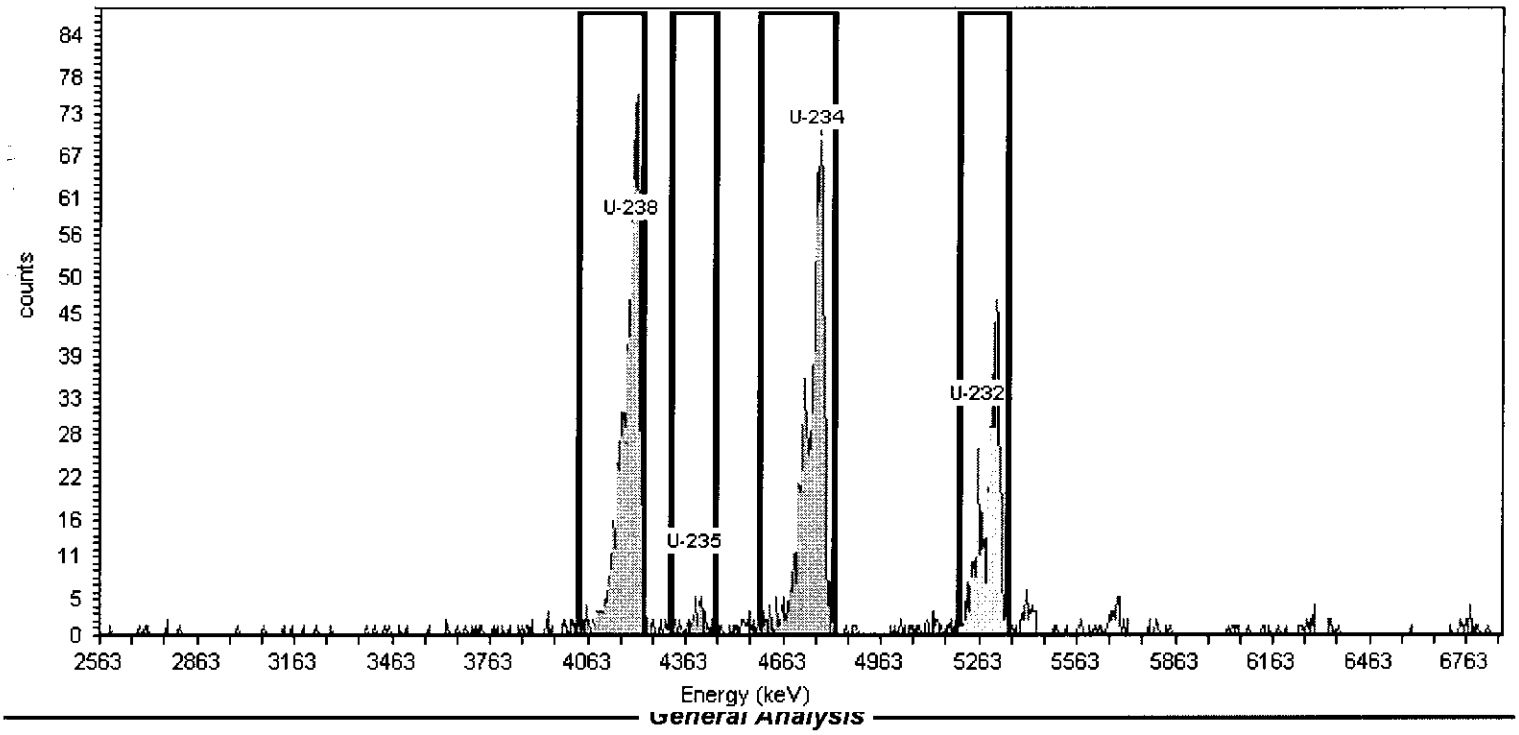
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 38.30%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/26/2010 3:39:13PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.420	100.2	898.77	5.0000	894	1.919E+001	4.798E+000	1.117E-001	2.815E-001
U-235	4396.000	4318.000	4453.000	42.955	80.9	40.99	4.0567	37	9.824E-001	5.808E-001	1.246E-001	3.212E-001
U-234	4765.000	4592.000	4819.000	39.938	100.0	910.69	21.0000	890	1.914E+001	4.801E+000	2.293E-001	5.168E-001
U-232	5263.000	5203.000	5350.000	14.416	99.8	512.14	11.3100	501	4.519E+000	6.433E-001	1.843E-001	4.324E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:40PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

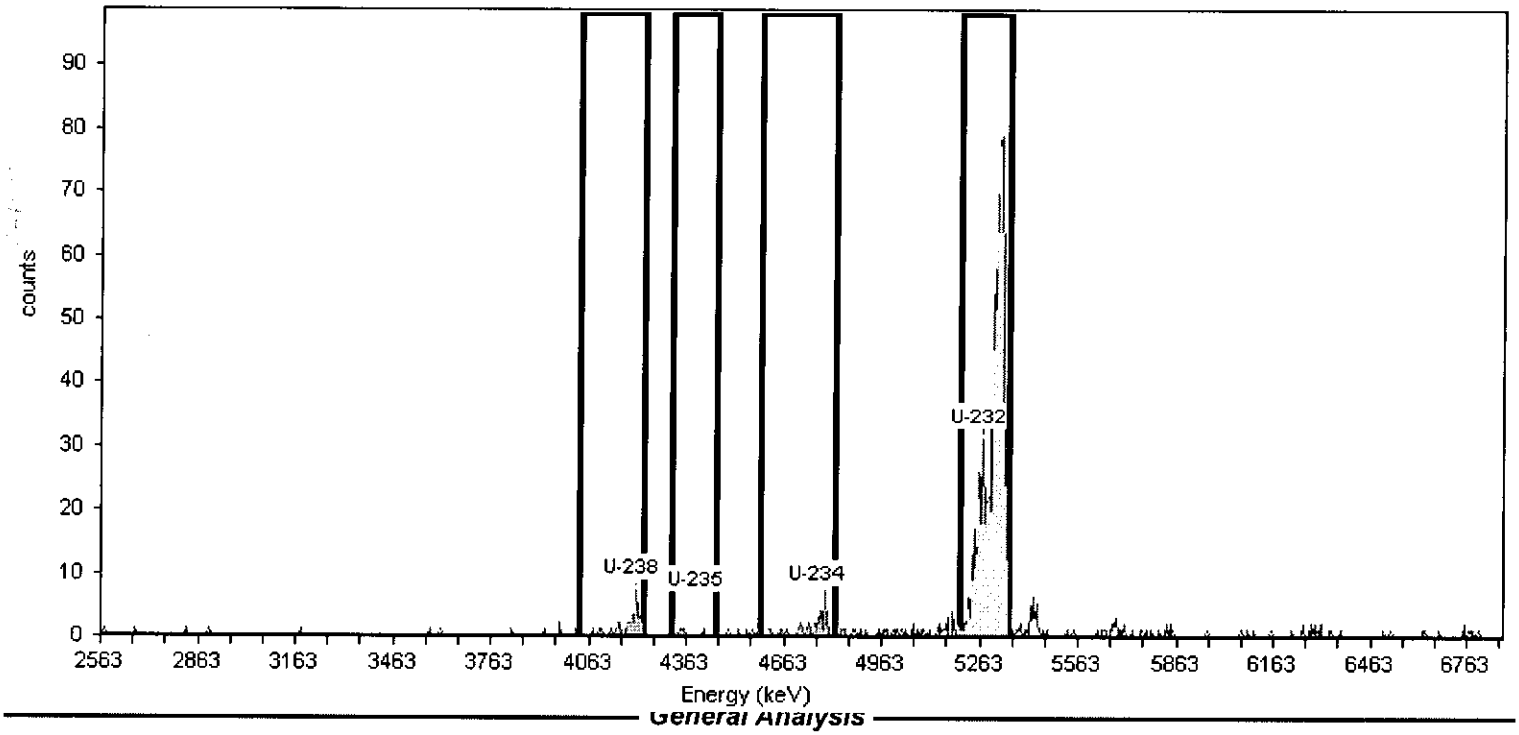
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.16%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/26/2010 3:39:15PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	15.175	100.2	44.86	6.0000	39	4.801E-001	2.829E-001	7.040E-002	1.742E-001
U-235	4396.000	4318.000	4453.000	23.540	80.9	4.00	3.0135	1	1.510E-002	1.217E-001	6.182E-002	1.651E-001
U-234	4765.000	4592.000	4819.000	6.475	100.0	43.06	10.0596	33	4.085E-001	2.839E-001	9.133E-002	2.162E-001
U-232	5263.000	5203.000	5350.000	20.742	99.8	875.99	5.6900	870	7.807E+000	8.533E-001	7.524E-002	1.872E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:44PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

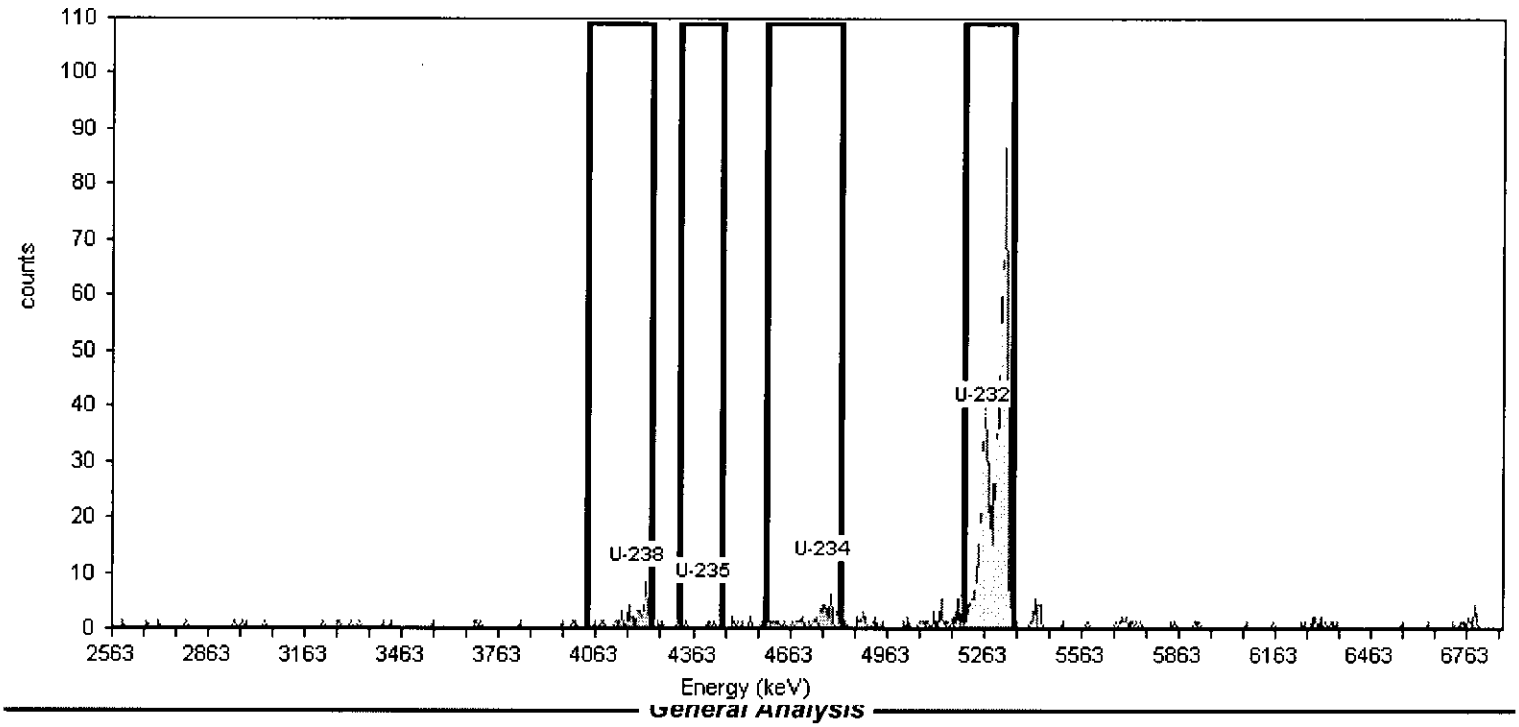
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.97%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/26/2010 3:39:17PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	13.932	100.2	52.57	7.0000	46	5.741E-001	3.158E-001	7.754E-002	1.892E-001
U-235	4396.000	4318.000	4453.000	5.859	80.9	4.04	4.0000	0	5.479E-004	1.327E-001	7.262E-002	1.875E-001
U-234	4765.000	4592.000	4819.000	7.091	100.0	54.29	18.0000	36	4.581E-001	3.361E-001	1.246E-001	2.833E-001
U-232	5263.000	5203.000	5350.000	19.661	99.8	862.65	9.1691	853	7.666E+000	8.483E-001	9.739E-002	2.322E-001

AlphaVision v5.3

Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
8:39:48PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

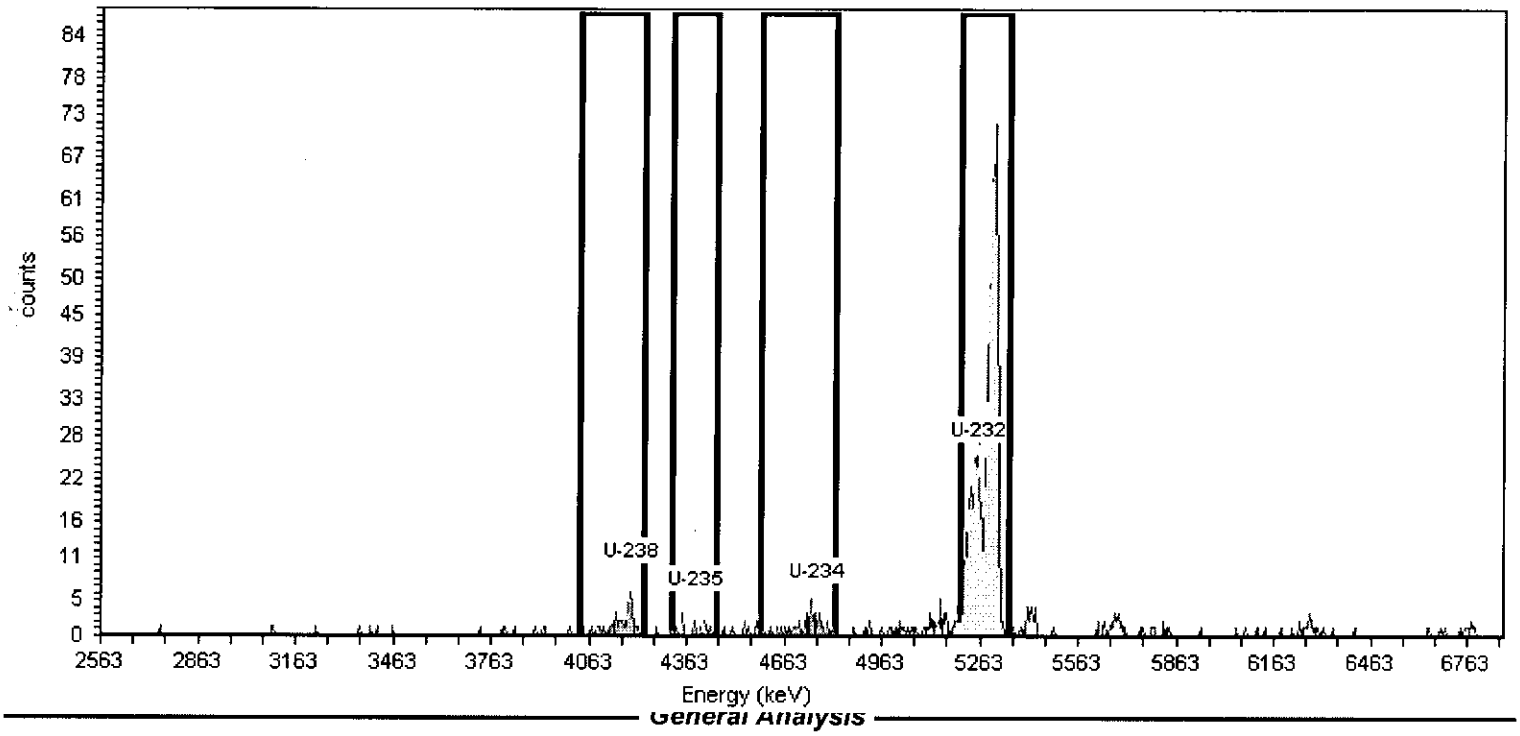
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.47%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/26/2010 3:39:17PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.797	100.2	46.00	11.0000	35	4.610E-001	3.139E-001	1.016E-001	2.389E-001
U-235	4396.000	4318.000	4453.000	94.365	80.9	11.96	5.0000	7	1.137E-001	2.031E-001	8.489E-002	2.139E-001
U-234	4765.000	4592.000	4819.000	44.107	100.0	44.23	17.9404	26	3.469E-001	3.207E-001	1.300E-001	2.958E-001
U-232	5263.000	5203.000	5350.000	38.786	99.8	823.35	7.0000	816	7.372E+000	8.306E-001	8.897E-002	2.171E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:12PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

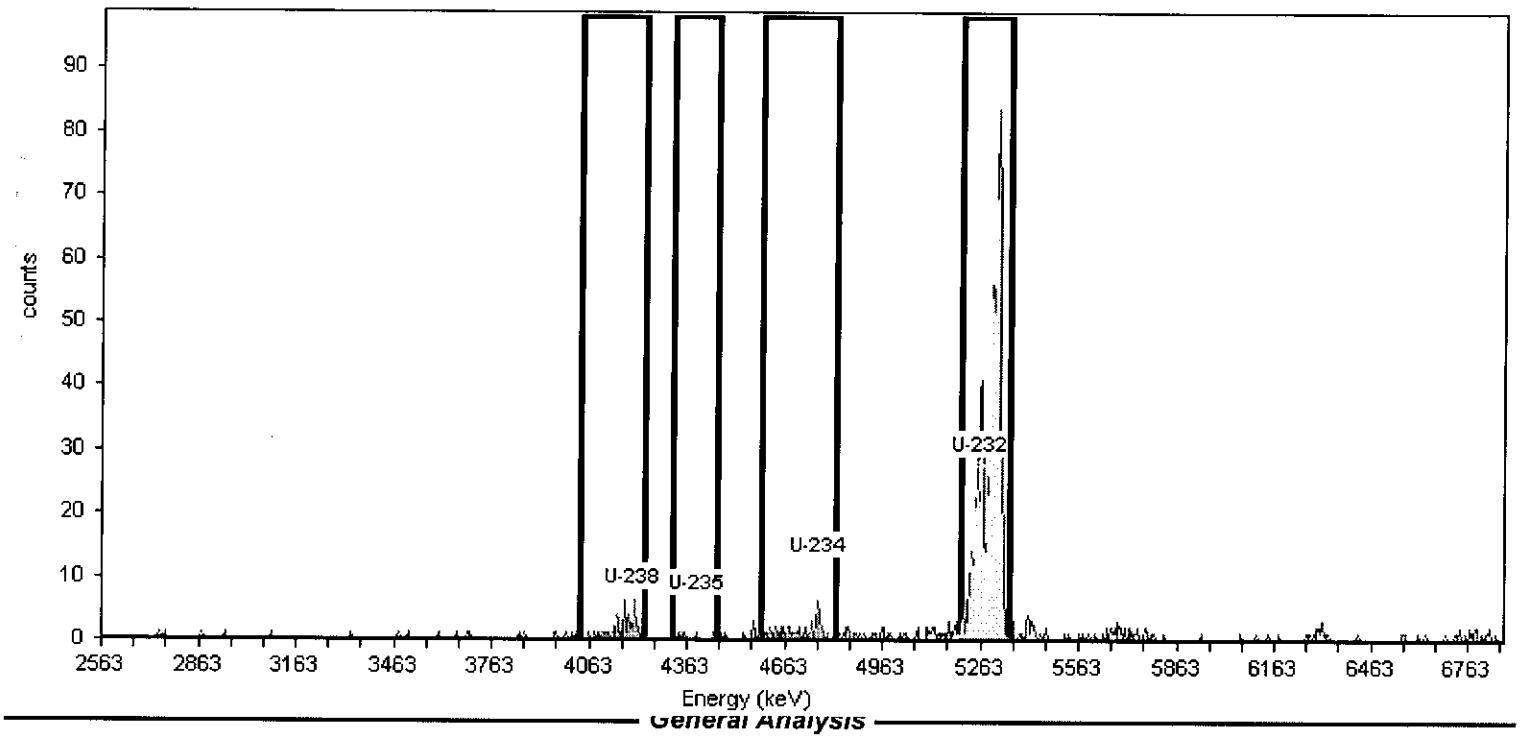
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.51%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/26/2010 3:39:18PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	44.860	100.2	50.57	3.0000	48	6.109E-001	3.100E-001	5.174E-002	1.382E-001
U-235	4396.000	4318.000	4453.000	5.810	80.9	5.98	7.0000	-1	-1.625E-002	1.720E-001	9.793E-002	2.389E-001
U-234	4765.000	4592.000	4819.000	30.103	100.0	56.06	29.0000	27	3.481E-001	3.635E-001	1.612E-001	3.572E-001
U-232	5263.000	5203.000	5350.000	21.938	99.8	849.14	11.8309	837	7.376E+000	8.246E-001	1.128E-001	2.637E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:25PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

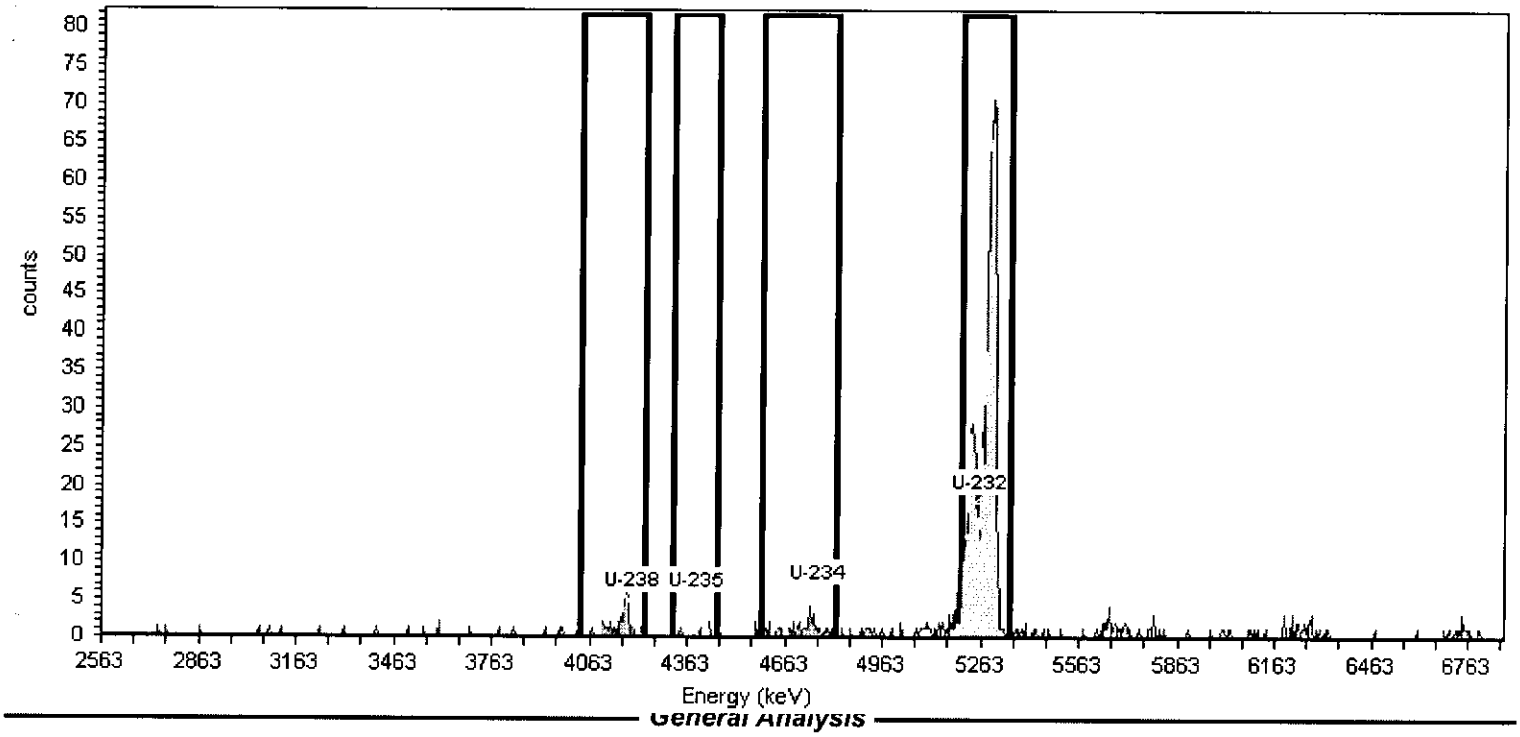
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.32%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/26/2010 3:39:07PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	28.771	100.2	41.00	8.0000	33	4.447E-001	2.983E-001	8.868E-002	2.138E-001
U-235	4396.000	4318.000	4453.000	5.556	80.9	4.00	11.0216	-7	-1.172E-001	1.957E-001	1.290E-001	3.031E-001
U-234	4765.000	4592.000	4819.000	66.909	100.0	36.00	21.7704	14	1.921E-001	3.106E-001	1.466E-001	3.297E-001
U-232	5263.000	5203.000	5350.000	34.743	99.8	801.83	4.0000	798	7.472E+000	8.497E-001	6.881E-002	1.777E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:08PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82974-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

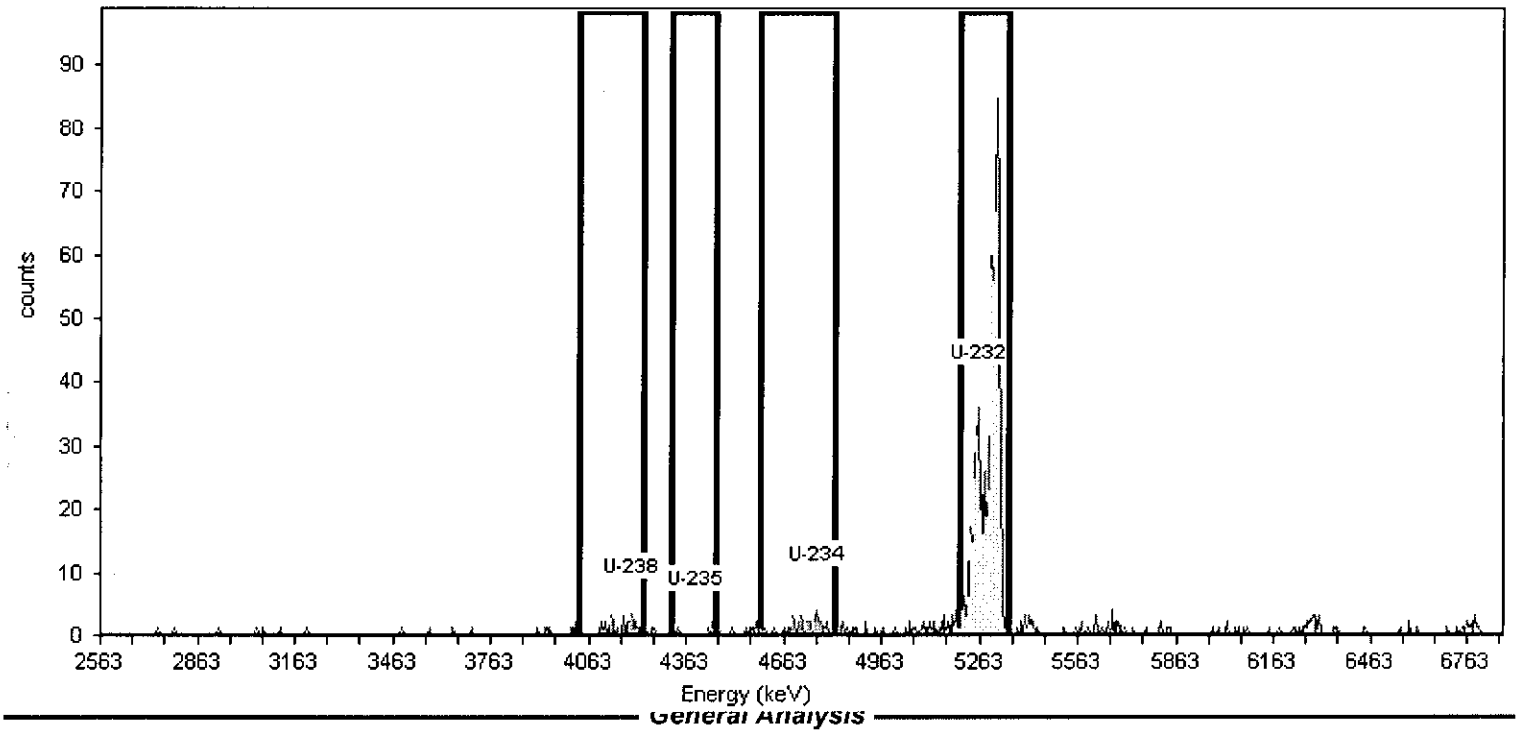
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.26%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/26/2010 3:39:08PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	41.077	100.2	31.00	3.0000	28	3.472E-001	2.289E-001	4.997E-002	1.335E-001
U-235	4396.000	4318.000	4453.000	6.053	80.9	6.00	2.0216	4	6.113E-002	1.312E-001	5.082E-002	1.432E-001
U-234	4765.000	4592.000	4819.000	95.310	100.0	43.71	14.2296	29	3.663E-001	2.940E-001	1.090E-001	2.517E-001
U-232	5263.000	5203.000	5350.000	22.244	99.8	874.01	7.0000	867	8.055E+000	8.850E-001	8.377E-002	2.044E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:20PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

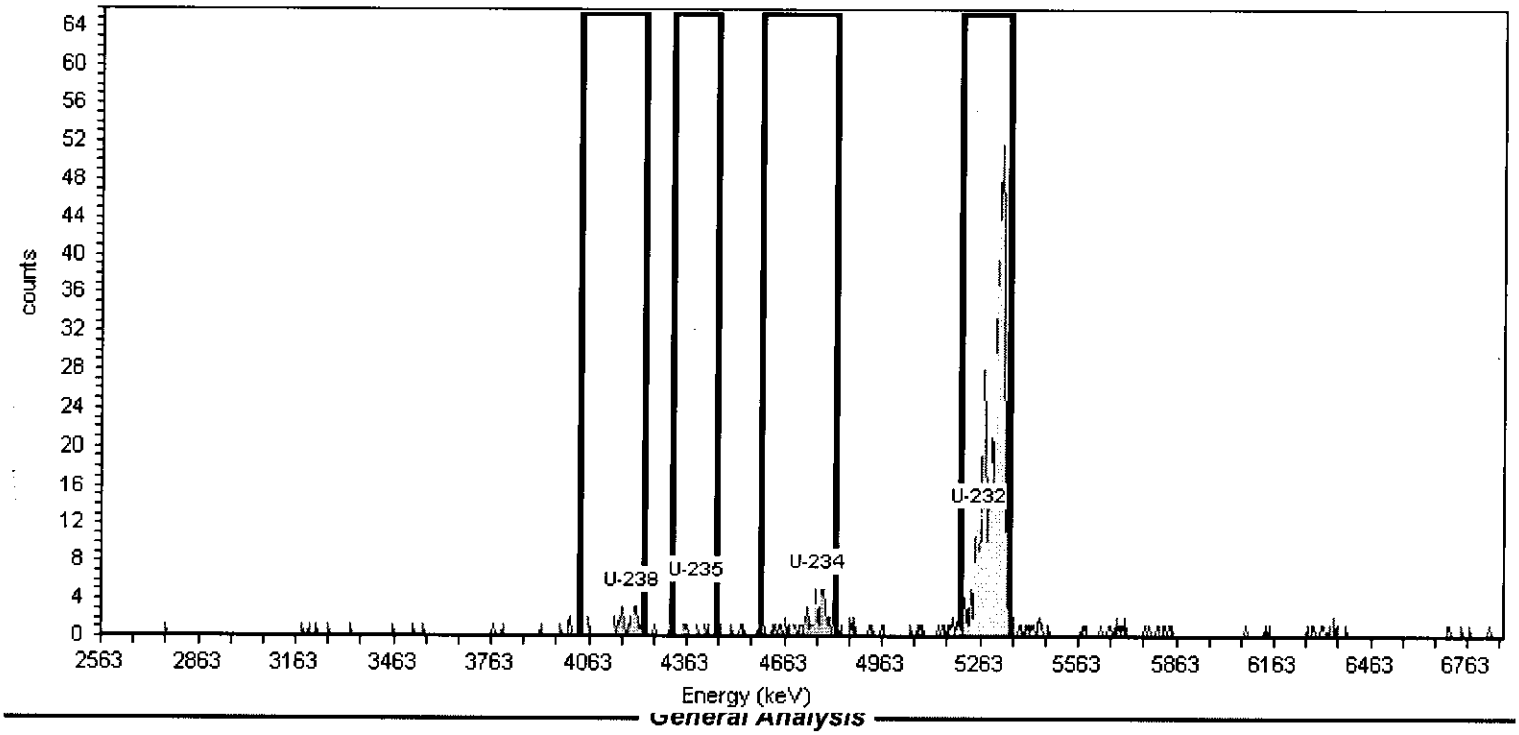
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 44.11%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/26/2010 3:39:09PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.232	100.2	28.00	6.5711	21	4.152E-001	3.543E-001	1.155E-001	2.835E-001
U-235	4396.000	4318.000	4453.000	5.920	80.9	6.00	9.0000	-3	-7.201E-002	2.794E-001	1.675E-001	4.000E-001
U-234	4765.000	4592.000	4819.000	22.844	100.0	55.00	15.0596	40	7.753E-001	5.177E-001	1.752E-001	4.030E-001
U-232	5263.000	5203.000	5350.000	22.282	99.8	565.96	11.0000	555	5.205E+000	7.060E-001	1.641E-001	3.857E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:29PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82975-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

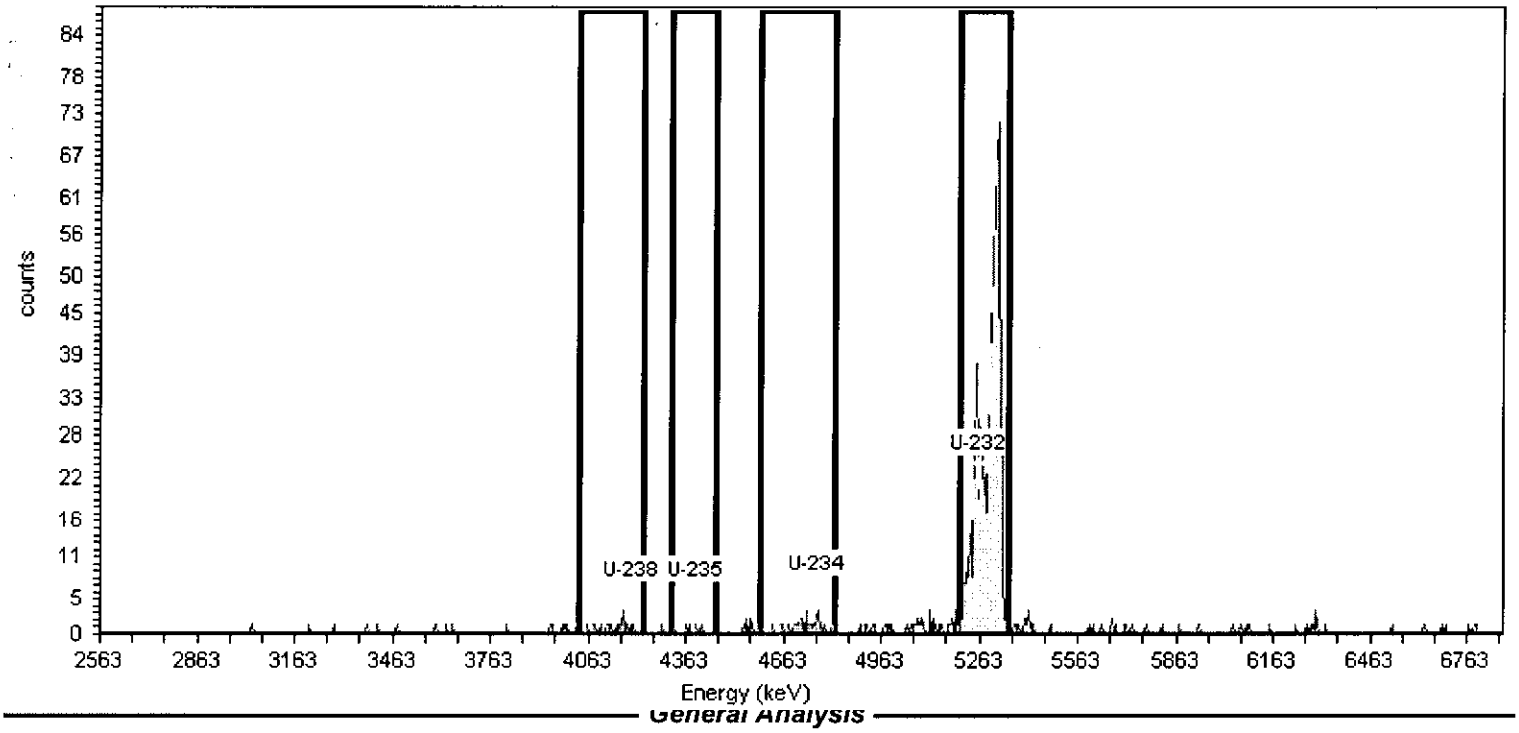
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.34%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/26/2010 3:39:10PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	65.129	100.2	16.00	4.0000	12	1.553E-001	1.767E-001	6.021E-002	1.554E-001
U-235	4396.000	4318.000	4453.000	65.306	80.9	5.00	3.0000	2	3.207E-002	1.362E-001	6.461E-002	1.726E-001
U-234	4765.000	4592.000	4819.000	80.817	100.0	31.06	23.0000	8	1.045E-001	2.869E-001	1.447E-001	3.244E-001
U-232	5263.000	5203.000	5350.000	13.748	99.8	849.66	18.8309	831	7.592E+000	8.597E-001	1.434E-001	3.252E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
8:39:33PM 7/26/2010

Analyst: ORTEC

Sample

Sample: L82975-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.26 019
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

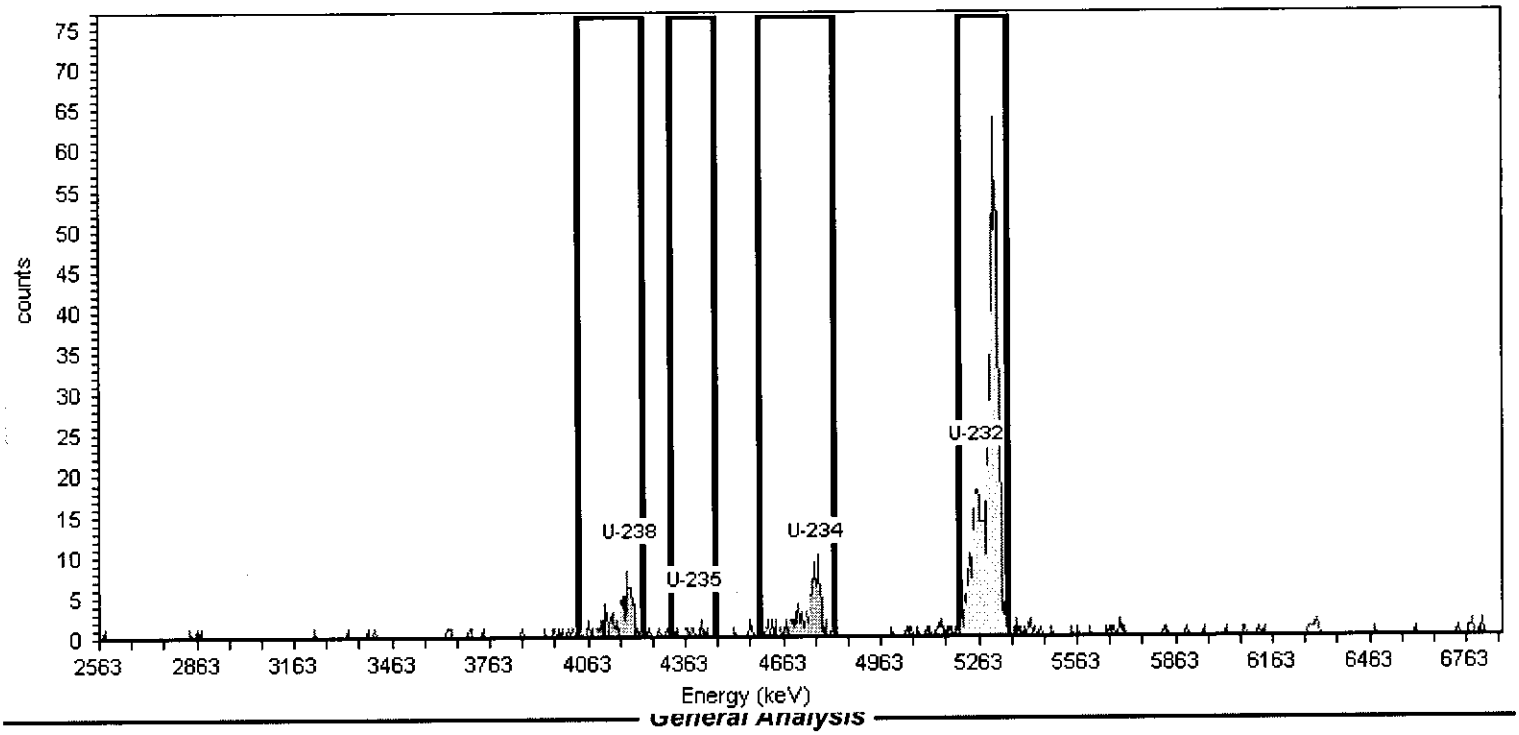
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 46.08%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/26/2010 3:39:10PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/26/2010 3:37:02PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	40.283	100.2	78.33	8.0000	70	1.265E+000	5.744E-001	1.183E-001	2.853E-001
U-235	4396.000	4318.000	4453.000	56.689	80.9	9.00	1.0000	8	1.783E-001	2.150E-001	5.184E-002	1.640E-001
U-234	4765.000	4592.000	4819.000	33.289	100.0	103.23	25.0596	78	1.409E+000	6.873E-001	2.098E-001	4.684E-001
U-232	5263.000	5203.000	5350.000	22.878	99.8	608.17	10.3100	598	5.438E+000	7.104E-001	1.474E-001	3.483E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:01PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

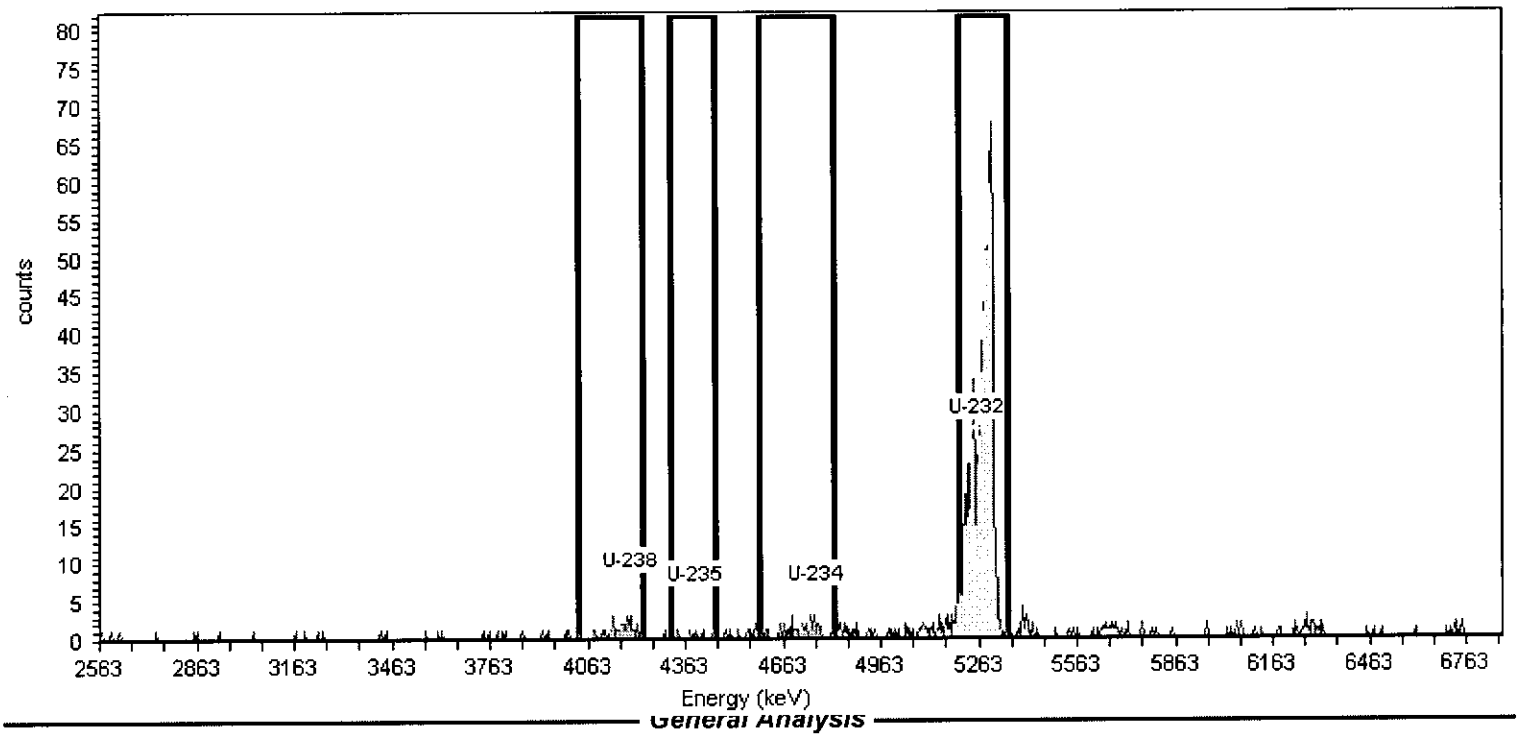
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 60.65%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/27/2010 7:44:01AM
Live Time: 300.00 min.
Real Time: 299.99 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	57.806	100.2	33.67	8.0000	26	3.473E-001	2.722E-001	8.902E-002	2.146E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	5.02	4.0351	1	1.654E-002	1.514E-001	7.833E-002	2.020E-001
U-234	4765.000	4592.000	4819.000	82.039	100.0	35.23	24.0000	11	1.522E-001	3.146E-001	1.545E-001	3.456E-001
U-232	5263.000	5203.000	5350.000	41.816	99.8	800.48	5.6900	795	7.157E+000	8.148E-001	8.239E-002	2.050E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:05PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

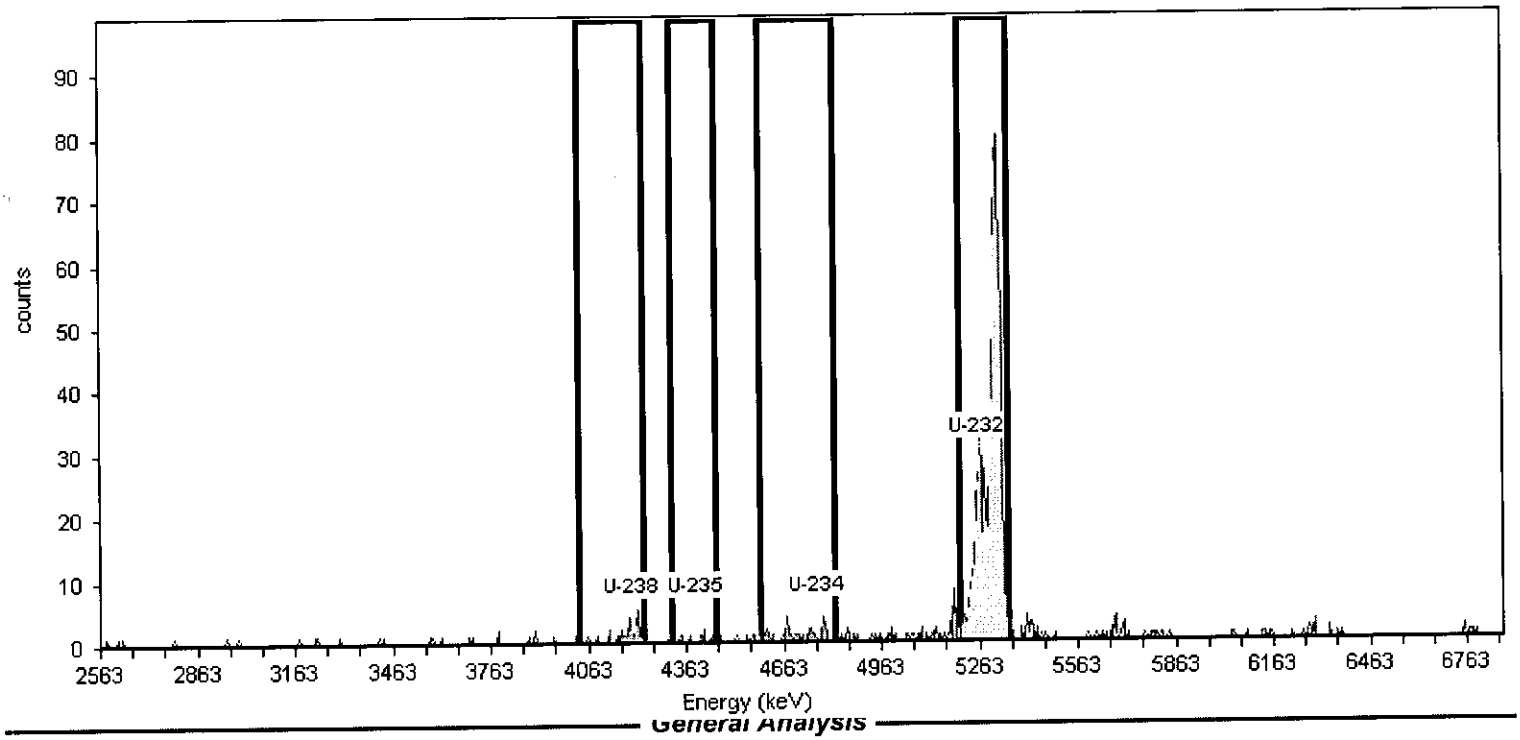
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.68%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/27/2010 7:44:03AM
Live Time: 300.00 min.
Real Time: 300.02 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.491	100.2	32.57	8.0000	25	2.965E-001	2.387E-001	7.939E-002	1.914E-001
U-235	4396.000	4318.000	4453.000	6.029	80.9	7.00	12.0000	-5	-7.474E-002	1.961E-001	1.205E-001	2.814E-001
U-234	4765.000	4592.000	4819.000	7.912	100.0	36.12	30.4592	6	6.842E-002	2.963E-001	1.552E-001	3.431E-001
U-232	5263.000	5203.000	5350.000	18.294	99.8	898.31	7.1691	891	7.750E+000	8.379E-001	8.248E-002	2.008E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:44:10PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

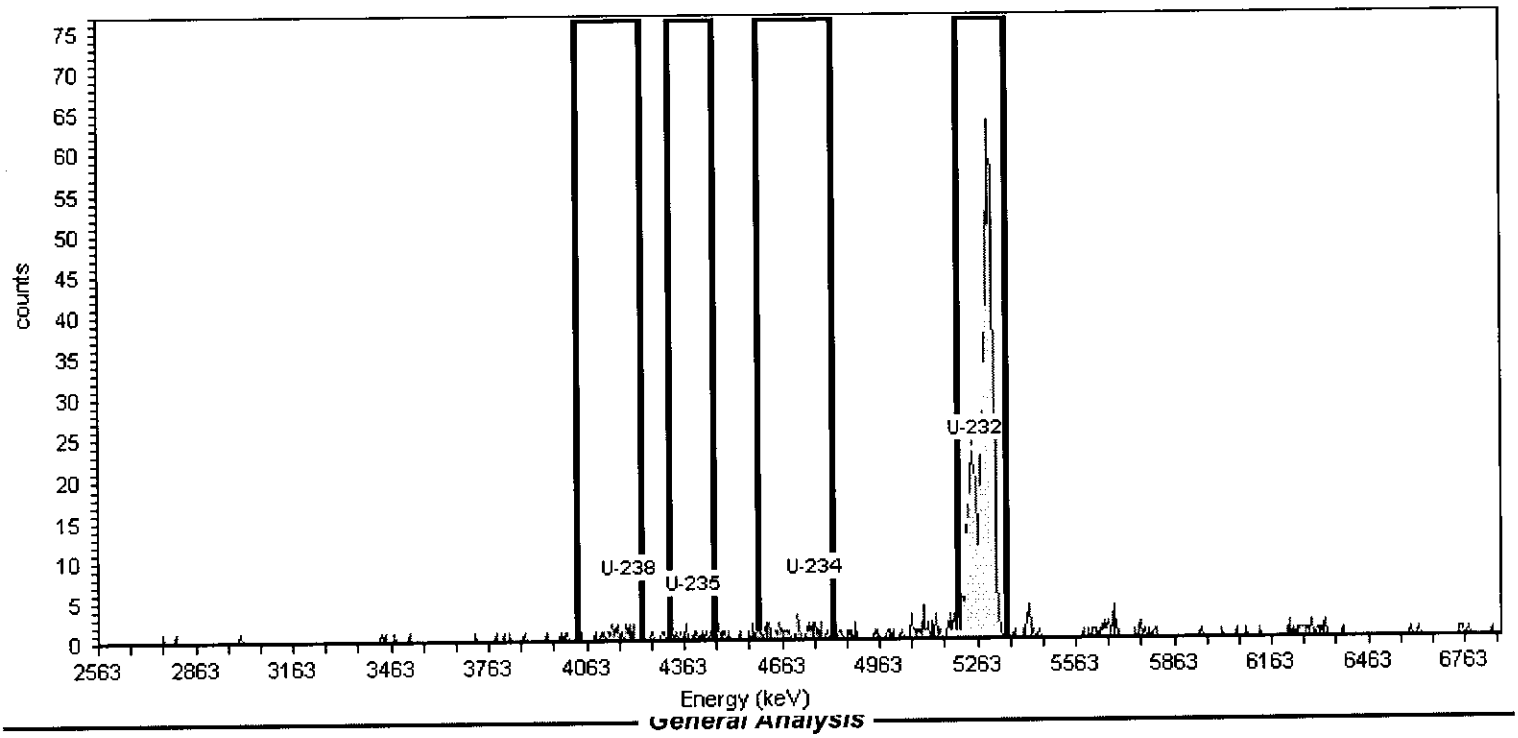
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 51.87%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/27/2010 7:43:46AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	34.591	100.2	20.00	4.4289	16	2.431E-001	2.374E-001	7.643E-002	1.951E-001
U-235	4396.000	4318.000	4453.000	9.499	80.9	12.00	14.0351	-2	-3.936E-002	2.962E-001	1.686E-001	3.895E-001
U-234	4765.000	4592.000	4819.000	198.491	100.0	38.77	30.7704	8	1.251E-001	3.923E-001	2.019E-001	4.460E-001
U-232	5263.000	5203.000	5350.000	41.662	99.8	696.01	7.3100	689	6.121E+000	7.448E-001	1.078E-001	2.619E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
12:44:13PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

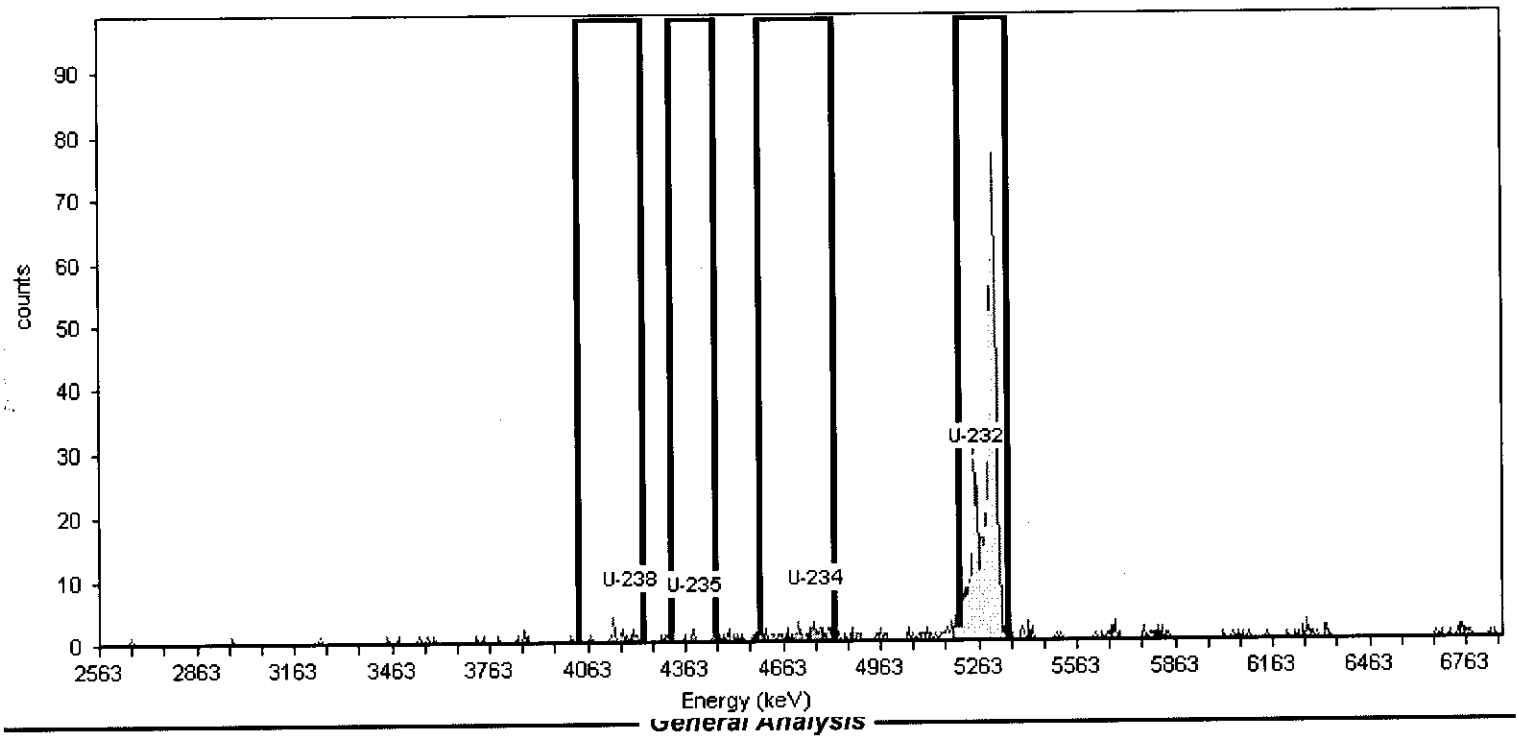
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 53.29%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/27/2010 7:43:49AM
Live Time: 300.00 min.
Real Time: 300.02 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	82.814	100.2	16.43	7.5711	9	1.358E-001	2.273E-001	9.815E-002	2.378E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	4.02	11.0000	-7	-1.326E-001	2.227E-001	1.466E-001	3.446E-001
U-234	4765.000	4592.000	4819.000	56.023	100.0	41.94	25.7108	16	2.493E-001	3.829E-001	1.812E-001	4.040E-001
U-232	5263.000	5203.000	5350.000	29.523	99.8	705.52	4.3100	701	6.288E+000	7.563E-001	8.127E-002	2.081E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:44:17PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

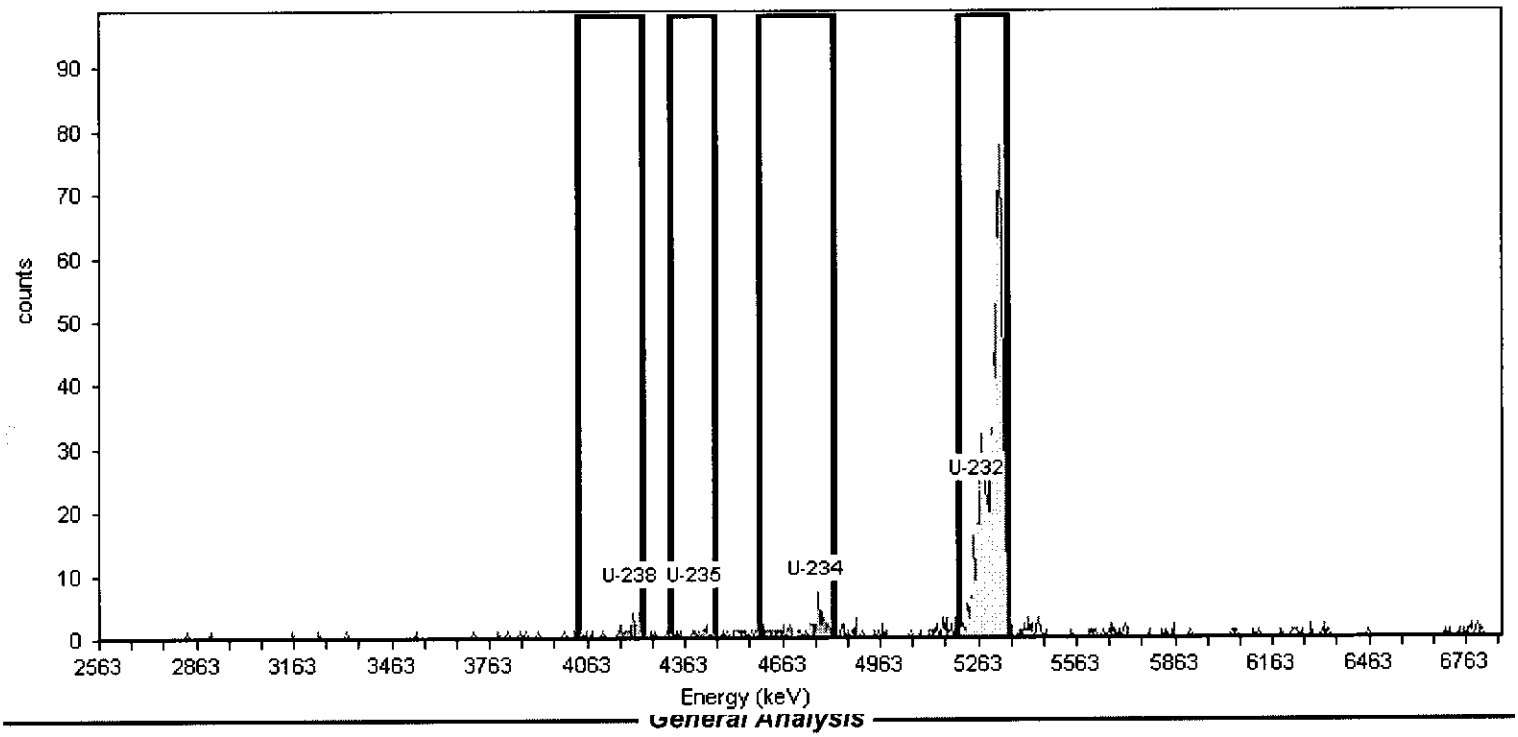
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 61.29%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/27/2010 7:43:52AM
Live Time: 300.00 min.
Real Time: 299.97 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	14.513	100.2	26.33	12.0000	14	1.882E-001	2.472E-001	1.058E-001	2.472E-001
U-235	4396.000	4318.000	4453.000	8.150	80.9	10.99	4.0000	7	1.137E-001	1.905E-001	7.571E-002	1.954E-001
U-234	4765.000	4592.000	4819.000	22.642	100.0	55.12	29.3399	26	3.392E-001	3.698E-001	1.658E-001	3.672E-001
U-232	5263.000	5203.000	5350.000	25.975	99.8	833.00	14.3100	819	7.233E+000	8.192E-001	1.268E-001	2.927E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:57PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82975-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

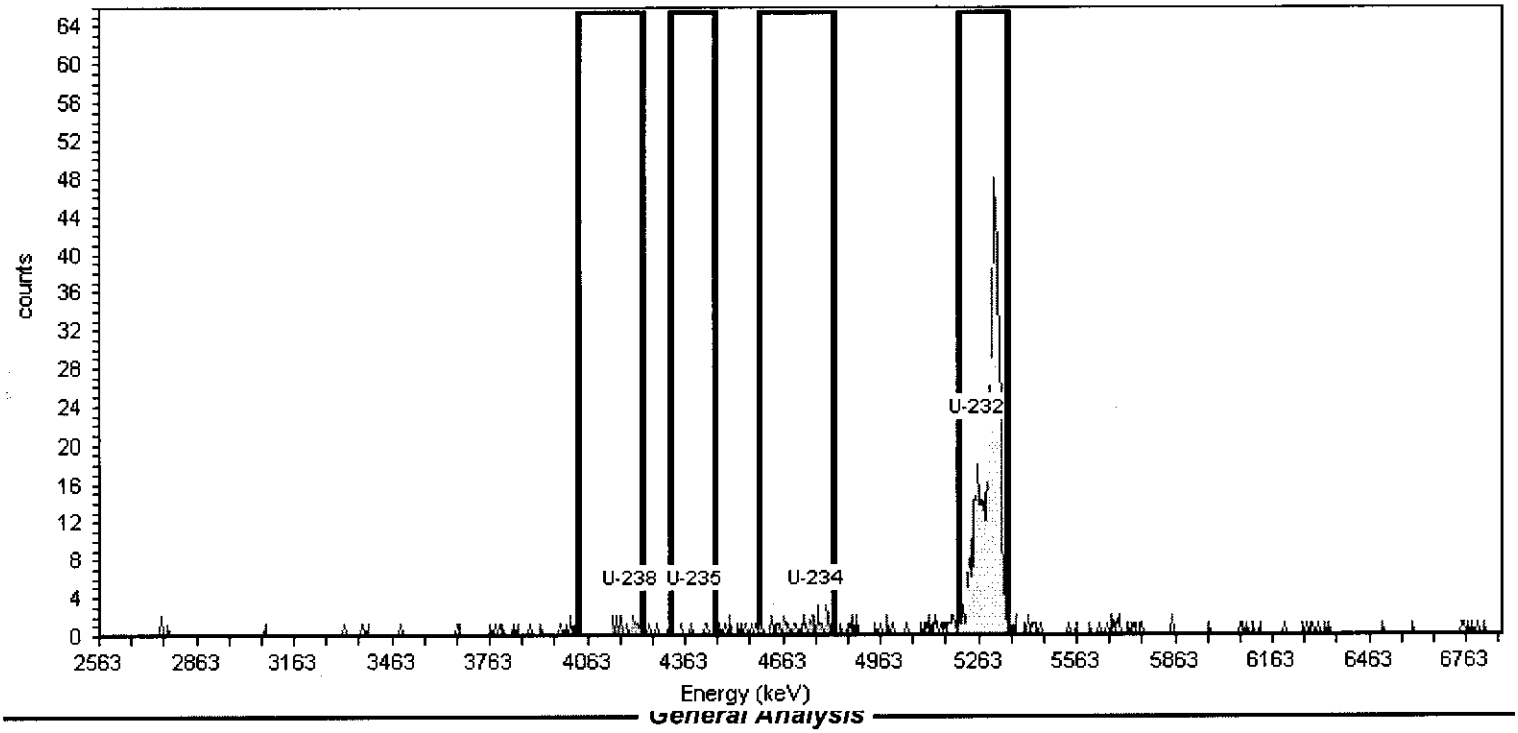
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 40.36%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/27/2010 7:43:55AM
Live Time: 300.00 min.
Real Time: 299.99 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.617	100.2	16.00	5.0000	11	2.241E-001	2.846E-001	1.060E-001	2.671E-001
U-235	4396.000	4318.000	4453.000	9.269	80.9	5.00	4.0567	1	2.381E-002	2.279E-001	1.183E-001	3.048E-001
U-234	4765.000	4592.000	4819.000	9.226	100.0	40.71	21.0000	20	4.023E-001	4.895E-001	2.176E-001	4.904E-001
U-232	5263.000	5203.000	5350.000	22.918	99.8	539.14	11.3100	528	4.763E+000	6.611E-001	1.749E-001	4.103E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:47:53PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82974-02 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:
:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

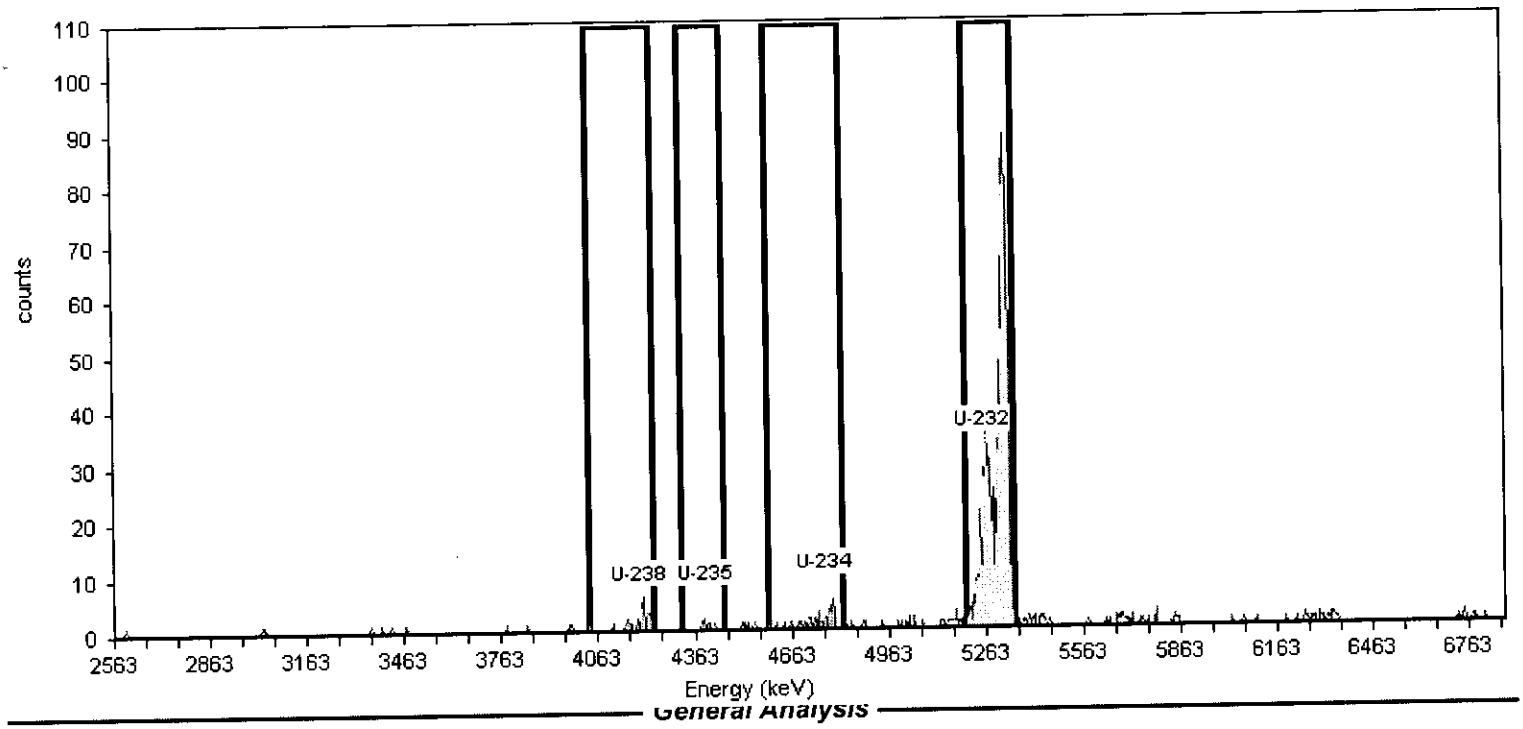
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 69.63%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/27/2010 7:43:48AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.635	100.2	33.34	6.0000	27	3.210E-001	2.308E-001	6.689E-002	1.656E-001
U-235	4396.000	4318.000	4453.000	27.404	80.9	7.00	3.0135	4	5.798E-002	1.386E-001	5.874E-002	1.568E-001
U-234	4765.000	4592.000	4819.000	8.764	100.0	42.94	10.0596	33	3.867E-001	2.692E-001	8.678E-002	2.054E-001
U-232	5263.000	5203.000	5350.000	19.967	99.8	921.62	5.6900	916	8.216E+000	8.780E-001	7.149E-002	1.778E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:43:56PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82974-03 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

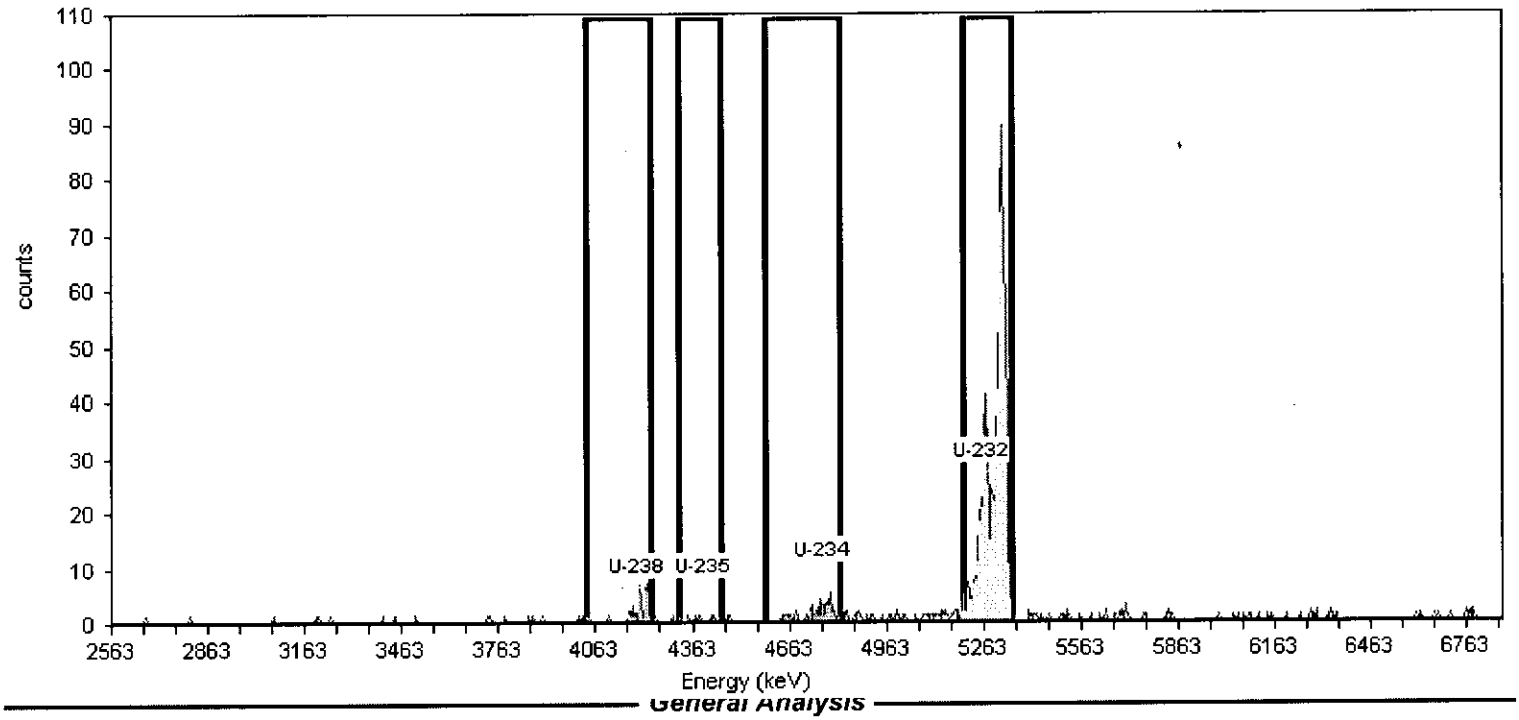
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.67%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/27/2010 7:43:51AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	12.624	100.2	46.57	7.0000	40	4.786E-001	2.839E-001	7.445E-002	1.816E-001
U-235	4396.000	4318.000	4453.000	5.927	80.9	7.00	4.0000	3	4.496E-002	1.494E-001	6.972E-002	1.800E-001
U-234	4765.000	4592.000	4819.000	7.479	100.0	52.23	18.0000	34	4.148E-001	3.168E-001	1.196E-001	2.720E-001
U-232	5263.000	5203.000	5350.000	18.746	99.8	898.11	9.1691	889	7.985E+000	8.676E-001	9.351E-002	2.229E-001

AlphaVision v5.3

Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
12:44:00PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L82974-01 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

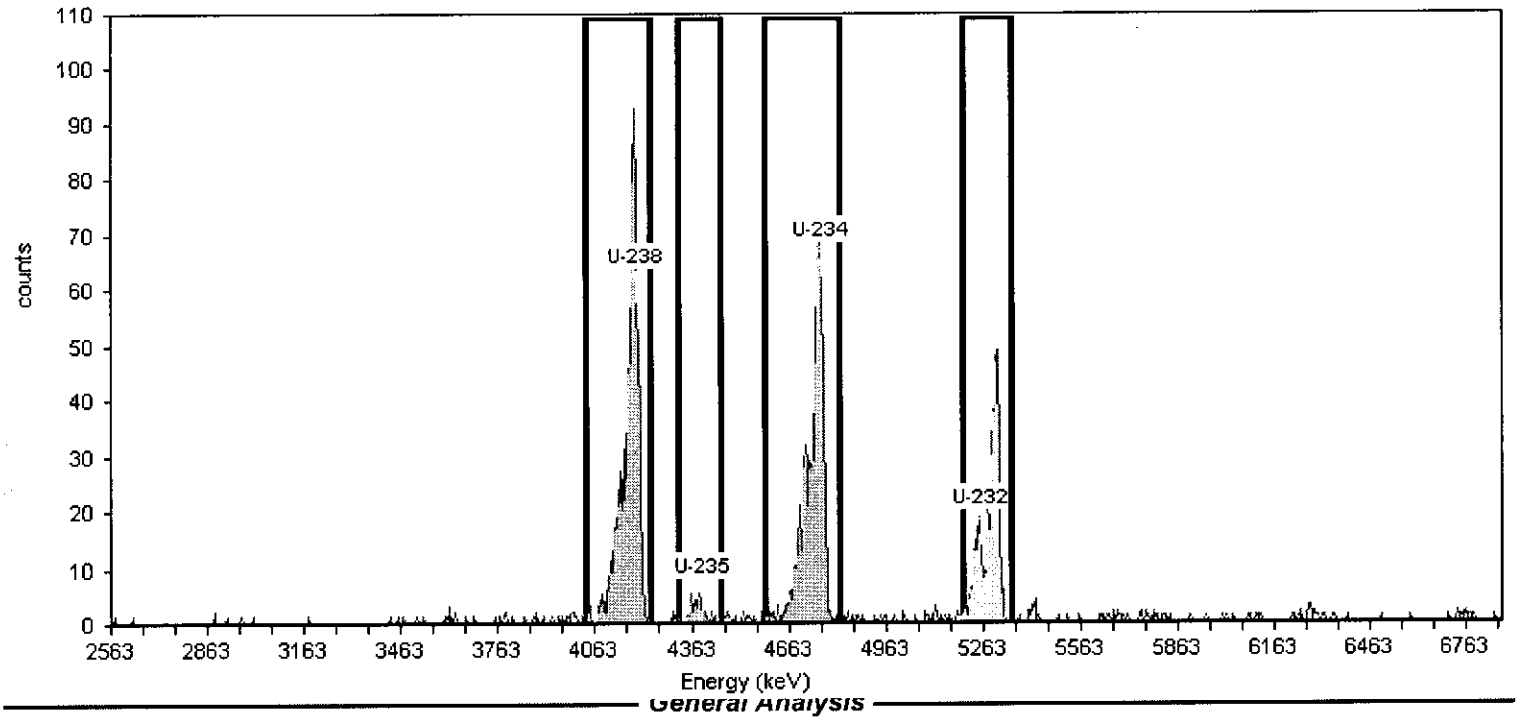
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 35.11%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/27/2010 7:43:59AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 7:42:01AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	36.527	100.2	910.09	11.0000	899	2.107E+001	5.331E+000	1.808E-001	4.250E-001
U-235	4396.000	4318.000	4453.000	41.970	80.9	41.94	5.0000	37	1.073E+000	6.465E-001	1.510E-001	3.806E-001
U-234	4765.000	4592.000	4819.000	35.742	100.0	832.77	17.9404	815	1.913E+001	4.889E+000	2.313E-001	5.262E-001
U-232	5263.000	5203.000	5350.000	32.810	99.8	465.83	7.0000	459	4.143E+000	6.103E-001	1.583E-001	3.862E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:33:19PM 7/22/2010

Analyst: ORTEC

Sample

Sample: WG286325 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

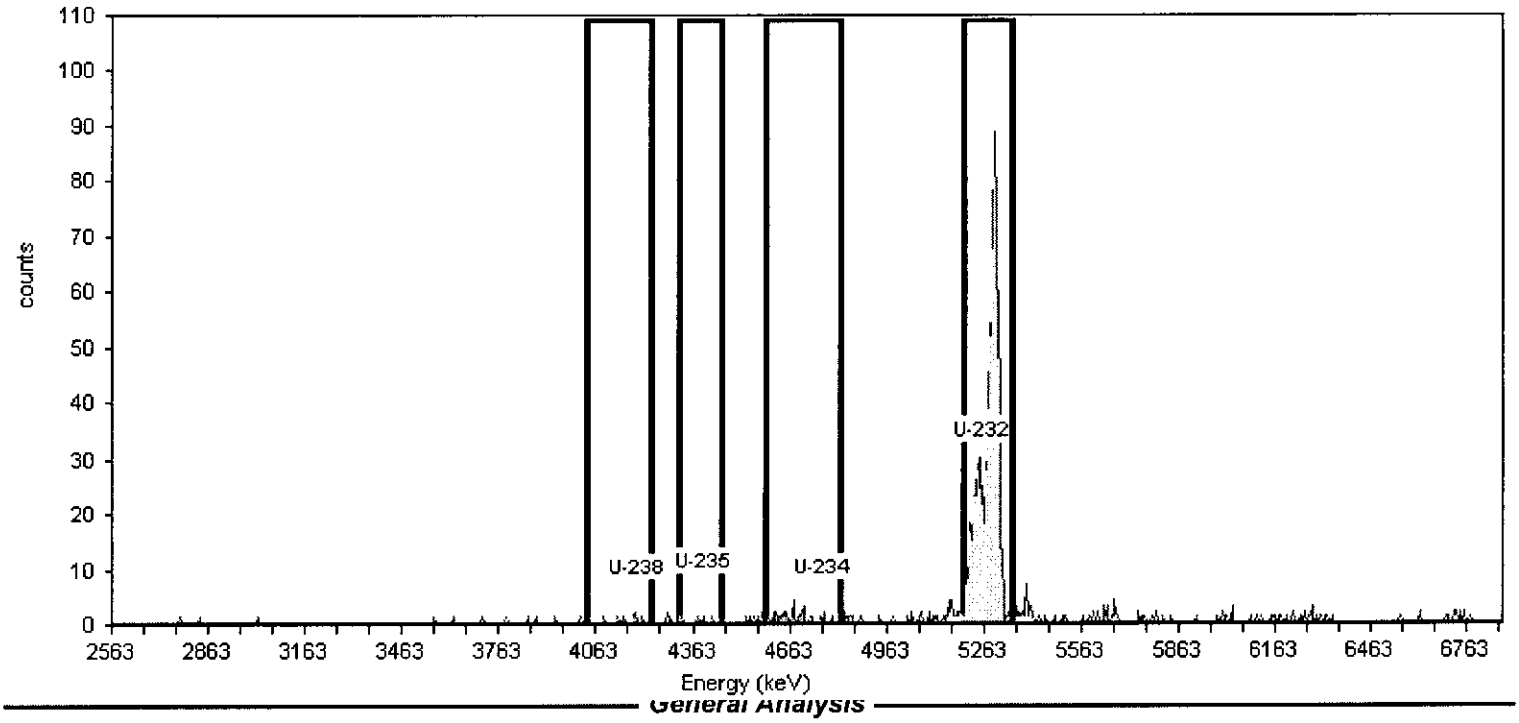
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.97%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/22/2010 10:25:23AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	64.775	100.2	7.00	3.0000	4	4.740E-002	1.129E-001	4.775E-002	1.276E-001
U-235	4396.000	4318.000	4453.000	13.938	80.9	7.94	6.0000	2	2.853E-002	1.646E-001	8.366E-002	2.070E-001
U-234	4765.000	4592.000	4819.000	109.968	100.0	34.31	12.3488	22	2.607E-001	2.493E-001	9.706E-002	2.262E-001
U-232	5263.000	5203.000	5350.000	35.648	99.8	912.17	4.6900	907	8.374E+000	8.994E-001	6.551E-002	1.662E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:33:37PM 7/22/2010

Analyst: ORTEC

Sample

Sample: WG286325 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

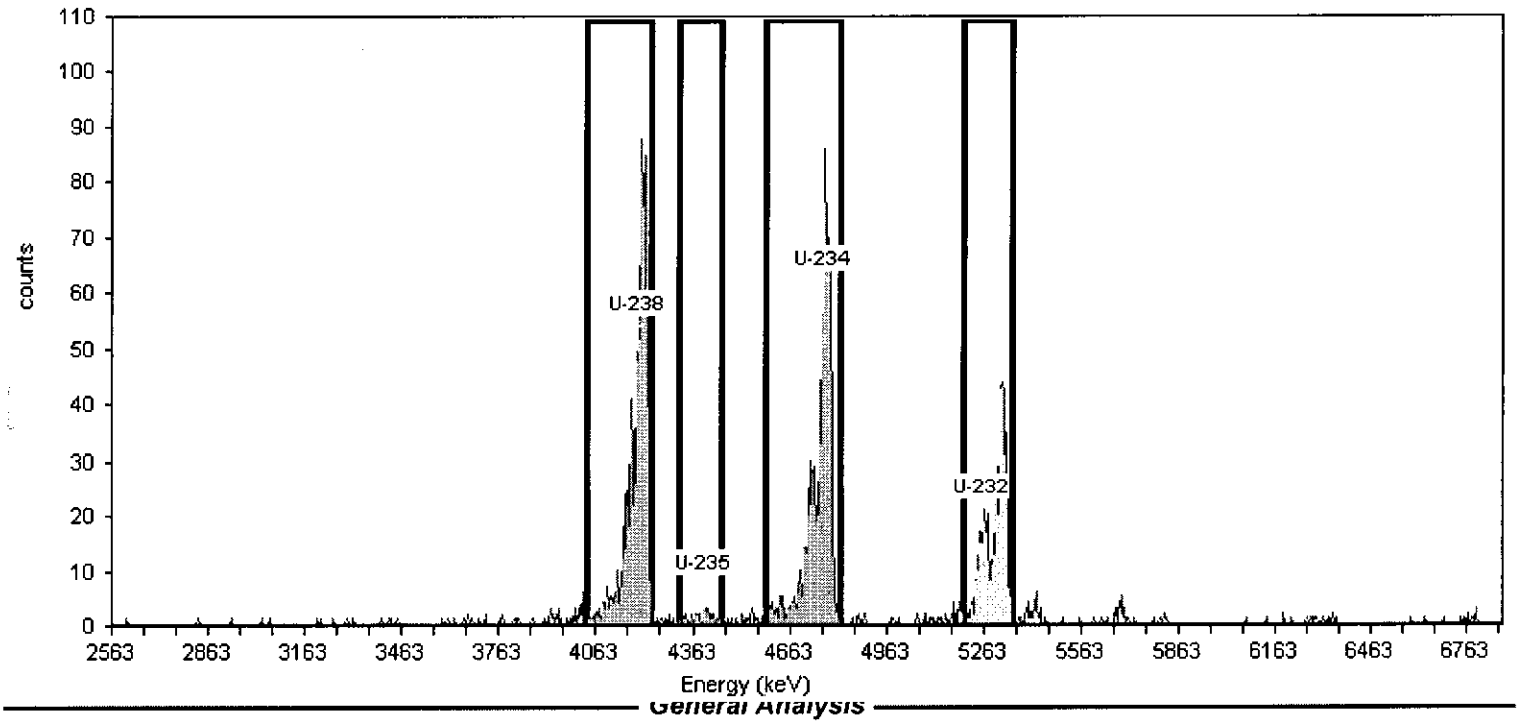
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 42.15%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/22/2010 10:25:25AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.256	100.2	953.09	6.0000	947	1.902E+001	4.673E+000	1.145E-001	2.833E-001
U-235	4396.000	4318.000	4453.000	63.600	80.9	36.96	7.0000	30	7.457E-001	5.227E-001	1.532E-001	3.737E-001
U-234	4765.000	4592.000	4819.000	28.678	100.0	885.29	14.0000	871	1.753E+001	4.344E+000	1.752E-001	4.048E-001
U-232	5263.000	5203.000	5350.000	20.063	99.8	539.37	4.0000	535	4.974E+000	6.781E-001	1.026E-001	2.647E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:26:04PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

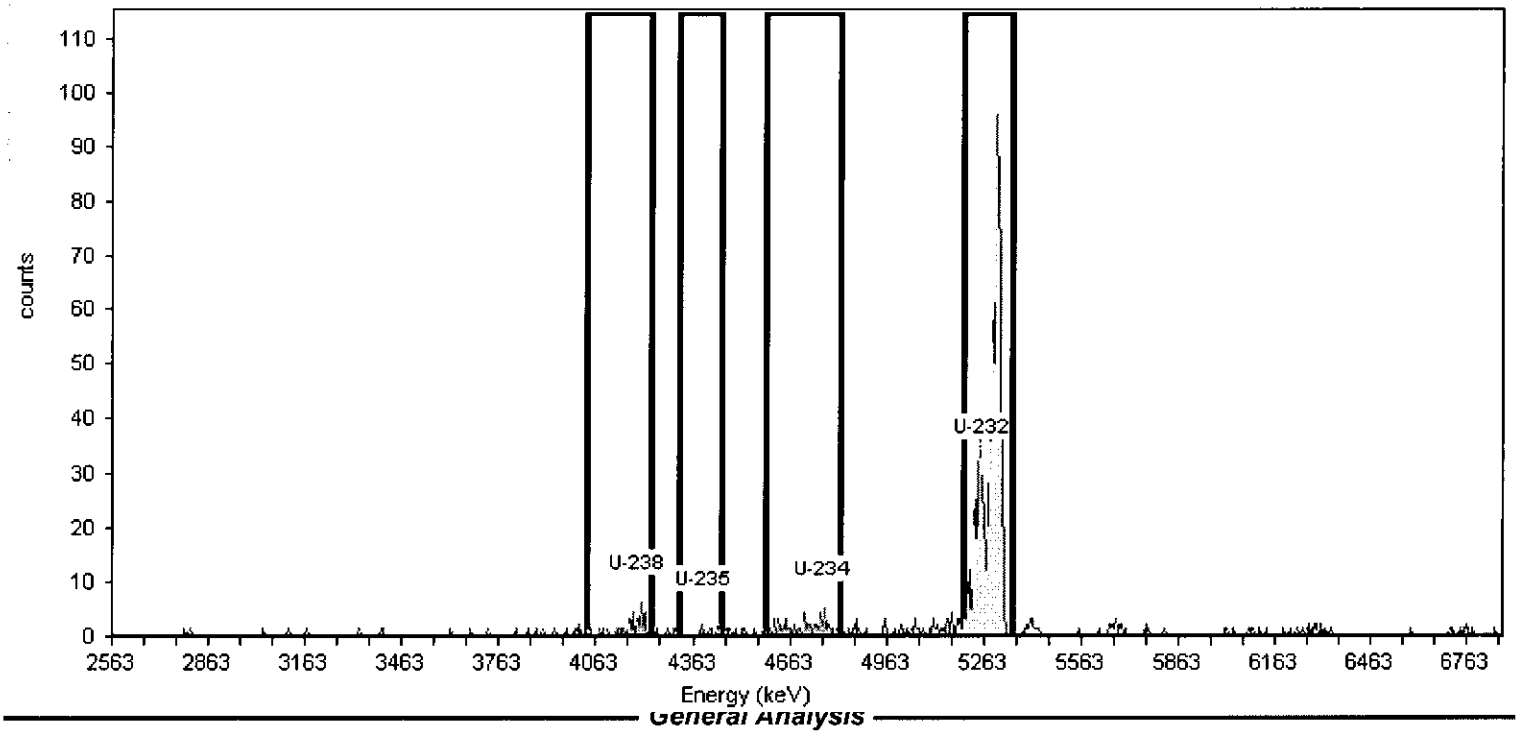
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.25%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/22/2010 10:25:27AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	19.796	100.2	47.00	10.0000	37	4.462E-001	2.887E-001	8.872E-002	2.101E-001
U-235	4396.000	4318.000	4453.000	10.287	80.9	8.00	7.9784	0	3.233E-004	1.792E-001	9.818E-002	2.368E-001
U-234	4765.000	4592.000	4819.000	152.247	100.0	65.00	21.1193	44	5.302E-001	3.542E-001	1.292E-001	2.911E-001
U-232	5263.000	5203.000	5350.000	36.931	99.8	898.66	7.0000	892	7.935E+000	8.588E-001	8.145E-002	1.987E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:26:07PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

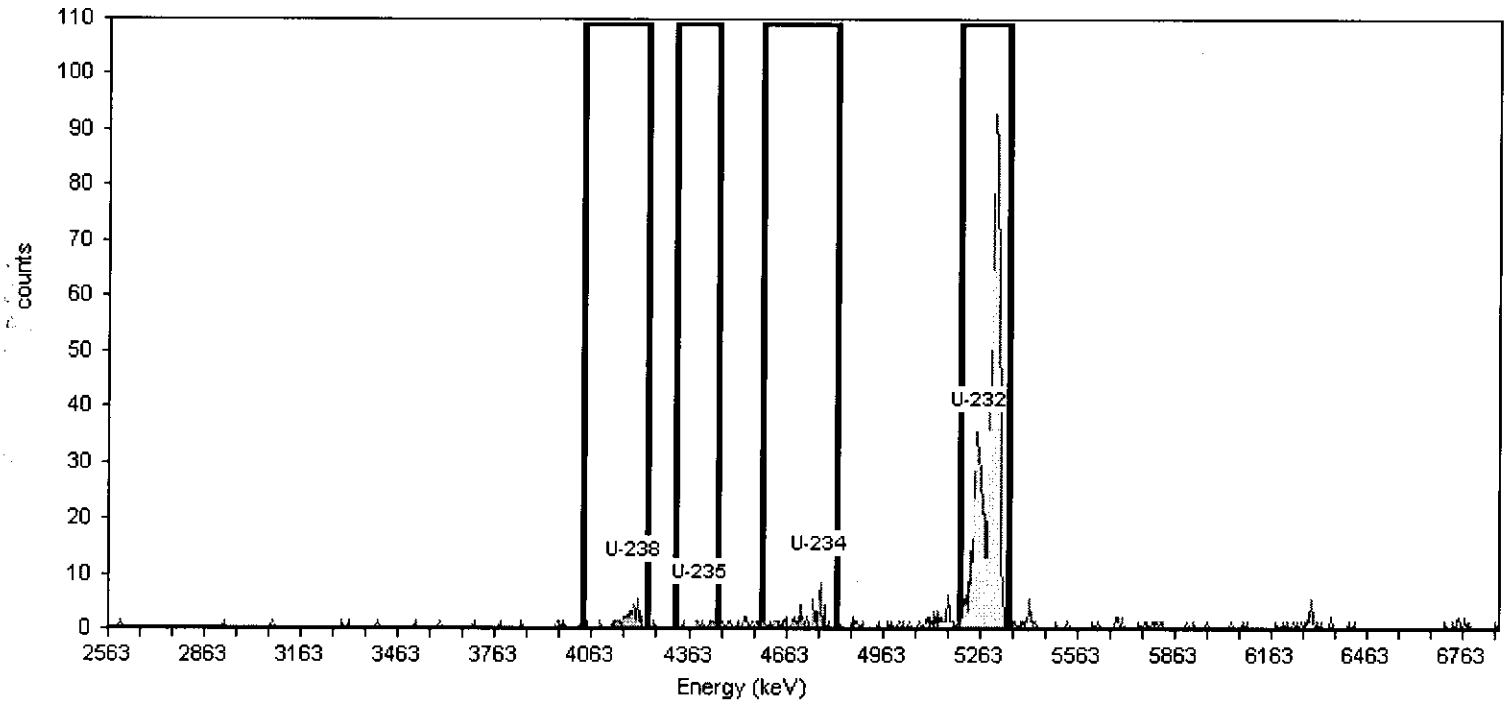
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.12%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/22/2010 10:25:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	50.674	100.2	37.57	3.0000	35	4.158E-001	2.457E-001	4.846E-002	1.295E-001
U-235	4396.000	4318.000	4453.000	16.942	80.9	7.00	8.0216	-1	-1.522E-002	1.733E-001	9.817E-002	2.367E-001
U-234	4765.000	4592.000	4819.000	31.295	100.0	57.94	23.1700	35	4.190E-001	3.372E-001	1.349E-001	3.025E-001
U-232	5263.000	5203.000	5350.000	26.147	99.8	901.17	7.0000	894	8.275E+000	8.966E-001	8.123E-002	1.982E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:03PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

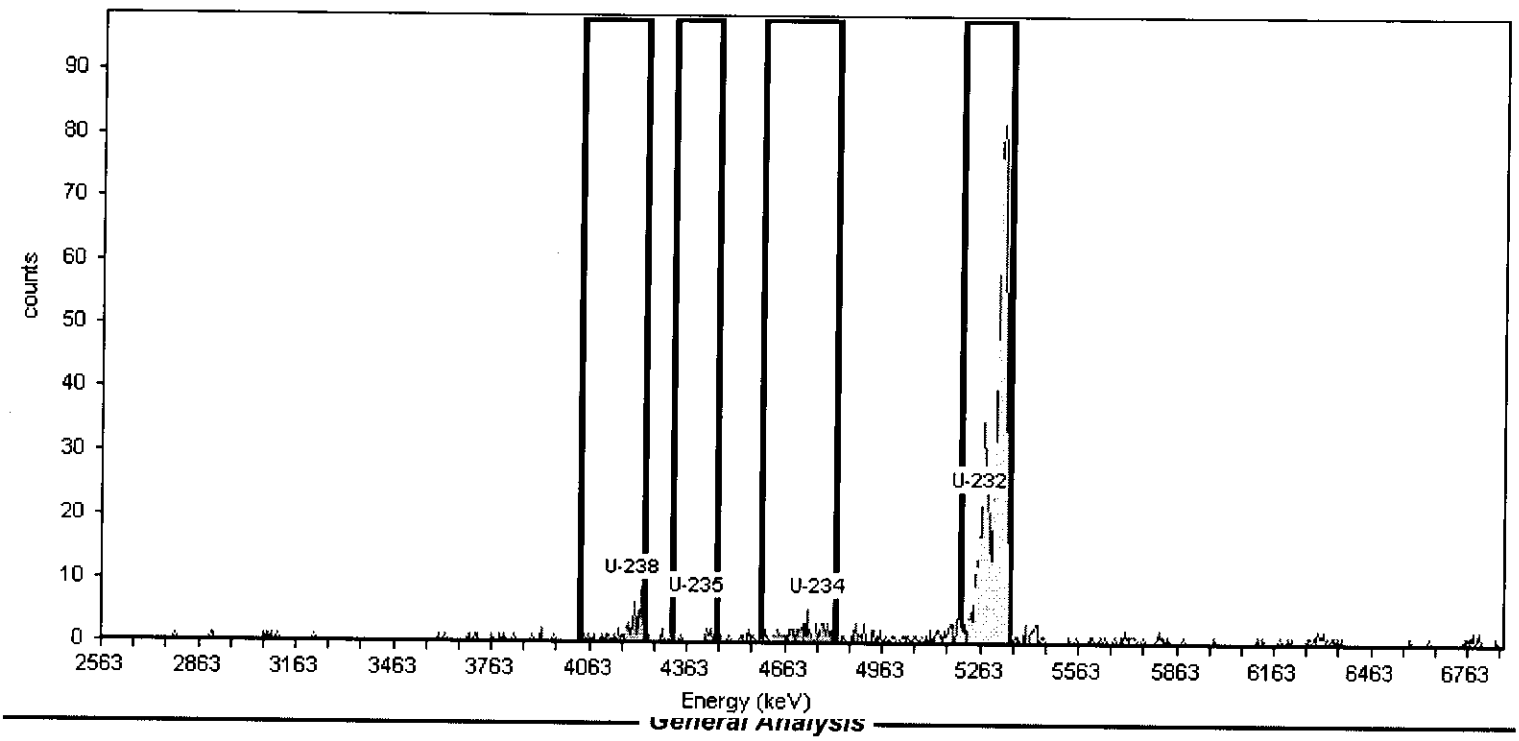
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.88%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/22/2010 10:25:10AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	14.305	100.2	53.57	4.0000	50	6.414E-001	3.242E-001	6.020E-002	1.554E-001
U-235	4396.000	4318.000	4453.000	13.271	80.9	8.04	1.0000	7	1.128E-001	1.465E-001	3.729E-002	1.180E-001
U-234	4765.000	4592.000	4819.000	20.913	100.0	67.94	18.1700	50	6.452E-001	3.858E-001	1.286E-001	2.922E-001
U-232	5263.000	5203.000	5350.000	25.253	99.8	838.76	7.6900	831	7.537E+000	8.433E-001	9.160E-002	2.216E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:15PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

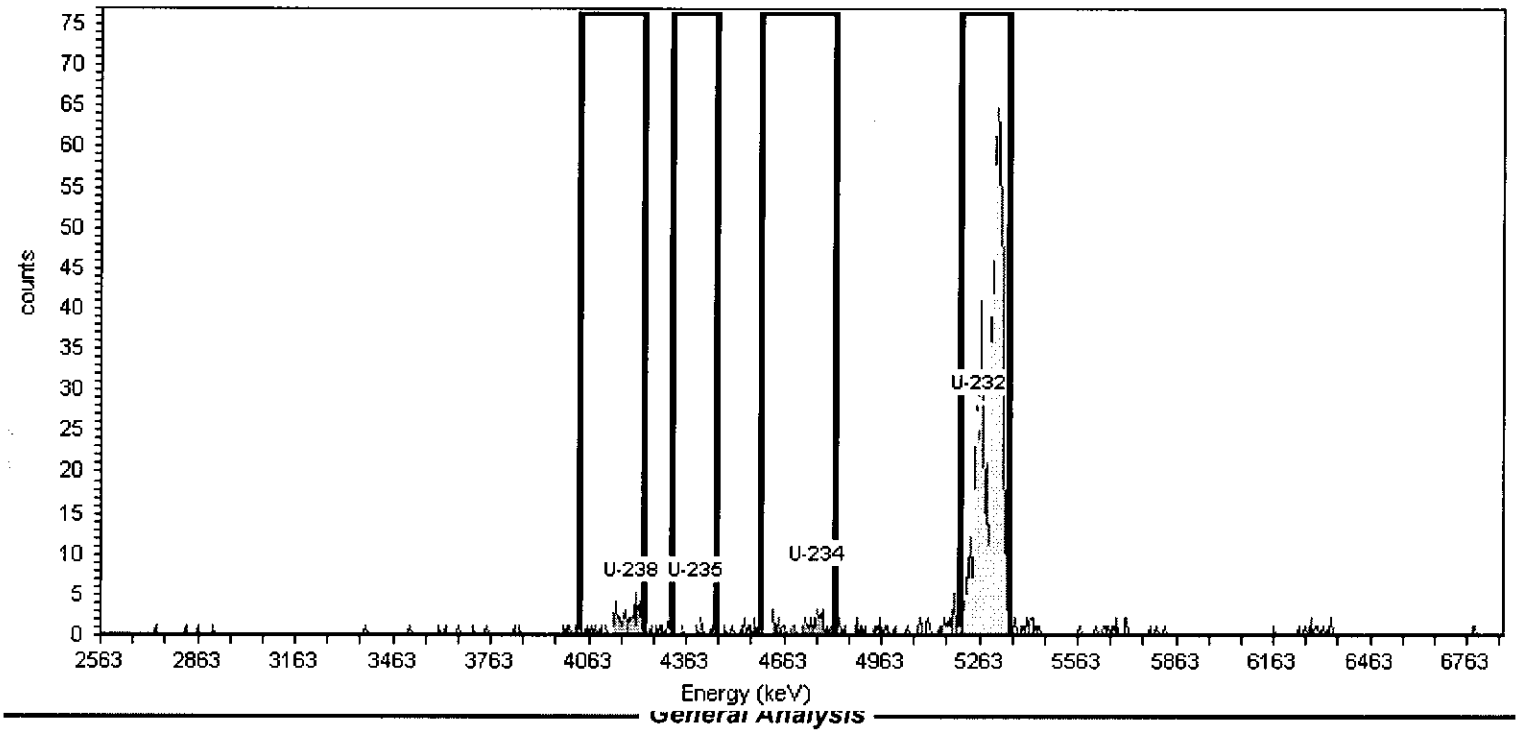
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.29%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/22/2010 10:25:10AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	17.754	100.2	47.67	5.9006	42	5.421E-001	3.071E-001	7.334E-002	1.818E-001
U-235	4396.000	4318.000	4453.000	45.786	80.9	6.06	2.0000	4	6.523E-002	1.376E-001	5.290E-002	1.493E-001
U-234	4765.000	4592.000	4819.000	33.851	100.0	37.94	11.0000	27	3.503E-001	2.827E-001	1.003E-001	2.358E-001
U-232	5263.000	5203.000	5350.000	19.016	99.8	832.62	4.0000	829	7.586E+000	8.471E-001	6.626E-002	1.711E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:29PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

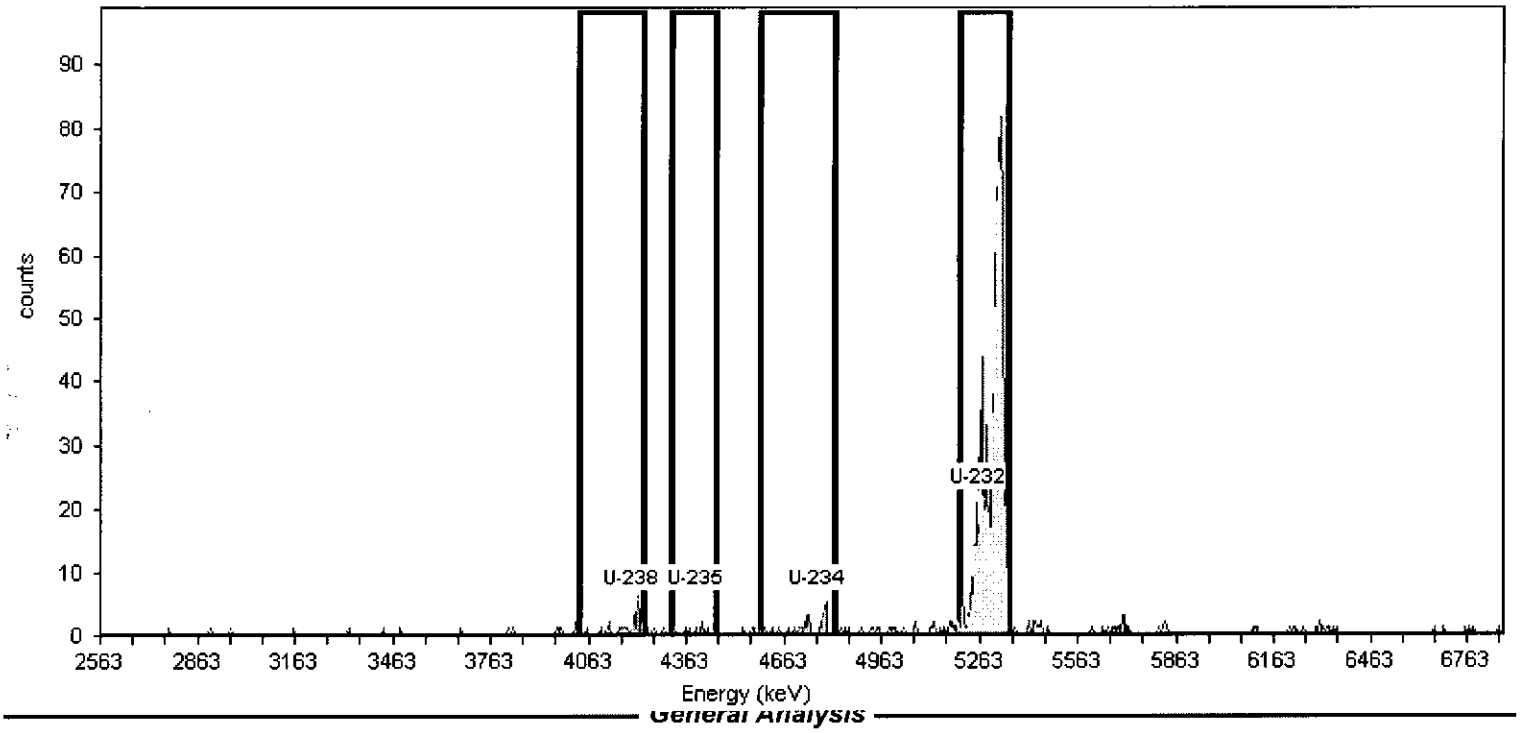
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.84%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/22/2010 10:25:12AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.066	100.2	31.00	4.3295	27	3.158E-001	2.212E-001	5.731E-002	1.467E-001
U-235	4396.000	4318.000	4453.000	111.004	80.9	8.98	2.0000	7	1.024E-001	1.474E-001	4.826E-002	1.362E-001
U-234	4765.000	4592.000	4819.000	9.238	100.0	31.94	10.0000	22	2.603E-001	2.368E-001	8.727E-002	2.066E-001
U-232	5263.000	5203.000	5350.000	22.539	99.8	914.27	6.0000	908	8.595E+000	9.255E-001	7.403E-002	1.832E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:25:14PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

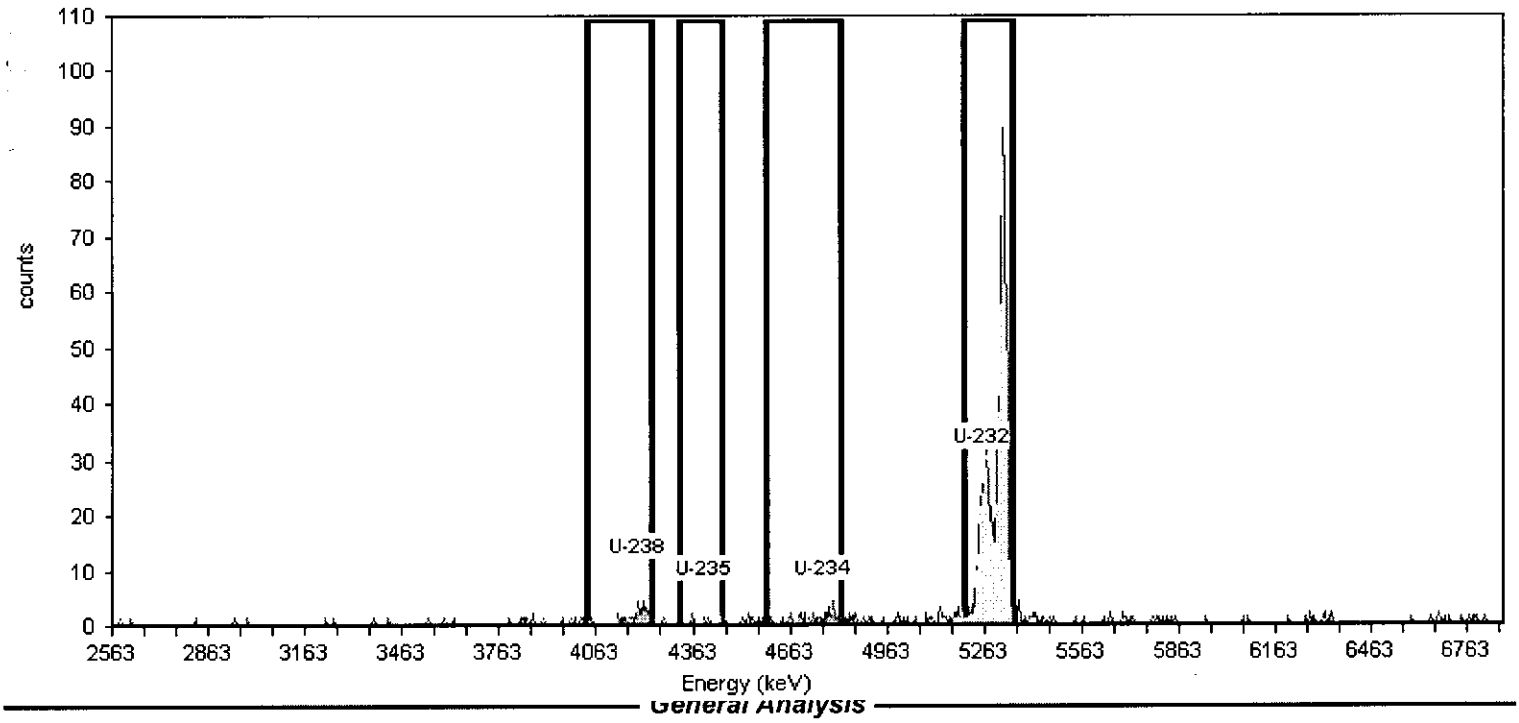
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.88%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/22/2010 10:25:14AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	22.340	100.2	37.47	1.0000	36	4.651E-001	2.567E-001	2.966E-002	9.383E-002
U-235	4396.000	4318.000	4453.000	.183	80.9	6.02	4.0000	2	3.194E-002	1.502E-001	7.350E-002	1.898E-001
U-234	4765.000	4592.000	4819.000	12.914	100.0	35.00	9.0596	26	3.314E-001	2.638E-001	8.946E-002	2.135E-001
U-232	5263.000	5203.000	5350.000	19.764	99.8	847.03	3.6900	843	7.656E+000	8.475E-001	6.253E-002	1.629E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:47PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

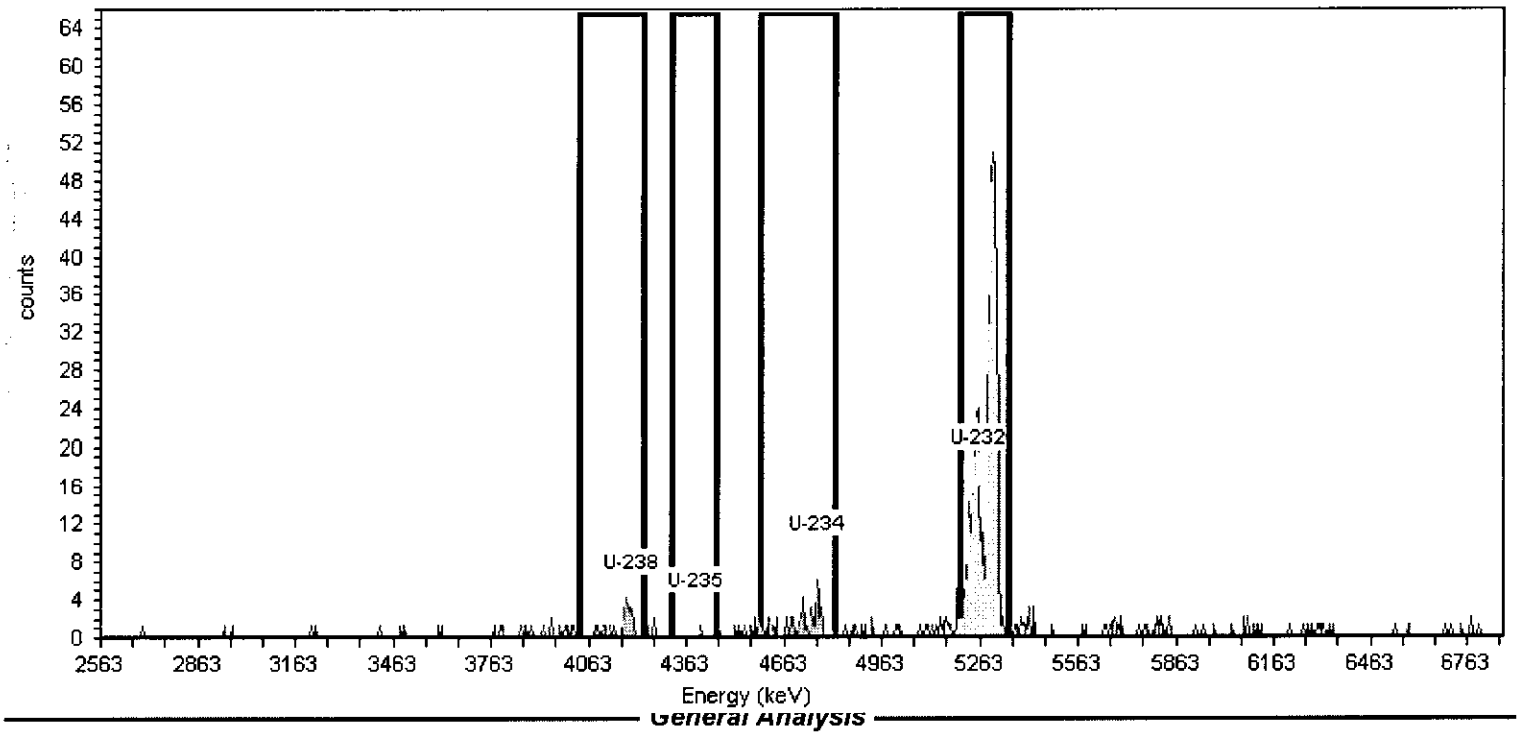
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 45.01%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/22/2010 10:25:15AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	27.356	100.2	27.00	5.0000	22	4.211E-001	3.382E-001	9.956E-002	2.509E-001
U-235	4396.000	4318.000	4453.000	25.143	80.9	1.00	5.0000	-4	-9.485E-002	1.755E-001	1.234E-001	3.109E-001
U-234	4765.000	4592.000	4819.000	73.200	100.0	49.83	27.0000	23	4.378E-001	5.137E-001	2.318E-001	5.155E-001
U-232	5263.000	5203.000	5350.000	35.956	99.8	569.00	7.1409	562	5.311E+000	7.121E-001	1.306E-001	3.180E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:51PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

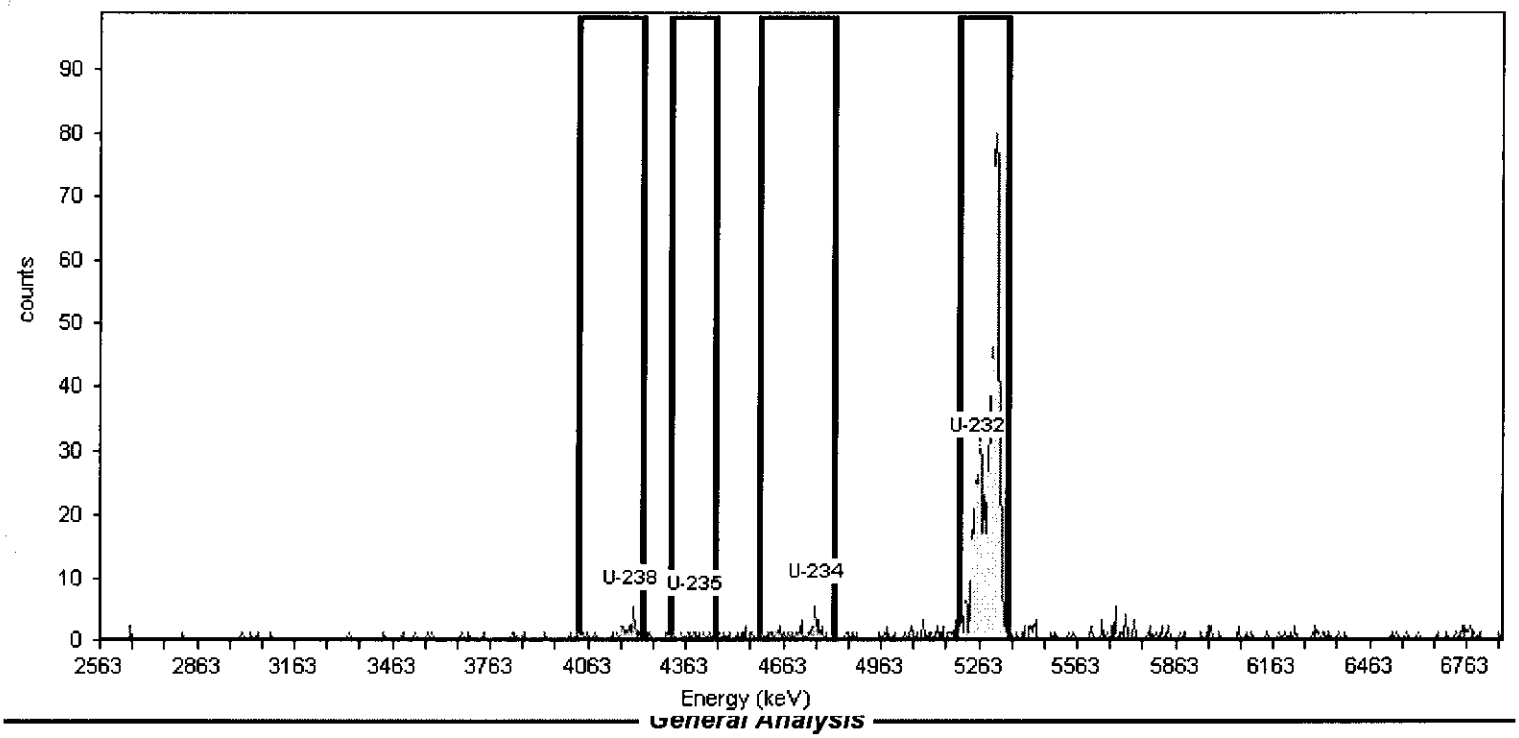
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.41%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/22/2010 10:25:15AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	6.800	100.2	27.00	8.0000	19	2.580E-001	2.472E-001	8.936E-002	2.155E-001
U-235	4396.000	4318.000	4453.000	6.076	80.9	9.04	4.0216	5	8.435E-002	1.833E-001	7.849E-002	2.025E-001
U-234	4765.000	4592.000	4819.000	128.787	100.0	44.77	24.0000	21	2.826E-001	3.438E-001	1.551E-001	3.469E-001
U-232	5263.000	5203.000	5350.000	12.016	99.8	799.83	7.9718	792	7.837E+000	9.010E-001	9.788E-002	2.361E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:58PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

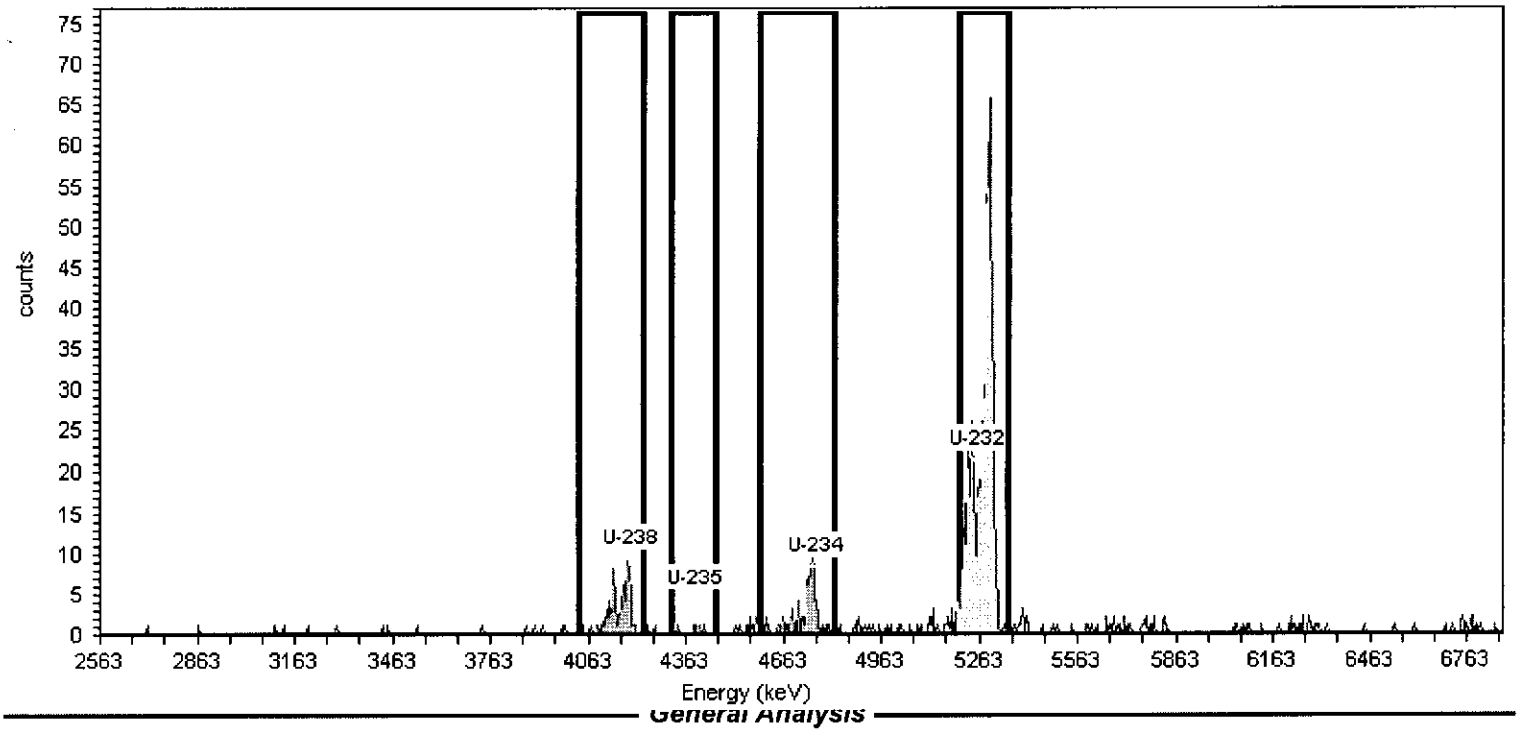
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 52.40%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/22/2010 10:25:16AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	64.180	100.2	87.00	5.0000	82	1.347E+000	5.564E-001	8.542E-002	2.153E-001
U-235	4396.000	4318.000	4453.000	84.096	80.9	6.00	5.0000	1	2.034E-002	2.025E-001	1.058E-001	2.667E-001
U-234	4765.000	4592.000	4819.000	32.435	100.0	87.00	8.2296	79	1.296E+000	5.585E-001	1.098E-001	2.641E-001
U-232	5263.000	5203.000	5350.000	33.093	99.8	658.52	3.6619	655	6.183E+000	7.685E-001	8.022E-002	2.092E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:28:54PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

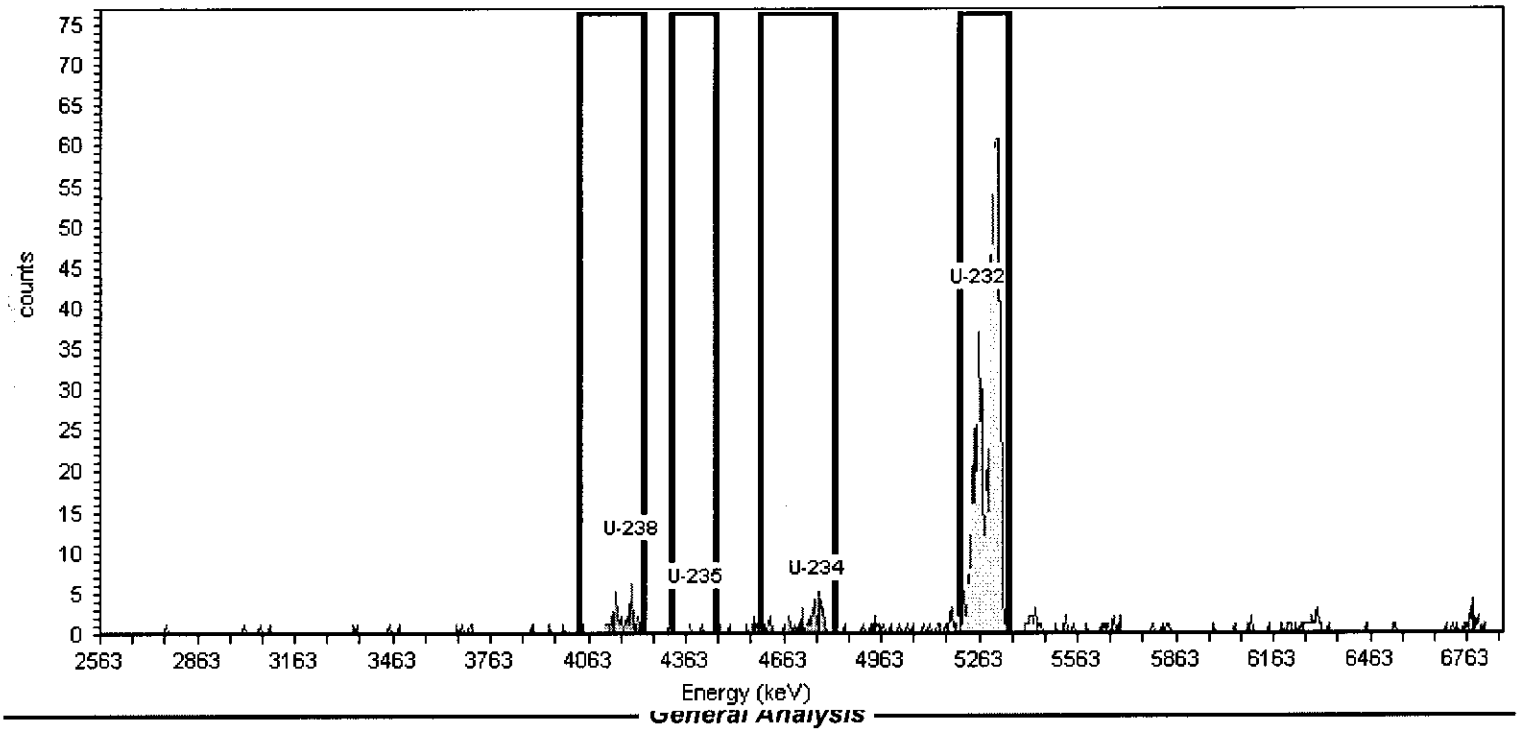
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 60.64%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/22/2010 10:25:16AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	67.492	100.2	41.00	6.0000	35	4.926E-001	3.081E-001	8.021E-002	1.985E-001
U-235	4396.000	4318.000	4453.000	.000	80.9	2.04	5.9649	-4	-6.853E-002	1.487E-001	9.908E-002	2.454E-001
U-234	4765.000	4592.000	4819.000	49.698	100.0	47.71	14.0596	34	4.746E-001	3.477E-001	1.230E-001	2.842E-001
U-232	5263.000	5203.000	5350.000	20.078	99.8	778.00	14.0000	764	7.155E+000	8.390E-001	1.344E-001	3.107E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:34:56PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

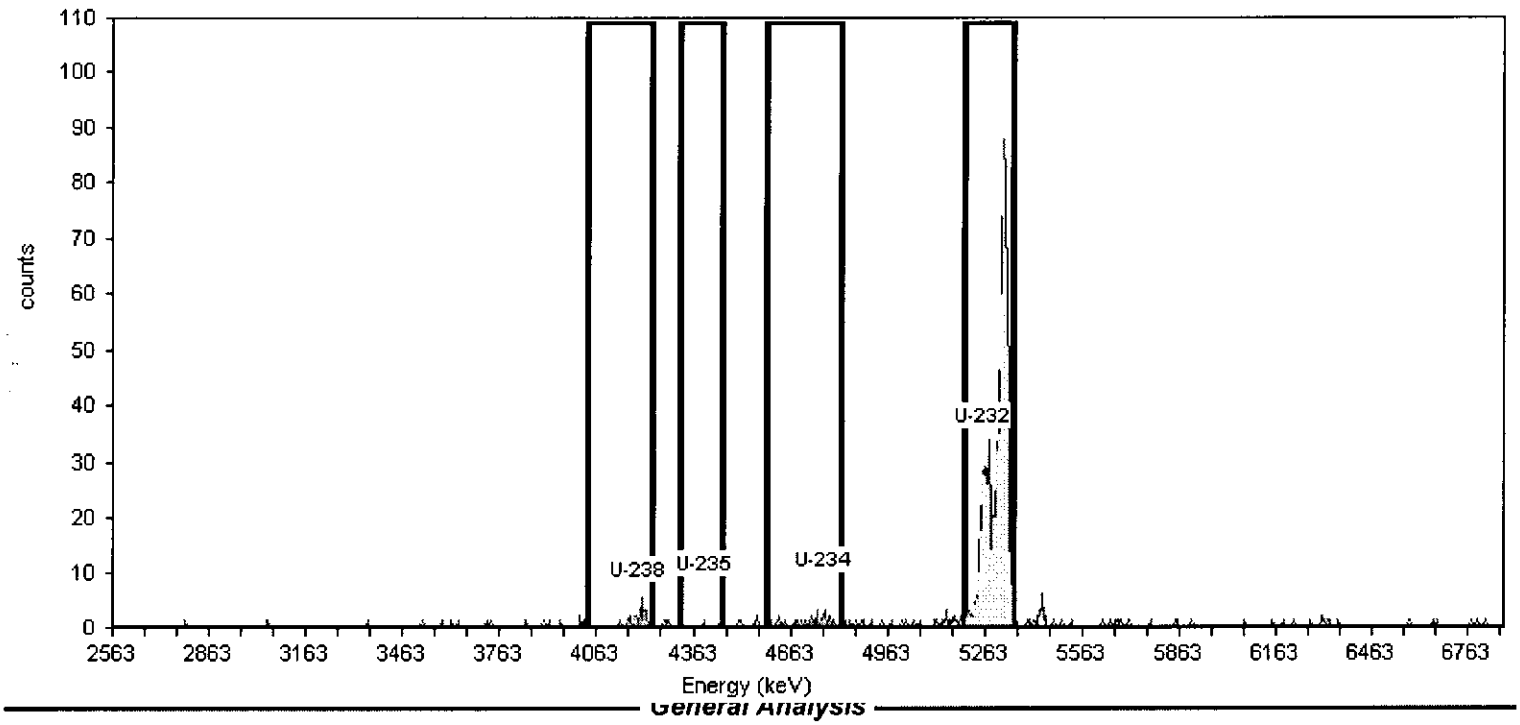
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 74.06%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/22/2010 10:25:17AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	13.127	100.2	28.00	4.0000	24	2.985E-001	2.203E-001	5.787E-002	1.494E-001
U-235	4396.000	4318.000	4453.000	5.810	80.9	2.98	1.0216	2	3.015E-002	9.268E-002	3.624E-002	1.142E-001
U-234	4765.000	4592.000	4819.000	54.736	100.0	32.00	9.0000	23	2.866E-001	2.469E-001	8.697E-002	2.077E-001
U-232	5263.000	5203.000	5350.000	19.229	99.8	868.55	4.0000	865	8.739E+000	9.639E-001	6.350E-002	1.639E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:29:41PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

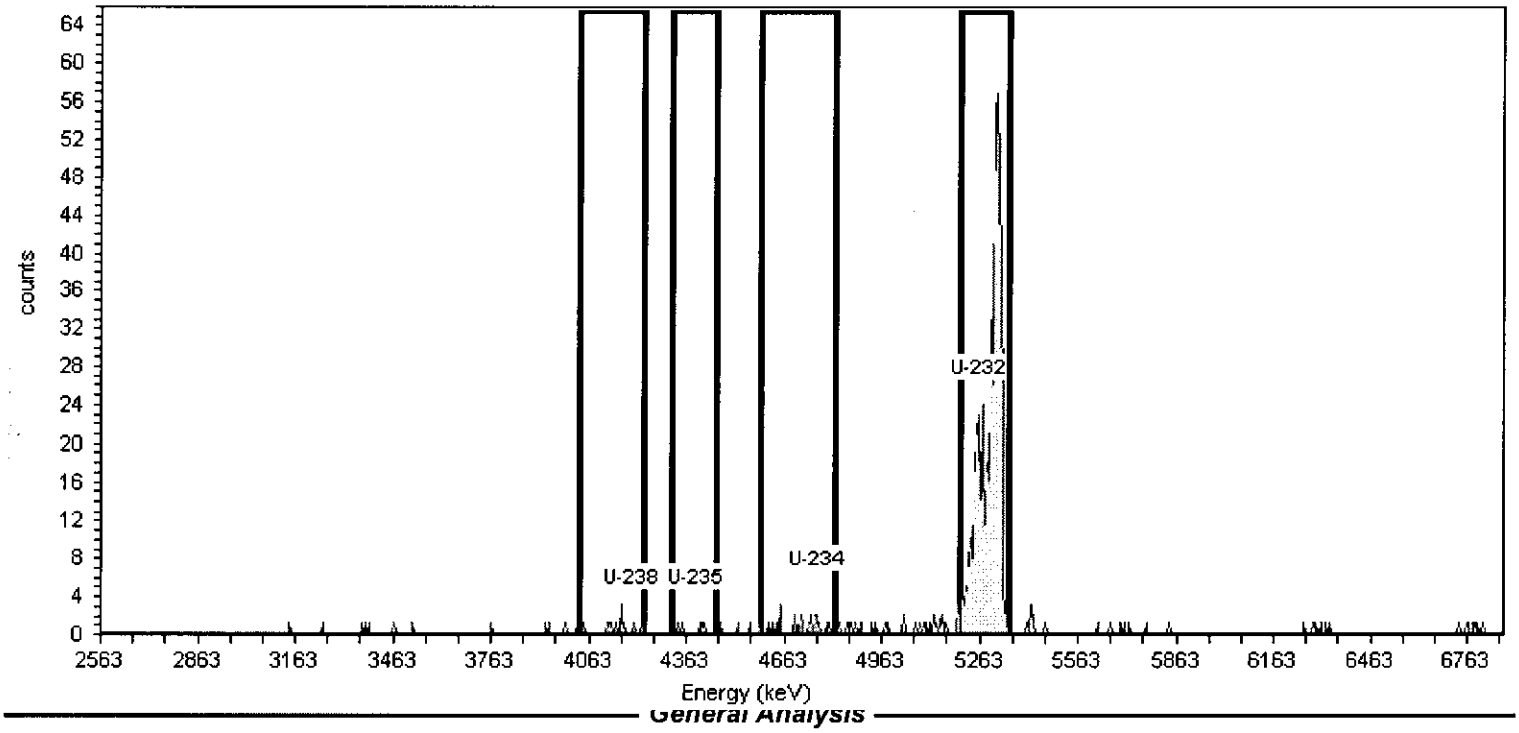
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 51.13%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/22/2010 10:25:19AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4396.000	4318.000	4453.000	92.207	80.9	6.00	0.0000	6	1.225E-001	1.642E-001	0.000E+000	5.524E-002
U-234	4765.000	4592.000	4819.000	61.974	100.0	23.06	10.0000	13	2.156E-001	2.886E-001	1.214E-001	2.876E-001
U-232	5263.000	5203.000	5350.000	16.071	99.8	663.65	11.0000	653	6.033E+000	7.576E-001	1.395E-001	3.279E-001
U-238	4193.000	4037.000	4232.000	74.052	100.2	12.57	1.0000	12	1.907E-001	1.868E-001	3.833E-002	1.212E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:29:45PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

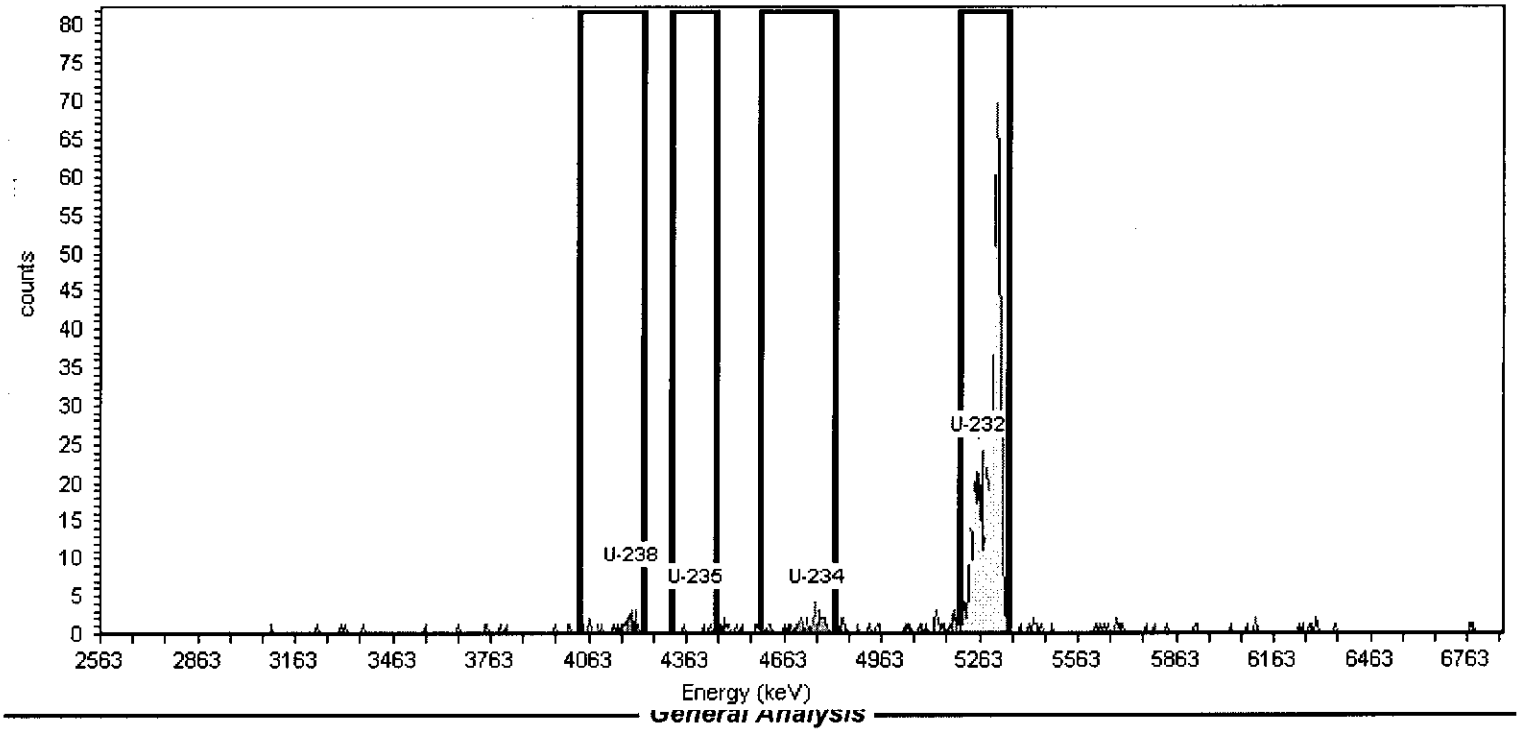
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 54.67%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/22/2010 10:25:20AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	34.606	100.2	22.00	2.0000	20	3.195E-001	2.449E-001	5.256E-002	1.483E-001
U-235	4396.000	4318.000	4453.000	5.740	80.9	3.00	0.0000	3	5.938E-002	1.195E-001	0.000E+000	5.356E-002
U-234	4765.000	4592.000	4819.000	32.189	100.0	34.06	13.0000	21	3.371E-001	3.375E-001	1.343E-001	3.118E-001
U-232	5263.000	5203.000	5350.000	13.675	99.8	677.83	4.6900	673	6.451E+000	7.935E-001	8.832E-002	2.241E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
3:29:49PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 001
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

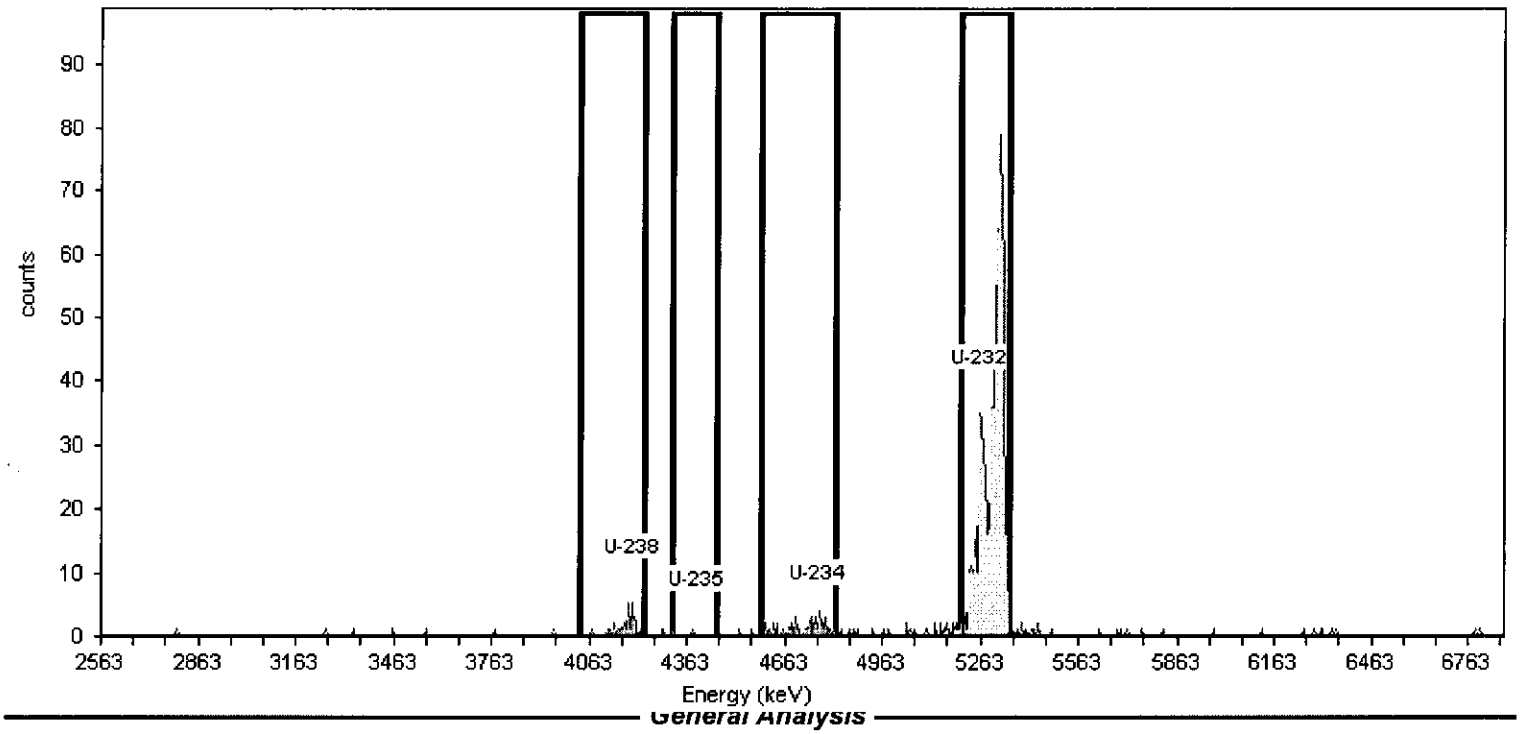
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.29%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/22/2010 10:25:20AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 10:22:28AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.619	100.2	36.00	2.0000	34	4.059E-001	2.365E-001	3.927E-002	1.109E-001
U-235	4396.000	4318.000	4453.000	10.167	80.9	1.96	2.0000	0	-5.192E-004	8.835E-002	4.866E-002	1.373E-001
U-234	4765.000	4592.000	4819.000	36.477	100.0	48.23	3.0000	45	5.410E-001	2.806E-001	4.819E-002	1.288E-001
U-232	5263.000	5203.000	5350.000	20.379	99.8	902.82	2.0000	901	8.294E+000	8.912E-001	4.310E-002	1.216E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:43PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82975-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

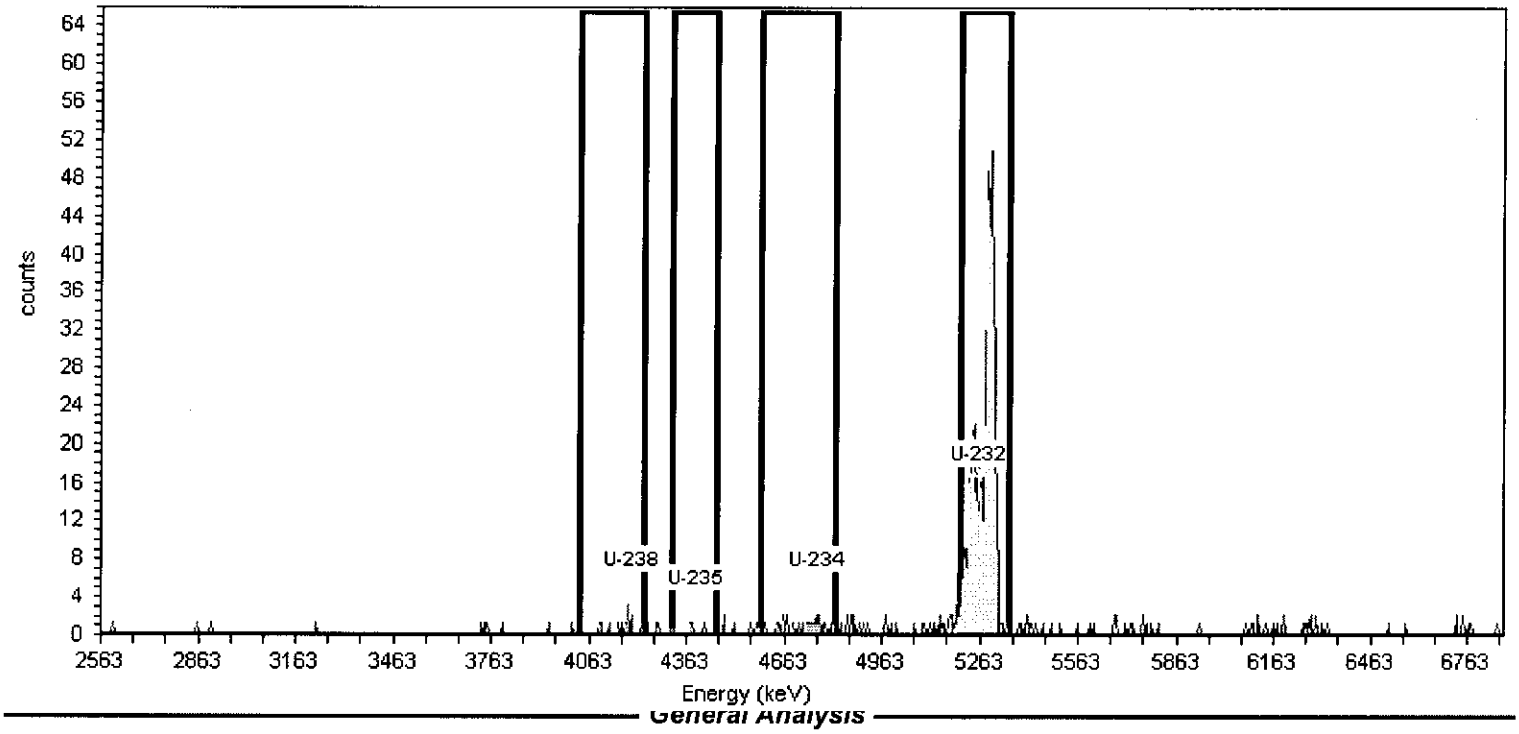
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 45.68%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/22/2010 3:39:41PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-232	5263.000	5203.000	5350.000	34.663	99.8	588.80	4.6900	584	5.390E+000	7.063E-001	1.018E-001	2.582E-001
U-238	4193.000	4037.000	4232.000	56.522	100.2	13.00	3.0000	10	1.841E-001	2.247E-001	7.418E-002	1.982E-001
U-235	4396.000	4318.000	4453.000	10.167	80.9	4.96	6.0000	-1	-2.361E-002	2.266E-001	1.300E-001	3.217E-001
U-234	4765.000	4592.000	4819.000	148.012	100.0	28.06	12.3488	16	2.898E-001	3.576E-001	1.508E-001	3.515E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:47PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-02 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

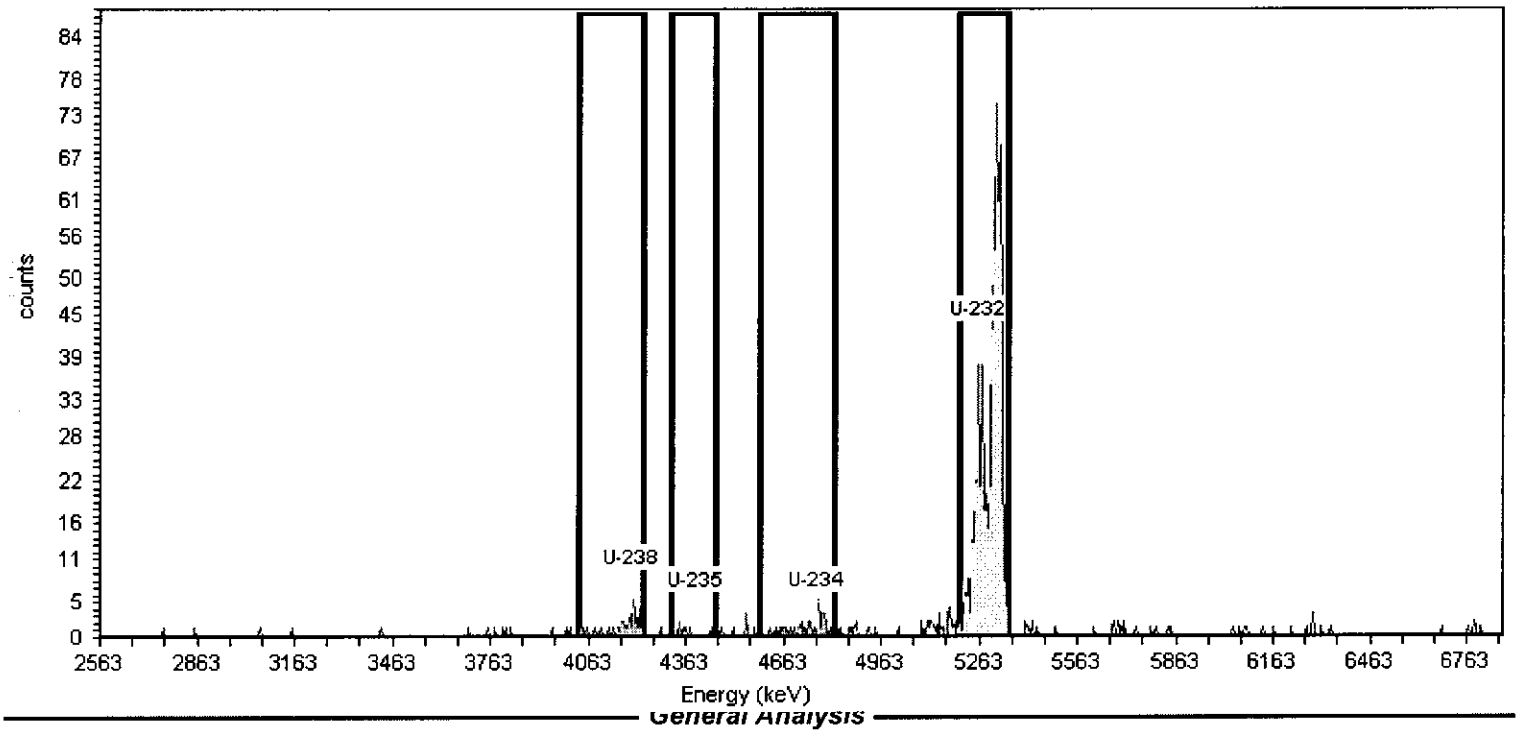
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.62%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/22/2010 3:39:35PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.998	100.2	42.19	6.0000	36	4.669E-001	2.862E-001	7.352E-002	1.820E-001
U-235	4396.000	4318.000	4453.000	6.023	80.9	7.00	7.0000	0	0.000E+000	1.794E-001	9.839E-002	2.400E-001
U-234	4765.000	4592.000	4819.000	20.089	100.0	38.77	14.0000	25	3.202E-001	2.897E-001	1.125E-001	2.600E-001
U-232	5263.000	5203.000	5350.000	19.953	99.8	837.45	4.0000	833	7.743E+000	8.631E-001	6.587E-002	1.701E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830
8:39:51PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-03 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

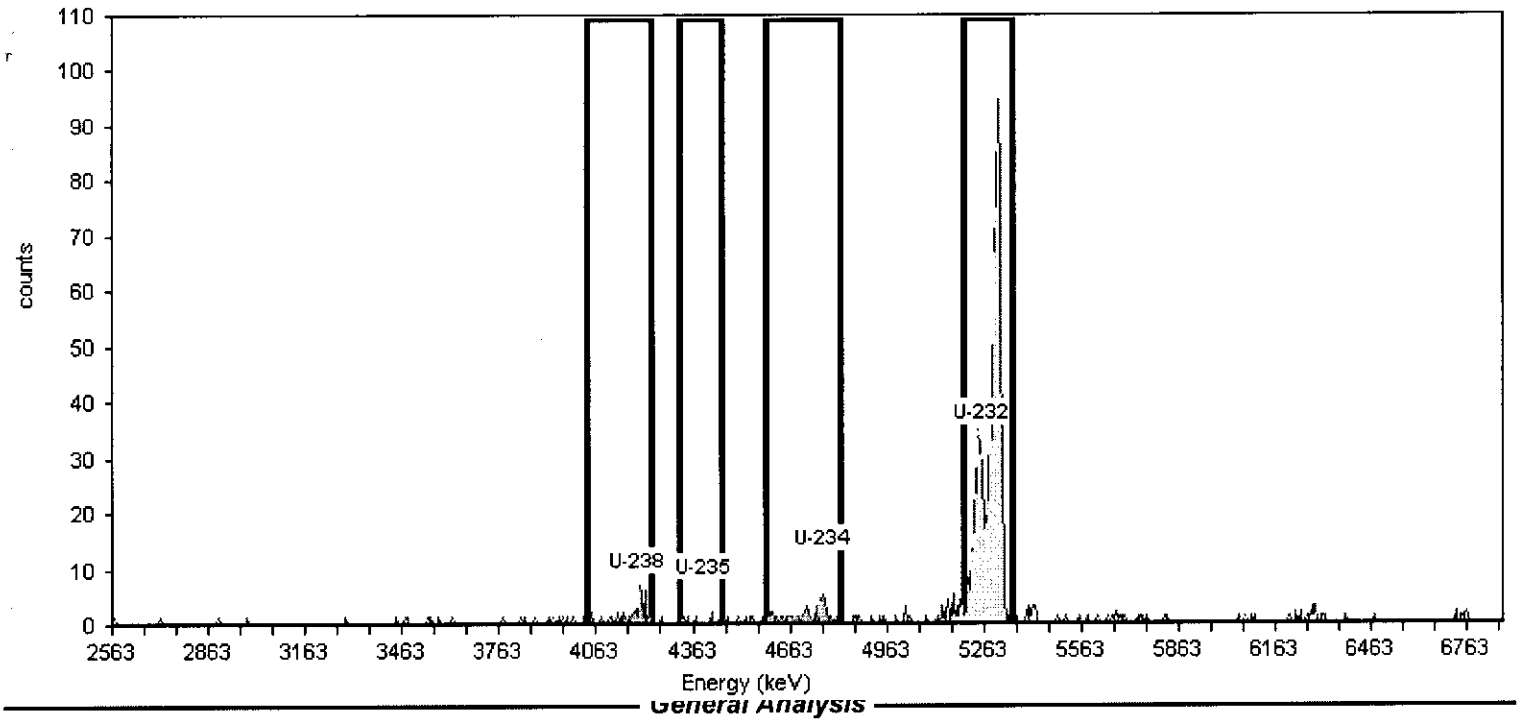
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.61%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/22/2010 3:39:37PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	13.795	100.2	51.00	10.0000	41	4.847E-001	2.949E-001	8.696E-002	2.059E-001
U-235	4396.000	4318.000	4453.000	6.135	80.9	7.00	7.9784	-1	-1.433E-002	1.701E-001	9.624E-002	2.321E-001
U-234	4765.000	4592.000	4819.000	73.560	100.0	58.12	21.1193	37	4.382E-001	3.292E-001	1.266E-001	2.853E-001
U-232	5263.000	5203.000	5350.000	36.519	99.8	916.68	7.0000	910	8.096E+000	8.684E-001	7.984E-002	1.948E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
8:39:55PM 7/22/2010

Analyst: ORTEC

Sample

Sample: L82974-01 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.22 002
:
Description: WG286325

Client Name: Undefined
Client Contact:

Tracer

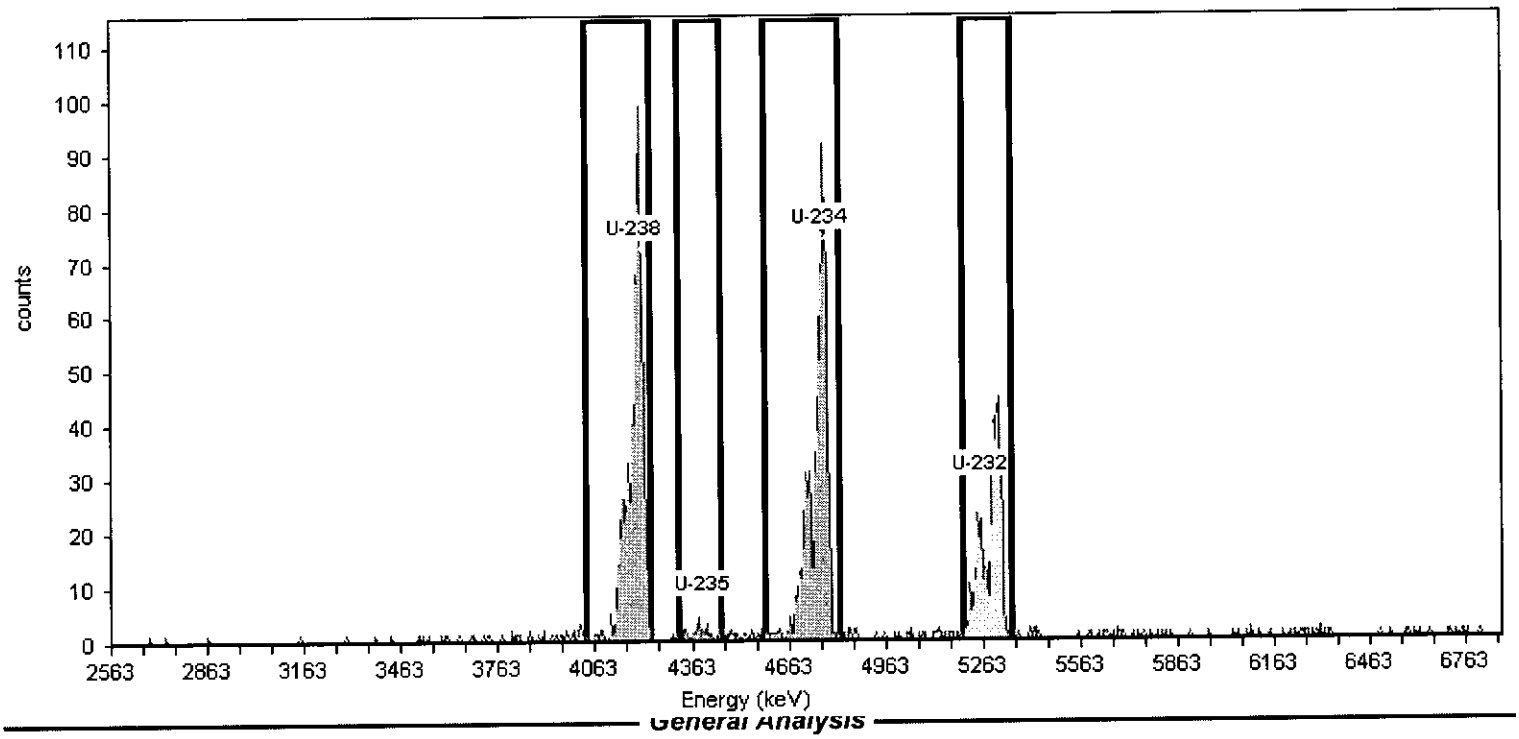
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 41.37%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/22/2010 3:39:39PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/22/2010 3:38:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.934	100.2	896.96	3.0000	894	1.822E+001	4.511E+000	8.214E-002	2.194E-001
U-235	4396.000	4318.000	4453.000	79.333	80.9	32.01	8.0216	24	6.059E-001	4.986E-001	1.664E-001	4.011E-001
U-234	4765.000	4592.000	4819.000	40.241	100.0	904.88	23.1700	882	1.801E+001	4.480E+000	2.287E-001	5.127E-001
U-232	5263.000	5203.000	5350.000	32.894	99.8	534.55	7.0000	528	4.882E+000	6.735E-001	1.377E-001	3.359E-001

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L82974

Soil Preparation

WG285851 **Air Dry**

Sample	Date	SCN	SP AIRDRY
L82935-01	07/12/10 13:00		X
L82974-01	07/12/10 13:05		X
L82974-02	07/12/10 13:10		X
L82974-03	07/12/10 13:15		X
L82974-04	07/12/10 13:21		X
L82974-05	07/12/10 13:26		X
L82974-06	07/12/10 13:31		X
L82975-01	07/12/10 13:37		X
L82975-02	07/12/10 13:42		X
L82975-03	07/12/10 13:47		X
L82975-04	07/12/10 13:53		X
L82975-05	07/12/10 13:58		X
L82975-06	07/12/10 14:03		X
L82975-07	07/12/10 14:08		X
L82975-08	07/12/10 14:14		X
L82975-09	07/12/10 14:19		X
L83116-01	07/12/10 14:24		X
L83156-01	07/12/10 14:30		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L82974

Soil Preparation

WG286023 **Crush Pulverize**

Sample	Date	SCN	SP CRUSHPULV
L82974-01	07/14/10 13:00		X
L82974-02	07/14/10 13:04		X
L82974-03	07/14/10 13:08		X
L82974-04	07/14/10 13:12		X
L82974-05	07/14/10 13:17		X
L82974-06	07/14/10 13:21		X
L82975-01	07/14/10 13:25		X
L82975-02	07/14/10 13:29		X
L82975-03	07/14/10 13:34		X
L82975-04	07/14/10 13:38		X
L82975-05	07/14/10 13:42		X
L82975-06	07/14/10 13:47		X
L82975-07	07/14/10 13:51		X
L82975-08	07/14/10 13:55		X
L82975-09	07/14/10 13:59		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L82974

Radiochemistry

WG286455 **Ra226**

Sample	Date	SCN	WITTING RADIUM IS
WG286266PBS	07/20/10 12:02		X
WG286266LCSS	07/20/10 12:03		X
L82974-01	07/20/10 12:04		X
L82974-02	07/20/10 12:06		X
L82974-03	07/20/10 12:07		X
L82974-04	07/20/10 12:09		X
L82974-05	07/20/10 12:10		X
L82974-06	07/20/10 12:12		X
L82975-01	07/20/10 12:13		X
L82975-02	07/20/10 12:14		X
L82975-03	07/20/10 12:16		X
L82975-04	07/20/10 12:17		X
L82975-05	07/20/10 12:19		X
L82975-06	07/20/10 12:20		X
L82975-07	07/20/10 12:22		X
L82975-08	07/20/10 12:23		X
L82975-09	07/20/10 12:25		X
L82974-01DUP	07/20/10 12:26		X
L82974-02DUP	07/20/10 12:27		X
L82974-03MS	07/20/10 12:29		X

ACZ Laboratories, Inc.
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Run Log by Workgroup

Columbia Analytical Services

Project ID: L82974

Radiochemistry

WG286554 **Th**

Sample	Date	SCN	THORIUM 228	THORIUM 230	THORIUM 232
WG286328PBS	07/21/10 09:47			X	X
WG286328LCSS	07/21/10 09:48			X	
L82974-01	07/21/10 09:49			X	
L82974-02	07/21/10 09:51			X	
L82974-03	07/21/10 09:52			X	
L82974-04	07/21/10 09:54			X	
L82974-05	07/21/10 09:55			X	
L82974-06	07/21/10 09:57			X	
L82975-01	07/21/10 09:58			X	
L82975-02	07/21/10 09:59			X	
L82975-03	07/21/10 10:01			X	
L82975-04	07/21/10 10:02			X	
L82975-05	07/21/10 10:04			X	
L82975-06	07/21/10 10:05			X	
L82975-07	07/21/10 10:07			X	
L82975-08	07/21/10 10:08			X	
L82975-09	07/21/10 10:10			X	
L82974-01DUP	07/21/10 10:11		X	X	X
L82974-03DUP	07/21/10 10:12		X	X	X
L82974-02MS	07/21/10 10:14			X	

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L82974

Radiochemistry

WG286634 **pb**

Sample	Date	SCN	LEAD 210
L82974-05	07/23/10 13:21		X
L82975-02	07/23/10 13:21		X
WG286254PBS	07/23/10 13:21		X
L82974-06	07/23/10 13:21		X
L82974-04	07/23/10 13:21		X
L82974-03	07/23/10 13:21		X
L82974-02	07/23/10 13:21		X
L82974-01	07/23/10 13:21		X
WG286254LCSS	07/23/10 13:21		X
L82975-01	07/23/10 13:21		X
L82975-09	07/23/10 14:53		X
L82975-03	07/23/10 14:53		X
L82974-03DUP	07/23/10 14:53		X
L82974-02MS	07/23/10 14:53		X
L82974-01DUP	07/23/10 14:53		X
L82975-07	07/23/10 14:53		X
L82975-06	07/23/10 14:53		X
L82975-04	07/23/10 14:53		X
L82975-05	07/23/10 14:53		X
L82975-08	07/23/10 14:53		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L82974

Radiochemistry

WG286781 **U**

Sample	Date	SCN	URANIUM 234	URANIUM 235	URANIUM 238
WG286325PBS	07/26/10 15:39		X	X	X
WG286325LCSS	07/26/10 15:40		X	X	X
L82974-01	07/26/10 15:41		X	X	X
L82974-02	07/26/10 15:43		X	X	X
L82974-03	07/26/10 15:44		X	X	X
L82974-04	07/26/10 15:46		X	X	X
L82974-05	07/26/10 15:47		X	X	X
L82974-06	07/26/10 15:49		X	X	X
L82975-01	07/26/10 15:50		X	X	X
L82975-02	07/26/10 15:51		X	X	X
L82975-03	07/26/10 15:53		X	X	X
L82975-04	07/26/10 15:54		X	X	X
L82975-05	07/26/10 15:56		X	X	X
L82975-06	07/26/10 15:57		X	X	X
L82975-07	07/26/10 15:59		X	X	X
L82975-08	07/26/10 16:00		X	X	X
L82975-09	07/26/10 16:02		X	X	X
L82974-02DUP	07/26/10 16:03		X	X	X
L82974-03DUP	07/26/10 16:04		X	X	X
L82974-01MS	07/26/10 16:06		X	X	X

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 | 360.577.7222 | 360.636.1068 (fax) | www.caslab.com

REVISION 2

December 29, 2010 Analytical Report for Service Request No: K1006636

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Dear Andrea:

Enclosed are the revised pages for the samples submitted to our laboratory on June 26, 2010. For your reference, these analyses have been assigned our service request number K1006636.

The report pages are corrected for the significant figure errors, header errors and transcription errors.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

for

Lynda Huckestein
Client Services Manager

LH/ln

REVISED
2:59 pm, Dec 29, 2010

100% Recycled Paper

REVISION 1

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006636
Project:	Rhodia Silver Bow Plant Background	**Date Received:**	6/26/2010
Sample Matrix:	Soil, Water		

CASE NARRATIVE ADDENDUM

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

General Chemistry Parameters

Soluble Fluoride by Method 340.2 Modified

The analysis of DI water soluble fluoride was performed past the recommended holding time specified in the project work plan due to an oversight at the laboratory. The samples were initially analyzed by the Fluoride Belleck Distillation method as is standard protocol for the analysis of total fluoride in soils. Efforts were made to analyze the samples as soon as the error was identified. The EPA methodology does not discuss a holding time for the extraction of a soil sample. The 30 day hold time is in reference to the analysis of water samples only. The analysis of the DI water extract was performed within 30 days of the extraction. The sample results are flagged accordingly.

Approved by _____ **Date** 12/22/10

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

Analytical Report

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Sample Matrix:	Soil	**Date Received:**	6/26/2010

Fluoride, Total

Prep Method:	DI Extract	Units:	mg/Kg
Analysis Method:	340.2M	Basis:	Dry
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepped	Date Analyzed	Result	Result Notes
BG-10 0-2 COMP	K1006636-001	0.59	0.03	1	11/18/2010	11/18/2010	0.52	J *
BG-10 2-12 COMP	K1006636-002	0.58	0.03	1	11/18/2010	11/18/2010	0.35	J *
BG-10 12-18 COMP	K1006636-003	0.59	0.03	1	11/18/2010	11/18/2010	0.64	*
BG-14 0-2 COMP	K1006636-005	0.55	0.02	1	11/18/2010	11/18/2010	0.44	J *
BG-14-2-12 COMP	K1006636-006	0.56	0.03	1	11/18/2010	11/18/2010	0.45	J *
BG-14 12-18 COMP	K1006636-007	0.57	0.03	1	11/18/2010	11/18/2010	1.20	*
Method Blank	K1006636-MB	0.55	0.02	1	11/18/2010	11/18/2010	0.19	J

M Modified for analysis of soil.

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client: Barr Engineering Company
Project: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400
Sample Matrix: Soil

Service Request: K1006636
Date Collected: 6/23/2010
Date Received: 6/26/2010
Date Extracted: 11/18/2010
Date Analyzed: 11/18/2010

Duplicate Summary
Inorganic Parameters

Sample Name: BG-10 0-2 COMP
Lab Code: K1006636-001DUP
Test Notes:

Units: mg/Kg
Basis: Dry

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	DI Extract	340.2M	0.52	0.44	0.48	17	

M Modified for analysis of soil.

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	6/23/2010
Sample Matrix:	Soil	**Date Received:**	6/26/2010
		Date Extracted:	11/18/2010
		Date Analyzed:	11/18/2010

Matrix Spike/Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name:	BG-10 0-2 COMP	Units:	mg/Kg
Lab Code:	K1006636-001MS, K1006636-001DMS	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference
Fluoride, Total	DI Extract	340.2M	56.8	117	0.52	70.1	138	101	99	75-125	17

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006636
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	NA
LCS Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	11/18/2010
		Date Analyzed:	11/18/2010

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name:	Lab Control Sample	Units:	mg/Kg
Lab Code:	K1006636-LCS	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	DI Extract	340.2M	11.0	10.9	99	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client: Barr Engineering Company
Project: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Service Request: K1006636
Date Collected: NA
Date Received: NA
Date Analyzed: 11/18/2010

Total Fluoride
EPA Method 340.2M
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	True Value	Measured Value	Percent Recovery
CCV 1 Result	5.00	5.18	104
CCV 2 Result	5.00	5.07	101
CCV 3 Result	5.00	5.02	100
CCV 4 Result	5.00	4.93	99
CCV 5 Result	5.00	4.93	99

CONTINUING CALIBRATION BLANK (CCB)

	MDL	Blank Value
CCB 1 Result	0.01	0.08 J
CCB 2 Result	0.01	0.06 J
CCB 3 Result	0.01	0.05 J
CCB 4 Result	0.01	0.05 J
CCB 5 Result	0.01	0.04 J

Original

Work Request # (K1007L) K 1036

REVISION 1

Tier: V V

Date Analyzed: 11-18-10

Analyst: A Chatham

Analysis: Fluoride Soil extraction

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

Final Approved by: BDK Date: 11/19/10

DOREPORT

REVISION 1

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.22	1.00	0.220	
CCV1	20	20	5.18	1.00	5.180	**103.6**
CCB1	20	20	0.0818	1.00	0.082	
MB	20	20	0.0735	1.00	0.074	
LCS	20	20	11.1	1.00	11.100	
K1006676-001	20	20	0.199	1.00	0.199	
K1006676-001d	20	20	0.181	1.00	0.181	
K1006676-001ms	20	20	23.4	1.00	23.400	
K1006676-001msd	20	20	48.6	1.00	48.600	
K1006676-002	20	20	0.525	1.00	0.525	
K1006676-003	20	20	1.15	1.00	1.150	
K1006676-004	20	20	0.164	1.00	0.164	
K1006676-005	20	20	0.11	1.00	0.110	
CCV2	20	20	5.07	1.00	5.070	**101.4**
CCB2	20	20	0.063	1.00	0.063	
K1006676-006	20	20	0.136	1.00	0.136	
K1006676-007	20	20	0.108	1.00	0.108	
K1006676-008	20	20	0.143	1.00	0.143	
K1006676-009	20	20	0.0664	1.00	0.066	
K1006676-010	20	20	0.117	1.00	0.117	
K1006676-011	20	20	0.124	1.00	0.124	
K1006676-012	20	20	0.0717	1.00	0.072	
K1006676-013	20	20	0.131	1.00	0.131	
K1006676-014	20	20	0.0904	1.00	0.090	
K1006676-015	20	20	0.0764	1.00	0.076	

Calibration info. 1STD 0.1 mg/L 2 STD 0.4 mg/L 3 STD 1.0mg/L

0.1-1.0ppm Slope:-57.38,-59.08 EFF=97.0,99.9

ID#f/2-84-M TV=11.0mg/L

CCV TV=5ppm ID# F/2-53-T

PROBE ID# F/2/2-99-B

		DATE	TIME
Analyzed By: AC		11/18/2010	2:10:00 PM
Reviewed By:	BDC		11/19/10

REVISION 1

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV3	20	20	5.02	1.00	5.020	100.4
CCB3	20	20	0.0481	1.00	0.048	
K106676-016	20	20	0.0964	1.00	0.096	
K106676-017	20	20	0.0969	1.00	0.097	
K106676-018	20	20	0.1	1.00	0.100	
K106676-019	20	20	0.0681	1.00	0.068	
K106676-020	20	20	0.0647	1.00	0.065	
MB	20	20	0.0337	1.00	0.034	
LCS	20	20	10.9	1.00	10.900	
K106636-001	20	20	0.176	1.00	0.176	
K106636-001d	20	20	0.149	1.00	0.149	
K106636-001ms	20	20	24.7	1.00	24.700	
CCV4	20	20	4.93	1.00	4.930	98.6
CCB4	20	20	0.0543	1.00	0.054	
K106636-001msd	20	20	47.1	1.00	47.100	
K106636-002	20	20	0.12	1.00	0.120	
K106636-003	20	20	0.216	1.00	0.216	
K106636-005	20	20	0.159	1.00	0.159	
K106636-006	20	20	0.163	1.00	0.163	
K106636-007	20	20	0.422	1.00	0.422	
0.2 std	20	20	0.207	1.00	0.207	
CCV5	20	20	4.93	1.00	4.930	
CCB5	20	20	0.0406	1.00		

		DATE	TIME
Analyzed By: AC		11/18/2010	2:10:00PM
Reviewed By:	BDR		11/19/10

Work Order #.: _____ Method: _____

Analysis: _____

REVISION 1

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol. (g) or (ml)	Final Volume (ml)	mg/L (in solution)	mg/L - mg/kg As Rec'd	% Solids	mg/kg Dry Wt.
11-18-10	MB	50 mL	50	0.074	0.074		
	LCS	↓		11.1	11.1		
	6676-1	20.6476g		0.199	0.479	85.4	0.563
	-1d	20.4347		0.181	0.442874131		0.517
	-1ms	20.0021		23.4	58.49385		68.3
	-1msd	20.1987		48.6	120.3047721	↓	141
	-2	20.1914		0.525	1.300058441	82.8	1.57
	-3	20.0347		1.15	2.870020914	90.6	3.17
	-4	20.4746		0.164	0.396583576	83.5	0.475
	-5	20.2545		0.110	0.271544595	87.0	0.312
	-6	20.3475		0.136	0.324621077	90.0	0.361
	-7	20.8218		0.108	0.259343573	87.6	0.296
	-8	20.9238		0.143	0.341716132	88.2	0.387
	-9	20.0492		0.066	0.164185639	85.2	0.193
	-10	20.1194		0.117	0.290764136	91.5	0.318
	-11	20.3087		0.124	0.305287882	84.6	0.361
	-12	20.0527		0.072	0.179526946	87.2	0.206
	-13	20.3426		0.131	0.321984407	87.8	0.367
	-14	20.3387		0.090	0.221290903	85.4	0.265
	-15	20.6878		0.076	0.187304686	86.8	0.216
	-16	20.3967		0.096	0.235332186	86.0	0.274
	-17	20.4955		0.097	0.236638162	86.1	0.275
	-18	20.2964		0.100	0.246349166	88.1	0.280
	-19	20.3940		0.068	0.166715701	88.7	0.188
	-20	20.8890		0.065	0.155584219	89.7	0.173
	MB	50 ml		0.034	0.034		
	LCS	↓		10.9	10.9		
	6636-1	20.2418g		0.176	0.434743946	84.3	0.516
	-1d	20.2561		0.149	0.367790443		0.436
	-1ms	20.8872		24.7	59.12712092		0.561 70.1
	-1msd	20.2834		47.1	116.1036502	↓	138
	-2	20.3149		0.120	0.295320644	84.4	0.350
	-3	20.1090		0.214	0.537072952	83.6	0.642
	-5	20.6428		0.159	0.385122173	87.5	0.440
	-6	20.4094		0.163	0.393644936	87.9	0.454
↓	↓ -7	20.5143	↓	0.422	1.028450549	85.9	1.20

MS= 6676-1ms = 1.0mL x 1,000 ppm / 20.0021g. = 50 / .856 = 58.4

MSD= 6676-1msd = 2.0mL x 1,000ppm / 20.1987g. = 99 / .856 = 116

X = 0.540 RPD = 9 %REC = 116 %REC = 121

X=

RPD= 6636-1ms = 1.0mL x 1,000ppm / 20.8872g. = 47.9 / .843 = 56.8

6636-1msd = 2.0mL x 1,000ppm / 20.2834g. = 98.6 / .843 = 117

STD ID # = X = 0.476 RPD = 17 %REC = ~~113~~ 123 %REC = 118

Comments:

LCS #PG#565 ID#NH3/4.55-T lot#123081 TV = 11.0mg/L %REC = 101, 99

Prepared By:	AZ	Date Prepared:	11-18-10 210
Analyzed By:	AZ	Date Analyzed:	11-18-10
Reviewed By:	BOK	Date Reviewed:	11/19/10

O TE 11.19.20

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 2, 2010 Analytical Report for Service Request No: K1006676

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Dear Andrea:

Enclosed are the results of the samples submitted to our laboratory on June 29, 2010. For your reference, these analyses have been assigned our service request number K1006676.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006676
Project:	Rhodia Silver Bow Plant Background	**Date Received:**	6/29/2010
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Twenty soil samples were received for analysis at Columbia Analytical Services on 6/29/2010. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

Total Fluoride by EPA Method 340.2 Modified:
The matrix spike recovery of Total Fluoride for sample BG-7 0-2 COMP was outside control criteria because of suspected matrix interference. A matrix spike duplicate was also analyzed, but produced similar results. The results of the original analysis were reported. No further corrective action was appropriate.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Iron and Manganese for sample BG-16 0-2 COMP were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Radiochemistry

Radiochemistry analysis was performed at ACZ Labs in Steamboat Springs Colorado. The narrative for this analysis can be found in the corresponding section of this data package.

Approved by_____ **Date** 8/2/10

Chain of Custody

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-32-2 SR# K1006676

PAGE 1 OF 4

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: [signature]

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
						Analysis Requested					See Table 1-1, 1-3, 1-5, and 6 for details.
BG-7 0-2 COMP	6/27/10	18:45		Solid	2	X	X	X	X		
BG-7 2-12 COMP	6/27/10	18:50		Solid	2	X	X	X	X		
BG-7 12-18 COMP	6/27/10	18:55		Solid	2	X	X	X	X		
BG-8 0-2 COMP	6/26/10	18:40		Solid	2	X	X	X	X		
BG-8 2-12 COMP	6/26/10	18:45		Solid	2	X	X	X	X		
BG-8 12-18 COMP	6/26/10	18:55		Solid	2	X	X	X	X		
[redacted]											
[redacted]											
[redacted]											MS/MSD
BG-101 2-12 COMP	6/26/10	18:50		Solid	2	X	X	X	X		

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

_X_ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

RELINQUISHED BY:

Shipping Tracking #: 9670 9779 9843

Signature: [signature]

Printed Name: Kevin Mooney

Firm: Barr Eng. Co.

Date/Time: 6/25/10 15:00

RECEIVED BY:

Signature: [signature]

Printed Name: [signature]

Firm: CAS

Date/Time: 6/29/10 0840

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-33-2 SR# _____

PAGE 2 OF 4

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: Kevin McGrath

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		See Table 1-1, 1-3, 1-5, and 6 for details. REMARKS
[redacted]											
[redacted]											
[redacted]											
BG-11 0-2 COMP	6/27/10	14:25		Solid	2	X	X	X	X		
BG-11 2-12 COMP	6/27/10	14:30		Solid	2	X	X	X	X		
BG-11 12-18 COMP	6/27/10	14:35		Solid	2	X	X	X	X		
[redacted]											
BG-12 0-2 COMP	6/26/10	15:40		Solid	2	X	X	X	X		
BG-12 2-12 COMP	6/26/10	15:45		Solid	2	X	X	X	X		
BG-12 12-18 COMP	6/26/10	15:50		Solid	2	X	X	X	X		

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_X_ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date: _____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #: 8670 9279 9843

Signature: Kevin McGrath

Printed Name: Kevin McGrath

Firm: Barr Engineering Co.

Date/Time: 6/28/10 15:00

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: 6/29/10 0840

Date/Time: CAS

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-34-3 SR# _____

PAGE 3 OF 4

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13 2610-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: Kevin McVey

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
[redacted]											
BG-15 0-2 COMP	6/25/10	14:35		Solid	2	X	X	X	X		
BG-15 2-12 COMP	6/25/10	14:40		Solid	2	X	X	X	X		
BG-15 12-18 COMP	6/25/10	14:45		Solid	2	X	X	X	X		
BG-102 2-12 COMP	6/25/10	14:50		Solid	2	X	X	X	X		

Analysis Requested

See Table 1-1, 1-3, 1-5, and 6 for details.

TURNAROUND REQUIREMENTS

_____ 24 hr _____ 48 hr _____ 5 day

_X_ Standard (21 days)

_____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

_____ I. Routine Report: Results, Method Blank, Surrogate, as required

_____ II. Report Dup., MS, MSD as required

_____ III. Data Validation Report (includes raw data)

_____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #:

Signature: Kevin McVey

Printed Name: Kevin McVey

Firm: Barr Eng. Co.

Date/Time: 6/25/10 15:00

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: CAS

Date/Time: 6/29/10 0840

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

10

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-35-2 SR# _____

PAGE 4 OF 4

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: Kevin McGillip

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		See Table 1-1, 1-3, 1-5, and 6 for details. REMARKS
[redacted]											
BG-16 0-2 COMP	6/26/10	11:10		Solid	6	X	X	X	X		MS/MSD
BG-16 2-12 COMP	6/26/10	11:15		Solid	2	X	X	X	X		
BG-16 12-18 COMP	6/26/10	11:20		Solid	2	X	X	X	X		

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

__X__ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #:

Signature: Kevin McGillip

Printed Name: Kevin McGillip

Firm: Barr Eng. Co.

Date/Time: 6/28/10 15:00

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: CAS

Date/Time: 6/29/10 0840

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

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Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC 14

Client / Project: Barr - Rhodes Service Request K10 06676

Received: 6/29/10 Opened: 6/29/10 By: AJ

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 f
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.5	1.7	291		8160668064 71	
0.6	2.2	263		8160668064 60	
0.5	3.5	259		8160668064 82	
0.3	2.2	284		8670427 9843	

7. Packing material used. *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

Client: Barr Engineering Company
Project: Rhodia Silver Bow Pl/26-46-0006.13-2010-4
Sample Matrix: Soil

Service Request: K1006676

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
BG-7 0-2 COMP	K1006676-001	06/27/2010	06/29/2010	07/03/2010	85.6	
BG-7 2-12 COMP	K1006676-002	06/27/2010	06/29/2010	07/03/2010	82.8	
BG-7 12-18 COMP	K1006676-003	06/27/2010	06/29/2010	07/03/2010	90.6	
BG-8 0-2 COMP	K1006676-004	06/26/2010	06/29/2010	07/03/2010	83.5	
BG-8 2-12 COMP	K1006676-005	06/26/2010	06/29/2010	07/03/2010	87.0	
BG-8 12-18 COMP	K1006676-006	06/26/2010	06/29/2010	07/03/2010	90.0	
BG-101 2-12 COMP	K1006676-007	06/26/2010	06/29/2010	07/03/2010	87.6	
BG-11 0-2 COMP	K1006676-008	06/27/2010	06/29/2010	07/03/2010	88.2	
BG-11 2-12 COMP	K1006676-009	06/27/2010	06/29/2010	07/03/2010	85.2	
BG-11 12-18 COMP	K1006676-010	06/27/2010	06/29/2010	07/03/2010	91.5	
BG-12 0-2 COMP	K1006676-011	06/26/2010	06/29/2010	07/03/2010	84.6	
BG-12 2-12 COMP	K1006676-012	06/26/2010	06/29/2010	07/03/2010	87.2	
BG-12 12-18 COMP	K1006676-013	06/26/2010	06/29/2010	07/03/2010	87.8	
BG-15 0-2 COMP	K1006676-014	06/25/2010	06/29/2010	07/03/2010	83.4	
BG-15 2-12 COMP	K1006676-015	06/25/2010	06/29/2010	07/03/2010	86.8	
BG-15 12-18 COMP	K1006676-016	06/25/2010	06/29/2010	07/03/2010	86.0	
BG-102 2-12 COMP	K1006676-017	06/25/2010	06/29/2010	07/03/2010	86.1	
BG-16 0-2 COMP	K1006676-018	06/26/2010	06/29/2010	07/03/2010	88.1	
BG-16 2-12 COMP	K1006676-019	06/26/2010	06/29/2010	07/03/2010	88.7	
BG-16 12-18 COMP	K1006676-020	06/26/2010	06/29/2010	07/03/2010	89.7	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project:	Rhodia Silver Bow Pl/26-46-0006.13-2010-4	**Date Collected:**	06/27/2010
Sample Matrix:	Soil	**Date Received:**	06/29/2010
		Date Analyzed:	07/03/2010

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
BG-7 0-2 COMP	K1006676-001	85.6	86.5	86.1	1	

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project:	Rhodia Silver Bow Pl/26-46-0006.13-2010-4	**Date Collected:**	06/26/2010
Sample Matrix:	Soil	**Date Received:**	06/29/2010
		Date Analyzed:	07/03/2010

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
BG-16 0-2 COMP	K1006676-018	88.1	87.3	87.7	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

207476

Group ID:	KWG1006471				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/8/10
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K1006662-001	EP182	SOIL	1.32g	28.53g	27.69g	96.9		
2	K1006662-002	EP183	SOIL	1.34g	16.36g	15.75g	95.9		
3	K1006662-003	EP184	SOIL	1.32g	14.24g	12.89g	89.6		
4	K1006662-004	EP185	SOIL	1.32g	19.58g	19.28g	98.4		
5	K1006662-005	EP186	SOIL	1.33g	18.66g	18.00g	96.2		
6	K1006662-006	EP187	SOIL	1.32g	18.55g	17.86g	96.0		
7	K1006662-007	EP188	SOIL	1.32g	21.63g	21.36g	98.7		
8	K1006662-008	EP189	SOIL	1.32g	29.53g	28.58g	96.6		
9	K1006662-009	EP190	SOIL	1.33g	17.51g	16.75g	95.3		
10	K1006662-010	EP191	SOIL	1.32g	18.98g	18.31g	96.2		
11	K1006662-011	EP192	SOIL	1.32g	13.56g	12.97g	95.2		
12	K1006662-012	EP193	SOIL	1.32g	14.15g	13.26g	93.1		
13	K1006662-013	EP194	SOIL	1.31g	31.38g	30.61g	97.4		
14	K1006662-014	EP195	SOIL	1.32g	15.60g	14.63g	93.2		
15	K1006662-016	EP197	SOIL	1.32g	13.76g	12.68g	91.3		
16	K1006662-017	EP198	SOIL	1.32g	23.39g	22.71g	96.9		
17	K1006662-018	EP199	SOIL	1.33g	25.69g	23.93g	92.8		
18	K1006662-019	EP200	SOIL	1.33g	17.62g	16.18g	91.2		
19	K1006662-020	EP201	SOIL	1.33g	21.00g	20.40g	96.9		
20	K1006662-021	EP202	SOIL	1.32g	17.22g	16.00g	92.3		
21	K1006663-001	EP203	SOIL	1.32g	14.49g	13.46g	92.2		
22	K1006663-002	EP204	SOIL	1.33g	13.83g	13.57g	97.9		
23	K1006663-003	EP205	SOIL	1.32g	19.40g	18.50g	95.0		
24	K1006663-004	EP206	SOIL	1.32g	14.24g	13.43g	93.7		
25	K1006663-005	EP207	SOIL	1.34g	16.65g	15.83g	94.6		
26	K1006663-006	EP208	SOIL	1.32g	12.99g	12.25g	93.7		

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Group ID:	KWG1006471		
Analyst:	SArwood	**Reviewed By:**	SAY
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	7/8/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K1006663-007	EP209	SOIL	1.33g	14.02g	11.83g	82.7		
28	K1006663-008	EP210	SOIL	1.32g	16.31g	15.94g	97.5		
29	K1006663-009	EP211	SOIL	1.32g	13.37g	12.52g	92.9		
30	K1006663-010	EP212	SOIL	1.32g	11.22g	10.58g	93.5		
31	K1006676-001	BG-7 0-2 COMP	SOIL	1.32g	11.33g	9.89g	85.6		
32	K1006676-002	BG-7 2-12 COMP	SOIL	1.32g	10.09g	8.58g	82.8		
33	K1006676-003	BG-7 12-18 COMP	SOIL	1.31g	16.31g	14.90g	90.6		
34	K1006676-004	BG-8 0-2 COMP	SOIL	1.31g	9.96g	8.53g	83.5		
35	K1006676-005	BG-8 2-12 COMP	SOIL	1.31g	11.96g	10.58g	87.0		
36	K1006676-006	BG-8 12-18 COMP	SOIL	1.31g	11.95g	10.89g	90.0		
37	K1006676-007	BG-101 2-12 COMP	SOIL	1.32g	13.21g	11.73g	87.6		
38	K1006676-008	BG-11 0-2 COMP	SOIL	1.33g	11.60g	10.39g	88.2		
39	K1006676-009	BG-11 2-12 COMP	SOIL	1.34g	15.39g	13.31g	85.2		
40	K1006676-010	BG-11 12-18 COMP	SOIL	1.32g	12.04g	11.13g	91.5		
41	K1006676-011	BG-12 0-2 COMP	SOIL	1.31g	13.09g	11.27g	84.6		
42	K1006676-012	BG-12 2-12 COMP	SOIL	1.34g	10.28g	9.14g	87.2		
43	K1006676-013	BG-12 12-18 COMP	SOIL	1.32g	13.90g	12.36g	87.8		
44	K1006676-014	BG-15 0-2 COMP	SOIL	1.31g	11.87g	10.12g	83.4		
45	K1006676-015	BG-15 2-12 COMP	SOIL	1.33g	18.73g	16.44g	86.8		
46	K1006676-016	BG-15 12-18 COMP	SOIL	1.33g	12.96g	11.33g	86.0		
47	K1006676-017	BG-102 2-12 COMP	SOIL	1.32g	14.02g	12.25g	86.1		
48	K1006676-018	BG-16 0-2 COMP	SOIL	1.31g	10.20g	9.14g	88.1		
49	K1006676-019	BG-16 2-12 COMP	SOIL	1.29g	15.06g	13.50g	88.7		
50	K1006676-020	BG-16 12-18 COMP	SOIL	1.32g	11.77g	10.69g	89.7		
51	K1006702-001	T4 STS	SOIL	1.32g	11.98g	9.92g	80.7		
52	K1006740-001	0610MCT1MS001	SEDIMENT	1.30g	12.33g	12.28g	99.5		
53	K1006771-001	2184	SOIL	1.30g	15.05g	11.96g	77.5		
54	K1006771-002	C094	SOIL	1.30g	10.64g	7.95g	71.2		
55	K1006771-003	C093	SOIL	1.31g	14.01g	10.35g	71.2		
56	K1006771-004	C092	SOIL	1.31g	16.36g	12.09g	71.6		
57	K1006771-005	C091	SOIL	1.29g	10.95g	7.37g	62.9		

Group ID:	KWG1006471				
Analyst:	SArwood			**Reviewed By:**	SAR
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/8/10
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
58	K1006771-006	3225	SOIL	1.32g	12.93g	8.82g	64.6		
59	K1006771-007	3224	SOIL	1.31g	10.90g	7.65g	66.1		
60	K1006771-008	3223	SOIL	1.31g	10.52g	7.24g	64.4		
61	K1006771-009	3222	SOIL	1.31g	10.46g	7.32g	65.7		
62	K1006771-010	3221	SOIL	1.33g	10.41g	7.11g	63.7		
63	K1006771-011	3275	SOIL	1.32g	10.11g	5.82g	51.2		
64	K1006771-012	3274	SOIL	1.32g	10.95g	6.31g	51.8		
65	K1006771-013	3273	SOIL	1.32g	11.38g	6.83g	54.8		
66	K1006771-014	3272	SOIL	1.32g	10.23g	5.45g	46.4		
67	K1006771-015	3271	SOIL	1.32g	7.66g	4.46g	49.5		
68	K1006771-016	1161	SOIL	1.32g	11.76g	9.54g	78.7		
69	K1006771-017	1162	SOIL	1.32g	13.19g	10.45g	76.9		
70	K1006771-018	1163	SOIL	1.32g	11.52g	8.67g	72.1		
71	K1006771-019	1164	SOIL	1.32g	10.04g	7.82g	74.5		
72	K1006771-020	1201	SOIL	1.30g	11.47g	9.01g	75.8		
73	K1006771-021	1202	SOIL	1.32g	8.87g	7.23g	78.3		
74	K1006771-022	1203	SOIL	1.31g	10.38g	8.64g	80.8		
75	K1006771-023	1204	SOIL	1.30g	12.95g	10.65g	80.3		
76	K1006771-024	2174	SOIL	1.31g	9.24g	7.53g	78.4		
77	K1006771-025	2173	SOIL	1.31g	10.89g	8.68g	76.9		
78	K1006771-026	2172	SOIL	1.30g	12.54g	10.10g	78.3		
79	K1006771-027	2171	SOIL	1.30g	12.72g	10.27g	78.5		
80	K1006771-028	2181	SOIL	1.32g	9.47g	7.42g	74.8		
81	K1006771-029	2182	SOIL	1.30g	12.01g	9.40g	75.6		
82	K1006771-030	2183	SOIL	1.30g	10.76g	8.33g	74.3		
83	K1006777-001	BG-1 0-2 COMP	SOIL	1.31g	19.80g	18.00g	90.3		
84	K1006777-002	BG-1 2-12 COMP	SOIL	1.32g	11.85g	10.86g	90.6		
85	K1006777-003	BG-1 12-18 COMP	SOIL	1.32g	10.01g	8.76g	85.6		
86	K1006777-004	BG-2 0-2 COMP	SOIL	1.31g	13.78g	11.36g	80.6		
87	K1006777-005	BG-2 2-12 COMP	SOIL	1.31g	10.10g	8.12g	77.5		
88	K1006777-006	BG-2 12-18 COMP	SOIL	1.32g	11.43g	10.05g	86.4		

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Group ID:	KWG1006471		
Analyst:	SArwood	**Reviewed By:**	SAH
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	7/8/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
89	K1006777-007	BG-100 0-2 COMP	SOIL	1.33g	11.38g	10.49g	91.1		
90	K1006777-009	BG-3 0-2 COMP	SOIL	1.31g	12.78g	11.75g	91.0		
91	K1006777-010	BG-3 2-12 COMP	SOIL	1.33g	12.44g	11.00g	87.0		
92	K1006777-011	BG-3 12-18 COMP	SOIL	1.32g	12.10g	10.80g	87.9		
93	K1006777-012	BG-4 0-2 COMP	SOIL	1.32g	13.10g	11.44g	85.9		
94	K1006777-013	BG-4 2-12 COMP	SOIL	1.30g	12.87g	11.43g	87.6		
95	K1006777-014	BG-4 12-18 COMP	SOIL	1.31g	13.54g	12.47g	91.3		
96	K1006777-015	BG-6 0-2 COMP	SOIL	1.32g	10.62g	9.58g	88.8		
97	K1006777-016	BG-6 2-12 COMP	SOIL	1.32g	13.62g	12.02g	87.0		
98	K1006777-017	BG-6 12-18 COMP	SOIL	1.31g	10.80g	9.69g	88.3		
99	K1006804-001	Drillsite 1	SOIL	1.32g	11.36g	6.57g	52.3		
100	K1006804-002	Drillsite 2	SOIL	1.32g	8.38g	5.49g	59.1		
101	K1006804-003	Drillsite 3	SOIL	1.31g	13.97g	9.10g	61.5		
102	K1006816-001	OUTSIDE-CB2-062910	SOIL	1.31g	8.05g	8.01g	99.4		
103	K1006816-002	OUTSIDE-CB3-062910	SOIL	1.31g	9.53g	9.46g	99.1		
104	K1006816-003	OUTSIDE-CB5-062910	SOIL	1.31g	12.60g	12.52g	99.3		
105	K1006816-004	DALLAS AVE-062910	SOIL	1.31g	14.15g	13.91g	98.1		
106	K1006834-002	HC-OC-SD20	SEDIMENT	1.33g	11.10g	9.24g	81.0		
107	K1006834-004	HC-NNC-SD21-BG	SEDIMENT	1.31g	14.19g	11.13g	76.2		
108	K1006834-006	HC-OC-SD22	SEDIMENT	1.32g	10.64g	7.59g	67.3		
109	K1006834-009	HC-KMWW8-DF32-BG	SEDIMENT	1.32g	12.10g	9.76g	78.3		
110	K1006834-010	HC-KMW8-SS33	SOIL	1.33g	9.74g	3.30g	23.4		
111	K1006834-011	HC-KMW8-SS34	SOIL	1.33g	13.12g	9.48g	69.1		
112	K1006834-012	HC-KMW3-SS35	SOIL	1.31g	11.53g	5.95g	45.4		
113	K1006834-013	HC-KMW8-SS36-BG	SOIL	1.32g	9.85g	6.98g	66.4		
114	K1006834-014	HC-KM-SS27-BG	SOIL	1.32g	12.19g	8.84g	69.2		
115	K1006834-016	HC-OC-TRAM-US-SD23	SEDIMENT	1.31g	12.75g	8.38g	61.8		
116	K1006834-018	HC-OC-TRAM-US-SD24	SEDIMENT	1.32g	16.28g	13.84g	83.7		
117	K1006834-020	HC-POLK-US-SD25-BG	SEDIMENT	1.33g	8.46g	5.43g	57.5		
118	K1006834-022	HC-POLK-US-SD40-BG	SEDIMENT	1.32g	16.44g	12.06g	71.0		
119	K1006834-024	HC-OC-TRAM-DS2-SD26	SEDIMENT	1.32g	13.39g	12.25g	90.6		

Group ID:	KWG1006471				
Analyst:	SArwood			**Reviewed By:**	SAH
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/8/10
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
120	K1006834-026	HC-OC-TRAM-US2-SD27	SEDIMENT	1.31g	13.38g	11.96g	88.2		
121	K1006834-027	HC-TRAM-SS28	SOIL	1.31g	12.10g	9.90g	79.6		
122	K1006834-028	HC-TRAM-SS29	SOIL	1.32g	10.74g	9.04g	82.0		
123	K1006834-029	HC-TRAM-SS30-BG	SOIL	1.31g	7.83g	3.30g	30.5		
124	K1006834-030	HC-SOP-SS38	SOIL	1.34g	9.65g	5.77g	53.3		
125	K1006834-031	HC-LAKE-SS39-BG	SOIL	1.33g	14.41g	9.85g	65.1		
126	K1006834-035	HC-CKESOP-SD41-BG	SEDIMENT	1.33g	10.98g	9.53g	85.0		
127	K1006834-036	HC-SOP-SS42-BG	SOIL	1.32g	10.27g	5.85g	50.6		
128	KWG1006471-1	Duplicate Client Sample	SOIL	1.33g	20.93g	20.15g	96.0	K1006662-002	
129	KWG1006471-10	Duplicate Client Sample	SOIL	1.33g	9.97g	5.80g	51.7	K1006771-011	
130	KWG1006471-11	Duplicate Client Sample	SOIL	1.31g	13.05g	10.37g	77.2	K1006771-021	
131	KWG1006471-12	Duplicate Client Sample	SOIL	1.33g	15.75g	13.24g	82.6	K1006777-005	
132	KWG1006471-13	Duplicate Client Sample	SOIL	1.32g	9.54g	8.59g	88.4	K1006777-011	
133	KWG1006471-14	Duplicate Client Sample	SOIL	1.32g	7.88g	5.11g	57.8	K1006804-001	
134	KWG1006471-15	Duplicate Client Sample	SOIL	1.31g	8.50g	8.45g	99.3	K1006816-001	
135	KWG1006471-18	Duplicate Client Sample	SEDIMENT	1.31g	11.09g	9.57g	84.5	K1006834-002	
136	KWG1006471-19	Duplicate Client Sample	SEDIMENT	1.33g	10.08g	8.15g	77.9	K1006834-018	
137	KWG1006471-2	Duplicate Client Sample	SOIL	1.32g	22.83g	22.00g	96.1	K1006662-006	
138	KWG1006471-20	Duplicate Client Sample	SEDIMENT	1.33g	13.74g	11.75g	84.0	K1006834-035	
139	KWG1006471-3	Duplicate Client Sample	SOIL	1.32g	13.41g	12.57g	93.1	K1006662-012	
140	KWG1006471-4	Duplicate Client Sample	SOIL	1.32g	16.29g	15.01g	91.4	K1006663-001	
141	KWG1006471-5	Duplicate Client Sample	SOIL	1.33g	11.00g	9.69g	86.5	K1006676-001	
142	KWG1006471-6	Duplicate Client Sample	SOIL	1.32g	14.96g	13.23g	87.3	K1006676-018	
143	KWG1006471-7	Duplicate Client Sample	SOIL	1.32g	14.39g	12.28g	83.9	K1006702-001	
144	KWG1006471-8	Duplicate Client Sample	SEDIMENT	1.30g	11.41g	11.37g	99.6	K1006740-001	
145	KWG1006471-9	Duplicate Client Sample	SOIL	1.32g	12.16g	9.78g	78.0	K1006771-001	

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006676
Date Collected : 06/25-27/10
Date Received : 06/29/10

Fluoride, Total

Prep Method : EPA 340.1 Modified
Analysis Method : 340.2 Modified
Test Notes :

Units : mg/Kg
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
BG-7 0-2 COMP	K1006676-001	1.2	0.8	1	7/7/2010	07/08/10	175	
BG-7 2-12 COMP	K1006676-002	1.2	0.8	1	7/7/2010	07/08/10	275	
BG-7 12-18 COMP	K1006676-003	1.1	0.8	1	7/7/2010	07/08/10	231	
BG-8 0-2 COMP	K1006676-004	1.2	0.8	1	7/7/2010	07/08/10	185	
BG-8 2-12 COMP	K1006676-005	1.1	0.8	1	7/7/2010	07/08/10	216	
BG-8 12-18 COMP	K1006676-006	1.1	0.8	1	7/7/2010	07/08/10	254	
BG-101 2-12 COMP	K1006676-007	1.1	0.8	1	7/7/2010	07/08/10	177	
BG-11 0-2 COMP	K1006676-008	1.1	0.8	1	7/7/2010	07/08/10	147	
BG-11 2-12 COMP	K1006676-009	1.2	0.8	1	7/7/2010	07/08/10	165	
BG-11 12-18 COMP	K1006676-010	1.1	0.8	1	7/7/2010	07/08/10	166	
BG-12 0-2 COMP	K1006676-011	1.2	0.8	1	7/7/2010	07/08/10	168	
BG-12 2-12 COMP	K1006676-012	1.1	0.8	1	7/7/2010	07/08/10	156	
BG-12 12-18 COMP	K1006676-013	1.1	0.3	1	7/12/2010	07/13/10	248	
BG-15 0-2 COMP	K1006676-014	1.2	0.3	1	7/12/2010	07/13/10	171	
BG-15 2-12 COMP	K1006676-015	1.2	0.3	1	7/12/2010	07/13/10	191	
BG-15 12-18 COMP	K1006676-016	1.2	0.3	1	7/12/2010	07/13/10	224	
BG-102 2-12 COMP	K1006676-017	1.2	0.3	1	7/12/2010	07/13/10	207	
BG-16 0-2 COMP	K1006676-018	1.1	0.3	1	7/12/2010	07/13/10	229	
BG-16 2-12 COMP	K1006676-019	1.1	0.3	1	7/12/2010	07/13/10	227	
BG-16 12-18 COMP	K1006676-020	1.1	0.3	1	7/12/2010	07/13/10	188	
Method Blank	K1006676-MB	1.0	0.2	1	7/7/2010	07/08/10	ND	
Method Blank	K1006676-MB	1.0	0.2	1	7/12/2010	07/13/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006676
Date Collected : 6/27/2010
Date Received : 6/29/2010
Date Prepared : 07/07/10
Date Analyzed : 07/08/10

Duplicate Summary
Inorganic Parameters

Sample Name : BG-7 0-2 COMP
Lab Code : K1006676-001DUP
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	1.2	175	176	176	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006676
Date Collected : 6/26/2010
Date Received : 6/29/2010
Date Prepared : 07/12/10
Date Analyzed : 07/13/10

Duplicate Summary
Inorganic Parameters

Sample Name : BG-16 0-2 COMP
Lab Code : K1006676-018DUP
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	1.1	229	237	233	3	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006676
Date Collected : 6/27/2010
Date Received : 6/29/2010
Date Prepared : 07/07/10
Date Analyzed : 07/08/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name : BG-7 0-2 COMP
Lab Code : K1006676-001MS K1006676-001DMS
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	1.2	2300	4670	175	1210	2710	45	54	75-125	18	*

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006676
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	6/26/2010
Project Number :	26-46-0006.13-2010-400	**Date Received :**	6/29/2010
Sample Matrix :	SOIL	**Date Prepared :**	07/12/10
		Date Analyzed :	07/13/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	BG-16 0-2 COMP		Units :	mg/Kg
Lab Code :	K1006676-018MS	K1006676-018DMS	Basis :	Dry
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	1.1	2160	4390	229	2050	3520	85	75	75-125	12	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006676
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	07/12/10
		Date Analyzed :	07/13/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006676-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	13.5	11.8	87	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006676
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	07/07/10
		Date Analyzed :	07/08/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006676-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	EPA 340.1 Modified	340.2 Modified	13.5	13.3	99	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006676
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/13/2010	5.00	5.20	104
CCV2 Result	7/13/2010	5.00	5.40	108
CCV3 Result	7/13/2010	5.00	5.25	105
CCV1 Result	7/8/2010	5.00	5.12	102
CCV2 Result	7/8/2010	5.00	5.16	103
CCV3 Result	7/8/2010	5.00	5.06	101

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006676
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/13/2010	0.20	0.03 J
CCB2 Result	7/13/2010	0.20	0.07 J
CCB3 Result	7/13/2010	0.20	0.06 J
CCB1 Result	7/8/2010	0.20	0.07 J
CCB2 Result	7/8/2010	0.20	0.06 J
CCB3 Result	7/8/2010	0.20	0.06 J

Work Request # Original (K0674) _____

Tier: V

Date Analyzed: 7-12-10

Analyst: A Chaffey

Analysis: Fluoride 340.2 Mod.

208336

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
	a. Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c. Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d. Are results for methods blanks all ND?	yes/no/NA
	e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f. Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?	yes/no/NA
7.	Are all samples labelled correctly?	yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.	Are detection limits and units reported correctly?	yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: _____ Date: 7/14/10

DQREPORT

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 208336 **Method/Testcode:** 340.2 Modified/F Dist

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
1006676-013	Fluoride, Total	N/A		Soil	5.68 mg/L	218.11	248 mg/Kg	1	0.3	1.1			7/13/10 01:05:00	N	V
1006676-014	Fluoride, Total	N/A		Soil	3.72 mg/L	142.68	171 mg/Kg	1	0.3	1.2			7/13/10 01:05:00	N	V
1006676-015	Fluoride, Total	N/A		Soil	4.42 mg/L	166.06	191 mg/Kg	1	0.3	1.2			7/13/10 01:05:00	N	V
1006676-016	Fluoride, Total	N/A		Soil	5.30 mg/L	193.03	224 mg/Kg	1	0.3	1.2			7/13/10 01:05:00	N	V
1006676-017	Fluoride, Total	N/A		Soil	4.86 mg/L	178.38	207 mg/Kg	1	0.3	1.2			7/13/10 01:05:00	N	V
1006676-018	Fluoride, Total	N/A		Soil	5.26 mg/L	201.59	229 mg/Kg	1	0.3	1.1			7/13/10 01:05:00	Y	V
1006676-019	Fluoride, Total	N/A		Soil	5.58 mg/L	201.56	227 mg/Kg	1	0.3	1.1			7/13/10 01:05:00	N	V
1006676-020	Fluoride, Total	N/A		Soil	4.66 mg/L	168.51	188 mg/Kg	1	0.3	1.1			7/13/10 01:05:00	N	V
Q1006907-01	Fluoride, Total	MS	K1006676-018	Soil	49.60 mg/L	1810.15	2050 mg/Kg	1	0.3	1.1			7/13/10 01:05:00	N	V
Q1006907-02	Fluoride, Total	DMS	K1006676-018	Soil	78.60 mg/L	3098.43	3520 mg/Kg	1	0.3	1.1			7/13/10 01:05:00	N	V
Q1006907-03	Fluoride, Total	LCS		Soil	12.20 mg/L	11.83	11.8 mg/Kg	1	0.2	1.0	88*		7/13/10 01:05:00	N	V
Q1006907-04	Fluoride, Total	MB		Soil	0.08 mg/L	0.08	1.0 mg/Kg U	1	0.2	1.0			7/13/10 01:05:00	N	V
Q1006907-05	Fluoride, Total	DUP	K1006676-018	Soil	5.40 mg/L	209.12	237 mg/Kg	1	0.3	1.1		4	7/13/10 01:05:00	N	V
Q1006915-01	Fluoride, Total	CCB		Soil	0.06 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/13/10 01:05:00	N	V
Q1006915-02	Fluoride, Total	CCB		Soil	0.07 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/13/10 01:05:00	N	V
Q1006915-03	Fluoride, Total	CCB		Soil	0.03 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/13/10 01:05:00	N	V
Q1006915-04	Fluoride, Total	CCV		Soil	5.25 mg/L	105%	5.3 mg/Kg	1	0.2	1.0			7/13/10 01:05:00	N	V
Q1006915-05	Fluoride, Total	CCV		Soil	5.40 mg/L	108%	5.4 mg/Kg	1	0.2	1.0			7/13/10 01:05:00	N	V
Q1006915-06	Fluoride, Total	CCV		Soil	5.20 mg/L	104%	5.2 mg/Kg	1	0.2	1.0			7/13/10 01:05:00	N	V

33

Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.236	1.00	0.236	
CCV1	20	20	5.25	1.00	5.250	**105**
CCB1	20	20	0.063	1.00	0.063	
MB	20	20	0.081	1.00	0.081	
LCS	20	20	12.2	1.00	12.200	
K1006676-013	20	20	5.68	1.00	5.680	
K1006676-014	20	20	3.72	1.00	3.720	
K1006676-015	20	20	4.42	1.00	4.420	
K1006676-016	20	20	5.3	1.00	5.300	
K1006676-017	20	20	4.86	1.00	4.860	
K1006676-018	20	20	5.26	1.00	5.260	
K1006676-018d	20	20	5.4	1.00	5.400	
K1006676-018ms	20	20	49.6	1.00	49.600	
CCV2	20	20	5.4	1.00	5.400	**108**
CCB2	20	20	0.069	1.00	0.069	
K1006676-018msd	20	20	78.6	1.00	78.600	
K1006676-019	20	20	5.58	1.00	5.580	
K1006676-020	20	20	4.66	1.00	4.660	
0.2 STD	20	20	0.204	1.00	0.204	
CCV3	20	20	5.2	1.00	5.200	**104**
CCB3	20	20	0.031	1.00	0.031	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L3 STD 100 mg/L

1-100ppm SLOPE:-59.3,-57.1 EFF.=11.2,96.5

LCS ID#AN1/33-T TV=13.5ppm

IBms = 10mL x 1,000ppm/5.264g · 1901/.881 = 2160 IBmsd = 20mL x 1,000ppm/5.175g = 3865/.881 = 4390

CCV TV=5ppm ID#F/2-53-T

PROBE ID#A

	DATE	TIME
Analyzed By:AC	7/13/2010	1:05:00 AM
Reviewed By:		7/14/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 115305
Team: GenChem
Analyst: AC

Prep Workflow: Gen Dist SFluor EPA
Prep Method: 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/12/2010 10:00
Due Date: 07/16/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006676-018: KQ1006907-01	Matrix Spike	.01	5.261 g	192 mL	10 mL	19258	
K1006676-018: KQ1006907-02	Duplicate Matrix Spike	.01	5.175 g	204 mL	20 mL	19258	
KQ1006907-03	Lab Control Sample		100 g	97 mL	100 mL	17012	
KQ1006907-04	Method Blank		200 g	186 mL			
K1006676-018: KQ1006907-05	Duplicate	.01	5.087 g	197 mL			
K1006676-013	BG-12 12-18 COMP	.01	5.026 g	193 mL			
K1006676-014	BG-15 0-2 COMP	.01	5.058 g	194 mL			
K1006676-015	BG-15 2-12 COMP	.01	5.004 g	188 mL			
K1006676-016	BG-15 12-18 COMP	.01	5.107 g	186 mL			
K1006676-017	BG-102 2-12 COMP	.01	5.013 g	184 mL			
K1006676-018	BG-16 0-2 COMP	.01	5.062 g	194 mL			
K1006676-019	BG-16 2-12 COMP	.01	5.343 g	193 mL			
K1006676-020	BG-16 12-18 COMP	.01	5.116 g	185 mL			

13 Total Samples consisting of 8 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 13.5ppm LCS	Spike	17012	7/19/2010

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	12-JUL-10 10:00	12-JUL-10 15:00	AC		N	

Comments

Review

Reviewed by: _____ Date: 7/14/10

Work Request # Original (K6676)

Tier: V

Date Analyzed: 7-7-10

Analyst: A Chatterjee

Analysis: Fluoride

207770

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

6676 - ms/msd failed suspect matrix interference

Final Approved by: [signature] Date: 7/9/10

DQREPORT

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 207770 **Method/Testcode:** 340.2 Modified/F Dist

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
1006676-001	Fluoride, Total	N/A		Soil	4.08 mg/L	150.18	175 mg/Kg	1	0.8	1.2			7/8/10 09:25:00	N	V
1006676-002	Fluoride, Total	N/A		Soil	6.20 mg/L	227.82	275 mg/Kg	1	0.8	1.2			7/8/10 09:25:00	N	V
1006676-003	Fluoride, Total	N/A		Soil	5.50 mg/L	208.89	231 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
1006676-004	Fluoride, Total	N/A		Soil	4.12 mg/L	154.86	185 mg/Kg	1	0.8	1.2			7/8/10 09:25:00	N	V
1006676-005	Fluoride, Total	N/A		Soil	5.30 mg/L	187.60	216 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
1006676-006	Fluoride, Total	N/A		Soil	6.42 mg/L	228.45	254 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
1006676-007	Fluoride, Total	N/A		Soil	4.58 mg/L	155.47	177 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
1006676-008	Fluoride, Total	N/A		Soil	3.42 mg/L	129.46	147 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
1006676-009	Fluoride, Total	N/A		Soil	3.72 mg/L	140.78	165 mg/Kg	1	0.8	1.2			7/8/10 09:25:00	N	V
1006676-010	Fluoride, Total	N/A		Soil	4.28 mg/L	151.55	166 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
1006676-011	Fluoride, Total	N/A		Soil	3.94 mg/L	142.16	168 mg/Kg	1	0.8	1.2			7/8/10 09:25:00	N	V
1006676-012	Fluoride, Total	N/A		Soil	3.54 mg/L	135.88	156 mg/Kg	1	0.8	1.1			7/8/10 09:25:00	N	V
Q1006747-01	Fluoride, Total	LCS		Soil	14.20 mg/L	13.28	13.3 mg/Kg	1	0.2	1.0	98		7/8/10 09:25:00	N	V
Q1006747-02	Fluoride, Total	MB		Soil	0.05 mg/L	0.05	1.0 mg/Kg U	1	0.2	1.0			7/8/10 09:25:00	N	V
Q1006747-03	Fluoride, Total	DUP	K1006676-001	Soil	4.08 mg/L	150.57	176 mg/Kg	1	0.8	1.2		0	7/8/10 09:25:00	N	V
Q1006747-04	Fluoride, Total	MS	K1006676-001	Soil	28.20 mg/L	1037.46	1210 mg/Kg	1	0.8	1.2	45%		7/8/10 09:25:00	N	V
Q1006747-05	Fluoride, Total	DMS	K1006676-001	Soil	59.80 mg/L	2319.31	2710 mg/Kg	1	0.8	1.2	54%		7/8/10 09:25:00	N	V
Q1006751-01	Fluoride, Total	CCB		Soil	0.06 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/8/10 09:25:00	N	V
Q1006751-02	Fluoride, Total	CCB		Soil	0.06 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/8/10 09:25:00	N	V
Q1006751-03	Fluoride, Total	CCB		Soil	0.07 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/8/10 09:25:00	N	V
Q1006751-04	Fluoride, Total	CCV		Soil	5.06 mg/L		5.06 mg/Kg	1	101%				7/8/10 09:25:00	N	V
Q1006751-05	Fluoride, Total	CCV		Soil	5.16 mg/L		5.16 mg/Kg	1	103%				7/8/10 09:25:00	N	V
Q1006751-06	Fluoride, Total	CCV		Soil	5.12 mg/L		5.12 mg/Kg	1	102%				7/8/10 09:25:00	N	V

7/9/10

Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.212	1.00	0.212	
CCV1	20	20	5.06	1.00	5.060	**101.2**
CCB1	20	20	0.059	1.00	0.059	
MB	20	20	0.052	1.00	0.052	
LCS APG:	20	20	14.2	1.00	14.200	
K1006676-001	20	20	4.08	1.00	4.080	
K1006676-001d	20	20	4.08	1.00	4.080	
K1006676-001ms	20	20	28.2	1.00	28.200	
K1006676-001ms	20	20	59.8	1.00	59.800	
K1006676-002	20	20	6.2	1.00	6.200	
K1006676-003	20	20	5.5	1.00	5.500	
K1006676-004	20	20	4.12	1.00	4.120	
K1006676-005	20	20	5.3	1.00	5.300	
CCV2	20	20	5.16	1.00	5.160	**103.2**
CCB2	20	20	0.056	1.00	0.056	
K1006676-006	20	20	6.42	1.00	6.420	
K1006676-007	20	20	4.58	1.00	4.580	
K1006676-008	20	20	3.42	1.00	3.420	
K1006676-009	20	20	3.72	1.00	3.720	
K1006676-010	20	20	4.28	1.00	4.280	
K1006676-011	20	20	3.94	1.00	3.940	
K1006676-012	20	20	3.54	1.00	3.540	
0.2 STD	20	20	0.214	1.00	0.214	
CCV3	20	20	5.12	1.00	5.120	**102.4**
CCB3	20	20	0.066	1.00	0.066	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L 3 STD 100 mg/L

1-100ppm Slope:-58.64,-56.74 EF%99.1,95.9

LCS APG: ID#AN1-33-T TV=13.5ppm

CCV TV=5ppm ID#F/2-53-T

PROBE ID#A

	DATE	TIME
Analyzed By:AC	7/8/2010	9:25:00 AM
Reviewed By:	SAN	7/9/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115029
Team: GenChem
Analyst: AC

Prep Workflow: Gen Dist SFluor EPA
Prep Method: 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/07/2010 09:30
Due Date: 07/16/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006676-001	BG-7 0-2 COMP	.01	5.053 g	186 mL			
K1006676-002	BG-7 2-12 COMP	.01	5.089 g	187 mL			
K1006676-003	BG-7 12-18 COMP	.01	5.029 g	191 mL			
K1006676-004	BG-8 0-2 COMP	.01	5.055 g	190 mL			
K1006676-005	BG-8 2-12 COMP	.01	5.283 g	187 mL			
K1006676-006	BG-8 12-18 COMP	.01	5.199 g	185 mL			
K1006676-007	BG-101 2-12 COMP	.01	5.008 g	170 mL			
K1006676-008	BG-11 0-2 COMP	.01	5.072 g	192 mL			
K1006676-009	BG-11 2-12 COMP	.01	5.047 g	191 mL			
K1006676-010	BG-11 12-18 COMP	.01	5.366 g	190 mL			
K1006676-011	BG-12 0-2 COMP	.01	5.238 g	189 mL			
K1006676-012	BG-12 2-12 COMP	.01	5.054 g	194 mL			
KQ1006747-01	Lab Control Sample		200 g	187 mL	200 mL	17012	
KQ1006747-02	Method Blank		200 g	188 mL			
K1006676-001: KQ1006747-03	Duplicate	.01	5.013 g	185 mL			
K1006676-001: KQ1006747-04	Matrix Spike	.01	5.083 g	187 mL	10 mL	19258	F.V.=2300
K1006676-001: KQ1006747-05	Duplicate Matrix Spike	.01	5.002 g	194 mL	20 mL	19258	F.V.=4671

% Solids
85.6

17 Total Samples consisting of 12 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F F/2-2-B	Spike	19258	1/8/2011	Fluoride 13.5ppm LCS	Spike	17012	7/19/2010

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	07-JUL-10 09:30	08-JUL-10 08:30	AC		N	

Comments

Review

Reviewed by: _____ Date: 7/9/10

Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow Plant Background
Project No.: 26-46-0006.13-2010-400

Service Request: K1006676

Sample Name:	Lab Code:
BG-7 0-2 COMP	K1006676-001
BG-7 2-12 COMP	K1006676-002
BG-7 12-18 COMP	K1006676-003
BG-8 0-2 COMP	K1006676-004
BG-8 2-12 COMP	K1006676-005
BG-8 12-18 COMP	K1006676-006
BG-101 2-12 COMP	K1006676-007
BG-11 0-2 COMP	K1006676-008
BG-11 2-12 COMP	K1006676-009
BG-11 12-18 COMP	K1006676-010
BG-12 0-2 COMP	K1006676-011
BG-12 2-12 COMP	K1006676-012
BG-12 12-18 COMP	K1006676-013
BG-15 0-2 COMP	K1006676-014
BG-15 2-12 COMP	K1006676-015
BG-15 12-18 COMP	K1006676-016
BG-102 2-12 COMP	K1006676-017
BG-16 0-2 COMP	K1006676-018
BG-16 0-2 COMPD	K1006676-018D
BG-16 0-2 COMPS	K1006676-018S
BG-16 2-12 COMP	K1006676-019
BG-16 12-18 COMP	K1006676-020
Method Blank	K1006676-MB

Comments:

Approved By: _____ **Date:** 7/30/10

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/27/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-7 0-2 COMP **Lab Code:** K1006676-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.011	5.0	07/15/10	07/28/10	0.392		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	20.4		
Barium	6010B	2.3	0.4	2.0	07/15/10	07/16/10	137		
Beryllium	6010B	1.17	0.01	2.0	07/15/10	07/16/10	0.39	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.7	2.3	2.0	07/15/10	07/16/10	2300		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	16.4		
Cobalt	6010B	2.3	0.4	2.0	07/15/10	07/16/10	5.6		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	16.8		
Iron	6010B	4.7	0.4	2.0	07/15/10	07/16/10	35300		
Lead	6010B	23.4	3.5	2.0	07/15/10	07/16/10	9.4	J	
Magnesium	6010B	4.67	0.05	2.0	07/15/10	07/16/10	2310		
Manganese	6010B	2.34	0.05	2.0	07/15/10	07/16/10	573		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.007	J	
Nickel	6010B	4.7	0.6	2.0	07/15/10	07/16/10	4.2	J	
Potassium	6010B	234	5.8	2.0	07/15/10	07/16/10	2570		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.4	4.7	2.0	07/15/10	07/16/10	127		
Thallium	6020	0.023	0.004	5.0	07/15/10	07/27/10	0.255		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.980		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	83.3		
Zinc	6010B	2.3	0.4	2.0	07/15/10	07/16/10	37.3		

% Solids: 85.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/27/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-7 2-12 COMP **Lab Code:** K1006676-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.060	0.011	5.0	07/15/10	07/28/10	0.152		
Arsenic	6020	0.59	0.06	5.0	07/15/10	07/27/10	4.55		
Barium	6010B	2.4	0.4	2.0	07/15/10	07/16/10	178		
Beryllium	6010B	1.20	0.01	2.0	07/15/10	07/16/10	0.71	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	12.0	2.4	2.0	07/15/10	07/16/10	4060		
Chromium	6010B	2.4	0.5	2.0	07/15/10	07/16/10	12.0		
Cobalt	6010B	2.4	0.4	2.0	07/15/10	07/16/10	6.2		
Copper	6010B	2.4	0.7	2.0	07/15/10	07/16/10	12.9		
Iron	6010B	4.8	0.4	2.0	07/15/10	07/16/10	28800		
Lead	6010B	23.9	3.6	2.0	07/15/10	07/16/10	7.9	J	
Magnesium	6010B	4.78	0.05	2.0	07/15/10	07/16/10	4220		
Manganese	6010B	2.39	0.05	2.0	07/15/10	07/16/10	500		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.012	J	
Nickel	6010B	4.8	0.6	2.0	07/15/10	07/16/10	4.7	J	
Potassium	6010B	239	6.0	2.0	07/15/10	07/16/10	4170		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.6	J	
Silver	6010B	2.4	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.9	4.8	2.0	07/15/10	07/16/10	620		
Thallium	6020	0.024	0.004	5.0	07/15/10	07/27/10	0.817		
Uranium	6020	0.024	0.007	5.0	07/15/10	07/27/10	2.090		
Vanadium	6010B	2.4	0.5	2.0	07/15/10	07/16/10	64.4		
Zinc	6010B	2.4	0.4	2.0	07/15/10	07/16/10	34.8		

% Solids: 82.8

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/27/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-7 12-18 COMP **Lab Code:** K1006676-003

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.055	0.010	5.0	07/15/10	07/28/10	0.080		
Arsenic	6020	0.55	0.06	5.0	07/15/10	07/27/10	1.64		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	126		
Beryllium	6010B	1.09	0.01	2.0	07/15/10	07/16/10	0.39	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	10.9	2.2	2.0	07/15/10	07/16/10	6010		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	12.7		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	4.8		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	7.2		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	29900		
Lead	6010B	21.9	3.3	2.0	07/15/10	07/16/10	5.2	J	
Magnesium	6010B	4.37	0.04	2.0	07/15/10	07/16/10	2850		
Manganese	6010B	2.19	0.04	2.0	07/15/10	07/16/10	434		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.003	J	
Nickel	6010B	4.4	0.5	2.0	07/15/10	07/16/10	3.6	J	
Potassium	6010B	219	5.5	2.0	07/15/10	07/16/10	2620		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.9	4.4	2.0	07/15/10	07/16/10	481		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.192		
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	1.990		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	76.7		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	23.8		

% Solids: 90.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project No.: 26-46-0006.13-2010-400
Project Name: Rhodia Silver Bow Plant Backgrou
Matrix: SOIL

Service Request: K1006676
Date Collected: 06/26/10
Date Received: 06/29/10
Units: mg/Kg
Basis: DRY

Sample Name: BG-8 0-2 COMP
Lab Code: K1006676-004

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.060	0.011	5.0	07/15/10	07/28/10	0.686		
Arsenic	6020	0.59	0.06	5.0	07/15/10	07/27/10	44.5		
Barium	6010B	2.4	0.4	2.0	07/15/10	07/16/10	188		
Beryllium	6010B	1.20	0.01	2.0	07/15/10	07/16/10	0.36	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	J	
Calcium	6010B	12.0	2.4	2.0	07/15/10	07/16/10	3270		
Chromium	6010B	2.4	0.5	2.0	07/15/10	07/16/10	9.7		
Cobalt	6010B	2.4	0.4	2.0	07/15/10	07/16/10	6.9		
Copper	6010B	2.4	0.7	2.0	07/15/10	07/16/10	41.9		
Iron	6010B	4.8	0.4	2.0	07/15/10	07/16/10	20200		
Lead	6010B	24.0	3.6	2.0	07/15/10	07/16/10	14.5	J	
Magnesium	6010B	4.79	0.05	2.0	07/15/10	07/16/10	3040		
Manganese	6010B	2.40	0.05	2.0	07/15/10	07/16/10	578		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.019		
Nickel	6010B	4.8	0.6	2.0	07/15/10	07/16/10	4.2	J	
Potassium	6010B	240	6.0	2.0	07/15/10	07/16/10	3300		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.4	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	24.0	4.8	2.0	07/15/10	07/16/10	45.5		
Thallium	6020	0.023	0.004	5.0	07/15/10	07/27/10	0.295		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.890		
Vanadium	6010B	2.4	0.5	2.0	07/15/10	07/16/10	43.5		
Zinc	6010B	2.4	0.4	2.0	07/15/10	07/16/10	54.8		

% Solids: 83.5

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-8 2-12 COMP **Lab Code:** K1006676-005

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.132		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	12.0		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	168		
Beryllium	6010B	1.13	0.01	2.0	07/15/10	07/16/10	0.35	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/15/10	07/16/10	3230		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	11.0		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	6.5		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	10.3		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	23500		
Lead	6010B	22.5	3.4	2.0	07/15/10	07/16/10	3.8	J	
Magnesium	6010B	4.51	0.05	2.0	07/15/10	07/16/10	3650		
Manganese	6010B	2.25	0.05	2.0	07/15/10	07/16/10	519		
Mercury	7471A	0.017	0.002	1.0	07/16/10	07/17/10	0.007	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	4.5	J	
Potassium	6010B	225	5.6	2.0	07/15/10	07/16/10	3670		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.2	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.5	4.5	2.0	07/15/10	07/16/10	49.0		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.276		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.880		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	52.8		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	35.6		

% Solids: 87.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-8 12-18 COMP **Lab Code:** K1006676-006

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.055	0.010	5.0	07/15/10	07/28/10	0.076		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	2.44		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	155		
Beryllium	6010B	1.10	0.01	2.0	07/15/10	07/16/10	0.36	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.0	2.2	2.0	07/15/10	07/16/10	2890		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	10.3		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	6.7		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	8.2		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	22000		
Lead	6010B	22.0	3.3	2.0	07/15/10	07/16/10	4.6	J	
Magnesium	6010B	4.40	0.04	2.0	07/15/10	07/16/10	3910		
Manganese	6010B	2.20	0.04	2.0	07/15/10	07/16/10	548		
Mercury	7471A	0.017	0.002	1.0	07/16/10	07/17/10	0.003	J	
Nickel	6010B	4.4	0.6	2.0	07/15/10	07/16/10	4.5		
Potassium	6010B	220	5.5	2.0	07/15/10	07/16/10	3510		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.0	4.4	2.0	07/15/10	07/16/10	51.3		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.330		
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	1.550		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	49.7		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	32.4		

% Solids: 90.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-101 2-12 COMP **Lab Code:** K1006676-007

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.154		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	17.4		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	162		
Beryllium	6010B	1.12	0.01	2.0	07/15/10	07/16/10	0.36	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.2	2.2	2.0	07/15/10	07/16/10	3190		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	9.7		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	5.5		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	10.6		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	20500		
Lead	6010B	22.4	3.4	2.0	07/15/10	07/16/10	3.5	J	
Magnesium	6010B	4.48	0.05	2.0	07/15/10	07/16/10	3280		
Manganese	6010B	2.24	0.05	2.0	07/15/10	07/16/10	503		
Mercury	7471A	0.018	0.002	1.0	07/16/10	07/17/10	0.004	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	3.9	J	
Potassium	6010B	224	5.6	2.0	07/15/10	07/16/10	3320		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.4	4.5	2.0	07/15/10	07/16/10	47.3		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.285		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.590		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	43.3		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	34.1		

% Solids: 87.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/27/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-11 0-2 COMP **Lab Code:** K1006676-008

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.439		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	42.6		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	120		
Beryllium	6010B	1.11	0.01	2.0	07/15/10	07/16/10	0.41	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.1	2.2	2.0	07/15/10	07/16/10	2040		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	6.4		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	4.9		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	27.7		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	15700		
Lead	6010B	22.2	3.3	2.0	07/15/10	07/16/10	8.9	J	
Magnesium	6010B	4.45	0.04	2.0	07/15/10	07/16/10	2560		
Manganese	6010B	2.22	0.04	2.0	07/15/10	07/16/10	537		
Mercury	7471A	0.016	0.002	1.0	07/16/10	07/17/10	0.008	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	2.7	J	
Potassium	6010B	222	5.6	2.0	07/15/10	07/16/10	2500		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.2	4.5	2.0	07/15/10	07/16/10	35.4		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.278		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.680		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	29.9		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	45.1		

% Solids: 88.2

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/27/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-11 2-12 COMP **Lab Code:** K1006676-009

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/15/10	07/28/10	0.107		
Arsenic	6020	0.59	0.06	5.0	07/15/10	07/27/10	5.26		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	153		
Beryllium	6010B	1.16	0.01	2.0	07/15/10	07/16/10	0.57	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/15/10	07/16/10	2730		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	8.1		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.9		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	10.2		
Iron	6010B	4.7	0.3	2.0	07/15/10	07/16/10	21100		
Lead	6010B	23.2	3.5	2.0	07/15/10	07/16/10	7.6	J	
Magnesium	6010B	4.65	0.05	2.0	07/15/10	07/16/10	3360		
Manganese	6010B	2.32	0.05	2.0	07/15/10	07/16/10	613		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.002	J	
Nickel	6010B	4.7	0.6	2.0	07/15/10	07/16/10	4.0	J	
Potassium	6010B	232	5.8	2.0	07/15/10	07/16/10	3030		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.2	4.7	2.0	07/15/10	07/16/10	44.6		
Thallium	6020	0.023	0.004	5.0	07/15/10	07/27/10	0.340		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.770		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	39.7		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	33.4		

% Solids: 85.2

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/27/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-11 12-18 COMP **Lab Code:** K1006676-010

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.054	0.010	5.0	07/15/10	07/28/10	0.083		
Arsenic	6020	0.54	0.05	5.0	07/15/10	07/27/10	1.35		
Barium	6010B	2.1	0.3	2.0	07/15/10	07/16/10	293		
Beryllium	6010B	1.07	0.01	2.0	07/15/10	07/16/10	0.37	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	10.7	2.1	2.0	07/15/10	07/16/10	2070		
Chromium	6010B	2.1	0.4	2.0	07/15/10	07/16/10	5.7		
Cobalt	6010B	2.1	0.3	2.0	07/15/10	07/16/10	5.9		
Copper	6010B	2.1	0.6	2.0	07/15/10	07/16/10	7.7		
Iron	6010B	4.3	0.3	2.0	07/15/10	07/16/10	16100		
Lead	6010B	21.4	3.2	2.0	07/15/10	07/16/10	9.0	J	
Magnesium	6010B	4.29	0.04	2.0	07/15/10	07/16/10	2830		
Manganese	6010B	2.14	0.04	2.0	07/15/10	07/16/10	1050		
Mercury	7471A	0.018	0.002	1.0	07/16/10	07/17/10	0.003	J	
Nickel	6010B	4.3	0.5	2.0	07/15/10	07/16/10	3.0	J	
Potassium	6010B	214	5.4	2.0	07/15/10	07/16/10	2390		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.1	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.4	4.3	2.0	07/15/10	07/16/10	43.1		
Thallium	6020	0.021	0.003	5.0	07/15/10	07/27/10	0.367		
Uranium	6020	0.021	0.006	5.0	07/15/10	07/27/10	1.460		
Vanadium	6010B	2.1	0.4	2.0	07/15/10	07/16/10	36.6		
Zinc	6010B	2.1	0.3	2.0	07/15/10	07/16/10	23.9		

% Solids: 91.5

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-12 0-2 COMP **Lab Code:** K1006676-011

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/15/10	07/28/10	0.391		
Arsenic	6020	0.59	0.06	5.0	07/15/10	07/27/10	38.2		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	168		
Beryllium	6010B	1.16	0.01	2.0	07/15/10	07/16/10	0.41	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/15/10	07/16/10	2760		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	8.1		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.2		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	21.0		
Iron	6010B	4.6	0.3	2.0	07/15/10	07/16/10	17400		
Lead	6010B	23.2	3.5	2.0	07/15/10	07/16/10	7.4	J	
Magnesium	6010B	4.64	0.05	2.0	07/15/10	07/16/10	2780		
Manganese	6010B	2.32	0.05	2.0	07/15/10	07/16/10	546		
Mercury	7471A	0.018	0.002	1.0	07/16/10	07/17/10	0.006	J	
Nickel	6010B	4.6	0.6	2.0	07/15/10	07/16/10	3.7	J	
Potassium	6010B	232	5.8	2.0	07/15/10	07/16/10	3100		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.2	4.6	2.0	07/15/10	07/16/10	44.7		
Thallium	6020	0.024	0.004	5.0	07/15/10	07/27/10	0.316		
Uranium	6020	0.024	0.007	5.0	07/15/10	07/27/10	1.930		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	32.1		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	44.0		

% Solids: 84.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-12 2-12 COMP **Lab Code:** K1006676-012

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.057	0.010	5.0	07/15/10	07/28/10	0.165		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	7.91		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	189		
Beryllium	6010B	1.14	0.01	2.0	07/15/10	07/16/10	0.43	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.4	2.3	2.0	07/15/10	07/16/10	2580		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	47.6		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	6.7		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	11.9		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	19100		
Lead	6010B	22.7	3.4	2.0	07/15/10	07/16/10	7.9	J	
Magnesium	6010B	4.54	0.05	2.0	07/15/10	07/16/10	2970		
Manganese	6010B	2.27	0.05	2.0	07/15/10	07/16/10	764		
Mercury	7471A	0.018	0.002	1.0	07/16/10	07/17/10	0.008	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	21.4		
Potassium	6010B	227	5.7	2.0	07/15/10	07/16/10	2990		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.7	4.5	2.0	07/15/10	07/16/10	43.4		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.281		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.540		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	39.4		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	32.8		

% Solids: 87.2

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-12 12-18 COMP **Lab Code:** K1006676-013

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.102		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	1.54		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	183		
Beryllium	6010B	1.12	0.01	2.0	07/15/10	07/16/10	0.62	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.2	2.2	2.0	07/15/10	07/16/10	3750		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	7.7		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	7.5		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	11.3		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	20500		
Lead	6010B	22.3	3.4	2.0	07/15/10	07/16/10	7.5	J	
Magnesium	6010B	4.47	0.05	2.0	07/15/10	07/16/10	4140		
Manganese	6010B	2.23	0.05	2.0	07/15/10	07/16/10	741		
Mercury	7471A	0.017	0.002	1.0	07/16/10	07/17/10	0.018		
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	5.8		
Potassium	6010B	223	5.6	2.0	07/15/10	07/16/10	3180		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.3	4.5	2.0	07/15/10	07/16/10	56.5		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.332		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.710		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	40.7		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	32.2		

% Solids: 87.8

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/25/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-15 0-2 COMP **Lab Code:** K1006676-014

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.060	0.011	5.0	07/15/10	07/28/10	0.398		
Arsenic	6020	0.60	0.06	5.0	07/15/10	07/27/10	34.1		
Barium	6010B	2.4	0.4	2.0	07/15/10	07/16/10	150		
Beryllium	6010B	1.20	0.01	2.0	07/15/10	07/16/10	0.42	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	12.0	2.4	2.0	07/15/10	07/16/10	3300		
Chromium	6010B	2.4	0.5	2.0	07/15/10	07/16/10	7.8		
Cobalt	6010B	2.4	0.4	2.0	07/15/10	07/16/10	4.7		
Copper	6010B	2.4	0.7	2.0	07/15/10	07/16/10	25.9		
Iron	6010B	4.8	0.4	2.0	07/15/10	07/16/10	17200		
Lead	6010B	24.0	3.6	2.0	07/15/10	07/16/10	8.0	J	
Magnesium	6010B	4.80	0.05	2.0	07/15/10	07/16/10	2610		
Manganese	6010B	2.40	0.05	2.0	07/15/10	07/16/10	651		
Mercury	7471A	0.020	0.002	1.0	07/16/10	07/17/10	0.017	J	
Nickel	6010B	4.8	0.6	2.0	07/15/10	07/16/10	3.8	J	
Potassium	6010B	240	6.0	2.0	07/15/10	07/16/10	2630		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.5	J	
Silver	6010B	2.4	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	24.0	4.8	2.0	07/15/10	07/16/10	36.3		
Thallium	6020	0.024	0.004	5.0	07/15/10	07/27/10	0.258		
Uranium	6020	0.024	0.007	5.0	07/15/10	07/27/10	4.110		
Vanadium	6010B	2.4	0.5	2.0	07/15/10	07/16/10	29.4		
Zinc	6010B	2.4	0.4	2.0	07/15/10	07/16/10	44.4		

% Solids: 83.4

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/25/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-15 2-12 COMP **Lab Code:** K1006676-015

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.133		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	10.9		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	98.3		
Beryllium	6010B	1.13	0.01	2.0	07/15/10	07/16/10	0.41	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/15/10	07/16/10	2930		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	8.6		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	4.5		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	11.2		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	17300		
Lead	6010B	22.6	3.4	2.0	07/15/10	07/16/10	5.2	J	
Magnesium	6010B	4.52	0.05	2.0	07/15/10	07/16/10	3110		
Manganese	6010B	2.26	0.05	2.0	07/15/10	07/16/10	411		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.008	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	4.1	J	
Potassium	6010B	226	5.7	2.0	07/15/10	07/16/10	2670		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.6	4.5	2.0	07/15/10	07/16/10	44.7		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.235		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.840		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	30.3		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	30.8		

% Solids: 86.8

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/25/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-15 12-18 COMP **Lab Code:** K1006676-016

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/15/10	07/28/10	0.104		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	5.70		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	90.3		
Beryllium	6010B	1.15	0.01	2.0	07/15/10	07/16/10	0.52	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.5	2.3	2.0	07/15/10	07/16/10	3440		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	7.0		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	4.2		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	11.6		
Iron	6010B	4.6	0.3	2.0	07/15/10	07/16/10	18200		
Lead	6010B	23.0	3.5	2.0	07/15/10	07/16/10	3.9	J	
Magnesium	6010B	4.61	0.05	2.0	07/15/10	07/16/10	3630		
Manganese	6010B	2.30	0.05	2.0	07/15/10	07/16/10	334		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.005	J	
Nickel	6010B	4.6	0.6	2.0	07/15/10	07/16/10	4.3	J	
Potassium	6010B	230	5.8	2.0	07/15/10	07/16/10	2930		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.0	4.6	2.0	07/15/10	07/16/10	66.2		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.331		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	2.220		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	32.4		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	31.1		

% Solids: 86.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/25/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-102 2-12 COMP **Lab Code:** K1006676-017

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/15/10	07/28/10	0.112		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	4.84		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	102		
Beryllium	6010B	1.16	0.01	2.0	07/15/10	07/16/10	0.54	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/15/10	07/16/10	3540		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	7.4		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	4.8		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	12.8		
Iron	6010B	4.7	0.3	2.0	07/15/10	07/16/10	18500		
Lead	6010B	23.2	3.5	2.0	07/15/10	07/16/10	4.6	J	
Magnesium	6010B	4.65	0.05	2.0	07/15/10	07/16/10	3840		
Manganese	6010B	2.32	0.05	2.0	07/15/10	07/16/10	379		
Mercury	7471A	0.019	0.002	1.0	07/16/10	07/17/10	0.014	J	
Nickel	6010B	4.7	0.6	2.0	07/15/10	07/16/10	4.4	J	
Potassium	6010B	232	5.8	2.0	07/15/10	07/16/10	3110		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.2	4.7	2.0	07/15/10	07/16/10	69.7		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.303		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.770		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	32.2		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	33.8		

% Solids: 86.1

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-16 0-2 COMP **Lab Code:** K1006676-018

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.592		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	32.5		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	120		
Beryllium	6010B	1.11	0.01	2.0	07/15/10	07/16/10	0.35	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.3	J	
Calcium	6010B	11.1	2.2	2.0	07/15/10	07/16/10	2810		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	7.7		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	5.1		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	54.8		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	20700		
Lead	6010B	22.3	3.3	2.0	07/15/10	07/16/10	16.4	J	
Magnesium	6010B	4.45	0.05	2.0	07/15/10	07/16/10	4080		
Manganese	6010B	2.23	0.05	2.0	07/15/10	07/16/10	604		
Mercury	7471A	0.018	0.002	1.0	07/16/10	07/17/10	0.016	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	3.2	J	
Potassium	6010B	223	5.6	2.0	07/15/10	07/16/10	3620		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.3	4.5	2.0	07/15/10	07/16/10	34.8		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.325		
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	2.050		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	36.0		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	61.0		

% Solids: 88.1

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-16 2-12 COMP **Lab Code:** K1006676-019

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/28/10	0.132		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	10.3		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	132		
Beryllium	6010B	1.13	0.01	2.0	07/15/10	07/16/10	0.41	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/15/10	07/16/10	2990		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	7.8		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.4		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	36.8		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	20600		
Lead	6010B	22.5	3.4	2.0	07/15/10	07/16/10	6.0	J	
Magnesium	6010B	4.51	0.05	2.0	07/15/10	07/16/10	4290		
Manganese	6010B	2.25	0.05	2.0	07/15/10	07/16/10	582		
Mercury	7471A	0.020	0.002	1.0	07/16/10	07/17/10	0.009	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	4.2	J	
Potassium	6010B	225	5.6	2.0	07/15/10	07/16/10	3700		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.5	4.5	2.0	07/15/10	07/16/10	43.9		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.303		
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	2.580		
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	34.9		
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	44.2		

% Solids: 88.7

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/26/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	06/29/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-16 12-18 COMP **Lab Code:** K1006676-020

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.055	0.010	5.0	07/15/10	07/28/10	0.076		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	3.06		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	107		
Beryllium	6010B	1.10	0.01	2.0	07/15/10	07/16/10	0.42	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.0	2.2	2.0	07/15/10	07/16/10	2830		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	7.8		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	5.0		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	34.2		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	17400		
Lead	6010B	22.1	3.3	2.0	07/15/10	07/16/10	5.5	J	
Magnesium	6010B	4.42	0.04	2.0	07/15/10	07/16/10	3690		
Manganese	6010B	2.21	0.04	2.0	07/15/10	07/16/10	440		
Mercury	7471A	0.017	0.002	1.0	07/16/10	07/17/10	0.007	J	
Nickel	6010B	4.4	0.6	2.0	07/15/10	07/16/10	3.2	J	
Potassium	6010B	221	5.5	2.0	07/15/10	07/16/10	3260		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.1	4.4	2.0	07/15/10	07/16/10	54.2		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.300		
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	3.060		
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	27.8		
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	35.9		

% Solids: 89.7

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Service Request: K1006676
Project No.: 26-46-0006.13-2010-400
Date Collected:
Project Name: Rhodia Silver Bow Plant Backgrou
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1006676-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.050	0.009	5.0	07/15/10	07/28/10	0.009	U	
Arsenic	6020	0.50	0.05	5.0	07/15/10	07/27/10	0.05	U	
Barium	6010B	2.0	0.3	2.0	07/15/10	07/16/10	0.3	U	
Beryllium	6010B	1.00	0.01	2.0	07/15/10	07/16/10	0.01	U	
Cadmium	6010B	1.0	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	10.0	2.0	2.0	07/15/10	07/16/10	2.0	U	
Chromium	6010B	2.0	0.4	2.0	07/15/10	07/16/10	0.4	U	
Cobalt	6010B	2.0	0.3	2.0	07/15/10	07/16/10	0.3	U	
Copper	6010B	2.0	0.6	2.0	07/15/10	07/16/10	0.6	U	
Iron	6010B	4.0	0.3	2.0	07/15/10	07/16/10	1.3	J	
Lead	6010B	20.0	3.0	2.0	07/15/10	07/16/10	3.0	U	
Magnesium	6010B	4.00	0.04	2.0	07/15/10	07/16/10	0.05	J	
Manganese	6010B	2.00	0.04	2.0	07/15/10	07/16/10	0.04	U	
Mercury	7471A	0.020	0.002	1.0	07/16/10	07/17/10	0.002	U	
Nickel	6010B	4.0	0.5	2.0	07/15/10	07/16/10	0.5	U	
Potassium	6010B	200	5.0	2.0	07/15/10	07/16/10	5.0	U	
Selenium	6020	1.0	0.2	5.0	07/15/10	07/27/10	0.2	U	
Silver	6010B	2.0	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	20.0	4.0	2.0	07/15/10	07/16/10	4.0	U	
Thallium	6020	0.020	0.003	5.0	07/15/10	07/27/10	0.003	U	
Uranium	6020	0.020	0.006	5.0	07/15/10	07/27/10	0.006	U	
Vanadium	6010B	2.0	0.4	2.0	07/15/10	07/16/10	0.4	U	
Zinc	6010B	2.0	0.3	2.0	07/15/10	07/16/10	0.3	U	

% Solids: 100.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony	25.0	24.5	98	25.0	25.3	101	25.4	102	6020
Arsenic	25.0	24.2	97	25.0	25.1	100	24.4	98	6020
Barium	5000	5160	103	2500	2487	99	2455	98	6010B
Beryllium	125	126	101	50	51	102	51	102	6010B
Cadmium	1250	1238	99	500	487	97	488	98	6010B
Calcium	5000	5173	103	2500	2490	100	2490	100	6010B
Calcium	12500	12607	101	25000	25202	101	25215	101	6010B
Chromium	500	506	101	500	488	98	489	98	6010B
Cobalt	1250	1241	99	500	489	98	490	98	6010B
Copper	625	624	100	500	495	99	496	99	6010B
Iron	2500	2533	101	500	489	98	506	101	6010B
Iron	10000	9902	99	25000	25446	102	24951	100	6010B
Lead	2500	2470	99	2500	2430	97	2429	97	6010B
Magnesium	5000	4942	99	2000	2051	103	2063	103	6010B
Magnesium	12500	12648	101	25000	25115	100	25464	102	6010B
Manganese	1250	1192	95	1000	950	95	950	95	6010B
Manganese	10000	9984	100	5000	5077	102	4997	100	6010B
Mercury	5.00	5.36	107	5.00	5.13	103	5.24	105	7471A
Nickel	1250	1237	99	500	490	98	490	98	6010B
Potassium	12500	12911	103	10000	10097	101	10057	101	6010B
Selenium	25.0	24.3	97	25.0	25.4	102	24.8	99	6020
Silver	625	629	101	500	495	99	495	99	6010B
Sodium	12500	12535	100	10000	10042	100	9824	98	6010B
Thallium	25.0	25.8	103	25.0	25.1	100	25.6	102	6020
Uranium	25.0	24.2	97	25.0	25.1	100	25.2	101	6020
Vanadium	1250	1247	100	500	492	98	497	99	6010B
Zinc	1250	1244	100	500	488	98	491	98	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.4	102	25.2	101	6020
Arsenic				25.0	24.4	98	24.5	98	6020
Barium				2500	2463	99	2503	100	6010B
Beryllium				50	51	102	50	100	6010B
Cadmium				500	494	99	497	99	6010B
Calcium				2500	2488	100	2453	98	6010B
Calcium				25000	25829	103	26704	107	6010B
Chromium				500	494	99	494	99	6010B
Cobalt				500	494	99	490	98	6010B
Copper				500	502	100	516	103	6010B
Iron				500	517	103	507	101	6010B
Iron				25000	25186	101	25754	103	6010B
Lead				2500	2404	96	2382	95	6010B
Magnesium				2000	2078	104	2071	104	6010B
Magnesium				25000	25454	102	25478	102	6010B
Manganese				1000	954	95	953	95	6010B
Manganese				5000	5005	100	4957	99	6010B
Mercury				5.00	5.12	102	5.28	106	7471A
Nickel				500	493	99	490	98	6010B
Potassium				10000	10060	101	9904	99	6010B
Selenium				25.0	24.6	98	25.2	101	6020
Silver				500	502	100	502	100	6010B
Sodium				10000	9873	99	9809	98	6010B
Thallium				25.0	25.6	102	25.7	103	6020
Uranium				25.0	25.2	101	25.5	102	6020
Vanadium				500	495	99	481	96	6010B
Zinc				500	489	98	493	99	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.1	100	6020
Arsenic				25.0	24.5	98	24.4	98	6020
Barium				2500	2498	100	2481	99	6010B
Beryllium				50	50	100	50	100	6010B
Cadmium				500	495	99	502	100	6010B
Calcium				2500	2444	98	2451	98	6010B
Calcium				25000	26604	106	26730	107	6010B
Chromium				500	491	98	501	100	6010B
Cobalt				500	488	98	497	99	6010B
Copper				500	516	103	522	104	6010B
Iron				500	513	103	528	106	6010B
Iron				25000	25742	103	25842	103	6010B
Lead				2500	2377	95	2416	97	6010B
Magnesium				2000	2071	104	2066	103	6010B
Magnesium				25000	25326	101	25381	102	6010B
Manganese				1000	953	95	976	98	6010B
Manganese				5000	4979	100	4956	99	6010B
Nickel				500	485	97	496	99	6010B
Potassium				10000	9900	99	9867	99	6010B
Selenium				25.0	25.1	100	25.2	101	6020
Silver				500	495	99	493	99	6010B
Sodium				10000	9761	98	9755	98	6010B
Thallium				25.0	26.5	106	26.4	106	6020
Uranium				25.0	25.4	102	25.5	102	6020
Vanadium				500	479	96	491	98	6010B
Zinc				500	487	97	497	99	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.6	102	25.5	102	6020
Barium				2500	2507	100			6010B
Beryllium				50	50	100			6010B
Cadmium				500	491	98			6010B
Calcium				2500	2464	99			6010B
Calcium				25000	26913	108			6010B
Chromium				500	488	98			6010B
Cobalt				500	486	97			6010B
Copper				500	515	103			6010B
Iron				500	521	104			6010B
Iron				25000	26157	105			6010B
Lead				2500	2355	94			6010B
Magnesium				2000	2071	104			6010B
Magnesium				25000	25269	101			6010B
Manganese				1000	952	95			6010B
Manganese				5000	4982	100			6010B
Nickel				500	485	97			6010B
Potassium				10000	9854	99			6010B
Silver				500	494	99			6010B
Sodium				10000	9835	98			6010B
Vanadium				500	478	96			6010B
Zinc				500	485	97			6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.5	102	25.1	100	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.5	102	25.8	103	6020

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.10	0.09	90		
Arsenic				1.00	1.06	106		
Barium				5.0	5.0	100		
Beryllium				5.0	4.8	96		
Cadmium				5.0	4.5	90		
Calcium				50.0	51.7	103		
Chromium				5.0	5.7	114		
Cobalt				10.0	8.6	86		
Copper				10.0	10.6	106		
Iron				20.0	24.4	122		
Lead				50.0	43.2	86		
Magnesium				20.0	19.3	96		
Manganese				5.0	4.8	96		
Mercury	0.20	0.18	90					
Nickel				20.0	19.6	98		
Potassium				400.0	418.0	104		
Selenium				2.0	2.11	106		
Silver				10.0	7.5	75		
Sodium				200.0	217.0	108		
Thallium				0.04	0.042	105		
Uranium				0.04	0.04	100		
Vanadium				10.0	10.6	106		
Zinc				10.0	10.9	109		

Metals

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.018	U	0.018	U	-0.036	J	-0.036	J	6020
Arsenic	0.1	U	0.1	U	0.1	U	0.1	U	6020
Barium	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Beryllium	0.06	J	0.07	J	0.07	J	0.06	J	6010B
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	6010B
Calcium	10.0	U	10.0	U	10.0	U	10.0	U	6010B
Chromium	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Copper	3.0	U	3.0	U	3.0	U	3.0	U	6010B
Iron	3.6	J	1.5	U	2.8	J	4.0	J	6010B
Lead	15	U	15	U	15	U	15	U	6010B
Magnesium	0.2	U	0.2	U	0.4	J	1.4	J	6010B
Manganese	0.8	J	0.5	J	0.8	J	1.0	J	6010B
Mercury	-0.030	J	-0.060	J	-0.040	J	-0.020	J	7471A
Nickel	2.5	U	2.5	U	2.5	U	2.5	U	6010B
Potassium	25.0	U	25.0	U	25.0	U	25.0	U	6010B
Selenium	0.4	U	0.4	U	0.4	U	0.4	U	6020
Silver	2.0	U	2.0	U	2.0	U	-3.3	J	6010B
Sodium	20	J	20	U	20	U	20	U	6010B
Thallium	0.006	U	0.006	U	0.006	U	0.006	U	6020
Uranium	0.012	U	0.012	U	0.012	U	0.012	U	6020
Vanadium	4	J	3	J	2	J	3	J	6010B
Zinc	1.5	J	2.0	J	1.5	U	1.5	U	6010B

Metals

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.028	J	-0.043	J	6020
Arsenic			0.1	U	0.1	U	0.1	U	6020
Barium			1.5	U	1.5	U	1.5	U	6010B
Beryllium			0.13	J	0.07	J	0.12	J	6010B
Cadmium			1.0	U	1.0	U	1.0	U	6010B
Calcium			10.0	U	10.0	U	10.0	U	6010B
Chromium			2.0	U	2.0	U	2.0	U	6010B
Cobalt			1.5	U	1.5	U	1.5	U	6010B
Copper			3.5	J	3.0	U	3.0	U	6010B
Iron			4.8	J	6.1	J	7.1	J	6010B
Lead			15	U	15	U	15	U	6010B
Magnesium			2.5	J	2.7	J	3.1	J	6010B
Manganese			1.2	J	1.3	J	1.5	J	6010B
Mercury			-0.040	J					7471A
Nickel			2.5	U	2.5	U	2.5	U	6010B
Potassium			25.0	U	25.0	U	25.0	U	6010B
Selenium			0.4	U	0.4	U	0.4	U	6020
Silver			2.0	U	2.0	U	2.0	U	6010B
Sodium			20	U	20	U	20	U	6010B
Thallium			0.006	U	0.006	U	0.006	U	6020
Uranium			0.012	U	0.012	U	0.012	U	6020
Vanadium			2	U	2	U	2	U	6010B
Zinc			1.5	U	2.1	J	1.5	U	6010B

Metals

- 3 -

BLANKS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.044	J	-0.054	J	6020
Barium			1.5	U					6010B
Beryllium			0.19	J					6010B
Cadmium			1.0	U					6010B
Calcium			10.0	U					6010B
Chromium			2.0	U					6010B
Cobalt			1.5	U					6010B
Copper			3.0	U					6010B
Iron			7.1	J					6010B
Lead			15	U					6010B
Magnesium			3.5	J					6010B
Manganese			1.5	J					6010B
Nickel			2.5	U					6010B
Potassium			25.0	U					6010B
Silver			2.0	U					6010B
Sodium			20	U					6010B
Vanadium			2	U					6010B
Zinc			1.5	U					6010B

Metals

-3-

BLANKS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.054	J	-0.054	J	-0.055	J	6020

Metals

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0		0.1	0.1				
Arsenic	0.0	25.0	0.0	26.3	105			
Selenium	0.0	25.0	0.1	25.9	104			
Thallium	0.0		0.0	0.0				
Uranium	0.0		0.0	0.0				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	0	451.7	90.3			
Beryllium		500	0	527.6	105.5			
Cadmium		1000	9	929.8	93.0			
Calcium	500000	500000	495616	494832.6	99.0			
Chromium		500	0	471.2	94.2			
Cobalt		500	-1	464.8	93.0			
Copper		500	1	460.3	92.1			
Iron	200000	200000	197807	192916.5	96.5			
Lead		1000	0	947.7	94.8			
Magnesium	500000	500000	516515	515041.8	103.0			
Manganese		500	14	476.6	95.3			
Nickel		1000	-3	908.6	90.9			
Potassium			-36	-74.0				
Silver		1000	1	955.6	95.6			
Sodium			61	21.9				
Vanadium		500	3	488.6	97.7			
Zinc		1000	8	902.1	90.2			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project No.:	26-46-0006.13-2010-400	**Units:**	MG/KG
Project Name:	Rhodia Silver Bow Plant Backgrou	**Basis:**	DRY
Matrix:	SOIL	**% Solids:**	88.1

Sample Name: BG-16 0-2 COMPS **Lab Code:** K1006676-018S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	10 - 103	60.9		0.592		113.51	53.1		6020
Arsenic	57 - 133	143		32.5		111.28	99.3		6020
Barium	60 - 139	635		120		454.03	113.4		6010B
Beryllium	78 - 115	12.3		0.35	J	11.35	105.3		6010B
Cadmium	78 - 118	12.3		0.3	J	11.35	105.7		6010B
Chromium	32 - 170	57.5		7.7		45.40	109.7		6010B
Cobalt	67 - 129	125		5.1		113.51	105.6		6010B
Copper	24 - 173	118		54.8		56.75	111.4		6010B
Iron		22500		20700		227.01	792.9		6010B
Lead	46 - 151	134		16.4	J	113.51	103.6		6010B
Manganese		788		604		113.51	176.2		6010B
Mercury	60 - 135	0.445		0.016	J	0.43	99.8		7471A
Nickel	77 - 121	122		3.2	J	113.51	104.7		6010B
Selenium	65 - 125	124		0.3	J	111.28	111.2		6020
Silver	52 - 148	10.3		0.5	U	11.35	90.7		6010B
Thallium	70 - 128	123		0.325		111.28	110.2		6020
Uranium	75 - 125	26.5		2.050		22.26	109.8		6020
Vanadium	64 - 132	158		36.0		113.51	107.5		6010B
Zinc	13 - 172	186		61.0		113.51	110.1		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company
Service Request: K1006676
Project No.: 26-46-0006.13-2010-400
Units: UG/L
Project Name: Rhodia Silver Bow Plant Backgrou
Basis: DRY
Matrix: WATER

Sample Name: BG-7 0-2 COMPA
Lab Code: K1006676-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	85 - 115	4.690		0.070	J	5.0	92		7471A

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400 **Units:** UG/L

Project Name: Rhodia Silver Bow Plant Backgrou **Basis:** DRY

Matrix: WATER

Sample Name: BG-16 0-2 COMPA **Lab Code:** K1006676-018A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	53.03		1.06		50.0	104		6020
Arsenic	75 - 125	102.3		57.2		50.0	90		6020
Selenium	75 - 125	49.7		0.5	J	50.0	98		6020
Thallium	75 - 125	53.660		0.573		50.0	106		6020
Uranium	75 - 125	58.42		3.62		50.0	110		6020

Metals

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DUPLICATES

Client: Barr Engineering Company
Service Request: K1006676

Project No.: 26-46-0006.13-2010-400
Units: MG/KG

Project Name: Rhodia Silver Bow Plant Backgrou
Basis: DRY

Matrix: SOIL
% Solids: 88.1

Sample Name: BG-16 0-2 COMPD
Lab Code: K1006676-018D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.592		0.537		9.7		6020
Arsenic	20	32.5		29.9		8.3		6020
Barium	30	120		112		6.9		6010B
Beryllium		0.35	J	0.37	J	5.6		6010B
Cadmium		0.3	J	0.2	J	40.0		6010B
Calcium	30	2810		2820		0.4		6010B
Chromium		7.7		7.5		2.6		6010B
Cobalt		5.1		4.7		8.2		6010B
Copper	30	54.8		49.4		10.4		6010B
Iron	30	20700		20500		1.0		6010B
Lead		16.4	J	12.4	J	27.8		6010B
Magnesium	30	4080		3770		7.9		6010B
Manganese	30	604		560		7.6		6010B
Mercury		0.016	J	0.017	J	6.1		7471A
Nickel		3.2	J	3.4	J	6.1		6010B
Potassium	30	3620		3400		6.3		6010B
Selenium		0.3	J	0.2	U	200.0		6020
Silver		0.4	U	0.5	U			6010B
Sodium		34.8		35.1		0.9		6010B
Thallium	20	0.325		0.319		1.9		6020
Uranium	20	2.050		1.950		5.0		6020
Vanadium	30	36.0		36.3		0.8		6010B
Zinc	30	61.0		58.3		4.5		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Aqueous LCS Source: CAS MIXED **Solid LCS Source:** ERA D065540

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony				105	80.7	50	150	76.9
Arsenic				88.3	82.6	78	122	93.5
Barium				432	440	81	119	101.9
Beryllium				58.2	65.5	83	117	112.5
Cadmium				91	91.9	81	119	101.0
Calcium				9630	10000	79	121	103.8
Chromium				144	147	80	119	102.1
Cobalt				190	194	82	118	102.1
Copper				237	244	83	116	103.0
Iron				18900	17500	50	149	92.6
Lead				104	100	79	121	96.2
Magnesium				4040	3780	73	127	93.6
Manganese				497	491	81	119	98.8
Mercury				6.8	7.890	71	128	116.0
Nickel				200	199	81	118	99.5
Potassium				4340	3960	73	126	91.2
Selenium				192	185	80	120	96.4
Silver				76.4	76.2	66	134	99.7
Sodium				735	645	74	126	87.8
Thallium				247	278	79	120	112.6
Uranium	200	201	100.5					
Vanadium				180	175	79	121	97.2
Zinc				292	290	73	121	99.3

Metals

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company Service Request: K1006676

Project No.: 26-46-0006.13-2010-400 Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Sample Name: BG-16 0-2 COMPL Lab Code: K1006676-018L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	1.064		0.913		14		MS
Arsenic	57.2		63.1		10		MS
Barium	537.28		526.50		2.0		P
Beryllium	1.57	J	1.30	J	17.2	E	P
Cadmium	1.30	J	5.00	U	100.0		P
Calcium	12617.04		11325.10		10.2	E	P
Chromium	34.51		36.20	J	4.9		P
Cobalt	22.97		22.10	J	3.8		P
Copper	246.19		247.25		0.4		P
Iron	93221.29		89409.05		4.1		P
Lead	73.62	J	75.00	U	100.0		P
Magnesium	18338.12		17180.70		6.3		P
Manganese	2715.89		2461.20		9.4		P
Nickel	14.46	J	12.50	U	100.0		P
Potassium	16284.36		16314.55		0.2		P
Selenium	0.5	J	2.0	U	100.0		MS
Silver	2.00	U	10.00	U			P
Sodium	156.48		226.10	J	44.5		P
Thallium	0.573		0.582		2		MS
Uranium	3.618		3.732		3		MS
Vanadium	161.66		157.50		2.6		P
Zinc	274.25		257.65		6.1		P

Metals

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #:

AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Barium	233.5		10.0	1.5	P
Beryllium	313.04		5.00	0.05	P
Cadmium	226.50		5.0	1.0	P
Calcium	211.2		50	10.0	P
Chromium	267.72		10.0	2.0	P
Cobalt	228.62		10.0	1.5	P
Copper	324.75		10.0	3.0	P
Iron	259.90		20.0	1.5	P
Lead	220.35		100	15.0	P
Magnesium	202.5		20	0.2	P
Manganese	257.61		10.00	0.20	P
Nickel	231.60		20.0	2.5	P
Potassium	766.49		1000	25.0	P
Silver	328.07		10.0	2.0	P
Sodium	330.23		100	20.0	P
Vanadium	310.2		10.0	2.0	P
Zinc	206.2		10.0	1.5	P

Comments:

Metals

- 10 -

DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: **AA ID #:**

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.100	0.018	MS
Arsenic	75		1.0	0.1	MS
Selenium	82		2.0	0.4	MS
Thallium	205		0.040	0.006	MS
Uranium	238		0.04	0.012	MS

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: K-CVAA-01

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.70		0.20	0.020	CV

Comments:

Columbia Analytical Services

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Barium	5.000	45000	6010B
Beryllium	5.000	9000	6010B
Cadmium	5.000	90000	6010B
Calcium	5.000	1800000	6010B
Chromium	5.000	90000	6010B
Cobalt	5.000	90000	6010B
Copper	5.000	90000	6010B
Iron	5.000	900000	6010B
Lead	5.000	90000	6010B
Magnesium	5.000	900000	6010B
Manganese	5.000	180000	6010B
Nickel	5.000	90000	6010B
Potassium	5.000	450000	6010B
Silver	5.000	9000	6010B
Sodium	5.000	180000	6010B
Vanadium	5.000	90000	6010B
Zinc	5.000	90000	6010B

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	900	6020
Arsenic	15.000	900	6020
Selenium	15.000	900	6020
Thallium	15.000	450	6020
Uranium	15.000	450	6020

Comments:

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: CV

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006676-001	07/16/10	0.61	50.0
K1006676-002	07/16/10	0.63	50.0
K1006676-003	07/16/10	0.58	50.0
K1006676-004	07/16/10	0.62	50.0
K1006676-005	07/16/10	0.68	50.0
K1006676-006	07/16/10	0.65	50.0
K1006676-007	07/16/10	0.64	50.0
K1006676-008	07/16/10	0.69	50.0
K1006676-009	07/16/10	0.60	50.0
K1006676-010	07/16/10	0.60	50.0
K1006676-011	07/16/10	0.64	50.0
K1006676-012	07/16/10	0.63	50.0
K1006676-013	07/16/10	0.65	50.0
K1006676-014	07/16/10	0.61	50.0
K1006676-015	07/16/10	0.61	50.0
K1006676-016	07/16/10	0.62	50.0
K1006676-017	07/16/10	0.60	50.0
K1006676-018	07/16/10	0.64	50.0
K1006676-018D	07/16/10	0.61	50.0
K1006676-018S	07/16/10	0.66	50.0
K1006676-019	07/16/10	0.57	50.0
K1006676-020	07/16/10	0.67	50.0
K1006676-MB	07/16/10	0.50	50.0
LCSS	07/16/10	0.26	50.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006676-001	07/15/10	1.00	100.0
K1006676-002	07/15/10	1.01	100.0
K1006676-003	07/15/10	1.01	100.0
K1006676-004	07/15/10	1.00	100.0
K1006676-005	07/15/10	1.02	100.0
K1006676-006	07/15/10	1.01	100.0
K1006676-007	07/15/10	1.02	100.0
K1006676-008	07/15/10	1.02	100.0
K1006676-009	07/15/10	1.01	100.0
K1006676-010	07/15/10	1.02	100.0
K1006676-011	07/15/10	1.02	100.0
K1006676-012	07/15/10	1.01	100.0
K1006676-013	07/15/10	1.02	100.0
K1006676-014	07/15/10	1.00	100.0
K1006676-015	07/15/10	1.02	100.0
K1006676-016	07/15/10	1.01	100.0
K1006676-017	07/15/10	1.00	100.0
K1006676-018	07/15/10	1.02	100.0
K1006676-018D	07/15/10	1.01	100.0
K1006676-018S	07/15/10	1.00	100.0
K1006676-019	07/15/10	1.00	100.0
K1006676-020	07/15/10	1.01	100.0
K1006676-MB	07/15/10	1.00	100.0
LCSS	07/15/10	1.02	100.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006676-001	07/15/10	1.00	100.0
K1006676-002	07/15/10	1.02	100.0
K1006676-003	07/15/10	1.01	100.0
K1006676-004	07/15/10	1.02	100.0
K1006676-005	07/15/10	1.02	100.0
K1006676-006	07/15/10	1.00	100.0
K1006676-007	07/15/10	1.01	100.0
K1006676-008	07/15/10	1.00	100.0
K1006676-009	07/15/10	1.00	100.0
K1006676-010	07/15/10	1.02	100.0
K1006676-011	07/15/10	1.00	100.0
K1006676-012	07/15/10	1.00	100.0
K1006676-013	07/15/10	1.01	100.0
K1006676-014	07/15/10	1.00	100.0
K1006676-015	07/15/10	1.01	100.0
K1006676-016	07/15/10	1.00	100.0
K1006676-017	07/15/10	1.00	100.0
K1006676-018	07/15/10	1.00	100.0
K1006676-018D	07/15/10	1.01	100.0
K1006676-018S	07/15/10	1.02	100.0
K1006676-019	07/15/10	1.01	100.0
K1006676-020	07/15/10	1.00	100.0
K1006676-MB	07/15/10	1.00	100.0
LCSS	07/15/10	1.00	100.0
LCSW	07/15/10	100.0	100.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006676-001	07/15/10	1.00	100.0
K1006676-002	07/15/10	1.01	100.0
K1006676-003	07/15/10	1.01	100.0
K1006676-004	07/15/10	1.00	100.0
K1006676-005	07/15/10	1.02	100.0
K1006676-006	07/15/10	1.01	100.0
K1006676-007	07/15/10	1.02	100.0
K1006676-008	07/15/10	1.02	100.0
K1006676-009	07/15/10	1.01	100.0
K1006676-010	07/15/10	1.02	100.0
K1006676-011	07/15/10	1.02	100.0
K1006676-012	07/15/10	1.01	100.0
K1006676-013	07/15/10	1.02	100.0
K1006676-014	07/15/10	1.00	100.0
K1006676-015	07/15/10	1.02	100.0
K1006676-016	07/15/10	1.01	100.0
K1006676-017	07/15/10	1.00	100.0
K1006676-018	07/15/10	1.02	100.0
K1006676-018D	07/15/10	1.01	100.0
K1006676-018S	07/15/10	1.00	100.0
K1006676-019	07/15/10	1.00	100.0
K1006676-020	07/15/10	1.01	100.0
K1006676-MB	07/15/10	1.00	100.0
LCSS	07/15/10	1.02	100.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1	09:20					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
STDB	1	09:23					X	X		X				X		X	X			X				X				
STDA	1	09:26							X	X	X	X	X	X	X	X	X	X		X			X			X	X	
ICV1	1	09:29					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
ICV1	1	09:32								X				X		X	X											
ICB1	1	09:35					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
CCV1	1	09:39					X	X		X				X		X	X			X				X				
CCV1	1	09:49							X	X	X	X	X	X	X	X	X	X		X			X			X	X	
CCB1	1	09:56					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
CRA1	1	09:59					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
ICS-A1	1	10:02					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
ICS-AB1	1	10:05					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
ZZZZZZ	1	10:08																										
CCV2	1	10:11					X	X		X				X		X	X			X				X				
CCV2	1	10:14							X	X	X	X	X	X	X	X	X	X		X			X			X	X	
CCB2	1	10:17					X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
ZZZZZZ	1	10:20																										
ZZZZZZ	1	10:23																										
ZZZZZZ	1	10:26																										
ZZZZZZ	1	10:29																										
ZZZZZZ	5	10:32																										
ZZZZZZ	1	10:35																										
ZZZZZZ	1	10:38																										
ZZZZZZ	1	10:41																										
ZZZZZZ	1	10:44																										
ZZZZZZ	1	10:47																										
CCV3	1	10:50					X	X		X				X		X	X			X			X					
CCV3	1	10:53							X	X	X	X	X	X	X	X	X		X			X			X	X		
CCB3	1	10:56					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
ZZZZZZ	1	10:59																										
ZZZZZZ	1	11:02																										
ZZZZZZ	1	11:05																										

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	11:08																												
ZZZZZZ	1	11:10																												
ZZZZZZ	1	11:13																												
ZZZZZZ	1	11:16																												
ZZZZZZ	1	11:19																												
ZZZZZZ	1	11:22																												
ZZZZZZ	1	11:25																												
CCV4	1	11:28					X	X		X				X		X	X			X			X							
CCV4	1	11:31							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB4	1	11:34					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	11:37																												
K1006676-MB	2	11:40					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
LCSS	2	11:43					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-018	2	11:46					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-018D	2	11:49					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-018L	10	11:52					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-018S	2	11:55					X	X	X		X	X	X	X	X		X		X			X			X	X				
K1006676-001	2	11:58					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-002	2	12:01					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-003	2	12:04					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
CCV5	1	12:07					X	X		X				X		X	X			X			X							
CCV5	1	12:09							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB5	1	12:12					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-004	2	12:15					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-005	2	12:18					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-006	2	12:21					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-007	2	12:24					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-008	2	12:27					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-009	2	12:30					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-010	2	12:33					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-011	2	12:36					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006676-012	2	12:39					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006676-013	2	12:42					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
CCV6	1	12:45					X	X		X				X		X	X			X			X				
CCV6	1	12:48							X	X	X	X	X	X	X	X	X		X			X			X	X	
CCB6	1	12:51					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
K1006676-014	2	13:07					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
K1006676-015	2	13:10					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
K1006676-016	2	13:13					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
K1006676-017	2	13:16					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
K1006676-019	2	13:19					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
K1006676-020	2	13:22					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	
ZZZZZZ	1	13:25																									
ZZZZZZ	2	13:28																									
ZZZZZZ	2	13:31																									
ZZZZZZ	2	13:34																									
CCV7	1	13:37					X	X		X				X		X	X			X			X				
CCV7	1	13:40							X	X	X	X	X	X	X	X	X		X			X			X	X	
CCB7	1	13:42					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	17:16				X															X			X				*
Cal. Blk	1	17:26				X															X			X				*
ICV1	1	17:28				X															X			X				*
CCV1	1	17:31				X															X			X				*
ICB1	1	17:36				X															X			X				*
CCB1	1	17:38				X															X			X				*
CRA1	1	17:44				X															X			X				*
ICS-A1	1	17:47				X															X			X				*
ICS-AB1	1	17:50				X															X			X				*
ZZZZZZ	1	17:53																										
ZZZZZZ	1	17:56																										
ZZZZZZ	1	18:00																										
ZZZZZZ	1	18:02																										
ZZZZZZ	1	18:06																										
ZZZZZZ	5	18:09																										
ZZZZZZ	1	18:12																										
ZZZZZZ	1	18:16																										
ZZZZZZ	1	18:20																										
ZZZZZZ	1	18:24																										
CCV2	1	18:27				X															X			X				*
CCB2	1	18:32				X															X			X				*
ZZZZZZ	1	18:34																										
ZZZZZZ	1	18:38																										
ZZZZZZ	1	18:41																										
ZZZZZZ	1	18:45																										
ZZZZZZ	1	18:49																										
ZZZZZZ	1	18:52																										
ZZZZZZ	1	18:56																										
ZZZZZZ	1	18:59																										
ZZZZZZ	1	19:03																										
ZZZZZZ	1	19:06																										
CCV3	1	19:10				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB3	1	19:14				X															X			X				*
ZZZZZZ	1	19:17																											
ZZZZZZ	1	19:20																											
K1006676-MB	5	19:24				X															X			X				*
LCSS	100	19:26				X															X			X				
LCSW	5	19:30																										*
K1006676-018	5	19:33				X															X			X				*
K1006676-018D	5	19:36				X															X			X				*
K1006676-018L	25	19:40				X															X			X				*
K1006676-018A	5	19:43				X															X			X				*
K1006676-018S	25	19:47				X															X			X				*
CCV4	1	19:51				X															X			X				*
CCB4	1	19:55				X															X			X				*
K1006676-001	5	19:58				X															X			X				*
K1006676-002	5	20:01				X															X			X				*
K1006676-003	5	20:05				X															X			X				*
K1006676-004	5	20:08				X															X			X				*
K1006676-005	5	20:12				X															X			X				*
K1006676-006	5	20:16				X															X			X				*
K1006676-007	5	20:19				X															X			X				*
K1006676-008	5	20:23				X															X			X				*
K1006676-009	5	20:26				X															X			X				*
K1006676-010	5	20:30				X															X			X				*
CCV5	1	20:33				X															X			X				*
CCB5	1	20:38				X															X			X				*
K1006676-011	5	20:40				X															X			X				*
K1006676-012	5	20:44				X															X			X				*
K1006676-013	5	20:47				X															X			X				*
K1006676-014	5	20:51				X															X			X				*
K1006676-015	5	20:54				X															X			X				*
K1006676-016	5	20:58				X															X			X				*
K1006676-017	5	21:01				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
K1006676-019	5	21:05				X															X			X				*
K1006676-020	5	21:09				X															X			X				*
CCV6	1	21:12				X															X			X				*
CCB6	1	21:16				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
Cal. Blk	1.00	17:16															X										
Cal. Blk	1.00	17:26															X										
ICV1	1.00	17:28															X										
CCV1	1.00	17:31															X										
ICB1	1.00	17:36															X										
CCB1	1.00	17:38															X										
CRA1	1.00	17:44															X										
ICS-A1	1.00	17:47															X										
ICS-AB1	1.00	17:50															X										
ZZZZZZ	1.00	17:53																									
ZZZZZZ	1.00	17:56																									
ZZZZZZ	1.00	18:00																									
ZZZZZZ	1.00	18:02																									
ZZZZZZ	1.00	18:06																									
ZZZZZZ	5.00	18:09																									
ZZZZZZ	1.00	18:12																									
ZZZZZZ	1.00	18:16																									
ZZZZZZ	1.00	18:20																									
ZZZZZZ	1.00	18:24																									
CCV2	1.00	18:27															X										
CCB2	1.00	18:32															X										
ZZZZZZ	1.00	18:34																									
ZZZZZZ	1.00	18:38																									
ZZZZZZ	1.00	18:41																									
ZZZZZZ	1.00	18:45																									
ZZZZZZ	1.00	18:49																									
ZZZZZZ	1.00	18:52																									
ZZZZZZ	1.00	18:56																									
ZZZZZZ	1.00	18:59																									
ZZZZZZ	1.00	19:03																									
ZZZZZZ	1.00	19:06																									
CCV3	1.00	19:10															X										
CCB3	1.00	19:14															X										
ZZZZZZ	1.00	19:17																									

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
ZZZZZZ	1.00	19:20																									
K1006676-MB	5.00	19:24															X										
LCSS	00.00	19:26																									
LCSW	5.00	19:30															X										
K1006676-018	5.00	19:33															X										
K1006676-018D	5.00	19:36															X										
K1006676-018L	25.00	19:40															X										
K1006676-018A	5.00	19:43															X										
K1006676-018S	25.00	19:47															X										
CCV4	1.00	19:51															X										
CCB4	1.00	19:55															X										
K1006676-001	5.00	19:58															X										
K1006676-002	5.00	20:01															X										
K1006676-003	5.00	20:05															X										
K1006676-004	5.00	20:08															X										
K1006676-005	5.00	20:12															X										
K1006676-006	5.00	20:16															X										
K1006676-007	5.00	20:19															X										
K1006676-008	5.00	20:23															X										
K1006676-009	5.00	20:26															X										
K1006676-010	5.00	20:30															X										
CCV5	1.00	20:33															X										
CCB5	1.00	20:38															X										
K1006676-011	5.00	20:40															X										
K1006676-012	5.00	20:44															X										
K1006676-013	5.00	20:47															X										
K1006676-014	5.00	20:51															X										
K1006676-015	5.00	20:54															X										
K1006676-016	5.00	20:58															X										
K1006676-017	5.00	21:01															X										
K1006676-019	5.00	21:05															X										
K1006676-020	5.00	21:09															X										
CCV6	1.00	21:12															X										
CCB6	1.00	21:16															X										

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/28/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Cal. Blk	1	15:50			X																									
Cal. Stn	1	15:52			X																									
ICV1	1	15:54			X																									
CCV1	1	15:56			X																									
ICB1	1	16:03			X																									
CCB1	1	16:06			X																									
CRA1	1	16:08			X																									
ICS-A1	1	16:10			X																									
ICS-AB1	1	16:12			X																									
ZZZZZZ	1	16:16																												
ZZZZZZ	1	16:19																												
ZZZZZZ	1	16:25																												
ZZZZZZ	1	16:29																												
ZZZZZZ	5	16:32																												
ZZZZZZ	1	16:35																												
ZZZZZZ	1	16:39																												
ZZZZZZ	1	16:45																												
ZZZZZZ	1	16:48																												
ZZZZZZ	1	16:51																												
CCV2	1	16:54			X																									
CCB2	1	17:00			X																									
ZZZZZZ	1	17:02																												
ZZZZZZ	1	17:05																												
ZZZZZZ	1	17:08																												
ZZZZZZ	1	17:12																												
ZZZZZZ	1	17:17																												
ZZZZZZ	1	17:20																												
ZZZZZZ	1	17:23																												
ZZZZZZ	1	17:26																												
ZZZZZZ	1	17:29																												
ZZZZZZ	1	17:32																												
CCV3	1	17:35			X																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/28/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
CCB3	1	17:41			X																									
ZZZZZZ	1	17:43																												
ZZZZZZ	1	17:46																												
ZZZZZZ	1	17:50																												
ZZZZZZ	1	17:53																												
ZZZZZZ	1	17:56																												
ZZZZZZ	1	17:59																												
ZZZZZZ	1	18:02																												
ZZZZZZ	1	18:05																												
CCV4	1	18:08			X																									
CCB4	1	18:14			X																									
ZZZZZZ	1	18:16																												
ZZZZZZ	1	18:18																												
ZZZZZZ	1	18:23																												
ZZZZZZ	1	18:26																												
ZZZZZZ	1	18:29																												
ZZZZZZ	1	18:33																												
ZZZZZZ	1	18:36																												
ZZZZZZ	1	18:41																												
ZZZZZZ	1	18:44																												
ZZZZZZ	5	18:47																												
CCV5	1	18:51			X																									
CCB5	1	18:57			X																									
ZZZZZZ	1	18:59																												
ZZZZZZ	1	19:03																												
ZZZZZZ	1	19:08																												
ZZZZZZ	1	19:11																												
ZZZZZZ	1	19:14																												
ZZZZZZ	1	19:18																												
ZZZZZZ	1	19:21																												
ZZZZZZ	1	19:24																												
ZZZZZZ	1	19:27																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/28/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	19:31																												
CCV6	1	19:34			X																									
CCB6	1	19:40			X																									
ZZZZZZ	1	19:42																												
ZZZZZZ	1	19:45																												
ZZZZZZ	1	19:48																												
ZZZZZZ	1	19:52																												
ZZZZZZ	1	19:55																												
ZZZZZZ	1	19:58																												
ZZZZZZ	1	20:01																												
ZZZZZZ	1	20:04																												
ZZZZZZ	1	20:07																												
CCV7	1	20:10			X																									
CCB7	1	20:16			X																									
ZZZZZZ	1	20:18																												
ZZZZZZ	1	20:20																												
ZZZZZZ	1	20:27																												
ZZZZZZ	1	20:30																												
ZZZZZZ	5	20:33																												
ZZZZZZ	1	20:36																												
ZZZZZZ	1	20:39																												
ZZZZZZ	1	20:44																												
ZZZZZZ	1	20:48																												
ZZZZZZ	1	20:51																												
CCV8	1	20:54			X																									
CCB8	1	21:00			X																									
ZZZZZZ	1	21:02																												
ZZZZZZ	1	21:05																												
ZZZZZZ	1	21:09																												
ZZZZZZ	1	21:12																												
ZZZZZZ	1	21:15																												
ZZZZZZ	1	21:18																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/28/10

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	21:21																									
ZZZZZZ	1	21:24																									
ZZZZZZ	1	21:27																									
ZZZZZZ	1	21:31																									
CCV9	1	21:34			X																						
CCB9	1	21:39			X																						
ZZZZZZ	1	21:42																									
K1006676-MB	5	21:45			X																						
LCSS	100	21:47			X																						
K1006676-018	5	21:53			X																						
K1006676-018D	5	21:56			X																						
K1006676-018L	25	22:00			X																						
K1006676-018A	5	22:03			X																						
K1006676-018S	25	22:06			X																						
K1006676-001	5	22:11			X																						
K1006676-002	5	22:14			X																						
CCV10	1	22:17			X																						
CCB10	1	22:23			X																						
K1006676-003	5	22:25			X																						
K1006676-004	5	22:28			X																						
K1006676-005	5	22:31			X																						
K1006676-006	5	22:35			X																						
K1006676-007	5	22:38			X																						
K1006676-008	5	22:41			X																						
K1006676-009	5	22:44			X																						
K1006676-010	5	22:47			X																						
K1006676-011	5	22:50			X																						
K1006676-012	5	22:54			X																						
CCV11	1	22:57			X																						
CCB11	1	23:02			X																						
K1006676-013	5	23:05			X																						
K1006676-014	5	23:08			X																						

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/28/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1006676-015	5	23:11			X																									
K1006676-016	5	23:14			X																									
K1006676-017	5	23:17			X																									
K1006676-019	5	23:20			X																									
K1006676-020	5	23:23			X																									
ZZZZZZ	5	23:27																												
ZZZZZZ	100	23:29																												
CCV12	1	23:35			X																									
CCB12	1	23:41			X																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 07/17/10 **End Date:** 07/17/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Standard #1	1	09:42																X									
Standard #2	1	09:44																X									
Standard #3	1	09:46																X									
Standard #4	1	09:48																X									
Standard #5	1	09:49																X									
ICV1	1	09:51																X									
ICB1	1	09:53																X									
CCV1	1	09:55																X									
CCB1	1	09:56																X									
CRA1	1	09:58																X									
K1006676-MB	1	10:00																X									
LCSS	10	10:02																X									
K1006676-001	1	10:04																X									
K1006676-001A	1	10:07																X									
K1006676-002	1	10:09																X									
K1006676-003	1	10:10																X									
K1006676-004	1	10:12																X									
K1006676-005	1	10:14																X									
K1006676-006	1	10:16																X									
CCV2	1	10:18																X									
CCB2	1	10:19																X									
K1006676-007	1	10:21																X									
K1006676-008	1	10:23																X									
K1006676-009	1	10:25																X									
K1006676-010	1	10:26																X									
K1006676-011	1	10:28																X									
K1006676-012	1	10:30																X									
K1006676-013	1	10:32																X									
K1006676-014	1	10:34																X									
K1006676-015	1	10:35																X									
K1006676-016	1	10:37																X									
ZCCV3	1	10:39																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006676

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 07/17/10 **End Date:** 07/17/10

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV3	1	10:51																X									
CCB3	1	10:53																X									
K1006676-017	1	10:55																X									
K1006676-018	1	10:56																X									
K1006676-018D	1	10:58																X									
K1006676-018S	1	11:00																X									
K1006676-019	1	11:02																X									
K1006676-020	1	11:04																X									
CCV4	1	11:06																X									
CCB4	1	11:07																X									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run:	115405	**Prep Workflow**:	MetDigSICP	**Status**:	Prepped	**Prep Date**:	07/15/2010 09:57
Team:	Metals	**Prep Method**:	EPA 3050B	**Current Step**:	Digestion		
Analyst:	WSchumann	**Rush/NPDES**:	N/A			**Due Date**:	07/16/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006966-01	Method Blank		g	As Received	100 mL			10% HNO3 10% HCL
KQ1006966-02	Lab Control Sample		1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-001	BG-7 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-002	BG-7 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-003	BG-7 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-004	BG-8 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-005	BG-8 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-006	BG-8 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-007	BG-101 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-008	BG-11 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-009	BG-11 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-010	BG-11 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-011	BG-12 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-012	BG-12 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-013	BG-12 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-014	BG-15 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-015	BG-15 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-016	BG-15 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-017	BG-102 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-018	BG-16 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-018: KQ1006966-03	Duplicate	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-018: KQ1006966-04	Matrix Spike	.01	1.00 g	As Received	100 mL	2 mL 1 mL 1 mL 1 mL	17544 18003 18837 18980	10% HNO3 10% HCL
K1006676-019	BG-16 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006676-020	BG-16 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011
K-MET SS1	Spike	17544	9/11/2010
K-MET SS3	Spike	18837	12/1/2010

Name	Type	ID	Expires
K-MET SS4	Spike	18980	12/16/2010
K-MET SS5	Spike	18003	11/20/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HCL	18676

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/15/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-01	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	15-JUL-10 09:57	15-JUL-10 11:15	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min HCL Reflux: 15min

Review

Reviewed by: _____ Date: 7/15/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

ICP

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	1.00
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Analytical Services™ Preparation Information Benchsheet

Prep Run: 115406 **Prep Workflow**: MetDigSMS **Status**: Prepped **Prep Date**: 07/15/2010 09:57
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion
Analyst: WSchumann **Rush/NPDES**: N/A **Due Date**: 07/16/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006967-01	Method Blank		g	As Received	100 mL			10% HNO3
KQ1006967-02	Lab Control Sample		1.00 g	As Received	100 mL			10% HNO3
KQ1006967-05	Lab Control Sample		g	As Received	100 mL			10% HNO3
K1006676-001	BG-7 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-002	BG-7 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006676-003	BG-7 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006676-004	BG-8 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006676-005	BG-8 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006676-006	BG-8 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-007	BG-101 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006676-008	BG-11 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-009	BG-11 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-010	BG-11 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006676-011	BG-12 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-012	BG-12 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-013	BG-12 12-18 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006676-014	BG-15 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-015	BG-15 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006676-016	BG-15 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-017	BG-102 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-018	BG-16 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006676-018: KQ1006967-03	Duplicate	.01	1.01 g	As Received	100 mL			10% HNO3
K1006676-018: KQ1006967-04	Matrix Spike	.01	1.02 g	As Received	100 mL	2 mL 1 mL 1 mL	17544 18837 18980	10% HNO3
K1006676-019	BG-16 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3

K1006676-020	BG-16 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3

25 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011	K-MET SS3	Spike	18837	12/1/2010
K-MET SS1	Spike	17544	9/11/2010	K-MET SS4	Spike	18980	12/16/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760	Digestion	K-MET H2O2	18955
Digestion	K-MET HNO3	18888			

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/15/10		Digestion	K-BlockDigester-02	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	15-JUL-10 09:57	15-JUL-10 11:00	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min The second LCS and spike are spike with 2.00mls 10ppm U MS13-67-C

Review

Reviewed by: _____ Date: 7/15/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

MS

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100**	1000ml	200	
	Ag	100**	1000ml	5	
	Ba	100**	1000ml	200	
	Be	100**	1000ml	5	
	Cd	100**	1000ml	5	
	Co	100**	1000ml	50	
	Cr	100**	1000ml	20	
	Cu	100**	1000ml	25	
	Fe	100**	1000ml	100	
	Pb	100**	1000ml	50	
	Mn	100**	1000ml	50	
	Ni	100**	1000ml	50	
	Sb	50	1000ml	50	
	V	100**	1000ml	50	
	Zn	100**	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	~~1.00~~ WS 7/14/10
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	WS 7/14/10 ppm	Logbook #	Exp. Date
U	2.00	100	MS13-67-C	11/12/10

CVAA Mercury Data Review Form

K-CVAA-01

Element: Hg

Analysis Lot #: 208368 ~~368~~ 374 ms 7/15/10

Cal. STD/CCV Source: HG1-93-T

Service Request Numbers:

K1006676

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: MS (initials)

Primary Reviewed By: MAS Date: 7/15/10 MS

Secondary Reviewed By: JDB Date: 7/19/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # : K1006676
Analysis For: ~~Hg~~	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.36		107%
2	ICB1	~	~	~	-0.03		< 0.2
3	CCV1	~	~	~	5.13		103%
4	CCB1	~	~	~	-0.06		< 0.2
5	CRA1	~	~	~	0.18		90%
6	K1006676-MB	0.598	50	~	0.01	0.001	
7	LCSS K1006676 1/10	0.263	50	10	4.15	7.890	116%
8	K1006676-001	0.521	50	~	0.07	0.007	
9	K1006676-001A		50	~	4.69		94%
10	K1006676-002	0.519	50	~	0.12	0.012	
11	K1006676-003	0.527	50	~	0.03	0.003	
12	K1006676-004	0.516	50	~	0.20	0.019	
13	K1006676-005	0.590	50	~	0.08	0.007	
14	K1006676-006	0.590	50	~	0.04	0.003	
15	CCV2	~	~	~	5.24		105%
16	CCB2	~	~	~	-0.04		< 0.2
17	K1006676-007	0.565	50	~	0.05	0.004	
18	K1006676-008	0.613	50	~	0.10	0.008	
19	K1006676-009	0.514	50	~	0.02	0.002	
20	K1006676-010	0.550	50	~	0.03	0.003	
21	K1006676-011	0.541	50	~	0.07	0.006	
22	K1006676-012	0.548	50	~	0.09	0.008	
23	K1006676-013	0.573	50	~	0.21	0.018	
24	K1006676-014	0.512	50	~	0.17	0.017	
25	K1006676-015	0.533	50	~	0.09	0.008	

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level: x @ 5 µg/L

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa Goth	7/17/10	1

[Controlled - HgSoilRunForm 2-18-10] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: ~~Hg~~	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K1006676-016	0.536	50	~	0.05	0.005	
27	~~CCV3~~	~	~	~	~~0.34~~ No sample MS 7/7/10		
28	CCV3	~	~	~	5.12		102%
29	CCB3	~	~	~	-0.02		< 0.2
30	K1006676-017	0.518	50	~	0.15	0.014	
31	K1006676-018	0.564	50	~	0.18	0.016	
32	K1006676-018D	0.545	50	~	0.18	0.017	
33	K1006676-018S	0.578	50	~	5.14	0.445	
34	K1006676-019	0.508	50	~	0.09	0.009	
35	K1006676-020	0.604	50	~	0.08	0.007	
36	CCV4	~	~	~	5.28		106%
37	CCB4	~	~	~	-0.04		< 0.2
38							
39							
40							
41							
42							
43			MS 7/7/10				
44							
45							
46							
47							
48							
49							
50							

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1006676-018S=0.433mg/kg

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

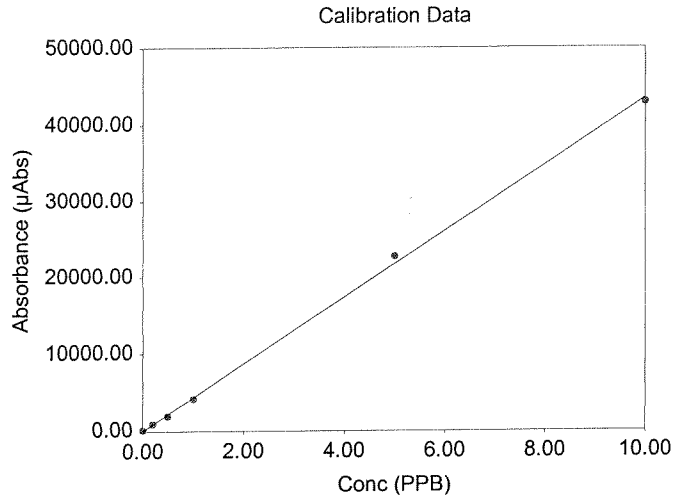
Analyst:	Date:	Page Number:
[signature]	7/7/10	2

[Controlled - HgSoilRunForm 2-18-10] HG2.XLS

CETAC Hg Analysis Report - 10071700.DB - Saturday, July 17, 2010, 11:09:15 AM

Analyst M SMITH
Date Started Saturday, July 17, 2010, 09:41:04
Worksheet Hg 071810A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	17-Jul-2010, 09:41	0.00	10.60	158.00	180	153	159	140	
Standard #1	17-Jul-2010, 09:42	0.20	1.39	923.00	915	920	916	942	
Standard #2	17-Jul-2010, 09:44	0.50	1.08	1950.00	1961	1973	1944	1924	
Standard #3	17-Jul-2010, 09:46	1.00	1.07	4170.00	4118	4139	4204	4205	
Standard #4	17-Jul-2010, 09:48	5.00	1.27	22700.00	22346	22677	22908	22988	
Standard #5	17-Jul-2010, 09:49	10.00	0.52	42900.00	42602	42909	43019	43120	



Int.	0.000
Slope	4340.016
Correlation	0.99953

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICV1	17-Jul-2010, 09:51	5.36	0.72	23200.00	23009	23238	23320	23398	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICB1	17-Jul-2010, 09:53	-0.03	11.40	-124.00	-139	-112	-112	-133	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV1	17-Jul-2010, 09:55	5.13	1.32	22300.00	21934	22177	22415	22615	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB1	17-Jul-2010, 09:56	-0.06	11.30	-253.00	-291	-260	-233	-229	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CRA1	17-Jul-2010, 09:58	0.18	6.34	798.00	738	778	819	855	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006676-MB	17-Jul-2010, 10:00	0.01	153.00	23.20	-20	12	40	62	
LCSS K1006676 1/10	17-Jul-2010, 10:02	4.15	0.87	18000.00	17829	17930	18052	18192	
K1006676-001	17-Jul-2010, 10:04	0.07	10.20	307.00	272	291	321	343	
K1006676-001A	17-Jul-2010, 10:07	4.69	1.19	20300.00	20055	20244	20439	20615	
K1006676-002	17-Jul-2010, 10:09	0.12	2.37	531.00	512	536	539	535	
K1006676-003	17-Jul-2010, 10:10	0.03	22.50	115.00	80	120	119	143	
K1006676-004	17-Jul-2010, 10:12	0.20	4.59	851.00	813	827	862	900	
K1006676-005	17-Jul-2010, 10:14	0.08	11.00	361.00	305	360	387	391	
K1006676-006	17-Jul-2010, 10:16	0.04	17.90	157.00	126	144	171	189	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV2	17-Jul-2010, 10:18	5.24	1.01	22700.00	22467	22651	22856	22989	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB2	17-Jul-2010, 10:19	-0.04	26.20	-168.00	-230	-168	-136	-137	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006676-007	17-Jul-2010, 10:21	0.05	19.50	235.00	175	223	260	279	
K1006676-008	17-Jul-2010, 10:23	0.10	7.22	414.00	394	389	419	454	
K1006676-009	17-Jul-2010, 10:25	0.02	26.10	68.60	46	66	74	89	
K1006676-010	17-Jul-2010, 10:26	0.03	16.20	131.00	101	137	138	150	
K1006676-011	17-Jul-2010, 10:28	0.07	14.82	306.00	282	290	318	333	

CETAC Hg Analysis Report - 10071700.DB - Saturday, July 17, 2010, 11:09:16 AM

Analyst M SMITH
Date Started Saturday, July 17, 2010, 10:30:28
Worksheet Hg 071810A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006676-012	17-Jul-2010, 10:30	0.09	10.10	412.00	359	400	441	449	
K1006676-013	17-Jul-2010, 10:32	0.21	5.42	922.00	865	895	955	972	
K1006676-014	17-Jul-2010, 10:34	0.17	7.07	753.00	693	725	794	802	
K1006676-015	17-Jul-2010, 10:35	0.09	7.11	410.00	377	396	424	442	
K1006676-016	17-Jul-2010, 10:37	0.05	5.98	231.00	216	221	240	244	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV3	17-Jul-2010, 10:39	0.34	2.59	1480.00	1508	1522	1462	1440	Q
CCV3	17-Jul-2010, 10:51	5.12	0.90	22200.00	21948	22200	22287	22420	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB3	17-Jul-2010, 10:53	-0.02	10.90	-94.60	-109	-95	-90	-85	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006676-017	17-Jul-2010, 10:55	0.15	5.09	670.00	624	663	694	698	
K1006676-018	17-Jul-2010, 10:56	0.18	5.29	771.00	721	759	788	816	
K1006676-018D	17-Jul-2010, 10:58	0.18	2.57	777.00	749	777	793	790	
K1006676-018S	17-Jul-2010, 11:00	5.14	1.11	22300.00	21982	22250	22463	22536	
K1006676-019	17-Jul-2010, 11:02	0.09	9.02	405.00	357	398	420	443	
K1006676-020	17-Jul-2010, 11:04	0.08	13.90	342.00	278	335	367	386	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV4	17-Jul-2010, 11:06	5.28	1.84	22900.00	22297	23053	23216	23118	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB4	17-Jul-2010, 11:07	-0.04	4.21	-152.00	-160	-152	-152	-145	

Columbia Analytical Services - **Preparation Information Benchsheet**

Prep Run: 114743 **Prep Workflow**: HgDigS **Status**: Prepped **Prep Date**: 07/16/2010 11:30
Team: Metals **Prep Method**: Method **Current Step**: Digestion
Analyst: KKLEIN **Rush/NPDES**: N/A **Due Date**: 07/16/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006532-03	Method Blank		0.598 g	wet weight	50 mL			
KQ1006532-04	Lab Control Sample		0.263 g	wet weight	50 mL			
K1006676-001	BG-7 0-2 COMP	.01	0.609 g	wet weight	50 mL			0.521
K1006676-002	BG-7 2-12 COMP	.01	0.627 g	wet weight	50 mL			0.519
K1006676-003	BG-7 12-18 COMP	.01	0.582 g	wet weight	50 mL			0.527
K1006676-004	BG-8 0-2 COMP	.01	0.618 g	wet weight	50 mL			0.516
K1006676-005	BG-8 2-12 COMP	.01	0.678 g	wet weight	50 mL			0.590
K1006676-006	BG-8 12-18 COMP	.01	0.655 g	wet weight	50 mL			0.590
K1006676-007	BG-101 2-12 COMP	.01	0.645 g	wet weight	50 mL			0.565
K1006676-008	BG-11 0-2 COMP	.01	0.695 g	wet weight	50 mL			0.613
K1006676-009	BG-11 2-12 COMP	.01	0.603 g	wet weight	50 mL			0.514
K1006676-010	BG-11 12-18 COMP	.01	0.601 g	wet weight	50 mL			0.550
K1006676-011	BG-12 0-2 COMP	.01	0.640 g	wet weight	50 mL			0.541
K1006676-012	BG-12 2-12 COMP	.01	0.629 g	wet weight	50 mL			0.548
K1006676-013	BG-12 12-18 COMP	.01	0.653 g	wet weight	50 mL			0.573
K1006676-014	BG-15 0-2 COMP	.01	0.614 g	wet weight	50 mL			0.512
K1006676-015	BG-15 2-12 COMP	.01	0.614 g	wet weight	50 mL			0.533
K1006676-016	BG-15 12-18 COMP	.01	0.623 g	wet weight	50 mL			0.536
K1006676-017	BG-102 2-12 COMP	.01	0.602 g	wet weight	50 mL			0.518
K1006676-018	BG-16 0-2 COMP	.01	0.641 g	wet weight	50 mL			0.564
K1006676-018: KQ1006532-05	Duplicate	.01	0.614 g	wet weight	50 mL			0.545
K1006676-018: KQ1006532-06	Matrix Spike	.01	0.656 g	wet weight	50 mL	0.25 mL	19172	0.578

Dry weight

K1006676-019	BG-16 2-12 COMP	.01	0.573 g	wet weight	50 mL			0.508
K1006676-020	BG-16 12-18 COMP	.01	0.674 g	wet weight	50 mL			0.604

Dry weight J

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Soil/TCLP 1000 ug/L	Spike	19172	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET HNO3	15193
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/15/2010	

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	16-JUL-10 11:30	16-JUL-10 12:00	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-T

Review

Reviewed by: JDB Date: 7/19/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run:	114743	**Prep Workflow**:	HgDigS	**Status**:	Draft	**Prep Date**:	07/01/2010 13:06
Team:	Metals	**Prep Method**:	Method	**Current Step**:	Digestion		
Analyst:	BSHELDON	**Rush/NPDES**:	N/A			**Due Date**:	07/16/2010

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006532-03	Method Blank		0.5 g	0.598					
KQ1006532-04	Lab Control Sample		0.5 g	0.263					
K1006676-001	BG-7 0-2 COMP	.01	0.58 g	0.609					
K1006676-002	BG-7 2-12 COMP	.01	0.60 g	0.627					
K1006676-003	BG-7 12-18 COMP	.01	0.55 g	0.582					
K1006676-004	BG-8 0-2 COMP	.01	0.60 g	0.616					
K1006676-005	BG-8 2-12 COMP	.01	0.57 g	0.678					
K1006676-006	BG-8 12-18 COMP	.01	0.56 g	0.655					
K1006676-007	BG-101 2-12 COMP	.01	0.57 g	0.645					
K1006676-008	BG-11 0-2 COMP	.01	0.57 g	0.695					
K1006676-009	BG-11 2-12 COMP	.01	0.59 g	0.603					
K1006676-010	BG-11 12-18 COMP	.01	0.55 g	0.601					
K1006676-011	BG-12 0-2 COMP	.01	0.59 g	0.640					
K1006676-012	BG-12 2-12 COMP	.01	0.57 g	0.629					
K1006676-013	BG-12 12-18 COMP	.01	0.57 g	0.653					
K1006676-014	BG-15 0-2 COMP	.01	0.60 g	0.614					
K1006676-015	BG-15 2-12 COMP	.01	0.58 g	0.614					
K1006676-016	BG-15 12-18 COMP	.01	0.58 g	0.623					
K1006676-017	BG-102 2-12 COMP	.01	0.58 g	0.602					
K1006676-018	BG-16 0-2 COMP	.01	0.57 g	0.641					
K1006676-018: KQ1006532-05	Duplicate	.01	0.5 g	0.614					
K1006676-018: KQ1006532-06	Matrix Spike	.01	0.5 g	0.656					
K1006676-019	BG-16 2-12 COMP	.01	0.56 g	0.573					
K1006676-020	BG-16 12-18 COMP	.01	0.56 g	0.674					

24 Total Samples consisting of 20 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion						

Comments

Service Request # K1006676 (Soil)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits		✓
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 071610BICP02
Star Lims: 208725
Spike: 132%(Ca), 161%(Mg), 166% K Recoveries.

Primary Review by 3C Date 7/16/10

Secondary Review by [signature] Date 7/16/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/16/10 09:20 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1511	.0097	.0069	.00005
Stddev	.0177	.0137	.0137	.00002
%RSD	11.73	141.4	198.0	46.512
#1	.1636	.0194	-.0028	.00006
#2	.1385	.0000	.0166	.00003

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00284	.3548	.0002	.3818
Stddev	.00024	.0159	.0000	.0223
%RSD	8.6038	4.476	2.434	5.847
#1	-.00266	.3660	.0002	.3660
#2	-.00301	.3435	.0002	.3976

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0663	-.0002	.0006	.0235
Stddev	.0587	.0001	.0002	.0020
%RSD	88.40	28.96	33.19	8.303
#1	-.1078	-.0001	.0007	.0221
#2	-.0249	-.0002	.0004	.0249

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0015	.0008	.0002	.0055
Stddev	.0000	.0007	.0000	.0157
%RSD	2.213	88.40	3.718	282.7
#1	.0015	.0013	.0002	.0166
#2	.0015	.0003	.0002	-.0055

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.01935	.00108	.0000	.0003
Stddev	.01564	.00029	.0000	.0001
%RSD	80.822	27.189	46.47	41.95
#1	.03041	.00129	.0000	.0004
#2	.00829	.00087	.0000	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.1770	-.0374	.0249
Stddev	.0002	.2307	.0098	.0039
%RSD	141.4	130.4	26.13	15.70
#1	-.0003	.3401	-.0305	.0221
#2	.0000	.0138	-.0443	.0276

Sample Name: Blank Run Time: 07/16/10 09:20

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0047	.0004	.0082	.0003
Stddev	.0005	.0000	.0001	.0001
%RSD	11.59	5.901	1.020	40.81
#1	.0051	.0004	.0082	.0002
#2	.0043	.0004	.0083	.0004

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0347	.1912	.00414	.0001
Stddev	.0373	.0040	.00026	.0000
%RSD	107.5	2.106	6.2425	16.41
#1	.0610	.1941	.00432	.0001
#2	.0083	.1884	.00396	.0002

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.06773	-.00171
Stddev	.05279	.00011
%RSD	77.939	6.6134
#1	.10506	-.00163
#2	.03040	-.00179

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	175.50
Stddev	1.34
%RSD	.76562
#1	176.45
#2	174.55

7/16/10

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Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/16/10 09:23 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.36	3.4423	.53175	40.47
Stddev	.06	.0324	.00177	.34
%RSD	.3186	.94075	.33377	.8315
#1	20.31	3.4194	.53300	40.23
#2	20.40	3.4652	.53049	40.70

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.8630	58.83	.7825	196.3
Stddev	.0043	.33	.0016	.0
%RSD	.4992	.5605	.2027	.0028
#1	.8599	58.60	.7814	196.3
#2	.8660	59.07	.7836	196.3

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.407	47.23	99.12	361.54
Stddev	.011	.18	.51	.94
%RSD	.2443	.3827	.5110	.25986
#1	4.414	47.10	98.77	362.20
#2	4.399	47.36	99.48	360.87

Elem	Sr4077
Line	407.771 { 82}
Avg	9.1932
Stddev	.0046
%RSD	.04960
#1	9.1900
#2	9.1964

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	173.17
Stddev	.15
%RSD	.08918
#1	173.06
#2	173.28

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/16/10 09:26 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	17.16	11.73	48.00	.3449
Stddev	.10	.07	.14	.0003
%RSD	.5706	.5591	.3017	.0980
#1	17.09	11.69	47.90	.3446
#2	17.23	11.78	48.10	.3451

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	35.08	.1378	.2247	18.00
Stddev	.21	.0000	.0004	.04
%RSD	.5968	.0092	.1613	.2058
#1	34.93	.1378	.2249	18.03
#2	35.23	.1378	.2244	17.97

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4871	.1101	1522.7	3.6195
Stddev	.0058	.0002	1.5	.0094
%RSD	1.182	.1960	.10129	.26031
#1	.4912	.1102	1521.6	3.6261
#2	.4830	.1099	1523.8	3.6128

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1790	.2055	11.14	19.23
Stddev	.0022	.0006	.02	.02
%RSD	1.211	.3147	.1580	.1225
#1	.1775	.2050	11.12	19.22
#2	.1805	.2059	11.15	19.25

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.1079	.1742	.1846	.19654
Stddev	.0002	.0005	.0013	.00100
%RSD	.2141	.2982	.6873	.50932
#1	.1081	.1745	.1855	.19725
#2	.1078	.1738	.1837	.19584

Elem	Tl1908
Line	190.864 {176}
Avg	.0916
Stddev	.0002
%RSD	.1731
#1	.0915
#2	.0918

Sample Name: STDA Run Time: 07/16/10 09:26

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	176.14
Stddev	.12
%RSD	.06932
#1	176.06
#2	176.23

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 07/16/10 09:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.135	2.480	2.513	5.1596	.12581	.0047
Stddev	.001	.007	.023	.0186	.00016	.0003
%RSD	.0235	.2828	.9182	.36050	.12861	6.611
#1	5.134	2.485	2.496	5.1464	.12570	.0044
#2	5.136	2.475	2.529	5.1727	.12593	.0049
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	5.000%	5.000%	5.000%	5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.238	12.61	.5062	1.241	.6242	2.533
Stddev	.006	.08	.0059	.004	.0074	.066
%RSD	.4546	.6250	1.173	.2810	1.186	2.619
#1	1.234	12.55	.5020	1.238	.6294	2.580
#2	1.242	12.66	.5104	1.243	.6189	2.486
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	12.65	1.1923	1.992	1.237	12.91
Stddev	.008	.02	.0026	.017	.007	.06
%RSD	.3106	.1228	.21554	.8494	.5418	.4969
#1	2.465	12.66	1.1905	1.980	1.232	12.96
#2	2.476	12.64	1.1942	2.004	1.242	12.87
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	5.000%	5.000%	5.0000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.487	.6290	12.53	.0094	1.247	1.244
Stddev	.006	.0140	.05	.0018	.002	.008
%RSD	.2512	2.232	.4008	19.45	.1795	.6704
#1	2.483	.6190	12.57	.0107	1.246	1.238
#2	2.492	.6389	12.50	.0081	1.249	1.250
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 07/16/10 09:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0402	-.1370	2.0084	2.510	.00054	.00671
Stddev	.0043	.0007	.0036	.006	.00022	.00005
%RSD	10.81	.5186	.17811	.2578	41.414	.75505
#1	-.0433	-.1365	2.0059	2.505	.00069	.00675
#2	-.0371	-.1375	2.0109	2.514	.00038	.00668
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	175.91
Stddev	.15
%RSD	.08428
#1	175.80
#2	176.01

Method: 2010A Sample Name: ICVB1 ICP7-Sb-C Operator:
Comment:
Run Time: 07/16/10 09:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.027	.0158	-.0005	.00501	.00018	1.987
Stddev	.008	.0217	.0021	.00074	.00002	.005
%RSD	.7583	137.7	389.0	14.824	8.4887	.2635
#1	1.021	.0311	-.0020	.00554	.00017	1.984
#2	1.032	.0004	.0009	.00449	.00019	1.991
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	5.173	.0037	.0012	.0023	9.902
Stddev	.0003	.037	.0001	.0006	.0002	.138
%RSD	20.47	.7185	3.044	54.06	9.768	1.394
#1	.0018	5.147	.0038	.0016	.0021	9.804
#2	.0014	5.199	.0036	.0007	.0024	10.000
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	4.9422	9.984	.0131	.0021	.0551
Stddev	.0015	.0016	.029	.0066	.0000	.0193
%RSD	155.1	.03300	.2878	50.84	.5569	35.08
#1	.0020	4.9433	9.964	.0178	.0021	.0414
#2	-.0001	4.9410	10.00	.0084	.0021	.0688
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		5.0000%	5.000%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	-.0001	.0781	4.867	.0043	.0054
Stddev	.0061	.0004	.0022	.041	.0003	.0005
%RSD	51.87	292.9	2.779	.8423	6.415	9.726
#1	.0161	.0002	.0766	4.838	.0041	.0051
#2	.0075	-.0004	.0797	4.896	.0045	.0058
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVB1 Run Time: 07/16/10 09:32

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.051	5.153	.00503	.0167	2.0736	2.0163
Stddev	.029	.017	.00019	.0156	.0051	.0056
%RSD	.5643	.3324	3.6840	93.48	.24384	.27883
#1	5.031	5.141	.00490	.0278	2.0701	2.0123
#2	5.071	5.165	.00516	.0057	2.0772	2.0202
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	176.97
Stddev	.47
%RSD	.26700
#1	177.30
#2	176.63

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/16/10 09:35 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0004	-.0012	.00010	.00006	.0020
Stddev	.0000	.0057	.0075	.00037	.00002	.0004
%RSD	.0539	1398.	637.2	372.55	36.659	21.83
#1	.0103	-.0036	-.0065	.00036	.00007	.0017
#2	.0103	.0044	.0041	-.00016	.00004	.0023
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0014	.0013	-.0006	.0017	.0036
Stddev	.0002	.0019	.0017	.0005	.0025	.0046
%RSD	173.9	141.6	133.3	79.47	147.7	127.4
#1	.0003	.0028	.0001	-.0009	-.0001	.0068
#2	.0000	.0000	.0025	-.0003	.0035	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.00016	.00079	.0008	.0004	.0168
Stddev	.0010	.00010	.00100	.0001	.0012	.0070
%RSD	76.96	59.756	126.96	9.517	288.5	41.56
#1	.0021	.00023	.00149	.0008	.0012	.0119
#2	.0006	.00009	.00008	.0007	-.0004	.0217
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0001	.0203	.0054	.0041	.0015
Stddev	.0044	.0004	.0029	.0077	.0036	.0011
%RSD	29.47	280.7	14.19	141.7	86.06	73.20
#1	.0118	-.0004	.0183	.0108	.0016	.0023
#2	.0180	.0001	.0223	.0000	.0066	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: ICB Run Time: 07/16/10 09:35

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0087	-.0009	.00253	-.0121	.00012	.00014
Stddev	.0039	.0006	.00063	.0074	.00053	.00002
%RSD	45.50	61.65	24.949	61.25	447.03	17.016
#1	-.0059	-.0005	.00298	-.0173	-.00026	.00015
#2	-.0115	-.0013	.00209	-.0068	.00049	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.84
Stddev	.32
%RSD	.18360
#1	173.61
#2	174.06

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 09:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.067	.0158	.0076	2.4872	.05101	.0087
Stddev	.029	.0079	.0094	.0076	.00046	.0005
%RSD	.5775	49.77	124.1	.30630	.90586	6.172
#1	5.045	.0148	.0198	2.4782	.05077	.0089
#2	5.041	.0132	-.0014	2.4836	.05063	.0094
#3	5.100	.0084	.0021	2.4927	.05099	.0083
#4	5.084	.0269	.0098	2.4943	.05167	.0083
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	5.000%			5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.20	.0027	-.0016	-.0006	25.45
Stddev	.0001	.25	.0012	.0006	.0017	.13
%RSD	8.541	.9869	46.03	34.43	288.3	.4943
#1	.0012	24.85	.0028	-.0014	.0015	25.29
#2	.0012	25.20	.0038	-.0019	-.0020	25.42
#3	.0010	25.42	.0031	-.0023	.0001	25.49
#4	.0010	25.33	.0009	-.0010	-.0020	25.59
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	25.11	5.077	-.0003	-.0017	10.10
Stddev	.0108	.19	.022	.0004	.0003	.02
%RSD	141.2	.7702	.4338	124.3	18.96	.1859
#1	-.0027	24.85	5.050	.0002	-.0019	10.10
#2	-.0045	25.25	5.071	-.0003	-.0020	10.11
#3	.0002	25.26	5.087	-.0005	-.0017	10.07
#4	-.0236	25.10	5.102	-.0007	-.0013	10.11
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		5.000%	5.000%			5.000%

Sample Name: CCVB Run Time: 07/16/10 09:39

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	.0001	10.04	.0041	.0045	.0024
Stddev	.0060	.0025	.04	.0047	.0016	.0015
%RSD	60.57	3689.	.3869	113.2	35.36	61.63
#1	.0148	-.0022	10.05	.0019	.0028	.0026
#2	.0012	.0001	10.08	-.0007	.0035	.0028
#3	.0124	-.0013	9.991	.0102	.0055	.0004
#4	.0111	.0036	10.04	.0050	.0061	.0040
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			5.000%			

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.979	2.511	.00427	.0276	.50464	.51185
Stddev	.030	.006	.00029	.0105	.00224	.00113
%RSD	.2967	.2362	6.7612	37.88	.44363	.22114
#1	9.975	2.502	.00400	.0249	.50466	.51095
#2	10.02	2.513	.00415	.0425	.50701	.51236
#3	9.947	2.514	.00467	.0180	.50163	.51088
#4	9.977	2.515	.00427	.0251	.50525	.51320
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	172.13
Stddev	.36
%RSD	.21149
#1	172.29
#2	172.41
#3	172.23
#4	171.60

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 09:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4741	2.453	2.408	.45815	.53409	.4977
Stddev	.0173	.013	.004	.00162	.00140	.0006
%RSD	3.654	.5456	.1713	.35265	.26130	.1129
#1	.4594	2.469	2.413	.45701	.53395	.4978
#2	.4923	2.446	2.409	.46014	.53510	.4982
#3	.4592	2.438	2.406	.45668	.53216	.4978
#4	.4856	2.459	2.404	.45879	.53514	.4969
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		5.000%	5.000%			5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4872	2.490	.4876	.4888	.4948	.4891
Stddev	.0023	.012	.0026	.0047	.0029	.0021
%RSD	.4751	.4943	.5434	.9527	.5767	.4199
#1	.4864	2.490	.4844	.4870	.4925	.4894
#2	.4906	2.491	.4909	.4958	.4990	.4915
#3	.4856	2.475	.4873	.4864	.4939	.4865
#4	.4861	2.505	.4879	.4861	.4939	.4892
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.430	2.0513	.95032	.9808	.4900	5.134
Stddev	.016	.0053	.00418	.0045	.0037	.027
%RSD	.6489	.25797	.43974	.4601	.7573	.5314
#1	2.427	2.0448	.94853	.9819	.4871	5.174
#2	2.445	2.0502	.95588	.9864	.4929	5.117
#3	2.439	2.0527	.94608	.9758	.4866	5.132
#4	2.409	2.0575	.95079	.9791	.4936	5.115
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	5.000%	5.0000%	5.0000%	5.000%	5.000%	

Sample Name: CCVA Run Time: 07/16/10 09:49

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4905	2.414	.4917	.4883
Stddev	.012	.0032	.0055	.022	.0044	.0013
%RSD	.4936	.6470	1.128	.9186	.8950	.2692
#1	2.423	.4956	.4935	2.416	.4867	.4867
#2	2.433	.4970	.4851	2.441	.4969	.4898
#3	2.418	.4907	.4968	2.387	.4899	.4887
#4	2.404	.4979	.4867	2.409	.4932	.4878
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	5.000%	5.000%		5.000%	5.000%	5.000%

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0381	.2905	.48907	4.850	.51560	.50227
Stddev	.0082	.0025	.00483	.012	.00227	.00103
%RSD	21.44	.8483	.98725	.2533	.43937	.20557
#1	-.0439	.2876	.48241	4.865	.51604	.50204
#2	-.0399	.2913	.48879	4.838	.51353	.50181
#3	-.0261	.2934	.49167	4.843	.51860	.50377
#4	-.0426	.2896	.49339	4.854	.51422	.50144
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.36
Stddev	.44
%RSD	.24721
#1	178.39
#2	177.79
#3	178.87
#4	178.37

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0075	.0093	-.0006	.00015	.00007
Stddev	.0117	.0057	.0084	.00002	.00001
%RSD	154.8	61.80	1417.	16.005	12.520
#1	.0007	.0133	-.0065	.00017	.00008
#2	-.0158	.0052	.0053	.00013	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0002	-.0055	.0008	-.0006
Stddev	.0003	.0001	.0011	.0002	.0010
%RSD	24.74	79.39	20.30	32.21	162.0
#1	.0014	-.0003	-.0063	.0009	.0001
#2	.0010	-.0001	-.0047	.0006	-.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0004	.0013	.00015	.00052
Stddev	.0008	.0001	.0013	.00002	.00000
%RSD	49.45	28.61	100.8	13.514	.45673
#1	.0010	.0005	.0004	.00017	.00053
#2	.0021	.0004	.0022	.00014	.00052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0008	.0028	.0068	.0003
Stddev	.0024	.0011	.0040	.0140	.0006
%RSD	155.9	127.7	141.1	205.9	211.9
#1	.0032	.0001	.0000	.0167	-.0001
#2	-.0002	.0016	.0056	-.0031	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 09:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0052	.0027	.0020	.0078
Stddev	.0009	.0061	.0008	.0013	.0026
%RSD	13.86	116.9	30.98	63.80	33.02
#1	.0059	.0096	.0021	.0029	.0059
#2	.0072	.0009	.0033	.0011	.0096
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.00175	-.0120	.00022	.00013
Stddev	.0012	.00041	.0000	.00003	.00011
%RSD	50.39	23.571	.0070	12.117	81.533
#1	-.0016	.00204	-.0120	.00020	.00021
#2	-.0033	.00145	-.0120	.00024	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	172.29
Stddev	.36
%RSD	.20910
#1	172.03
#2	172.54

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/16/10 09:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0454	.0475	.0766	.00502	.00475	.0503
Stddev	.0088	.0017	.0029	.00012	.00008	.0003
%RSD	19.29	3.616	3.804	2.3534	1.6790	.6351
#1	.0516	.0487	.0745	.00510	.00469	.0500
#2	.0392	.0463	.0786	.00494	.00481	.0505
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0517	.0057	.0086	.0106	.0244
Stddev	.0009	.0053	.0002	.0003	.0021	.0002
%RSD	19.56	10.25	3.523	3.841	19.51	.6377
#1	.0051	.0480	.0058	.0084	.0091	.0243
#2	.0038	.0555	.0055	.0088	.0121	.0245
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0432	.01931	.00484	.0092	.0196	.4180
Stddev	.0089	.00006	.00004	.0004	.0015	.0151
%RSD	20.68	.30475	.82107	4.002	7.572	3.619
#1	.0369	.01935	.00487	.0094	.0185	.4073
#2	.0495	.01926	.00482	.0089	.0206	.4287
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0788	.0075	.2170	.0387	.0106	.0108
Stddev	.0053	.0010	.0012	.0075	.0003	.0017
%RSD	6.693	13.64	.5425	19.40	3.229	15.99
#1	.0825	.0068	.2178	.0440	.0104	.0096
#2	.0750	.0082	.2161	.0334	.0109	.0121
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/16/10 09:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1826	.4003	.01126	.1461	.01011	.00955
Stddev	.0003	.0045	.00097	.0013	.00005	.00001
%RSD	.1540	1.128	8.5901	.9074	.49316	.10288
#1	.1828	.3971	.01058	.1452	.01015	.00956
#2	.1824	.4035	.01195	.1471	.01008	.00954
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.27
Stddev	.14
%RSD	.08174
#1	175.37
#2	175.17

Method: 2010A Sample Name: ICSA ICP764-B Operator:
Comment:
Run Time: 07/16/10 10:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	.0458	-.0015	-.00032	.00012	.0233
Stddev	1.5	.0006	.0232	.00020	.00008	.0019
%RSD	.2919	1.207	1553.	63.196	65.547	8.378
#1	503.2	.0455	.0149	-.00047	.00017	.0219
#2	505.2	.0462	-.0179	-.00018	.00006	.0246
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	495.6	-.0003	-.0011	.0013	197.8
Stddev	.0007	3.6	.0002	.0002	.0014	.0
%RSD	7.723	.7265	50.36	20.40	105.1	.0020
#1	.0086	493.1	-.0002	-.0009	.0003	197.8
#2	.0096	498.2	-.0005	-.0013	.0023	197.8
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	516.5	.00334	.0029	-.0032	-.0361
Stddev	.0125	2.3	.00009	.0008	.0023	.0108
%RSD	6417.	.4440	2.6661	29.47	71.64	29.81
#1	.0091	514.9	.00328	.0035	-.0048	-.0437
#2	-.0087	518.1	.00341	.0023	-.0016	-.0285
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254	.0007	.0611	-.0159	.0029	.0084
Stddev	.0124	.0004	.0011	.0156	.0008	.0011
%RSD	48.72	57.00	1.855	98.24	27.16	13.11
#1	.0166	.0010	.0619	-.0049	.0035	.0076
#2	.0341	.0004	.0603	-.0270	.0023	.0092
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/16/10 10:02

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	-.0186	.01410	.1130	.01358	.01489
Stddev	.0017	.0039	.00118	.0172	.00001	.00086
%RSD	6.897	20.79	8.3447	15.26	.11044	5.7891
#1	.0254	-.0159	.01493	.1252	.01359	.01550
#2	.0230	-.0213	.01327	.1008	.01357	.01428
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.23
Stddev	.23
%RSD	.14471
#1	160.07
#2	160.40

Method: 2010A Sample Name: ICSAB ICP7615 Operator:
Comment:
Run Time: 07/16/10 10:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	500.7	1.028	-.0059	.45165	.52762	.0269
Stddev	3.4	.015	.0088	.00281	.00080	.0017
%RSD	.6784	1.491	149.4	.62165	.15243	6.467
#1	498.3	1.018	.0003	.44966	.52706	.0281
#2	503.1	1.039	-.0121	.45364	.52819	.0256
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9298	494.8	.4712	.4648	.4603	192.9
Stddev	.0066	1.2	.0013	.0034	.0058	1.8
%RSD	.7068	.2526	.2859	.7259	1.252	.9585
#1	.9252	493.9	.4702	.4624	.4644	191.6
#2	.9345	495.7	.4721	.4672	.4562	194.2
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9477	515.0	.43614	.0013	.9086	-.0740
Stddev	.0230	2.0	.00328	.0015	.0058	.0273
%RSD	2.427	.3901	.75319	115.3	.6356	36.89
#1	.9314	513.6	.43382	.0002	.9045	-.0933
#2	.9640	516.5	.43846	.0023	.9127	-.0547
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0325	.9556	.0219	-.0112	.4886	.9021
Stddev	.0187	.0070	.0030	.0013	.0068	.0000
%RSD	57.59	.7362	13.56	11.81	1.388	.0034
#1	.0193	.9606	.0198	-.0103	.4838	.9021
#2	.0458	.9506	.0240	-.0121	.4934	.9021
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0196	.01449	.1134	.01330	.01509
Stddev	.0015	.0015	.00139	.0349	.00030	.00009
%RSD	120.0	7.646	9.6152	30.80	2.2760	.57856
#1	-.0023	-.0185	.01351	.1381	.01309	.01503
#2	-.0002	-.0206	.01548	.0887	.01352	.01515
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	162.65
Stddev	.48
%RSD	.29211
#1	162.98
#2	162.31

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/16/10 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	1.040	-.0113	.46135	.53582	.0233
Stddev	.3	.005	.0102	.00058	.00183	.0031
%RSD	.0628	.4386	90.77	.12540	.34084	13.29
#1	504.0	1.043	-.0040	.46094	.53712	.0255
#2	504.5	1.037	-.0185	.46176	.53453	.0211
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9469	497.0	.4814	.4713	.4693	197.3
Stddev	.0046	3.1	.0001	.0045	.0014	1.5
%RSD	.4908	.6307	.0202	.9557	.3029	.7546
#1	.9436	494.8	.4815	.4681	.4703	196.2
#2	.9502	499.2	.4814	.4745	.4683	198.3
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9623	515.9	.44586	-.0022	.9284	-.0468
Stddev	.0146	3.9	.00050	.0005	.0006	.0000
%RSD	1.518	.7597	.11256	21.26	.0667	.0112
#1	.9520	518.6	.44551	-.0019	.9279	-.0468
#2	.9727	513.1	.44622	-.0025	.9288	-.0468
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0361	.9571	.0192	-.0090	.4968	.9173
Stddev	.0019	.0028	.0002	.0020	.0082	.0088
%RSD	5.173	.2929	1.218	22.74	1.654	.9541
#1	.0348	.9551	.0191	-.0104	.5026	.9111
#2	.0374	.9591	.0194	-.0076	.4910	.9234
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	-.0170	.01303	.1197	.01304	.01584
Stddev	.0271	.0060	.00397	.0109	.00022	.00045
%RSD	1182.	35.52	30.453	9.123	1.6844	2.8688
#1	-.0215	-.0213	.01023	.1274	.01319	.01616
#2	.0169	-.0127	.01584	.1120	.01288	.01552
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.52
Stddev	.41
%RSD	.25788
#1	160.23
#2	160.81

2C 7/16/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.082	.0087	.0044	2.4549	.05063	.0100
Stddev	.071	.0017	.0067	.0118	.00004	.0004
%RSD	1.392	19.11	150.4	.48018	.07161	3.560
#1	5.132	.0099	.0092	2.4465	.05066	.0103
#2	5.032	.0075	-.0003	2.4632	.05060	.0098
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.21	.0028	-.0015	-.0003	24.95
Stddev	.0008	.06	.0014	.0003	.0021	.12
%RSD	70.55	.2424	50.83	19.08	781.6	.4828
#1	.0017	25.17	.0038	-.0013	.0012	24.87
#2	.0006	25.26	.0018	-.0017	-.0017	25.04
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0030	25.46	4.997	-.0028	-.0014	10.06
Stddev	.0018	.19	.045	.0012	.0003	.01
%RSD	58.58	.7583	.9019	42.65	24.75	.1187
#1	-.0018	25.60	4.965	-.0036	-.0016	10.07
#2	-.0042	25.33	5.028	-.0019	-.0011	10.05
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0001	9.824	.0047	.0053	.0031
Stddev	.0018	.0004	.048	.0025	.0001	.0011
%RSD	15.77	293.1	.4901	53.24	1.115	34.16
#1	.0123	-.0001	9.790	.0029	.0053	.0039
#2	.0099	.0004	9.858	.0064	.0052	.0024
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.532	.00450	.0147	.50632	.50398
Stddev	.00	.010	.00016	.0157	.00026	.00350
%RSD	.0183	.3991	3.6208	106.5	.05213	.69421
#1	10.08	2.539	.00438	.0259	.50613	.50150
#2	10.08	2.525	.00461	.0036	.50650	.50645
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.61
Stddev	1.11
%RSD	.63334
#1	176.40
#2	174.82

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4894	2.406	2.426	.46016	.53833	.4951
Stddev	.0154	.002	.014	.00200	.00027	.0020
%RSD	3.148	.0969	.5713	.43467	.04999	.3964
#1	.5003	2.404	2.416	.45874	.53852	.4937
#2	.4785	2.408	2.435	.46157	.53814	.4965
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4883	2.490	.4889	.4904	.4958	.5058
Stddev	.0002	.014	.0029	.0013	.0009	.0089
%RSD	.0425	.5480	.5986	.2608	.1743	1.769
#1	.4881	2.499	.4868	.4913	.4952	.5121
#2	.4884	2.480	.4910	.4895	.4964	.4995
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.429	2.0626	.94991	.9708	.4898	5.067
Stddev	.001	.0034	.00680	.0091	.0010	.032
%RSD	.0451	.16291	.71607	.9346	.1972	.6366
#1	2.429	2.0602	.94510	.9644	.4892	5.045
#2	2.430	2.0650	.95472	.9773	.4905	5.090
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4809	2.429	.4971	.4911
Stddev	.015	.0041	.0061	.001	.0004	.0030
%RSD	.6359	.8217	1.260	.0549	.0904	.6157
#1	2.409	.4924	.4766	2.430	.4968	.4889
#2	2.431	.4982	.4852	2.428	.4975	.4932
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0327	.2902	.49291	4.788	.51238	.50477
Stddev	.0153	.0004	.00209	.015	.00070	.00076
%RSD	46.90	.1525	.42322	.3187	.13758	.15093
#1	-.0219	.2899	.49144	4.777	.51188	.50531
#2	-.0436	.2905	.49439	4.799	.51288	.50423
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	177.72
Stddev	.54
%RSD	.30510
#1	177.33
#2	178.10

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.0165	.0041	.00005	.00007	.0015
Stddev	.0019	.0046	.0067	.00031	.00006	.0003
%RSD	24.97	27.76	161.6	610.78	84.271	21.68
#1	.0062	.0197	-.0006	.00027	.00011	.0018
#2	.0089	.0132	.0089	-.00017	.00003	.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0002	.0010	-.0006	-.0008	.0027
Stddev	.0003	.0025	.0016	.0003	.0011	.0015
%RSD	453.6	1259.	155.8	51.53	129.1	53.07
#1	.0003	.0020	.0021	-.0004	-.0001	.0038
#2	-.0001	-.0016	-.0001	-.0008	-.0016	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.00044	.00079	.0009	.0007	.0128
Stddev	.0023	.00004	.00012	.0017	.0004	.0038
%RSD	474.4	9.3437	15.468	182.0	57.59	29.70
#1	-.0011	.00041	.00087	.0021	.0004	.0155
#2	.0021	.00046	.00070	-.0003	.0009	.0101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0009	-.0038	.0063	.0024	.0000
Stddev	.0000	.0006	.0043	.0077	.0013	.003
%RSD	.1319	70.37	114.0	123.0	54.92	6057.
#1	.0056	-.0013	-.0068	.0117	.0034	-.0019
#2	.0056	-.0004	-.0007	.0008	.0015	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 10:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	-.0012	.00189	.0063	.00050	.00025
Stddev	.0041	.0026	.00136	.0061	.00010	.00001
%RSD	52.74	214.9	71.771	96.95	20.766	3.4199
#1	-.0106	-.0030	.00093	.0020	.00057	.00025
#2	-.0048	.0006	.00285	.0107	.00042	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.02
Stddev	.26
%RSD	.15301
#1	172.83
#2	173.21

Method: 2010A Sample Name: K1006615-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	-.0053	.0044	-.00013	.00010	.0014
#1	-.0007	-.0037	-.0030	-.00020	.00016	.0011
#2	.0089	-.0068	.0118	-.00007	.00003	.0017

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0059	.0002	-.0013	.0012	.0064
#1	.0001	.0031	.0011	-.0016	.0005	.0069
#2	.0006	.0087	-.0007	-.0011	.0019	.0060

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.00045	.00009	-.0015	.0000	.0240
#1	.0024	.00021	.00000	-.0021	.0004	.0240
#2	.0143	.00069	.00018	-.0010	-.0004	.0240

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0010	-.0019	.0107	-.0001	.0026
#1	.0093	-.0007	-.0023	.0130	-.0003	.0009
#2	.0217	-.0013	-.0015	.0084	.0001	.0043

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	.0047	.00165	-.0016	.00018	.00012
#1	.0159	.0042	.00082	.0002	.00029	.00017
#2	.0190	.0053	.00248	-.0034	.00006	.00008

Int. Std.	Sc3572
Units	Cts/S
Avg	174.26
#1	173.70
#2	174.81

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 K1006615 (208725) (071610B)
Run Time: 07/16/10 10:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.48	.5328	.4510	2.2625	.33853	.5651
#1	46.36	.5320	.4554	2.2615	.33827	.5632
#2	46.60	.5336	.4465	2.2636	.33878	.5669

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4587	50.72	.7589	.9958	1.218	97.83
#1	.4583	50.36	.7562	.9908	1.219	97.35
#2	.4591	51.07	.7617	1.001	1.218	98.31

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029	20.39	2.5512	.3146	1.010	21.57
#1	1.021	20.35	2.5422	.3133	1.006	21.55
#2	1.037	20.42	2.5603	.3160	1.013	21.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9892	.3948	3.444	.7082	.9429	1.466
#1	.9837	.3959	3.440	.7080	.9427	1.459
#2	.9947	.3936	3.448	.7085	.9432	1.473

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.389	10.62	2.4679	1.288	.04772	.76087
#1	4.361	10.59	2.4659	1.274	.04752	.76102
#2	4.417	10.66	2.4699	1.303	.04793	.76072

Int. Std.	Sc3572
Units	Cts/S
Avg	175.92
#1	176.03
#2	175.82

Method: 2010A Sample Name: K1006615-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.34	.0277	.0066	.50064	.00202	.0312
#1	44.23	.0221	-.0023	.49852	.00203	.0314
#2	44.44	.0334	.0154	.50276	.00202	.0309

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029 *	23.18	.0299	.0215	.0456	73.67
#1	.0028	23.03	.0298	.0220	.0443	73.48
#2	.0031	23.32	.0300	.0211	.0469	73.86

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	15.77	1.6685	.0015	.0124	11.82
#1	.0141	15.75	1.6808	.0009	.0128	11.85
#2	.0200	15.80	1.6561	.0022	.0120	11.80

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0003	1.052	.0234	.1718	.1196
#1	.0076	.0009	1.057	.0262	.1714	.1184
#2	-.0085	-.0014	1.046	.0205	.1722	.1207

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.608	9.924	2.5512	.0317	.04235	.24879
#1	2.599	9.872	2.5538	.0429	.04267	.24961
#2	2.617	9.975	2.5487	.0206	.04203	.24797

Int. Std.	Sc3572
Units	Cts/S
Avg	178.07
#1	177.57
#2	178.57

* 0.0029 Cd − 73.67 Fe $\left(\frac{0.0091\ Cd}{197.8\ Fe}\right)$ = −0.0005 Cd

Method: 2010A Sample Name: K1006615-006D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:29 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.59	.0198	-.0021	.71640	.00209	.0314
#1	43.50	.0270	-.0001	.71378	.00209	.0309
#2	43.68	.0126	-.0042	.71901	.00208	.0320

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	20.98	.0351	.0226	.0483	72.15
#1	.0033	20.81	.0354	.0233	.0501	72.23
#2	.0037	21.15	.0348	.0219	.0465	72.07

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0238	16.21	2.5676	.0011	.0121	12.06
#1	.0178	16.09	2.5667	.0021	.0118	12.07
#2	.0297	16.33	2.5685	.0001	.0125	12.05

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	-.0018	.9550	.0112	.1637	.1230
#1	.0261	-.0017	.9583	.0068	.1613	.1215
#2	.0112	-.0020	.9518	.0157	.1661	.1245

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.491	8.715	2.5083	.0262	.04372	.21948
#1	2.483	9.102	2.5160	.0169	.04392	.22062
#2	2.499	8.328	2.5007	.0355	.04352	.21833

Int. Std.	Sc3572
Units	Cts/S
Avg	178.39
#1	178.06
#2	178.72

* 0.00018 Cd

Method: 2010A Sample Name: K1006615-006L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 10:32 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.675	-.0049	-.0011	.09959	.00041	.0081
#1	8.635	.0020	-.0053	.09771	.00040	.0090
#2	8.716	-.0117	.0030	.10147	.00043	.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005 *	4.548	.0070	.0035	.0081	14.07
#1	.0001	4.521	.0062	.0041	.0084	13.85
#2	.0008	4.574	.0077	.0029	.0078	14.28

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	3.0786	.31221	-.0019	.0012	2.325
#1	.0054	3.0705	.30675	-.0017	.0014	2.318
#2	-.0042	3.0868	.31767	-.0022	.0010	2.332

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0021	.2157	-.0016	.0345	.0231
#1	.0094	.0027	.2090	-.0048	.0348	.0235
#2	.0069	.0015	.2224	.0016	.0342	.0227

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4848	1.784	.49346	.0007	.00850	.04709
#1	.4961	1.784	.48412	.0131	.00840	.04631
#2	.4735	1.784	.50280	-.0118	.00860	.04788

Int. Std.	Sc3572
Units	Cts/S
Avg	178.54
#1	181.47
#2	175.61

* -0.00015 cd

Method: 2010A Sample Name: K1006615-006S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.16	.3127	.4871	2.6718	.05402	.5021
#1	58.95	.3094	.4877	2.6800	.05397	.5010
#2	59.37	.3160	.4865	2.6635	.05407	.5033

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0526	33.16	.2350	.5280	.3002	80.28
#1	.0524	33.05	.2357	.5260	.3021	80.25
#2	.0529	33.27	.2343	.5300	.2982	80.32

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5262	25.66	2.8918	.4704	.5112	19.99
#1	.5217	25.57	2.8811	.4663	.5109	20.03
#2	.5307	25.75	2.9025	.4744	.5116	19.94

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4879	.0476	6.335	.0128	.6815	.6627
#1	.4718	.0491	6.360	.0143	.6794	.6629
#2	.5040	.0460	6.309	.0113	.6835	.6626

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.837	5.300	2.5991	.4861	.05335	.26066
#1	2.815	5.289	2.6026	.4758	.05369	.26175
#2	2.860	5.311	2.5956	.4963	.05302	.25956

Int. Std.	Sc3572
Units	Cts/S
Avg	178.13
#1	177.84
#2	178.42

* 0.0489 Cd

Method: 2010A Sample Name: K1006615-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.98	.0246	.0849	.70489	.00197	.0312
#1	53.67	.0262	.0922	.69840	.00195	.0312
#2	54.29	.0229	.0776	.71139	.00198	.0312

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	15.08	.0365	.0246	.0976	70.88
#1	.0048	15.06	.0358	.0243	.0969	70.25
#2	.0040	15.11	.0372	.0249	.0982	71.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0431	13.26	2.3859	.0013	.0167	13.38
#1	.0397	13.19	2.3756	.0027	.0172	13.39
#2	.0464	13.33	2.3963	.0000	.0161	13.37

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	-.0001	.3834	.0148	.1522	.1834
#1	.0105	-.0019	.3805	.0170	.1512	.1819
#2	.0180	.0016	.3864	.0126	.1532	.1850

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.566	10.48	3.5491	.0356	.04815	.22587
#1	2.556	10.48	3.5395	.0430	.04814	.22479
#2	2.576	10.49	3.5586	.0282	.04816	.22696

Int. Std.	Sc3572
Units	Cts/S
Avg	179.47
#1	180.04
#2	178.90

* 0.0011 Cd

Method: 2010A Sample Name: K1006615-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.73	.0254	.0182	.72261	.00243	.0345
#1	63.52	.0189	.0172	.71925	.00243	.0351
#2	63.94	.0318	.0191	.72597	.00242	.0338

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	20.59	.0341	.0300	.0495	87.11
#1	.0032	20.53	.0347	.0295	.0502	86.71
#2	.0035	20.66	.0334	.0305	.0489	87.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	20.03	2.1571	.0011	.0203	16.46
#1	.0220	19.95	2.1487	.0011	.0214	16.48
#2	.0210	20.11	2.1655	.0012	.0191	16.43

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183	-.0020	.4148	.0163	.1729	.1582
#1	.0046	-.0016	.4177	.0177	.1719	.1579
#2	.0320	-.0025	.4118	.0149	.1739	.1584

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.134	10.94	4.3713	.0468	.05614	.26015
#1	3.145	10.89	4.3646	.0492	.05668	.26068
#2	3.123	11.00	4.3780	.0444	.05560	.25962

Int. Std.	Sc3572
Units	Cts/S
Avg	181.86
#1	181.87
#2	181.86

x -0.00071 Cd

Method: 2010A Sample Name: K1006615-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.12	.0314	.0112	.72832	.00242	.0346
#1	59.95	.0374	.0153	.72724	.00243	.0350
#2	60.28	.0254	.0071	.72940	.00241	.0343

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048 *	21.52	.0384	.0415	.0553	94.24
#1	.0050	21.38	.0391	.0413	.0570	94.01
#2	.0047	21.66	.0376	.0418	.0536	94.48

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	22.66	2.5092	.0013	.0228	14.61
#1	.0167	22.62	2.5232	.0008	.0225	14.61
#2	.0208	22.70	2.4952	.0018	.0232	14.62

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	-.0005	.3390	.0184	.2064	.1452
#1	.0135	-.0017	.3412	.0212	.2085	.1447
#2	.0086	.0006	.3369	.0155	.2042	.1458

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.415	10.10	4.4449	.0367	.05498	.27201
#1	2.406	10.08	4.4562	.0325	.05515	.27321
#2	2.424	10.11	4.4336	.0408	.05480	.27081

Int. Std.	Sc3572
Units	Cts/S
Avg	182.47
#1	182.10
#2	182.84

* 0.0005Cd

Method: 2010A Sample Name: K1006615-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.91	.0259	.1046	.42565	.00154	.0366
#1	43.88	.0339	.1034	.42618	.00154	.0363
#2	43.94	.0179	.1058	.42512	.00154	.0368

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061	14.82	.0554	.0407	.1017	119.1
#1	.0052	14.80	.0554	.0405	.1057	118.8
#2	.0069	14.84	.0554	.0409	.0976	119.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0470	12.22	1.7540	-.0007	.0136	10.85
#1	.0439	12.22	1.7571	-.0014	.0139	10.86
#2	.0502	12.21	1.7510	.0000	.0134	10.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0020	.3354	.0217	.3004	.1660
#1	.0190	-.0020	.3370	.0221	.2986	.1658
#2	.0016	-.0020	.3338	.0213	.3022	.1663

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.461	9.635	2.6020	.0576	.03453	.17458
#1	2.462	9.596	2.6043	.0576	.03461	.17481
#2	2.459	9.674	2.5996	.0576	.03446	.17435

Int. Std.	Sc3572
Units	Cts/S
Avg	178.84
#1	178.67
#2	179.00

x 0.00006 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:50 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.142	.0087	-.0029	2.4625	.05066	.0086
Stddev	.006	.0040	.0121	.0017	.00063	.0008
%RSD	.1205	45.38	415.0	.06865	1.2357	9.607
#1	5.138	.0115	.0056	2.4614	.05022	.0080
#2	5.146	.0059	-.0115	2.4637	.05110	.0092
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	25.83	.0037	-.0026	-.0006	25.19
Stddev	.0007	.19	.0002	.0004	.0004	.12
%RSD	57.69	.7492	6.526	15.93	67.02	.4738
#1	.0007	25.69	.0035	-.0023	-.0003	25.10
#2	.0018	25.97	.0039	-.0029	-.0010	25.27
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	25.45	5.005	-.0013	-.0027	10.06
Stddev	.0018	.11	.029	.0008	.0006	.01
%RSD	52.66	.4407	.5857	62.75	21.41	.0757
#1	-.0046	25.37	4.984	-.0019	-.0022	10.05
#2	-.0021	25.53	5.026	-.0007	-.0031	10.07
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	-.0004	9.873	.0032	.0039	.0024
Stddev	.0210	.0037	.001	.0025	.0003	.0005
%RSD	154.6	840.8	.0078	78.62	6.517	20.75
#1	.0285	.0022	9.873	.0050	.0037	.0028
#2	-.0013	-.0030	9.874	.0014	.0041	.0021
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:50

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23	2.549	.00461	.0361	.51205	.50473
Stddev	.09	.001	.00006	.0026	.00050	.00449
%RSD	.8688	.0223	1.2888	7.075	.09754	.88984
#1	10.17	2.549	.00457	.0343	.51170	.50155
#2	10.30	2.549	.00466	.0379	.51241	.50790
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.00
Stddev	.43
%RSD	.24299
#1	177.31
#2	176.70

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:53 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4732	2.421	2.446	.46430	.54039	.5017
Stddev	.0117	.016	.011	.00498	.00224	.0032
%RSD	2.483	.6779	.4680	1.0722	.41436	.6326
#1	.4649	2.410	2.454	.46078	.53881	.4994
#2	.4815	2.433	2.438	.46782	.54197	.5039
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4938	2.488	.4937	.4939	.5015	.5168
Stddev	.0058	.015	.0059	.0050	.0010	.0071
%RSD	1.183	.6226	1.197	1.006	.1988	1.383
#1	.4897	2.477	.4895	.4904	.5022	.5219
#2	.4979	2.499	.4979	.4975	.5008	.5118
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404	2.0776	.95446	.9784	.4931	5.132
Stddev	.021	.0024	.00929	.0151	.0032	.011
%RSD	.8521	.11432	.97381	1.544	.6450	.2220
#1	2.390	2.0759	.94789	.9677	.4908	5.124
#2	2.419	2.0792	.96103	.9891	.4953	5.140
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.463	.5018	.4909	2.394	.4954	.4894
Stddev	.021	.0038	.0013	.011	.0028	.0044
%RSD	.8304	.7670	.2734	.4382	.5566	.8947
#1	2.449	.4991	.4918	2.387	.4934	.4863
#2	2.478	.5045	.4899	2.401	.4973	.4925
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:53

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0379	.2992	.49569	4.867	.52430	.50700
Stddev	.0032	.0008	.01203	.039	.00079	.00073
%RSD	8.402	.2608	2.4265	.7950	.14985	.14431
#1	-.0401	.2997	.48719	4.840	.52486	.50648
#2	-.0356	.2986	.50420	4.895	.52374	.50752
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.35
Stddev	.74
%RSD	.41224
#1	178.87
#2	177.83

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0121	.0044	.00027	.00006
Stddev	.0087	.0074	.0021	.00021	.00002
%RSD	638.3	61.30	47.04	78.411	32.353
#1	.0048	.0174	.0059	.00042	.00007
#2	-.0075	.0069	.0030	.00012	.00004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0001	.0033	-.0003	-.0005
Stddev	.0002	.0006	.0053	.0005	.0004
%RSD	10.00	420.1	158.1	189.8	82.09
#1	.0021	.0006	-.0004	-.0006	-.0002
#2	.0019	-.0003	.0071	.0001	-.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0040	.0025	.00141	.00097
Stddev	.0032	.0012	.0113	.00006	.00006
%RSD	128.1	29.84	460.5	4.3494	6.2405
#1	.0002	.0048	.0105	.00137	.00101
#2	.0047	.0031	-.0056	.00145	.00092
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0004	.0175	.0025	-.0033
Stddev	.0021	.0001	.0032	.0131	.0004
%RSD	70.90	16.14	18.20	530.9	12.32
#1	.0044	-.0003	.0152	-.0068	-.0036
#2	.0015	-.0004	.0197	.0118	-.0030
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 10:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0080	.0031	.0007	.0099
Stddev	.0018	.0035	.0005	.0007	.0068
%RSD	66.94	43.56	14.63	99.84	68.71
#1	.0014	.0056	.0034	.0011	.0147
#2	.0039	.0105	.0028	.0002	.0051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00207	-.0009	.00000	.00032
Stddev	.0017	.00187	.0109	.00017	.00009
%RSD	290.2	90.164	1177.	794400.	28.371
#1	.0018	.00339	.0068	.00012	.00039
#2	-.0006	.00075	-.0086	-.00012	.00026
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	175.96
Stddev	.77
%RSD	.43509
#1	176.50
#2	175.42

Method: 2010A Sample Name: K1006615-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.48	.0214	.0154	.52349	.00332	.0300
#1	73.44	.0198	.0109	.52276	.00334	.0300
#2	73.53	.0230	.0199	.52422	.00330	.0301

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	22.92	.0322	.0259	.0594	88.25
#1	.0041	22.86	.0314	.0255	.0584	87.57
#2	.0042	22.99	.0331	.0263	.0604	88.92

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	20.85	2.3946	.0023	.0157	14.78
#1	.0264	20.82	2.3918	.0035	.0151	14.78
#2	.0266	20.89	2.3973	.0011	.0163	14.78

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0171	-.0015	.8786	.0126	.1558	.1743
#1	.0152	-.0012	.8762	.0211	.1578	.1747
#2	.0190	-.0018	.8811	.0042	.1538	.1738

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	9.780	3.0236	.0109	.05177	.19679
#1	2.389	9.805	3.0279	.0141	.05199	.19771
#2	2.381	9.755	3.0194	.0077	.05155	.19587

Int. Std.	Sc3572
Units	Cts/S
Avg	183.07
#1	182.82
#2	183.32

* 0.00014 Cd

Method: 2010A Sample Name: K1006615-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.25	.0193	.0672	.61612	.00205	.0286
#1	49.06	.0214	.0648	.61333	.00207	.0282
#2	49.43	.0173	.0696	.61891	.00204	.0290

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	12.74	.0471	.0228	.0831	80.16
#1	.0037	12.71	.0457	.0221	.0821	79.74
#2	.0037	12.78	.0484	.0234	.0840	80.58

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0316	11.44	2.5266	.0022	.0205	9.252
#1	.0285	11.41	2.5174	.0033	.0203	9.302
#2	.0348	11.47	2.5358	.0011	.0208	9.202

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0032	.3416	.0114	.1769	.1654
#1	.0021	.0024	.3451	.0084	.1733	.1644
#2	-.0115	.0041	.3380	.0145	.1806	.1664

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.145	6.396	2.4644	.0469	.04187	.14439
#1	2.137	6.416	2.4650	.0493	.04225	.14469
#2	2.154	6.376	2.4637	.0445	.04150	.14409

Int. Std.	Sc3572
Units	Cts/S
Avg	181.52
#1	181.59
#2	181.44

* 0.000001 Cd

Method: 2010A Sample Name: K1006615-008 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.27	.0268	.0106	.44051	.00196	.0267
#1	47.40	.0220	.0062	.44253	.00193	.0273
#2	47.15	.0317	.0150	.43850	.00199	.0260

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	15.88	.0534	.0233	.0502	91.62
#1	.0031	15.98	.0539	.0238	.0512	91.55
#2	.0035	15.79	.0529	.0229	.0492	91.70

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169	15.84	1.9717	.0023	.0233	9.267
#1	.0171	15.92	1.9739	.0008	.0238	9.315
#2	.0167	15.76	1.9695	.0037	.0228	9.219

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0006	.9084	.0191	.2115	.1349
#1	.0015	-.0015	.9125	.0175	.2140	.1348
#2	.0039	.0003	.9043	.0207	.2089	.1349

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.521	8.127	2.5770	.0206	.04091	.14681
#1	2.549	8.155	2.5939	.0189	.04165	.14792
#2	2.493	8.100	2.5601	.0223	.04018	.14571

Int. Std.	Sc3572
Units	Cts/S
Avg	179.71
#1	179.84
#2	179.58

* -0.00092 Cd

Method: 2010A Sample Name: K1006615-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.37	.0263	.0200	.79884	.00207	.0308
#1	47.36	.0190	.0206	.79507	.00199	.0309
#2	47.39	.0335	.0194	.80261	.00215	.0308

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032 X	61.45	.0438	.0193	.0585	75.27
#1	.0032	61.38	.0437	.0197	.0568	75.13
#2	.0031	61.52	.0438	.0190	.0603	75.41

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158	18.75	3.262	.0012	.0285	9.083
#1	.0109	18.79	3.245	.0009	.0279	9.156
#2	.0207	18.71	3.279	.0016	.0290	9.009

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0309	-.0002	1.553	.0127	.1699	.1260
#1	.0240	.0014	1.559	.0080	.1718	.1262
#2	.0377	-.0018	1.547	.0175	.1679	.1258

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.569	9.341	2.2714	.0307	.04697	.23280
#1	2.540	9.335	2.2650	.0340	.04694	.23349
#2	2.598	9.346	2.2779	.0274	.04699	.23211

Int. Std.	Sc3572
Units	Cts/S
Avg	180.20
#1	180.69
#2	179.70

X -0.00026 Cd

Method: 2010A Sample Name: K1006636-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.14	.0113	.1450	.59000	.00202	.0409
#1	50.08	.0069	.1429	.59034	.00202	.0400
#2	50.20	.0157	.1470	.58965	.00202	.0418

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	9.371	.0506	.0259	.1373	112.7
#1	.0064	9.339	.0508	.0263	.1391	112.9
#2	.0070	9.403	.0505	.0254	.1356	112.5

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0512	12.09	2.8142	.0008	.0190	12.30
#1	.0494	12.04	2.8216	.0015	.0196	12.32
#2	.0530	12.13	2.8068	.0001	.0185	12.27

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0013	.1904	.0090	.2364	.2302
#1	-.0021	-.0028	.1908	.0079	.2386	.2299
#2	.0066	.0001	.1899	.0102	.2342	.2305

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.388	6.956	3.1709	.0529	.05027	.09025
#1	2.377	6.941	3.1827	.0539	.05010	.09047
#2	2.398	6.971	3.1590	.0519	.05043	.09003

Int. Std.	Sc3572
Units	Cts/S
Avg	179.97
#1	179.51
#2	180.44

$$\times\ 0.0067\,Cd - 112.7\,Fe\left(\frac{0.0091\,Cd}{197.8\,Fe}\right) = 0.0015\,Cd$$

Method: 2010A Sample Name: K1006636-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.22	.0213	.0186	.61476	.00255	.0414
#1	57.36	.0294	.0142	.61371	.00255	.0415
#2	57.07	.0133	.0230	.61581	.00255	.0413

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042 *	11.42	.0418	.0256	.0523	101.1
#1	.0042	11.37	.0425	.0262	.0489	101.2
#2	.0043	11.47	.0410	.0251	.0557	101.1

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313	14.07	2.3335	.0017	.0207	13.36
#1	.0249	14.14	2.3356	.0020	.0210	13.41
#2	.0378	14.01	2.3314	.0014	.0204	13.31

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	.0001	.2498	.0073	.2061	.1631
#1	.0101	.0011	.2500	.0076	.2063	.1649
#2	.0138	-.0009	.2497	.0069	.2060	.1612

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.188	8.077	3.4186	.0343	.05075	.10967
#1	2.181	8.052	3.4305	.0285	.05068	.11008
#2	2.194	8.103	3.4067	.0401	.05082	.10925

Int. Std.	Sc3572
Units	Cts/S
Avg	180.99
#1	181.01
#2	180.98

* -0.00045Cd

Method: 2010A Sample Name: K1006636-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.37	.0206	.0114	.65393	.00318	.0422
#1	58.96	.0174	.0137	.64798	.00312	.0423
#2	59.78	.0238	.0092	.65987	.00324	.0420

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	14.94	.0356	.0316	.0537	97.01
#1	.0042	14.85	.0348	.0318	.0523	96.13
#2	.0040	15.03	.0364	.0314	.0551	97.89

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0405	21.68	2.6445	-.0009	.0236	17.59
#1	.0365	21.63	2.6351	-.0005	.0236	17.58
#2	.0445	21.74	2.6540	-.0013	.0236	17.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124	-.0013	.3395	.0134	.1839	.1819
#1	.0049	-.0012	.3384	.0107	.1849	.1814
#2	.0200	-.0015	.3406	.0160	.1828	.1824

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.185	5.844	3.7983	.0602	.05993	.13642
#1	2.174	5.801	3.7947	.0517	.05996	.13623
#2	2.196	5.887	3.8018	.0687	.05989	.13662

Int. Std.	Sc3572
Units	Cts/S
Avg	182.66
#1	182.66
#2	182.67

x 0.00036Cd

Method: 2010A Sample Name: K1006636-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.68	.0229	.1221	.53458	.00201	.0375
#1	44.88	.0253	.1275	.53702	.00200	.0365
#2	44.48	.0205	.1167	.53214	.00202	.0385

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	10.26	.0413	.0223	.1707	90.21
#1	.0069	10.27	.0411	.0214	.1755	90.81
#2	.0064	10.25	.0415	.0232	.1660	89.61

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0965	11.88	2.0542	.0013	.0173	10.92
#1	.1033	11.99	2.0494	.0019	.0171	11.02
#2	.0897	11.77	2.0589	.0007	.0175	10.82

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0016	.2366	.0131	.1881	.2743
#1	.0248	-.0009	.2407	.0161	.1891	.2770
#2	.0061	-.0023	.2324	.0101	.1871	.2716

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.323	9.318	3.0358	.0450	.04505	.09704
#1	2.320	9.358	3.0671	.0394	.04583	.09808
#2	2.325	9.278	3.0046	.0506	.04427	.09600

Int. Std.	Sc3572
Units	Cts/S
Avg	180.23
#1	179.74
#2	180.71

x 0.00266 d

Method: 2010A Sample Name: K1006636-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.36	.0132	.0218	.43378	.00203	.0344
#1	46.52	.0092	.0230	.43467	.00203	.0337
#2	46.21	.0173	.0206	.43288	.00203	.0352

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	9.646	.0376	.0235	.0581	83.12
#1	.0044	9.647	.0388	.0248	.0578	83.45
#2	.0036	9.645	.0364	.0222	.0584	82.80

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0228	15.63	1.8617	.0011	.0195	12.91
#1	.0301	15.55	1.8660	.0001	.0204	12.97
#2	.0154	15.70	1.8573	.0021	.0185	12.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189	-.0011	.4816	.0117	.1576	.1568
#1	.0183	.0004	.4822	.0077	.1589	.1602
#2	.0195	-.0025	.4810	.0157	.1562	.1535

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.911	8.124	3.2195	.0357	.05250	.09920
#1	1.900	8.141	3.2394	.0417	.05320	.09991
#2	1.921	8.106	3.1995	.0297	.05180	.09849

Int. Std.	Sc3572
Units	Cts/S
Avg	181.35
#1	180.95
#2	181.74

x 0.0002 Cd

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.24	.0197	-.0075	.99659	.00256	.0454
#1	52.14	.0149	-.0152	.99145	.00252	.0447
#2	52.35	.0245	.0003	1.0017	.00259	.0460

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	16.63	.0341	.0218	.0544	92.51
#1	.0032	16.49	.0334	.0206	.0557	92.05
#2	.0036	16.76	.0348	.0229	.0531	92.96

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0202	20.87	2.0106	.0012	.0231	16.26
#1	.0168	20.87	2.0046	.0022	.0227	16.34
#2	.0236	20.86	2.0166	.0002	.0234	16.19

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	-.0015	1.028	.0181	.1707	.1575
#1	.0167	-.0038	1.030	.0179	.1700	.1543
#2	.0279	.0008	1.025	.0182	.1713	.1607

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.535	9.274	4.1630	.0398	.05509	.21326
#1	2.524	9.277	4.1677	.0463	.05475	.21403
#2	2.547	9.272	4.1582	.0332	.05543	.21249

Int. Std.	Sc3572
Units	Cts/S
Avg	184.37
#1	183.99
#2	184.76

x - 0.0009 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 11:28 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.076	.0023	-.0023	2.5026	.05011	.0079
Stddev	.004	.0063	.0071	.0093	.00020	.0012
%RSD	.0787	275.7	313.2	.37032	.40191	15.10
#1	5.074	-.0022	.0027	2.4961	.04997	.0070
#2	5.079	.0067	-.0073	2.5092	.05025	.0087
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	26.70	.0036	-.0016	-.0013	25.75
Stddev	.0002	.08	.0011	.0004	.0000	.16
%RSD	23.61	.2939	30.52	27.24	.2374	.6401
#1	.0012	26.65	.0044	-.0019	-.0013	25.64
#2	.0009	26.76	.0029	-.0013	-.0012	25.87
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0032	25.48	4.957	-.0027	-.0015	9.904
Stddev	.0015	.08	.027	.0001	.0004	.009
%RSD	47.33	.3077	.5402	2.113	27.04	.0917
#1	-.0043	25.42	4.938	-.0027	-.0012	9.911
#2	-.0021	25.53	4.976	-.0027	-.0018	9.898
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0019	9.809	.0070	.0010	.0032
Stddev	.0035	.0008	.010	.0007	.0004	.0028
%RSD	94.81	43.62	.0988	9.689	36.01	86.46
#1	.0012	.0013	9.816	.0075	.0013	.0052
#2	.0062	.0024	9.802	.0065	.0008	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 11:28

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.530	.00558	.0190	.50014	.49379
Stddev	.02	.006	.00066	.0074	.00461	.00076
%RSD	.2186	.2446	11.860	38.84	.92110	.15478
#1	10.26	2.525	.00511	.0138	.50340	.49434
#2	10.29	2.534	.00605	.0242	.49688	.49325
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.61
Stddev	.60
%RSD	.33538
#1	178.03
#2	177.19

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 11:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4955	2.436	2.483	.46375	.52631	.4971
Stddev	.0263	.027	.000	.00207	.00127	.0033
%RSD	5.308	1.091	.0009	.44536	.24137	.6677
#1	.4769	2.417	2.483	.46229	.52542	.4947
#2	.5141	2.454	2.483	.46521	.52721	.4994
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4966	2.453	.4943	.4904	.5160	.5074
Stddev	.0017	.012	.0065	.0003	.0004	.0058
%RSD	.3350	.4850	1.312	.0701	.0815	1.136
#1	.4954	2.461	.4897	.4902	.5163	.5115
#2	.4978	2.444	.4989	.4907	.5157	.5033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.382	2.0714	.95313	.9671	.4903	5.050
Stddev	.032	.0056	.00223	.0048	.0009	.025
%RSD	1.334	.26935	.23431	.4972	.1840	.4998
#1	2.359	2.0753	.95155	.9637	.4909	5.033
#2	2.404	2.0674	.95471	.9705	.4896	5.068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.419	.5019	.4815	2.313	.4808	.4928
Stddev	.016	.0008	.0019	.011	.0034	.0009
%RSD	.6685	.1595	.4001	.4716	.7108	.1814
#1	2.408	.5025	.4829	2.305	.4784	.4922
#2	2.430	.5013	.4802	2.321	.4832	.4935
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 11:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0249	.2982	.49099	4.796	.50906	.49060
Stddev	.0232	.0021	.00180	.039	.00139	.00020
%RSD	93.11	.6918	.36717	.8097	.27337	.04114
#1	-.0413	.2967	.48972	4.769	.50808	.49046
#2	-.0085	.2996	.49227	4.824	.51005	.49074
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.23
Stddev	.08
%RSD	.04453
#1	181.17
#2	181.29

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 11:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144	.0097	-.0047	.00052	.00013	.0007
Stddev	.0078	.0086	.0017	.00004	.00008	.0003
%RSD	53.87	88.70	35.35	7.2979	60.118	41.17
#1	.0199	.0158	-.0035	.00049	.00007	.0005
#2	.0089	.0036	-.0059	.00055	.00018	.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0041	-.0003	-.0011	.0035	.0048
Stddev	.0004	.0058	.0012	.0003	.0024	.0002
%RSD	183.8	141.6	400.3	24.00	69.03	3.910
#1	.0005	.0000	-.0011	-.0009	.0018	.0047
#2	-.0001	.0083	.0005	-.0013	.0052	.0050
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.00248	.00123	.0018	.0008	-.0023
Stddev	.0018	.00010	.00010	.0028	.0010	.0128
%RSD	176.8	3.9162	7.9132	152.6	118.3	566.6
#1	-.0003	.00241	.00129	.0038	.0015	-.0113
#2	.0023	.00255	.00116	-.0001	.0001	.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0014	-.0038	.0046	.0020	.0012
Stddev	.0009	.0006	.0027	.0017	.0030	.0015
%RSD	70.86	42.33	71.23	37.18	150.7	124.6
#1	.0019	-.0019	-.0057	.0058	.0041	.0022
#2	.0006	-.0010	-.0019	.0034	-.0001	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 11:34

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0021	.00123	-.0087	-.00007	.00039
Stddev	.0093	.0012	.00009	.0218	.00035	.00001
%RSD	1077.	56.78	7.1726	249.8	477.00	3.4821
#1	-.0057	-.0012	.00117	.0067	.00017	.00038
#2	.0075	-.0029	.00129	-.0241	-.00032	.00040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	176.85
Stddev	.72
%RSD	.40503
#1	177.36
#2	176.34

Method: 2010A Sample Name: RB Operator: JC
Comment: (208725) (071610B)
Run Time: 07/16/10 11:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0045	.0038	.00048	-.00002
#1	-.0034	.0044	.0041	.00062	-.00001
#2	.0007	-.0133	.0035	.00034	-.00002

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0004	-.0061	.0002	-.0007
#1	.0006	.0003	-.0039	-.0008	-.0002
#2	.0013	.0006	-.0083	.0011	-.0012

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0001	.0067	.00014	-.00012
#1	.0005	-.0001	.0092	.00015	-.00019
#2	.0009	.0002	.0041	.00012	-.00005

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	.0006	-.0142	-.0037	.0009
#1	-.0020	.0002	-.0175	-.0044	.0013
#2	-.0026	.0009	-.0110	-.0031	.0004

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0124	.0056	.0024	-.0006	.0039
#1	-.0119	.0017	.0010	-.0032	.0048
#2	-.0129	.0094	.0038	.0019	.0030

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0026	.00177	-.0008	.00024	.00011
#1	-.0021	.00212	.0000	.00017	.00008
#2	-.0032	.00142	-.0017	.00032	.00013

Int. Std.	Sc3572
Units	Cts/S
Avg	175.22
#1	175.03
#2	175.41

Method: 2010A Sample Name: K1006676-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0020	.0053	.00022	.00002	.0022
#1	-.0007	.0028	.0166	.00006	.00004	.0024
#2	.0048	.0012	-.0059	.00038	-.00001	.0019

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0026	-.0003	-.0010	.0014	.0063
#1	-.0002	.0075	-.0002	-.0009	.0005	.0066
#2	.0002	-.0024	-.0003	-.0011	.0022	.0060

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	.00024	.00010	-.0023	.0009	.0055
#1	.0011	.00018	-.00003	-.0016	.0008	-.0161
#2	-.0067	.00031	.00022	-.0030	.0010	.0271

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	-.0023	-.0074	.0151	-.0002	-.0006
#1	.0031	-.0013	-.0045	.0143	-.0020	.0003
#2	.0056	-.0033	-.0103	.0159	.0016	-.0014

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195	.0068	.00089	-.0138	.00060	.00006
#1	.0159	.0069	.00104	-.0020	.00095	.00006
#2	.0231	.0066	.00074	-.0257	.00026	.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	178.95
#1	178.41
#2	179.48

Method: 2010A Sample Name: LCSS Operator: JC
Comment: K1006676 1/2 (208725) (071610B)
Run Time: 07/16/10 11:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.01	.4733	.4363	2.2441	.33424	.5417
#1	41.04	.4708	.4306	2.2392	.33554	.5424
#2	40.97	.4758	.4419	2.2490	.33295	.5410

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4688	51.02	.7519	.9911	1.242	89.10
#1	.4682	50.78	.7476	.9900	1.247	88.85
#2	.4694	51.26	.7563	.9921	1.237	89.34

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5101	19.28	2.5044	.3092	1.014	20.17
#1	.5128	19.27	2.5038	.3048	1.012	20.31
#2	.5074	19.28	2.5049	.3136	1.016	20.04

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9795	.3885	3.291	.6797	.8940	1.480
#1	.9739	.3857	3.320	.6741	.9005	1.474
#2	.9851	.3913	3.262	.6853	.8875	1.485

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.377	7.390	2.2408	1.284	.04314	.68082
#1	4.395	7.396	2.2485	1.248	.04385	.68500
#2	4.358	7.384	2.2331	1.319	.04244	.67664

Int. Std.	Sc3572
Units	Cts/S
Avg	178.47
#1	178.32
#2	178.62

Method: 2010A Sample Name: K1006676-018 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.07	.0259	.1419	.53728	.00157	.0275
#1	43.41	.0392	.1402	.54081	.00157	.0288
#2	42.73	.0126	.1436	.53374	.00156	.0262

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056 *	12.62	.0345	.0230	.2462	93.22
#1	.0058	12.67	.0357	.0220	.2516	93.63
#2	.0053	12.57	.0334	.0240	.2408	92.82

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0736	18.34	2.7159	.0024	.0145	16.28
#1	.0752	18.46	2.7361	.0049	.0149	16.40
#2	.0720	18.21	2.6956	.0000	.0140	16.17

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0007	.1565	.0187	.1617	.2742
#1	.0113	.0018	.1559	.0162	.1608	.2755
#2	.0236	-.0031	.1571	.0213	.1625	.2730

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.944	5.996	3.6717	.0531	.08663	.09691
#1	2.972	6.032	3.7053	.0466	.08727	.09784
#2	2.916	5.961	3.6381	.0596	.08599	.09598

Int. Std.	Sc3572
Units	Cts/S
Avg	179.85
#1	179.56
#2	180.14

* 0.0056 Cd − 93.22 Fe $\left(\frac{0.0091\,Cd}{197.8\,Fe}\right)$ = 0.0013 Cd

Method: 2010A Sample Name: K1006676-018D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.61	.0282	.1498	.49847	.00163	.0249
#1	42.85	.0286	.1516	.50135	.00161	.0242
#2	42.37	.0279	.1480	.49558	.00165	.0255

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	12.56	.0332	.0209	.2198	91.20
#1	.0050	12.66	.0348	.0214	.2215	91.52
#2	.0055	12.47	.0316	.0204	.2181	90.88

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0551	16.77	2.4901	.0017	.0149	15.12
#1	.0557	16.86	2.5062	.0000	.0133	15.29
#2	.0545	16.67	2.4739	.0035	.0165	14.96

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0185	-.0042	.1560	.0200	.1616	.2592
#1	.0309	-.0060	.1601	.0173	.1637	.2613
#2	.0061	-.0025	.1519	.0228	.1595	.2571

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.862	6.543	3.2468	.0457	.07962	.09584
#1	2.883	6.605	3.2869	.0534	.08046	.09707
#2	2.840	6.481	3.2066	.0380	.07878	.09462

Int. Std.	Sc3572
Units	Cts/S
Avg	181.41
#1	181.22
#2	181.60

* 0.0011Cd

Method: 2010A Sample Name: K1006676-018L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 11:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.447	.0048	.0371	.10530	.00026	.0070
#1	8.471	.0036	.0301	.10512	.00026	.0075
#2	8.423	.0060	.0442	.10548	.00026	.0065

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	2.265	.0072	.0044	.0495	17.88
#1	.0017	2.278	.0069	.0047	.0491	17.89
#2	.0013	2.252	.0076	.0041	.0498	17.88

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129	3.4361	.49224	-.0013	.0019	3.263
#1	.0126	3.4411	.49573	-.0002	.0029	3.279
#2	.0132	3.4312	.48876	-.0024	.0009	3.247

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	-.0007	.0452	.0163	.0315	.0515
#1	.0109	-.0001	.0442	.0151	.0317	.0513
#2	-.0015	-.0012	.0462	.0175	.0313	.0517

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5589	1.165	.71155	.0001	.01723	.01915
#1	.5674	1.177	.71765	.0060	.01740	.01906
#2	.5504	1.152	.70545	-.0058	.01706	.01924

Int. Std.	Sc3572
Units	Cts/S
Avg	180.57
#1	180.37
#2	180.77

X 0.00068 Cd

Method: 2010A Sample Name: K1006676-018S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.89	.2660	.6712	2.7987	.05439	.5207
#1	56.61	.2619	.6760	2.7850	.05427	.5194
#2	57.17	.2700	.6665	2.8124	.05450	.5220

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0586	19.22	.2533	.5495	.5216	98.95
#1	.0584	19.14	.2536	.5489	.5187	98.75
#2	.0588	19.29	.2531	.5501	.5245	99.15

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5919	26.40	3.470	.5086	.5387	24.58
#1	.5895	26.50	3.470	.5065	.5367	24.73
#2	.5943	26.31	3.471	.5108	.5406	24.42

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5087	.0456	5.361	.0114	.6971	.8195
#1	.5025	.0438	5.396	.0130	.6987	.8159
#2	.5150	.0473	5.327	.0097	.6956	.8232

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.356	7.264	4.3879	.5380	.10749	.11220
#1	3.378	7.261	4.4030	.5540	.10764	.11246
#2	3.335	7.268	4.3729	.5221	.10734	.11195

Int. Std.	Sc3572
Units	Cts/S
Avg	179.07
#1	178.83
#2	179.32

x 0.0540 Cd

Method: 2010A Sample Name: K1006676-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.60	.0231	.0949	.58809	.00168	.0423
#1	37.48	.0308	.0949	.58562	.00164	.0404
#2	37.73	.0154	.0949	.59056	.00172	.0441

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	9.863	.0700	.0240	.0720	151.1
#1	.0060	9.786	.0698	.0243	.0716	151.1
#2	.0071	9.940	.0703	.0237	.0724	151.0

Elem	Pb2203	Mg2025	Mg2795	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0404	9.886	8.9152	2.4540	.0011	.0178
#1	.0471	9.774	8.8980	2.4552	.0035	.0178
#2	.0337	9.998	8.9324	2.4528	-.0013	.0178

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.98	.0242	.0009	.5419	.0227	.3566
#1	11.01	.0180	.0008	.5484	.0279	.3573
#2	10.96	.0304	.0011	.5353	.0174	.3558

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1596	2.869	7.128	2.6998	.0281	.04123
#1	.1602	2.848	7.111	2.7010	.0399	.04131
#2	.1589	2.889	7.144	2.6986	.0163	.04115

Elem	Sr4077
Units	ppm
Avg	.08553
#1	.08571
#2	.08534

$x = 0.00045 Cd$

Int. Std.	Sc3572
Units	Cts/S
Avg	180.37
#1	180.01
#2	180.72

Method: 2010A Sample Name: K1006676-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.85	.0212	.0254	.74434	.00295	.0546
#1	51.76	.0164	.0248	.74385	.00298	.0542
#2	51.94	.0260	.0261	.74482	.00293	.0551

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	16.99	.0503	.0258	.0539	120.4
#1	.0055	16.91	.0501	.0255	.0551	119.8
#2	.0051	17.06	.0506	.0260	.0527	121.0

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0331	17.65	2.0902	.0012	.0195	17.43
#1	.0360	17.68	2.1013	.0004	.0191	17.45
#2	.0303	17.61	2.0790	.0021	.0199	17.41

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	-.0020	2.593	.0244	.2694	.1455
#1	.0183	.0008	2.610	.0243	.2686	.1446
#2	-.0015	-.0049	2.576	.0244	.2703	.1463

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.523	6.119	2.9944	.0258	.05196	.20235
#1	2.512	6.104	3.0044	.0282	.05244	.20337
#2	2.535	6.134	2.9845	.0234	.05147	.20133

Int. Std.	Sc3572
Units	Cts/S
Avg	182.39
#1	181.91
#2	182.88

x -0.00024 Cd

Method: 2010A Sample Name: K1006676-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.97	.0311	.0115	.57447	.00178	.0557
#1	33.89	.0243	.0080	.57400	.00175	.0549
#2	34.04	.0380	.0150	.57495	.00180	.0565

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052 *	27.51	.0582	.0221	.0331	137.0
#1	.0051	27.43	.0569	.0209	.0331	137.2
#2	.0053	27.59	.0594	.0233	.0331	136.8

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236	13.02	1.9834	-.0008	.0164	11.98
#1	.0342	13.01	1.9747	-.0010	.0161	12.06
#2	.0131	13.03	1.9921	-.0006	.0168	11.90

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	-.0009	2.199	.0148	.3507	.1089
#1	.0108	-.0010	2.216	.0186	.3532	.1107
#2	.0058	-.0007	2.183	.0110	.3483	.1071

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.469	7.024	2.4021	.0311	.03865	.17395
#1	2.453	7.002	2.4129	.0237	.03872	.17476
#2	2.485	7.046	2.3913	.0385	.03859	.17314

Int. Std.	Sc3572
Units	Cts/S
Avg	180.68
#1	180.26
#2	181.09

* -0.0011 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 12:07 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.077	.0148	.0143	2.4978	.05011	.0075
Stddev	.024	.0057	.0046	.0075	.00027	.0002
%RSD	.4788	38.31	32.28	.29957	.53095	2.738
#1	5.094	.0188	.0175	2.4925	.04992	.0073
#2	5.060	.0108	.0110	2.5031	.05030	.0076
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	26.60	.0015	-.0022	-.0032	25.74
Stddev	.0000	.03	.0008	.0009	.0001	.04
%RSD	1.440	.1092	51.42	42.11	3.403	.1684
#1	.0014	26.58	.0010	-.0029	-.0031	25.77
#2	.0014	26.62	.0021	-.0016	-.0032	25.71
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0144	25.33	4.979	-.0002	-.0026	9.900
Stddev	.0063	.04	.006	.0013	.0009	.057
%RSD	43.51	.1732	.1176	519.2	33.36	.5783
#1	-.0100	25.36	4.983	-.0012	-.0032	9.860
#2	-.0188	25.30	4.975	.0007	-.0020	9.941
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	.0053	9.761	.0078	.0009	.0014
Stddev	.0158	.0020	.005	.0004	.0019	.0013
%RSD	255.1	38.27	.0524	4.594	205.5	94.06
#1	-.0050	.0068	9.765	.0080	-.0004	.0024
#2	.0173	.0039	9.758	.0075	.0023	.0005
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 12:07

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.31	2.544	.00523	.0258	.49556	.49459
Stddev	.06	.000	.00150	.0047	.00249	.00011
%RSD	.5990	.0013	28.687	18.15	.50216	.02205
#1	10.27	2.544	.00417	.0225	.49380	.49467
#2	10.35	2.544	.00630	.0292	.49732	.49451
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.19
Stddev	.67
%RSD	.37978
#1	176.71
#2	177.66

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 12:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4917	2.434	2.472	.46233	.52270	.4969
Stddev	.0012	.025	.000	.00018	.00064	.0015
%RSD	.2432	1.040	.0093	.03919	.12175	.2955
#1	.4925	2.417	2.472	.46245	.52225	.4959
#2	.4909	2.452	2.473	.46220	.52315	.4980
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4951	2.444	.4910	.4881	.5163	.5128
Stddev	.0010	.010	.0013	.0009	.0017	.0082
%RSD	.2057	.4228	.2598	.1786	.3269	1.605
#1	.4944	2.436	.4901	.4875	.5175	.5186
#2	.4959	2.451	.4919	.4887	.5151	.5069
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.377	2.0712	.95325	.9649	.4854	5.041
Stddev	.000	.0015	.00548	.0103	.0001	.041
%RSD	.0089	.07208	.57474	1.071	.0177	.8046
#1	2.377	2.0702	.95712	.9576	.4854	5.070
#2	2.376	2.0723	.94938	.9722	.4855	5.012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.419	.4954	.4754	2.320	.4789	.4872
Stddev	.036	.0006	.0049	.013	.0049	.0016
%RSD	1.491	.1147	1.030	.5568	1.020	.3330
#1	2.445	.4950	.4789	2.310	.4824	.4860
#2	2.394	.4958	.4720	2.329	.4754	.4883
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 12:09

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0167	.2928	.49015	4.818	.50998	.48756
Stddev	.0043	.0054	.00036	.004	.00426	.00091
%RSD	25.89	1.836	.07255	.0744	.83481	.18698
#1	-.0136	.2967	.49040	4.821	.51299	.48820
#2	-.0198	.2890	.48990	4.816	.50697	.48691
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.95
Stddev	.15
%RSD	.08161
#1	181.85
#2	182.06

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 12:12 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0192	.0157	.0095	.00044	.00007	.0013
Stddev	.0010	.0103	.0125	.00010	.00003	.0009
%RSD	5.071	65.53	132.6	23.438	39.944	67.09
#1	.0185	.0230	.0006	.00052	.00009	.0007
#2	.0199	.0084	.0183	.00037	.00005	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0028	.0011	-.0011	.0008	.0061
Stddev	.0000	.0050	.0002	.0001	.0030	.0007
%RSD	17.14	181.9	14.11	12.48	360.3	11.12
#1	.0001	-.0008	.0012	-.0010	-.0013	.0066
#2	.0001	.0063	.0010	-.0012	.0030	.0057
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.00271	.00129	.0037	.0002	-.0103
Stddev	.0039	.00008	.00009	.0044	.0005	.0169
%RSD	112.7	2.7739	7.0568	119.3	191.0	164.4
#1	.0062	.00266	.00122	.0068	.0006	-.0223
#2	.0007	.00276	.00135	.0006	-.0001	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0016	-.0012	.0052	.0010	.0021
Stddev	.0035	.0041	.0012	.0051	.0016	.0026
%RSD	62.90	257.0	98.50	98.89	157.3	125.5
#1	.0031	-.0045	-.0004	.0088	.0021	.0039
#2	.0081	.0013	-.0021	.0016	-.0001	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 12:12

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0023	-.00009	-.0147	.00024	.00036
Stddev	.0002	.0004	.00114	.0060	.00024	.00003
%RSD	1.481	15.51	1242.8	40.82	99.537	8.2825
#1	.0104	-.0025	-.00090	-.0190	.00042	.00038
#2	.0102	-.0020	.00071	-.0105	.00007	.00034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	178.21
Stddev	1.79
%RSD	1.0031
#1	176.95
#2	179.47

Method: 2010A Sample Name: K1006676-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.33	.0217	.1774	.78376	.00151	.0283
#1	41.36	.0238	.1706	.78583	.00149	.0292
#2	41.30	.0197	.1841	.78169	.00153	.0274

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	13.66	.0406	.0287	.1749	84.32
#1	.0053	13.64	.0405	.0288	.1755	84.59
#2	.0045	13.69	.0407	.0287	.1743	84.05

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0607	12.69	2.4131	.0016	.0177	13.77
#1	.0605	12.70	2.4166	.0036	.0183	13.84
#2	.0609	12.68	2.4096	-.0003	.0171	13.71

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0006	.1898	.0164	.1818	.2287
#1	.0007	-.0009	.1914	.0141	.1843	.2282
#2	.0292	-.0003	.1881	.0186	.1792	.2293

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.140	5.756	3.4194	.0389	.05025	.11200
#1	3.145	5.792	3.4501	.0459	.05008	.11270
#2	3.135	5.720	3.3887	.0319	.05043	.11129

Int. Std.	Sc3572
Units	Cts/S
Avg	178.66
#1	178.22
#2	179.09

X 0.0010 CJ

Method: 2010A Sample Name: K1006676-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.99	.0333	.0620	.74436	.00157	.0329
#1	47.15	.0269	.0673	.73785	.00156	.0323
#2	46.83	.0397	.0567	.75088	.00157	.0335

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	14.35	.0488	.0286	.0457	104.3
#1	.0033	14.22	.0487	.0279	.0455	104.1
#2	.0046	14.47	.0488	.0294	.0459	104.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	16.21	2.3017	.0012	.0199	16.28
#1	.0127	16.21	2.2677	.0022	.0203	16.38
#2	.0213	16.20	2.3357	.0001	.0194	16.19

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096	-.0032	.2173	.0132	.2342	.1581
#1	.0158	-.0038	.2203	.0125	.2323	.1552
#2	.0034	-.0027	.2142	.0140	.2360	.1609

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.207	5.564	4.2439	.0456	.06116	.10923
#1	3.193	5.576	4.2191	.0503	.06194	.10876
#2	3.221	5.552	4.2687	.0409	.06038	.10970

Int. Std.	Sc3572
Units	Cts/S
Avg	180.37
#1	181.77
#2	178.98

-0.00080 Cd

Method: 2010A Sample Name: K1006676-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:21 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	45.61	.0169	.0008	.70495	.00162	.0305
#1	45.77	.0213	-.0009	.70404	.00164	.0303
#2	45.45	.0124	.0025	.70586	.00160	.0306

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040 ✱	13.15	.0467	.0304	.0374	100.1
#1	.0041	13.19	.0466	.0315	.0371	100.7
#2	.0039	13.11	.0468	.0293	.0378	99.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	17.77	2.4905	.0002	.0202	15.96
#1	.0177	17.83	2.4912	.0017	.0211	16.08
#2	.0240	17.70	2.4898	-.0013	.0194	15.83

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0015	.2333	.0138	.2259	.1473
#1	.0155	-.0022	.2345	.0082	.2237	.1466
#2	-.0044	-.0008	.2322	.0193	.2281	.1480

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.895	6.243	4.3951	.0319	.05702	.09264
#1	2.895	6.259	4.3973	.0337	.05752	.09320
#2	2.896	6.226	4.3928	.0301	.05653	.09207

Int. Std.	Sc3572
Units	Cts/S
Avg	179.44
#1	179.64
#2	179.25

✱ -0.0006 Cd

Method: 2010A Sample Name: K1006676-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:24 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.06	.0181	.0634	.72457	.00159	.0296
#1	44.00	.0181	.0704	.72376	.00156	.0309
#2	44.12	.0181	.0563	.72539	.00161	.0283

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036 *	14.27	.0432	.0244	.0474	91.47
#1	.0036	14.27	.0427	.0245	.0483	91.19
#2	.0036	14.27	.0436	.0242	.0466	91.76

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154	14.63	2.2477	-.0002	.0176	14.83
#1	.0142	14.59	2.2485	-.0002	.0165	14.81
#2	.0166	14.67	2.2469	-.0002	.0187	14.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0029	.2115	.0163	.1932	.1525
#1	.0099	-.0033	.2106	.0148	.1918	.1522
#2	.0211	-.0024	.2124	.0178	.1947	.1529

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.087	7.623	3.9090	.0457	.05465	.10693
#1	3.079	7.599	3.9145	.0491	.05468	.10707
#2	3.095	7.648	3.9035	.0424	.05462	.10679

Int. Std.	Sc3572
Units	Cts/S
Avg	181.47
#1	181.08
#2	181.85

* -0.0006 Cd

Method: 2010A Sample Name: K1006676-008 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.54	.0170	.1642	.54037	.00185	.0196
#1	35.52	.0150	.1631	.54331	.00188	.0200
#2	35.57	.0190	.1654	.53742	.00181	.0191

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	9.184	8.558	.0287	.0222	.1247
#1	.0037	9.097	8.493	.0296	.0219	.1272
#2	.0044	9.271	8.622	.0279	.0224	.1221

Elem	Fe2714	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	70.62	.0399	11.51	2.4145	.0009	.0123
#1	70.78	.0448	11.54	2.4297	.0010	.0128
#2	70.45	.0351	11.48	2.3993	.0008	.0118

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.26	.0057	-.0022	.1592	.0116	.1347
#1	11.32	-.0042	-.0010	.1635	.0135	.1342
#2	11.20	.0156	-.0033	.1548	.0097	.1353

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2028	1.966	5.554	2.7760	.0279	.03765
#1	.2032	1.955	5.575	2.7892	.0264	.03777
#2	.2024	1.977	5.534	2.7629	.0294	.03754

Elem	Sr4077
Units	ppm
Avg	.07349
#1	.07398
#2	.07300

× 0.0009 Cd

Int. Std.	Sc3572
Units	Cts/S
Avg	182.30
#1	181.55
#2	183.05

Method: 2010A Sample Name: K1006676-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.87	.0302	.0296	.65865	.00247	.0204
#1	48.07	.0311	.0246	.67875	.00260	.0166
#2	47.67	.0294	.0346	.63856	.00234	.0241

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	11.73	.0348	.0253	.0440	90.88
#1	.0032	11.74	.0360	.0259	.0442	93.81
#2	.0041	11.73	.0335	.0247	.0438	87.95

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0325	14.45	2.6369	.0009	.0173	13.02
#1	.0332	14.47	2.7199	.0009	.0180	12.98
#2	.0318	14.44	2.5540	.0008	.0165	13.06

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139	-.0018	.1918	.0143	.1709	.1437
#1	.0202	-.0013	.2011	.0137	.1777	.1473
#2	.0075	-.0023	.1825	.0150	.1642	.1402

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.827	3.615	3.0440	.0379	.04459	.09739
#1	1.819	3.626	3.1413	.0293	.04495	.10016
#2	1.835	3.604	2.9466	.0466	.04423	.09461

Int. Std.	Sc3572
Units	Cts/S
Avg	177.74
#1	172.72
#2	182.76

x -0.0006 Cd

Method: 2010A Sample Name: K1006676-010 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.14	.0242	-.0012	1.3666	.00171	.0215
#1	34.29	.0355	.0000	1.4311	.00173	.0220
#2	33.99	.0130	-.0024	1.3021	.00169	.0210

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032 X	9.675	.0267	.0276	.0360	75.00
#1	.0032	9.725	.0265	.0279	.0376	75.27
#2	.0032	9.625	.0269	.0274	.0344	74.74

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0419	13.22	4.915	.0006	.0139	11.18
#1	.0418	13.23	4.936	.0007	.0133	11.21
#2	.0421	13.21	4.894	.0006	.0145	11.14

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	-.0002	.2013	.0129	.1708	.1118
#1	-.0040	-.0015	.2022	.0067	.1710	.1099
#2	.0145	.0011	.2004	.0191	.1707	.1136

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.609	5.457	3.0196	.0186	.03775	.07710
#1	1.621	5.476	3.0542	.0128	.03788	.07753
#2	1.597	5.439	2.9850	.0243	.03761	.07668

Int. Std.	Sc3572
Units	Cts/S
Avg	180.84
#1	180.77
#2	180.90

X - 0.000252 Cd

Method: 2010A Sample Name: K1006676-011 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.18	.0238	.1476	.72641	.00176	.0277
#1	46.15	.0262	.1506	.72603	.00174	.0280
#2	46.21	.0214	.1446	.72680	.00178	.0275

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	11.92	.0348	.0224	.0906	74.96
#1	.0038	11.87	.0339	.0234	.0926	75.25
#2	.0039	11.97	.0356	.0214	.0886	74.68

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0320	11.99	2.3543	.0018	.0160	13.39
#1	.0365	11.88	2.3559	.0031	.0153	13.37
#2	.0274	12.11	2.3527	.0005	.0166	13.41

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	.0004	.1930	.0128	.1385	.1900
#1	.0141	.0023	.1944	.0148	.1392	.1910
#2	.0078	-.0015	.1917	.0108	.1378	.1890

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.901	7.822	3.3835	.0342	.04780	.10272
#1	2.889	7.837	3.3867	.0351	.04794	.10262
#2	2.914	7.807	3.3803	.0333	.04766	.10283

Int. Std.	Sc3572
Units	Cts/S
Avg	180.66
#1	180.53
#2	180.78

x 0.00045 Cd

Method: 2010A Sample Name: K1006676-012 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.33	.0241	.0298	.83214	.00191	.0317
#1	47.64	.0225	.0243	.81542	.00190	.0337
#2	47.03	.0257	.0353	.84886	.00192	.0298

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	11.35	.2098	.0296	.0525	83.96
#1	.0035	11.38	.2062	.0284	.0516	82.11
#2	.0034	11.31	.2133	.0308	.0534	85.81

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0347	13.08	3.364	.0012	.0944	13.16
#1	.0240	13.12	3.266	.0006	.0927	13.18
#2	.0453	13.03	3.463	.0018	.0961	13.15

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	-.0012	.1913	.0134	.1734	.1444
#1	.0134	-.0009	.1846	.0111	.1678	.1409
#2	.0136	-.0016	.1981	.0156	.1789	.1479

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.482	5.346	3.4661	.0331	.04601	.09372
#1	2.490	5.388	3.3675	.0286	.04610	.09121
#2	2.474	5.305	3.5647	.0375	.04591	.09622

Int. Std.	Sc3572
Units	Cts/S
Avg	184.45
#1	189.04
#2	179.86

x 0.00036 Cd

Method: 2010A Sample Name: K1006676-013 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:42 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.99	.0267	.0047	.82084	.00277	.0289
#1	54.06	.0263	-.0006	.82126	.00278	.0291
#2	53.91	.0271	.0099	.82042	.00276	.0288

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040 X	16.77	.0344	.0335	.0505	91.73
#1	.0038	16.71	.0344	.0333	.0522	92.27
#2	.0042	16.83	.0345	.0336	.0488	91.18

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0336	18.53	3.319	-.0015	.0259	14.22
#1	.0334	18.56	3.340	-.0023	.0263	14.33
#2	.0339	18.50	3.298	-.0007	.0255	14.11

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0005	.2528	.0119	.1822	.1441
#1	.0094	-.0014	.2547	.0130	.1814	.1455
#2	.0254	.0004	.2509	.0107	.1830	.1428

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.987	3.137	2.8473	.0351	.04764	.12711
#1	1.978	3.144	2.8626	.0328	.04811	.12810
#2	1.996	3.130	2.8319	.0374	.04718	.12611

Int. Std.	Sc3572
Units	Cts/S
Avg	182.37
#1	182.08
#2	182.66

X - 0.00022 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 12:45 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.103	.0196	.0143	2.4808	.04968	.0060
Stddev	.032	.0068	.0171	.0062	.00026	.0000
%RSD	.6242	34.70	119.8	.25105	.51474	.5854
#1	5.126	.0243	.0264	2.4852	.04949	.0060
#2	5.081	.0148	.0022	2.4764	.04986	.0061
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	26.73	.0031	-.0022	-.0004	25.84
Stddev	.0000	.05	.0004	.0002	.0014	.10
%RSD	4.195	.1851	14.32	11.27	351.2	.3755
#1	.0011	26.69	.0028	-.0020	-.0014	25.77
#2	.0012	26.76	.0034	-.0023	.0006	25.91
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0061	25.38	4.956	-.0023	-.0018	9.867
Stddev	.0040	.07	.002	.0019	.0007	.011
%RSD	66.14	.2846	.0407	81.42	39.46	.1165
#1	-.0089	25.33	4.954	-.0037	-.0023	9.875
#2	-.0032	25.43	4.957	-.0010	-.0013	9.859
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0036	9.755	.0018	.0019	.0018
Stddev	.0105	.0041	.035	.0029	.0013	.0015
%RSD	212.3	113.3	.3604	155.2	67.99	84.93
#1	.0124	.0007	9.730	-.0002	.0010	.0007
#2	-.0025	.0065	9.780	.0039	.0028	.0029
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 12:45

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.25	2.523	.00453	.0214	.49403	.49006
Stddev	.05	.001	.00144	.0085	.00274	.00151
%RSD	.5291	.0294	31.709	39.65	.55436	.30772
#1	10.22	2.523	.00554	.0154	.49209	.48900
#2	10.29	2.522	.00351	.0275	.49596	.49113
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	178.14
Stddev	.34
%RSD	.19160
#1	178.39
#2	177.90

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 12:48 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4924	2.445	2.478	.46953	.53253	.4979
Stddev	.0271	.032	.029	.00220	.00066	.0034
%RSD	5.512	1.294	1.154	.46764	.12414	.6878
#1	.5116	2.423	2.458	.46798	.53300	.4955
#2	.4733	2.468	2.499	.47109	.53207	.5003
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5016	2.451	.5011	.4967	.5217	.5281
Stddev	.0008	.021	.0003	.0011	.0044	.0115
%RSD	.1688	.8421	.0674	.2284	.8444	2.175
#1	.5022	2.437	.5008	.4975	.5185	.5362
#2	.5010	2.466	.5013	.4959	.5248	.5200
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.416	2.0665	.97563	.9816	.4959	5.079
Stddev	.011	.0027	.00267	.0121	.0035	.029
%RSD	.4732	.13129	.27366	1.228	.6967	.5642
#1	2.408	2.0684	.97375	.9731	.4935	5.059
#2	2.424	2.0646	.97752	.9901	.4984	5.099
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.410	.4933	.4859	2.360	.4914	.4970
Stddev	.022	.0029	.0052	.013	.0029	.0020
%RSD	.9173	.5856	1.079	.5322	.6000	.4047
#1	2.394	.4953	.4822	2.351	.4935	.4956
#2	2.425	.4912	.4896	2.369	.4893	.4985
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 12:48

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0131	.2992	.50349	4.851	.51372	.49834
Stddev	.0043	.0005	.00340	.036	.00319	.00020
%RSD	32.63	.1773	.67549	.7496	.62176	.04033
#1	-.0101	.2995	.50108	4.825	.51146	.49820
#2	-.0161	.2988	.50589	4.876	.51598	.49848
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.89
Stddev	.22
%RSD	.12227
#1	178.74
#2	179.05

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 12:51 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137	.0121	-.0030	.00087	.00012	.0015
Stddev	.0126	.0005	.0042	.00005	.00006	.0003
%RSD	91.66	4.194	141.4	5.8535	47.470	21.55
#1	.0048	.0117	-.0059	.00083	.00016	.0013
#2	.0226	.0125	.0000	.00091	.00008	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0014	.0008	-.0005	.0025	.0071
Stddev	.0001	.0047	.0008	.0003	.0010	.0008
%RSD	53.35	345.3	94.89	53.94	39.78	11.45
#1	.0002	.0047	.0003	-.0007	.0032	.0076
#2	.0001	-.0020	.0013	-.0003	.0018	.0065
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.00309	.00151	.0031	.0006	-.0048
Stddev	.0074	.00008	.00002	.0024	.0004	.0012
%RSD	79.95	2.4878	1.5724	77.79	62.20	25.01
#1	.0144	.00315	.00149	.0049	.0004	-.0039
#2	.0040	.00304	.00153	.0014	.0009	-.0056
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	.0000	-.0035	.0062	.0003	.0001
Stddev	.0070	.0026	.0029	.0016	.0015	.0021
%RSD	59.47	98920.	82.93	26.17	468.5	1953.
#1	.0167	-.0019	-.0056	.0074	.0013	-.0014
#2	.0068	.0019	-.0015	.0051	-.0007	.0016
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 12:51

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	-.0017	.00026	.0024	.00069	.00040
Stddev	.0074	.0003	.00040	.0036	.00009	.00006
%RSD	188.1	18.75	155.21	146.8	13.349	15.704
#1	-.0092	-.0014	-.00003	-.0001	.00075	.00045
#2	.0013	-.0019	.00055	.0050	.00062	.00036
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	176.89
Stddev	.46
%RSD	.26236
#1	176.56
#2	177.22

Method: 2010A Sample Name: K1006676-014 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:07 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.79	.0183	.1214	.62709	.00175	.0219
#1	38.67	.0199	.1158	.62618	.00175	.0212
#2	38.92	.0167	.1270	.62800	.00176	.0226

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	13.75	.0325	.0195	.1079	71.54
#1	.0037	13.71	.0324	.0199	.1085	71.61
#2	.0045	13.80	.0327	.0190	.1073	71.48

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0334	10.87	2.7156	.0034	.0158	10.96
#1	.0374	10.89	2.7091	.0021	.0158	11.00
#2	.0294	10.84	2.7220	.0047	.0159	10.92

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	-.0002	.1513	.0107	.1228	.1851
#1	.0047	.0000	.1517	.0053	.1214	.1851
#2	.0023	-.0003	.1510	.0160	.1241	.1850

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.390	5.871	2.2305	.0493	.04767	.12801
#1	2.379	5.870	2.2340	.0460	.04818	.12814
#2	2.401	5.872	2.2270	.0527	.04715	.12788

Int. Std.	Sc3572
Units	Cts/S
Avg	180.52
#1	180.50
#2	180.53

x 0.000810

Method: 2010A Sample Name: K1006676-015 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.69	.0161	.0259	.43530	.00181	.0254
#1	42.56	.0157	.0351	.43727	.00181	.0242
#2	42.83	.0165	.0167	.43334	.00182	.0265

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032 X	12.98	.0379	.0200	.0497	76.48
#1	.0035	12.95	.0389	.0207	.0521	76.76
#2	.0030	13.01	.0368	.0194	.0473	76.20

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0231	13.76	1.8191	.0019	.0182	11.83
#1	.0251	13.73	1.8323	.0023	.0182	11.86
#2	.0210	13.79	1.8059	.0014	.0183	11.80

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0288	-.0023	.1978	.0177	.1340	.1364
#1	.0276	-.0008	.2049	.0149	.1348	.1375
#2	.0300	-.0037	.1908	.0205	.1333	.1354

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.248	7.431	2.4911	.0290	.04944	.11670
#1	2.244	7.444	2.5158	.0309	.04939	.11740
#2	2.251	7.418	2.4664	.0271	.04950	.11601

Int. Std.	Sc3572
Units	Cts/S
Avg	181.32
#1	180.20
#2	182.44

X = -0.000320d

Method: 2010A Sample Name: K1006676-016 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.86	.0128	.0131	.39204	.00226	.0262
#1	44.07	.0156	.0136	.39208	.00226	.0261
#2	43.64	.0100	.0125	.39200	.00226	.0264

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	14.94	.0305	.0182	.0502	79.09
#1	.0033	14.94	.0304	.0187	.0501	78.88
#2	.0023	14.94	.0306	.0177	.0503	79.29

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	15.75	1.4507	.0000	.0187	12.74
#1	.0075	15.87	1.4593	-.0004	.0187	12.85
#2	.0265	15.63	1.4420	.0005	.0188	12.62

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247	-.0013	.2873	.0107	.1409	.1350
#1	.0204	-.0035	.2880	.0097	.1431	.1352
#2	.0290	.0009	.2866	.0117	.1387	.1347

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.070	5.732	2.5500	.0382	.05692	.13477
#1	2.081	5.750	2.5654	.0383	.05752	.13601
#2	2.060	5.713	2.5345	.0382	.05633	.13353

Int. Std.	Sc3572
Units	Cts/S
Avg	180.67
#1	180.30
#2	181.05

± -0.00084Cd

Method: 2010A Sample Name: K1006676-017 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.16	.0225	.0141	.43773	.00232	.0257
#1	47.27	.0141	.0145	.43913	.00231	.0248
#2	47.06	.0309	.0137	.43633	.00233	.0267

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	15.23	.0320	.0205	.0549	79.59
#1	.0032	15.12	.0324	.0205	.0536	80.31
#2	.0033	15.34	.0315	.0206	.0563	78.86

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	16.53	1.6319	.0017	.0189	13.39
#1	.0168	16.60	1.6441	.0016	.0187	13.42
#2	.0225	16.45	1.6197	.0018	.0192	13.36

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	.0004	.2999	.0188	.1388	.1457
#1	.0157	-.0008	.3031	.0217	.1404	.1477
#2	.0119	.0015	.2967	.0160	.1372	.1437

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.229	5.235	2.8305	.0287	.06002	.13933
#1	2.227	5.247	2.8443	.0290	.06011	.14014
#2	2.230	5.224	2.8167	.0284	.05994	.13853

Int. Std.	Sc3572
Units	Cts/S
Avg	180.89
#1	179.95
#2	181.83

* - 0.00046 Cd

Method: 2010A Sample Name: K1006676-019 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.28	.0090	.0351	.58404	.00183	.0265
#1	50.34	.0086	.0295	.58588	.00181	.0255
#2	50.22	.0094	.0407	.58219	.00185	.0275

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	13.27	.0345	.0239	.1633	91.43
#1	.0041	13.19	.0352	.0238	.1636	91.61
#2	.0040	13.36	.0338	.0241	.1629	91.26

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	19.01	2.5813	.0010	.0185	16.42
#1	.0281	19.02	2.5894	.0010	.0196	16.51
#2	.0248	18.99	2.5733	.0009	.0174	16.33

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	-.0023	.1946	.0103	.1549	.1961
#1	.0004	-.0021	.1971	.0118	.1551	.1973
#2	.0227	-.0024	.1921	.0089	.1546	.1949

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.984	6.730	3.8740	.0518	.09022	.10210
#1	3.000	6.748	3.8737	.0394	.09100	.10245
#2	2.968	6.713	3.8742	.0641	.08944	.10175

Int. Std.	Sc3572
Units	Cts/S
Avg	181.86
#1	181.30
#2	182.43

x - 0.00021 Cd

Method: 2010A Sample Name: K1006676-020 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.15	.0226	.0069	.48287	.00192	.0228
#1	46.99	.0238	.0019	.48256	.00187	.0227
#2	47.31	.0214	.0120	.48319	.00196	.0228

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	12.81	.0354	.0226	.1547	78.77
#1	.0042	12.71	.0355	.0226	.1540	78.55
#2	.0028	12.91	.0354	.0225	.1555	79.00

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0249	16.73	1.9954	.0033	.0143	14.76
#1	.0265	16.69	1.9993	.0026	.0144	14.79
#2	.0233	16.76	1.9914	.0039	.0142	14.73

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112	.0012	.2456	.0092	.1257	.1627
#1	.0094	-.0012	.2472	.0128	.1233	.1610
#2	.0131	.0035	.2439	.0057	.1282	.1643

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.632	5.698	3.3566	.0539	.07304	.09599
#1	2.627	5.701	3.3591	.0507	.07339	.09606
#2	2.637	5.695	3.3541	.0571	.07268	.09592

Int. Std.	Sc3572
Units	Cts/S
Avg	183.16
#1	182.67
#2	183.65

* -0.00012 cd

Method: 2010A Sample Name: RB Operator: JC
Comment: (208725) (071610B)
Run Time: 07/16/10 13:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0036	-.0015	.00006	.00002	.0008
#1	-.0020	.0060	.0030	.00034	-.00002	.0005
#2	.0076	.0012	-.0059	-.00022	.00005	.0011

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0004	.0000	-.0005	.0020	.0269
#1	.0003	.0000	-.0002	-.0004	.0033	.0457
#2	.0005	.0008	.0003	-.0007	.0007	.0080

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	.00031	.00022	-.0018	.0001	.0336
#1	.0057	.00049	.00042	-.0015	-.0003	.0361
#2	.0079	.00014	.00003	-.0021	.0005	.0310

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0136	.0000	-.0101	.0008	.0015	.0017
#1	-.0118	.0016	-.0107	.0035	-.0001	.0029
#2	-.0155	-.0016	-.0095	-.0019	.0030	.0005

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0146	.0005	.00294	.0023	.00017	.00007
#1	.0114	.0000	.00381	.0083	-.00014	.00010
#2	.0177	.0010	.00206	-.0036	.00049	.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	177.98
#1	178.15
#2	177.80

Method: 2010A Sample Name: K1006777-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0016	-.0006	.00018	.00002
#1	.0034	-.0068	.0018	.00014	.00003
#2	-.0061	.0036	-.0030	.00022	.00001

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0003	.0002	.0005	-.0015
#1	.0017	.0006	.0035	-.0003	-.0013
#2	.0014	.0001	-.0031	.0013	-.0017

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.0061	.0039	.00023	.00013
#1	-.0002	.0070	.0028	.00017	.00024
#2	-.0021	.0052	.0049	.00028	.00001

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0005	.0261	.0198	.0012
#1	.0008	.0003	.0330	.0167	-.0004
#2	-.0006	.0007	.0192	.0229	.0027

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0042	.0097	.0015	.0016	.0069
#1	-.0023	.0099	.0033	.0022	.0064
#2	-.0060	.0095	-.0002	.0009	.0075

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0060	.00094	.0065	.00001	.00009
#1	.0069	.00146	.0082	.00025	.00011
#2	.0052	.00042	.0047	-.00023	.00007

Int. Std.	Sc3572
Units	Cts/S
Avg	179.06
#1	178.74
#2	179.38

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 K1006777 (208725) (071610B)
Run Time: 07/16/10 13:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.32	.4148	.4525	2.2329	.34005	.5611
#1	41.37	.4060	.4639	2.2183	.33812	.5619
#2	41.26	.4237	.4411	2.2475	.34198	.5603

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4781	50.76	.7739	1.028	1.302	85.91
#1	.4724	50.36	.7667	1.017	1.306	84.87
#2	.4838	51.16	.7811	1.039	1.298	86.94

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5018	19.99	2.5400	.3265	1.066	20.85
#1	.4976	19.93	2.5264	.3211	1.057	20.87
#2	.5059	20.05	2.5535	.3319	1.074	20.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.005	.4076	3.398	.6906	.9186	1.444
#1	1.006	.4064	3.382	.6776	.9114	1.425
#2	1.005	.4088	3.414	.7037	.9258	1.463

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.008	7.763	2.2215	1.277	.04395	.67849
#1	4.002	7.764	2.2087	1.272	.04378	.67636
#2	4.014	7.763	2.2342	1.283	.04411	.68063

Int. Std.	Sc3572
Units	Cts/S
Avg	179.26
#1	180.37
#2	178.16

Method: 2010A Sample Name: K1006777-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	64.92	.0209	.0264	.92508	.00624	.0292
#1	64.86	.0153	.0290	.92583	.00622	.0295
#2	64.99	.0265	.0237	.92432	.00625	.0290

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	31.82	.0227	.0207	.0667	70.56
#1	.0032	31.68	.0225	.0197	.0660	70.72
#2	.0033	31.96	.0229	.0217	.0674	70.40

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0460	19.55	3.658	.0021	.0150	10.98
#1	.0477	19.46	3.672	.0036	.0150	10.99
#2	.0443	19.64	3.643	.0006	.0150	10.96

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	-.0028	1.430	.0140	.0954	.1764
#1	.0013	-.0076	1.440	.0147	.0958	.1747
#2	.0224	.0019	1.421	.0134	.0950	.1781

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.782	3.345	2.3099	.0266	.05164	.29849
#1	1.783	3.342	2.3117	.0227	.05200	.29959
#2	1.780	3.348	2.3081	.0306	.05128	.29739

Int. Std.	Sc3572
Units	Cts/S
Avg	185.99
#1	185.16
#2	186.82

x -0.00005 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 13:37 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.096	.0156	.0069	2.5068	.05018	.0062
Stddev	.036	.0068	.0083	.0181	.00006	.0016
%RSD	.7057	43.72	120.5	.72044	.11608	25.52
#1	5.122	.0204	.0128	2.4940	.05022	.0051
#2	5.071	.0108	.0010	2.5196	.05014	.0073
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	26.91	.0027	-.0027	-.0010	26.16
Stddev	.0000	.07	.0017	.0011	.0010	.12
%RSD	.6192	.2518	62.39	40.75	96.80	.4400
#1	.0015	26.86	.0015	-.0019	-.0017	26.08
#2	.0014	26.96	.0039	-.0035	-.0003	26.24
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0044	25.27	4.982	-.0009	-.0026	9.854
Stddev	.0139	.00	.028	.0011	.0004	.030
%RSD	312.6	.0011	.5594	113.1	14.21	.3084
#1	.0054	25.27	4.962	-.0017	-.0024	9.876
#2	-.0142	25.27	5.002	-.0002	-.0029	9.833
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	.0000	9.835	-.0002	.0012	.0024
Stddev	.0017	.007	.066	.0064	.0004	.0022
%RSD	20.11	161600.	.6666	3841.	31.79	92.14
#1	.0099	.0047	9.882	.0044	.0015	.0039
#2	.0075	-.0048	9.789	-.0047	.0009	.0008
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 13:37

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.524	.00499	.0097	.49392	.49413
Stddev	.01	.007	.00070	.0012	.00443	.00115
%RSD	.1155	.2608	14.032	12.08	.89699	.23198
#1	10.28	2.520	.00450	.0106	.49705	.49332
#2	10.27	2.529	.00549	.0089	.49079	.49494
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	176.66
Stddev	.06
%RSD	.03665
#1	176.70
#2	176.61

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 13:40 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5055	2.439	2.452	.46004	.52390	.4985
Stddev	.0126	.021	.020	.00237	.00040	.0021
%RSD	2.494	.8712	.8149	.51426	.07685	.4233
#1	.4965	2.424	2.437	.45837	.52361	.4970
#2	.5144	2.454	2.466	.46172	.52418	.5000
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4914	2.464	.4884	.4857	.5151	.5210
Stddev	.0036	.037	.0004	.0019	.0035	.0070
%RSD	.7276	1.509	.0877	.3962	.6710	1.347
#1	.4889	2.438	.4881	.4843	.5127	.5259
#2	.4940	2.490	.4887	.4871	.5176	.5160
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.355	2.0708	.95231	.9611	.4852	5.059
Stddev	.001	.0001	.00312	.0167	.0036	.014
%RSD	.0309	.00727	.32732	1.735	.7416	.2725
#1	2.355	2.0707	.95451	.9494	.4827	5.049
#2	2.354	2.0710	.95011	.9729	.4877	5.069
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	.4940	.4781	2.298	.4781	.4855
Stddev	.028	.0051	.0017	.016	.0007	.0063
%RSD	1.174	1.031	.3537	.7159	.1372	1.287
#1	2.365	.4976	.4792	2.286	.4786	.4811
#2	2.404	.4904	.4769	2.309	.4776	.4899
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 13:40

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0121	.2947	.49272	4.789	.51073	.48849
Stddev	.0127	.0001	.00030	.008	.00112	.00198
%RSD	105.1	.0170	.06089	.1743	.22013	.40607
#1	-.0210	.2946	.49293	4.795	.50993	.48709
#2	-.0031	.2947	.49250	4.783	.51152	.48990
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.92
Stddev	.14
%RSD	.07533
#1	182.02
#2	181.82

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 13:42 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179	.0141	.0030	.00050	.00019	.0011
Stddev	.0029	.0137	.0100	.00035	.00004	.0005
%RSD	16.29	96.87	339.3	71.081	20.793	44.85
#1	.0199	.0238	-.0041	.00025	.00017	.0015
#2	.0158	.0044	.0101	.00075	.00022	.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0045	.0008	-.0013	.0025	.0071
Stddev	.0001	.0003	.0010	.0001	.0001	.0004
%RSD	29.05	6.196	133.6	7.167	4.305	5.550
#1	.0003	.0047	.0015	-.0013	.0025	.0074
#2	.0004	.0043	.0000	-.0012	.0024	.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	.00346	.00154	.0036	.0013	.0016
Stddev	.0047	.00016	.00014	.0029	.0015	.0190
%RSD	58.32	4.6334	9.1214	79.42	118.0	1215.
#1	.0048	.00335	.00164	.0056	.0002	-.0118
#2	.0115	.00358	.00144	.0016	.0023	.0150
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0007	-.0028	.0069	-.0016	.0006
Stddev	.0044	.0028	.0023	.0032	.0011	.0009
%RSD	25.26	396.9	83.55	45.55	69.12	151.0
#1	.0205	-.0027	-.0044	.0092	-.0023	.0013
#2	.0143	.0013	-.0011	.0047	-.0008	.0000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 13:42

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0004	.00095	.0007	.00026	.00049
Stddev	.0025	.0000	.00167	.0036	.00002	.00002
%RSD	23.11	.0579	174.74	500.4	6.2916	4.0166
#1	.0125	.0004	-.00022	-.0018	.00025	.00048
#2	.0090	.0004	.00213	.0033	.00027	.00051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	177.11
Stddev	.50
%RSD	.28064
#1	176.76
#2	177.46

Service Request # K1006676 (HNO3)_____
Calibration _____072710D_____
QC in calibration__072710D_____
QC Service Request K1006676_____
STARLIMS Batch # 210137_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments:

Primary Review by _____ Date 7/27/10
Secondary Review by JDB Date 7/28/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Blk	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	7	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	LCSW K1006615 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006615-006 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	LCSW K1006676 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	K1006676-018 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	3	5	145
43	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	1	3	6	145
44	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
45	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
46	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	3	145
55	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	1	4	4	145
56	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
57	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
58	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
67	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
68	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
69	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	LCSW K1006777 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006777-005 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
78	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	11	145
79	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
80	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
81	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	K1006777-013 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
90	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
91	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
92	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
93	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	CCV9	Unknown	0 kg	0 ml	1.00	0	1	2	145
97	CCB9	Unknown	0 kg	0 ml	1.00	0	1	1	145

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80

ExCell Mass Calibration Date: 7/27/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1297	0.715	-0.001	TRUE	
7.016	1550	0.766	0.005	TRUE	Li-7
9.012	2051	0.715	0.032	TRUE	Be-9
23.985	5871	0.715	-0.012	TRUE	Mg-24
24.986	6131	0.715	-0.033	TRUE	Co-59
25.983	6378	0.715	-0.007	TRUE	In-115
26.982	6638	0.715	-0.03	TRUE	Ce-140
43.956	10953	0.766	-0.013	TRUE	Pb-208
45.953	11460	0.766	-0.008	TRUE	Bi-209
51.94	12981	0.766	0.004	TRUE	U-238
53.949	13488	0.766	0.02	TRUE	
55.935	13950	0.409	0.191	FALSE	
56.935	14255	0.766	-0.007	TRUE	
57.934	14502	0.766	0.022	TRUE	
58.933	14762	0.766	-0.001	TRUE	
59.931	15009	0.766	0.027	TRUE	
65.926	16537	0.817	0.019	TRUE	
69.925	17557	0.766	0.012	TRUE	
75.92	19091	0.766	-0.018	TRUE	
112.904	28504	0.765	0.006	TRUE	
114.904	29011	0.765	0.015	TRUE	
118.903	30064	0.765	-0.119	FALSE	
139.905	35388	0.714	-0.011	TRUE	
141.908	35901	0.765	-0.021	TRUE	
155.923	39470	0.714	-0.008	TRUE	
205.974	52229	0.663	0.007	TRUE	
206.976	52489	0.663	-0.01	TRUE	
207.977	52743	0.713	-0.005	TRUE	
208.98	52996	0.663	0.007	TRUE	
238.051	60413	0.611	0.009	TRUE	

Excluded In Calib | Excluded in Results | Peak Fit Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	58Ni	7Li	9Be	59Co	115In	208Pb
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)0.833	(P)39327.559	(P)9811.035	(P)67039.274	(P)76502.298	(P)33178.985
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)0.167	(P)39103.111	(P)9514.667	(P)66322.439	(P)76624.967	(P)33653.428
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)0.667	(P)38334.197	(P)9542.019	(P)65835.204	(P)76336.600	(P)33757.674
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)0.500	(P)37799.945	(P)9229.314	(P)65155.255	(P)76773.425	(P)34351.085
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)0.167	(P)38073.342	(P)9374.242	(P)64549.011	(P)76572.176	(P)33980.700
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)0.467	(P)38527.631	(P)9494.255	(P)65780.237	(P)76561.893	(P)33784.374
	SD of Stability 07-27-20		(P)0.298	(P)660.376	(P)216.590	(P)973.229	(P)160.576	(P)431.295
	%RSD of Stability 07		(P)63.888	(P)1.714	(P)2.281	(P)1.480	(P)0.210	(P)1.277

Run	Label	TimeStamp	209Bi	232Th	238U
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)51754.918	(P)0.000	(P)56579.869
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)51684.833	(P)0.167	(P)57396.617
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)52516.523	(P)0.167	(P)58113.671
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)52575.914	(P)0.167	(P)58425.955
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)52335.358	(P)0.333	(P)58743.726
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)52173.509	(P)0.167	(P)57851.968
	SD of Stability 07-27-20		(P)424.207	(P)0.118	(P)868.729
	%RSD of Stability 07		(P)0.813	(P)70.711	(P)1.502

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:16					
Arsenic	75	0.0043	0.0083	-0.0126	**0**	0.0111	0
Selenium	77	-0.0264	-0.0253	0.0517	**0**	0.0447	0
Selenium	78	-0.0267	-0.0503	0.077	**0**	0.0677	0
Selenium	82	-0.0399	0.0576	-0.0177	**0**	0.0511	0
Thallium	203	-0.0003	-0.0036	0.0038	**0**	0.0037	0
Thallium	205	-0.0003	-0.0011	0.0014	**0**	0.0013	0
Uranium	238	-0.0021	-0.0015	0.0036	**0**	0.0031	0

Internal Standard Factors:

Rhodium	103	1.016	0.992	0.992	**1.016**	n/a	n/a
Lutetium	175	1.017	0.99	0.994	**1.017**	n/a	n/a
Gold	197	1.011	1.007	0.982	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:26					
Arsenic	75	24.94	25.17	24.89	**25**	0.1484	0.5935
Selenium	77	24.6	25	25.39	**25**	0.3967	1.587
Selenium	78	24.9	25.09	25.02	**25**	0.0968	0.387
Selenium	82	25.34	25.15	24.51	**25**	0.4382	1.753
Thallium	203	24.81	24.75	25.45	**25**	0.3889	1.556
Thallium	205	24.79	24.84	25.37	**25**	0.3243	1.297
Uranium	238	25.09	24.67	25.24	**25**	0.2963	1.185

Internal Standard Factors:							
Rhodium	103	0.966	0.964	0.957	**0.966**	n/a	n/a
Lutetium	175	0.976	0.963	0.972	**0.976**	n/a	n/a
Gold	197	0.973	0.97	0.968	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:28					
Arsenic	75	24.32	23.95	24.32	**24.2**	0.2139	0.884
Selenium	77	24.77	24.51	24.46	**24.58**	0.165	0.6714
Selenium	78	24.51	24.14	24.6	**24.41**	0.2432	0.9963
Selenium	82	24.21	24.21	24.55	**24.32**	0.194	0.7977
Thallium	203	25.82	25.7	25.53	**25.68**	0.1463	0.5695
Thallium	205	25.95	25.99	25.47	**25.8**	0.29	1.124
Uranium	238	24.27	24.17	24.28	**24.24**	0.0611	0.2519

Internal Standard Factors:							
Rhodium	103	0.995	0.972	0.981	**0.995**	n/a	n/a
Lutetium	175	0.986	0.981	0.981	**0.986**	n/a	n/a
Gold	197	0.964	0.976	0.969	**0.964**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:31					
Arsenic	75	25.14	25.06	24.96	**25.06**	0.0902	0.3599
Selenium	77	25.34	25.44	25.59	**25.46**	0.1279	0.5023
Selenium	78	25.76	25.06	25.15	**25.32**	0.38	1.501
Selenium	82	25.62	25.42	25.07	**25.37**	0.2761	1.088
Thallium	203	24.37	24.86	26	**25.08**	0.8399	3.349
Thallium	205	24.45	24.67	26.12	**25.08**	0.9071	3.617
Uranium	238	25.75	24.63	25.03	**25.14**	0.5679	2.259

Internal Standard Factors:							
Rhodium	103	0.976	0.964	0.961	**0.976**	n/a	n/a
Lutetium	175	1.001	0.97	0.969	**1.001**	n/a	n/a
Gold	197	0.976	0.966	0.975	**0.976**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:36					
Arsenic	75	0.0572	0.0112	0.0028	**0.0238**	0.0293	123.2
Selenium	77	-0.0437	-0.0148	-0.0973	**-0.0519**	0.0419	80.68
Selenium	78	0.0599	0.0219	0.1312	**0.071**	0.0555	78.15
Selenium	82	0.101	0.0188	-0.0547	**0.0217**	0.0779	358.9
Thallium	203	0.0023	0.001	-0.0007	**0.0009**	0.0015	175.1
Thallium	205	0.0032	0.0018	0.0007	**0.0019**	0.0012	65.54
Uranium	238	0.0009	-0.0006	-0.0011	**-0.0002**	0.0011	436.2

Internal Standard Factors:

Rhodium	103	0.989	0.973	0.97	**0.989**	n/a	n/a
Lutetium	175	1.004	1.007	0.994	**1.004**	n/a	n/a
Gold	197	1.01	0.986	0.987	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:38					
Arsenic	75	0.0584	0.0304	-0.0052	**0.0279**	0.0319	114.3
Selenium	77	-0.2539	-0.1072	-0.0985	**-0.1532**	0.0874	57.01
Selenium	78	0.2177	0.2093	0.1286	**0.1852**	0.0492	26.57
Selenium	82	0.03	0.0576	-0.0661	**0.0072**	0.0649	902.5
Thallium	203	-0.0019	-0.0023	-0.0036	**-0.0026**	0.0009	33.62
Thallium	205	-0.0026	-0.0003	-0.0011	**-0.0014**	0.0012	84.61
Uranium	238	-0.0024	-0.0004	-0.0008	**-0.0012**	0.0011	90.58

Internal Standard Factors:

Rhodium	103	0.986	0.965	0.969	**0.986**	n/a	n/a
Lutetium	175	1.004	0.98	0.973	**1.004**	n/a	n/a
Gold	197	0.998	0.993	0.979	**0.998**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/27/10 17:44					
Arsenic	75	1.105	1.082	1.005	**1.064**	0.0522	4.905
Selenium	77	1.952	2.043	1.832	**1.942**	0.1057	5.441
Selenium	78	2.48	2.082	2.146	**2.236**	0.2136	9.552
Selenium	82	2.081	2.123	2.114	**2.106**	0.0224	1.064
Thallium	203	0.0394	0.042	0.0427	**0.0413**	0.0018	4.246
Thallium	205	0.0435	0.041	0.0406	**0.0417**	0.0016	3.763
Uranium	238	0.0397	0.0397	0.0405	**0.04**	0.0005	1.171

Internal Standard Factors:

Rhodium	103	0.974	0.954	0.94	**0.974**	n/a	n/a
Lutetium	175	0.993	0.965	0.972	**0.993**	n/a	n/a
Gold	197	0.983	0.98	0.971	**0.983**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/27/10 17:47					
Arsenic	75	-0.0246	0.0604	0.071	**0.0356**	0.0524	147
Selenium	77	2.831	2.798	2.591	**2.74**	0.13	4.744
Selenium	78	1.416	1.3	1.13	**1.282**	0.1438	11.22
Selenium	82	-0.0735	0.179	0.0907	**0.0654**	0.1281	195.9
Thallium	203	0.0215	0.0242	0.0192	**0.0216**	0.0025	11.69
Thallium	205	0.0232	0.0217	0.0208	**0.0219**	0.0012	5.537
Uranium	238	-0.0065	-0.0037	-0.0065	**-0.0056**	0.0016	29.29

Internal Standard Factors:

Rhodium	103	1.171	1.174	1.189	**1.171**	n/a	n/a
Lutetium	175	1.093	1.108	1.113	**1.093**	n/a	n/a
Gold	197	1.117	1.111	1.146	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/27/10 17:50					
Arsenic	75	26.33	26.08	26.48	**26.3**	0.1986	0.7554
Selenium	77	28.83	28.11	28.6	**28.52**	0.3672	1.288
Selenium	78	26.7	26.2	27.37	**26.76**	0.5914	2.21
Selenium	82	25.72	25.35	26.71	**25.93**	0.7072	2.728
Thallium	203	0.0259	0.031	0.0305	**0.0291**	0.0028	9.631
Thallium	205	0.0322	0.0312	0.0305	**0.0313**	0.0009	2.756
Uranium	238	0.0247	0.0245	0.0237	**0.0243**	0.0005	2.181

Internal Standard Factors:

Rhodium	103	1.194	1.202	1.22	**1.194**	n/a	n/a
Lutetium	175	1.11	1.135	1.138	**1.11**	n/a	n/a
Gold	197	1.141	1.156	1.167	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 17:53					
Arsenic	75	0.0073	-0.0133	0.0059	**0**	0.0115	38330
Selenium	77	-0.196	-0.1605	-0.0747	**-0.1437**	0.0623	43.38
Selenium	78	0.6472	0.5157	0.6149	**0.5926**	0.0685	11.57
Selenium	82	0.0027	-0.0084	0.1441	**0.0462**	0.085	184.2
Thallium	203	-0.0092	-0.0091	-0.0094	**-0.0092**	0.0001	1.375
Thallium	205	-0.008	-0.0084	-0.0085	**-0.0083**	0.0003	3.122
Uranium	238	-0.008	-0.0075	-0.0079	**-0.0078**	0.0003	3.324

Internal Standard Factors:

Rhodium	103	1.06	1.037	1.032	**1.06**	n/a	n/a
Lutetium	175	1.04	1.024	1.027	**1.04**	n/a	n/a
Gold	197	1.16	1.128	1.107	**1.16**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/27/10 17:56					
Arsenic	75	8.659	8.519	8.529	**8.569**	0.0778	0.9078
Selenium	77	19.58	19.12	19.35	**19.35**	0.2309	1.193
Selenium	78	18.81	19.19	19	**19**	0.1872	0.9853
Selenium	82	19.42	18.72	19.09	**19.08**	0.3482	1.825
Thallium	203	27.26	26.8	27.42	**27.16**	0.3243	1.194
Thallium	205	27.06	26.91	27.69	**27.22**	0.4172	1.533
Uranium	238	0.1566	0.1592	0.1626	**0.1595**	0.003	1.888

Internal Standard Factors:							
Rhodium	103	1.023	0.999	1.001	**1.023**	n/a	n/a
Lutetium	175	0.996	0.997	1.008	**0.996**	n/a	n/a
Gold	197	1.08	1.061	1.053	**1.08**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSW K1006615 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:00					
Arsenic	75	0.021	0.0095	0.0578	**0.0294**	0.0252	85.72
Selenium	77	-0.1221	-0.1885	-0.2303	**-0.1803**	0.0546	30.27
Selenium	78	0.4252	0.3059	0.2807	**0.3373**	0.0772	22.89
Selenium	82	0.1606	0.0461	0.2282	**0.145**	0.0921	63.53
Thallium	203	0.0111	0.0041	0.0058	**0.007**	0.0036	51.88
Thallium	205	0.01	0.0109	0.0086	**0.0098**	0.0011	11.7
Uranium	238	41.46	40.14	40.6	**40.73**	0.6724	1.651

Internal Standard Factors:							
Rhodium	103	0.992	0.974	0.971	**0.992**	n/a	n/a
Lutetium	175	1.018	0.987	0.995	**1.018**	n/a	n/a
Gold	197	1.089	1.08	1.067	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:02					
Arsenic	75	2.577	2.609	2.409	**2.532**	0.1078	4.256
Selenium	77	3.104	2.889	3.349	**3.114**	0.2301	7.389
Selenium	78	1.13	1.381	1.204	**1.238**	0.1291	10.43
Selenium	82	0.9723	1.096	0.9064	**0.9917**	0.0964	9.722
Thallium	203	0.4696	0.4714	0.4609	**0.4673**	0.0056	1.2
Thallium	205	0.4649	0.4748	0.4654	**0.4684**	0.0056	1.187
Uranium	238	1.593	1.602	1.536	**1.577**	0.0355	2.25

Internal Standard Factors:

Rhodium	103	1.073	1.073	1.071	**1.073**	n/a	n/a
Lutetium	175	1.017	1.016	1.019	**1.017**	n/a	n/a
Gold	197	1.139	1.139	1.123	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/27/10 18:06					
Arsenic	75	2.141	2.183	2.179	**2.167**	0.023	1.062
Selenium	77	2.67	2.54	2.451	**2.553**	0.11	4.309
Selenium	78	1.295	0.8338	0.7712	**0.9667**	0.2862	29.61
Selenium	82	0.5902	0.655	0.6242	**0.6231**	0.0324	5.204
Thallium	203	0.42	0.4203	0.4029	**0.4144**	0.01	2.404
Thallium	205	0.4129	0.4219	0.415	**0.4166**	0.0047	1.124
Uranium	238	2.273	2.265	2.178	**2.239**	0.0525	2.344

Internal Standard Factors:

Rhodium	103	1.088	1.064	1.062	**1.088**	n/a	n/a
Lutetium	175	1.038	1.031	1.015	**1.038**	n/a	n/a
Gold	197	1.135	1.139	1.132	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25L			Mean	SD	%RSD
TimeStamp		7/27/10 18:09					
Arsenic	75	0.4774	0.5267	0.4786	**0.4943**	0.0281	5.692
Selenium	77	0.5106	0.6208	0.5786	**0.57**	0.0556	9.753
Selenium	78	0.0168	0.3718	0.2728	**0.2205**	0.1832	83.08
Selenium	82	0.1112	0.2545	0.1516	**0.1724**	0.0739	42.85
Thallium	203	0.0854	0.0854	0.0842	**0.085**	0.0007	0.8289
Thallium	205	0.0876	0.0902	0.0864	**0.088**	0.002	2.227
Uranium	238	0.3152	0.2998	0.3025	**0.3059**	0.0082	2.685

Internal Standard Factors:							
Rhodium	103	1.037	1.029	1.026	**1.037**	n/a	n/a
Lutetium	175	1.023	1.006	1.007	**1.023**	n/a	n/a
Gold	197	1.028	0.998	1.012	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 18:12					
Arsenic	75	51.84	52.65	51.63	**52.04**	0.5426	1.043
Selenium	77	51.97	51.45	51.09	**51.5**	0.4429	0.86
Selenium	78	49.29	49.65	49.45	**49.46**	0.1826	0.3692
Selenium	82	49.92	50.03	50.16	**50.04**	0.1196	0.2391
Thallium	203	53.5	51.95	52.09	**52.51**	0.8559	1.63
Thallium	205	53.4	53.3	52.64	**53.11**	0.412	0.7757
Uranium	238	56.53	54.38	54.64	**55.18**	1.171	2.122

Internal Standard Factors:

Rhodium	103	1.045	1.06	1.058	**1.045**	n/a	n/a
Lutetium	175	1.01	0.988	0.997	**1.01**	n/a	n/a
Gold	197	1.087	1.099	1.076	**1.087**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 18:16					
Arsenic	75	41.95	41.82	42.27	**42.01**	0.2318	0.5518
Selenium	77	43.14	44.87	45.02	**44.34**	1.047	2.36
Selenium	78	43.59	43.52	44.57	**43.89**	0.5882	1.34
Selenium	82	43.1	44.66	44.67	**44.14**	0.9064	2.053
Thallium	203	42.94	42.15	42.82	**42.64**	0.4269	1.001
Thallium	205	43.37	42.96	42.95	**43.09**	0.2386	0.5536
Uranium	238	8.654	8.497	8.438	**8.53**	0.1113	1.305

Internal Standard Factors:							
Rhodium	103	1.036	1.03	1.034	**1.036**	n/a	n/a
Lutetium	175	1.013	0.998	1.007	**1.013**	n/a	n/a
Gold	197	1.015	1.018	1.004	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-001 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:20					
Arsenic	75	31.79	31.82	31.23	**31.61**	0.3333	1.054
Selenium	77	2.595	2.472	2.572	**2.546**	0.0652	2.56
Selenium	78	0.7473	0.4873	0.437	**0.5572**	0.1665	29.89
Selenium	82	0.3766	0.8106	0.9342	**0.7071**	0.2929	41.42
Thallium	203	0.4155	0.4468	0.4107	**0.4243**	0.0196	4.619
Thallium	205	0.4293	0.4269	0.415	**0.4237**	0.0077	1.813
Uranium	238	2.215	2.288	2.226	**2.243**	0.0394	1.758

Internal Standard Factors:

Rhodium	103	1.099	1.093	1.084	**1.099**	n/a	n/a
Lutetium	175	1.034	1.058	1.036	**1.034**	n/a	n/a
Gold	197	1.215	1.159	1.187	**1.215**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:24					
Arsenic	75	7.383	7.314	7.252	**7.316**	0.0653	0.8922
Selenium	77	2.906	2.752	2.717	**2.792**	0.1006	3.605
Selenium	78	0.6212	0.5264	0.5861	**0.5779**	0.0479	8.294
Selenium	82	0.6507	0.83	0.6773	**0.7193**	0.0967	13.45
Thallium	203	0.5732	0.5344	0.5414	**0.5497**	0.0207	3.762
Thallium	205	0.5552	0.5586	0.5357	**0.5498**	0.0124	2.254
Uranium	238	2.074	2.058	2.018	**2.05**	0.0288	1.404

Internal Standard Factors:							
Rhodium	103	1.129	1.121	1.136	**1.129**	n/a	n/a
Lutetium	175	1.073	1.061	1.046	**1.073**	n/a	n/a
Gold	197	1.24	1.216	1.222	**1.24**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/27/10 18:27					
Arsenic	75	24.5	24.57	24.11	**24.39**	0.2479	1.016
Selenium	77	24.63	24.72	24.62	**24.66**	0.054	0.2191
Selenium	78	24.7	24.66	23.9	**24.42**	0.449	1.838
Selenium	82	25.05	24.89	24.32	**24.76**	0.3823	1.544
Thallium	203	25.06	25.51	26.04	**25.54**	0.4903	1.92
Thallium	205	24.91	25.85	25.89	**25.55**	0.5579	2.184
Uranium	238	25.46	25.29	24.92	**25.22**	0.2766	1.097

Internal Standard Factors:							
Rhodium	103	1.065	1.055	1.041	**1.065**	n/a	n/a
Lutetium	175	1.051	1.04	1.031	**1.051**	n/a	n/a
Gold	197	1.066	1.049	1.051	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/27/10 18:32					
Arsenic	75	0.0601	-0.04	0.0313	**0.0171**	0.0515	300.4
Selenium	77	-0.1632	-0.0593	-0.0527	**-0.0917**	0.062	67.56
Selenium	78	-0.1479	-0.0872	0.0936	**-0.0471**	0.1256	266.5
Selenium	82	0.1605	-0.1221	0.1332	**0.0572**	0.1559	272.7
Thallium	203	0.0018	-0.001	-0.0019	**-0.0004**	0.0019	543.7
Thallium	205	0.001	-0.0002	-0.0001	**0.0002**	0.0007	303.4
Uranium	238	-0.0001	0.0002	-0.0012	**-0.0004**	0.0007	204.9

Internal Standard Factors:

Rhodium	103	1.073	1.049	1.05	**1.073**	n/a	n/a
Lutetium	175	1.046	1.043	1.038	**1.046**	n/a	n/a
Gold	197	1.096	1.051	1.062	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-003 1/5 7/27/10 18:34			Mean	SD	%RSD
Arsenic	75	2.583	2.497	2.582	**2.554**	0.0493	1.931
Selenium	77	2.448	2.542	2.177	**2.389**	0.1896	7.935
Selenium	78	0.5322	0.5897	0.2585	**0.4601**	0.177	38.46
Selenium	82	0.5444	0.5114	0.4028	**0.4862**	0.0741	15.23
Thallium	203	0.5607	0.5648	0.5726	**0.566**	0.0061	1.072
Thallium	205	0.5508	0.5513	0.5623	**0.5548**	0.0065	1.176
Uranium	238	1.74	1.728	1.749	**1.739**	0.0103	0.5908

Internal Standard Factors:

Rhodium	103	1.132	1.129	1.127	**1.132**	n/a	n/a
Lutetium	175	1.066	1.063	1.075	**1.066**	n/a	n/a
Gold	197	1.185	1.202	1.188	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-004 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:38					
Arsenic	75	48.8	49.17	48.47	**48.81**	0.3508	0.7187
Selenium	77	2.075	1.914	2.048	**2.012**	0.0866	4.302
Selenium	78	0.5384	0.2598	0.4247	**0.4076**	0.1401	34.37
Selenium	82	0.2159	0.6316	0.3395	**0.3957**	0.2135	53.96
Thallium	203	0.3922	0.3881	0.3822	**0.3875**	0.005	1.3
Thallium	205	0.4046	0.3995	0.3963	**0.4001**	0.0042	1.042
Uranium	238	1.871	1.849	1.881	**1.867**	0.0164	0.8759

Internal Standard Factors:

Rhodium	103	1.138	1.126	1.124	**1.138**	n/a	n/a
Lutetium	175	1.082	1.068	1.063	**1.082**	n/a	n/a
Gold	197	1.25	1.219	1.225	**1.25**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:41					
Arsenic	75	5.626	5.502	5.724	**5.617**	0.1114	1.983
Selenium	77	3.275	3.054	2.813	**3.047**	0.2313	7.589
Selenium	78	0.733	0.7773	0.4452	**0.6518**	0.1803	27.66
Selenium	82	0.5661	0.5243	0.6969	**0.5957**	0.09	15.11
Thallium	203	0.5497	0.535	0.5524	**0.5457**	0.0093	1.71
Thallium	205	0.5391	0.5243	0.5518	**0.5384**	0.0137	2.551
Uranium	238	2.042	2.014	2.023	**2.026**	0.0144	0.7103

Internal Standard Factors:

Rhodium	103	1.151	1.139	1.139	**1.151**	n/a	n/a
Lutetium	175	1.08	1.064	1.089	**1.08**	n/a	n/a
Gold	197	1.244	1.217	1.212	**1.244**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:45					
Arsenic	75	32.72	32.74	32.41	**32.62**	0.1852	0.5679
Selenium	77	2.415	2.246	2.158	**2.273**	0.131	5.763
Selenium	78	0.4436	0.3429	0.3665	**0.3843**	0.0526	13.69
Selenium	82	0.557	0.8241	0.6935	**0.6915**	0.1336	19.31
Thallium	203	0.3939	0.3783	0.3833	**0.3852**	0.008	2.071
Thallium	205	0.3811	0.3727	0.3795	**0.3777**	0.0044	1.176
Uranium	238	2.12	2.105	2.092	**2.106**	0.0143	0.6804

Internal Standard Factors:							
Rhodium	103	1.15	1.139	1.132	**1.15**	n/a	n/a
Lutetium	175	1.081	1.06	1.068	**1.081**	n/a	n/a
Gold	197	1.317	1.304	1.288	**1.317**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-008 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:49					
Arsenic	75	6.639	6.585	6.633	**6.619**	0.0297	0.4483
Selenium	77	2.792	2.541	2.599	**2.644**	0.1317	4.981
Selenium	78	0.4443	0.415	0.3836	**0.4143**	0.0303	7.32
Selenium	82	0.8092	0.6889	0.6666	**0.7216**	0.0767	10.63
Thallium	203	0.5657	0.5765	0.5554	**0.5658**	0.0106	1.866
Thallium	205	0.5692	0.5728	0.5564	**0.5661**	0.0086	1.522
Uranium	238	2.605	2.525	2.536	**2.555**	0.0435	1.703

Internal Standard Factors:

Rhodium	103	1.179	1.157	1.168	**1.179**	n/a	n/a
Lutetium	175	1.101	1.098	1.08	**1.101**	n/a	n/a
Gold	197	1.247	1.257	1.249	**1.247**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-009 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:52					
Arsenic	75	4.769	4.618	4.649	**4.679**	0.0801	1.712
Selenium	77	2.315	2.434	2.25	**2.333**	0.0932	3.995
Selenium	78	0.4477	0.3993	0.3088	**0.3853**	0.0705	18.29
Selenium	82	0.7473	0.6611	0.7572	**0.7219**	0.0528	7.316
Thallium	203	0.3484	0.3537	0.3441	**0.3488**	0.0048	1.383
Thallium	205	0.3593	0.3558	0.3556	**0.3569**	0.002	0.5739
Uranium	238	1.445	1.434	1.454	**1.444**	0.0101	0.7021

Internal Standard Factors:

Rhodium	103	1.177	1.157	1.163	**1.177**	n/a	n/a
Lutetium	175	1.097	1.084	1.086	**1.097**	n/a	n/a
Gold	197	1.227	1.205	1.191	**1.227**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-001 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:56					
Arsenic	75	64.73	65.03	63.48	**64.41**	0.8236	1.279
Selenium	77	2.781	2.405	2.634	**2.607**	0.1893	7.261
Selenium	78	0.4298	0.3365	0.0915	**0.2859**	0.1747	61.1
Selenium	82	0.9812	0.7909	0.7042	**0.8254**	0.1417	17.16
Thallium	203	0.4726	0.4735	0.4635	**0.4698**	0.0055	1.179
Thallium	205	0.4557	0.474	0.4618	**0.4638**	0.0093	2.004
Uranium	238	4.464	4.59	4.465	**4.507**	0.0725	1.608

Internal Standard Factors:

Rhodium	103	1.165	1.165	1.143	**1.165**	n/a	n/a
Lutetium	175	1.076	1.093	1.063	**1.076**	n/a	n/a
Gold	197	1.379	1.329	1.314	**1.379**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:59					
Arsenic	75	8.674	8.896	8.453	**8.674**	0.2215	2.554
Selenium	77	3.138	2.703	3.346	**3.063**	0.3283	10.72
Selenium	78	0.3035	0.4251	0.461	**0.3966**	0.0825	20.81
Selenium	82	0.7923	1.063	0.6151	**0.8234**	0.2254	27.38
Thallium	203	0.4945	0.5021	0.503	**0.4999**	0.0047	0.9381
Thallium	205	0.4934	0.4845	0.4986	**0.4922**	0.0072	1.453
Uranium	238	3.847	3.841	3.823	**3.837**	0.0126	0.3287

Internal Standard Factors:

Rhodium	103	1.168	1.168	1.177	**1.168**	n/a	n/a
Lutetium	175	1.073	1.075	1.073	**1.073**	n/a	n/a
Gold	197	1.316	1.288	1.268	**1.316**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-003 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:03					
Arsenic	75	4.122	3.907	3.791	**3.94**	0.1678	4.26
Selenium	77	3.433	3.203	3.723	**3.453**	0.2607	7.549
Selenium	78	0.685	0.458	0.6241	**0.589**	0.1175	19.95
Selenium	82	0.8465	0.6373	0.8426	**0.7755**	0.1197	15.44
Thallium	203	0.591	0.5791	0.5841	**0.5847**	0.006	1.02
Thallium	205	0.6005	0.5803	0.5825	**0.5878**	0.0111	1.888
Uranium	238	5.989	5.647	5.712	**5.783**	0.1817	3.142

Internal Standard Factors:							
Rhodium	103	1.194	1.184	1.18	**1.194**	n/a	n/a
Lutetium	175	1.12	1.079	1.085	**1.12**	n/a	n/a
Gold	197	1.311	1.286	1.303	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:06					
Arsenic	75	45.11	43.82	44.35	**44.43**	0.6496	1.462
Selenium	77	2.549	2.401	2.397	**2.449**	0.0865	3.532
Selenium	78	0.4661	0.261	0.2849	**0.3373**	0.1121	33.23
Selenium	82	0.534	0.5841	0.5871	**0.5684**	0.0299	5.251
Thallium	203	0.4829	0.477	0.4729	**0.4776**	0.005	1.056
Thallium	205	0.4675	0.4815	0.489	**0.4793**	0.0109	2.269
Uranium	238	2.73	2.8	2.71	**2.747**	0.0473	1.721

Internal Standard Factors:							
Rhodium	103	1.185	1.16	1.166	**1.185**	n/a	n/a
Lutetium	175	1.081	1.1	1.085	**1.081**	n/a	n/a
Gold	197	1.422	1.387	1.366	**1.422**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/27/10 19:10					
Arsenic	75	24.48	24.32	24.32	**24.38**	0.0914	0.375
Selenium	77	24.52	24.65	24.61	**24.59**	0.0701	0.2852
Selenium	78	24.5	23.74	24.63	**24.29**	0.4799	1.975
Selenium	82	24.6	24.19	24.92	**24.57**	0.3667	1.492
Thallium	203	25.05	25.67	25.92	**25.55**	0.446	1.746
Thallium	205	25.12	25.91	25.74	**25.59**	0.4143	1.619
Uranium	238	24.85	25.84	24.86	**25.18**	0.5716	2.27

Internal Standard Factors:

Rhodium	103	1.125	1.096	1.1	**1.125**	n/a	n/a
Lutetium	175	1.069	1.059	1.048	**1.069**	n/a	n/a
Gold	197	1.117	1.083	1.085	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/27/10 19:14					
Arsenic	75	0.0328	0.0294	0.0126	**0.0249**	0.0108	43.48
Selenium	77	-0.1703	-0.2089	-0.1632	**-0.1808**	0.0246	13.62
Selenium	78	-0.3883	-0.146	-0.1547	**-0.2296**	0.1375	59.85
Selenium	82	0.0351	-0.0037	0.0093	**0.0135**	0.0197	145.7
Thallium	203	-0.001	0.0024	0.0006	**0.0007**	0.0017	251.3
Thallium	205	0.0011	0.002	0.0003	**0.0011**	0.0008	72.54
Uranium	238	-0.001	-0.0004	0.0021	**0.0002**	0.0017	730.2

Internal Standard Factors:							
Rhodium	103	1.129	1.101	1.101	**1.129**	n/a	n/a
Lutetium	175	1.082	1.057	1.066	**1.082**	n/a	n/a
Gold	197	1.126	1.113	1.086	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-006 1/5 7/27/10 19:17			Mean	SD	%RSD
Arsenic	75	11.62	11.41	11.45	**11.49**	0.1099	0.956
Selenium	77	2.342	2.269	2.366	**2.326**	0.0504	2.165
Selenium	78	0.5077	0.2358	0.2603	**0.3346**	0.1504	44.96
Selenium	82	0.8499	0.7231	0.9417	**0.8382**	0.1098	13.1
Thallium	203	0.4764	0.4729	0.4619	**0.4704**	0.0076	1.607
Thallium	205	0.4497	0.4641	0.461	**0.4582**	0.0076	1.651
Uranium	238	2.594	2.66	2.604	**2.619**	0.0353	1.349

Internal Standard Factors:

Rhodium	103	1.15	1.137	1.144	**1.15**	n/a	n/a
Lutetium	175	1.06	1.087	1.067	**1.06**	n/a	n/a
Gold	197	1.212	1.214	1.219	**1.212**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006636-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:20					
Arsenic	75	4.529	4.392	4.539	**4.486**	0.0822	1.832
Selenium	77	3.822	3.707	3.793	**3.774**	0.0596	1.579
Selenium	78	0.6496	0.4499	0.4143	**0.5046**	0.1268	25.14
Selenium	82	1.244	1.047	1.085	**1.125**	0.1047	9.306
Thallium	203	0.7227	0.7432	0.7212	**0.7291**	0.0123	1.687
Thallium	205	0.7467	0.7138	0.7342	**0.7316**	0.0166	2.268
Uranium	238	3.543	3.54	3.501	**3.528**	0.0236	0.6693

Internal Standard Factors:

Rhodium	103	1.182	1.166	1.195	**1.182**	n/a	n/a
Lutetium	175	1.077	1.074	1.071	**1.077**	n/a	n/a
Gold	197	1.256	1.252	1.233	**1.256**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:24					
Arsenic	75	0.0294	-0.0131	-0.0013	**0.005**	0.022	440.9
Selenium	77	-0.2038	-0.2605	-0.2584	**-0.2409**	0.0322	13.35
Selenium	78	-0.2079	-0.1046	-0.2302	**-0.1809**	0.067	37.03
Selenium	82	0.1315	-0.0597	0.0623	**0.0447**	0.0968	216.7
Thallium	203	-0.01	-0.0102	-0.0102	**-0.0101**	0.0001	1.354
Thallium	205	-0.0097	-0.0097	-0.0098	**-0.0097**	0.0001	0.6004
Uranium	238	-0.0075	-0.008	-0.008	**-0.0078**	0.0003	3.734

Internal Standard Factors:

Rhodium	103	1.155	1.133	1.119	**1.155**	n/a	n/a
Lutetium	175	1.11	1.075	1.09	**1.11**	n/a	n/a
Gold	197	1.248	1.227	1.253	**1.248**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		LCSS K1006676 1/100 7/27/10 19:26			Mean	SD	%RSD
Arsenic	75	8.219	8.339	8.217	**8.258**	0.07	0.8475
Selenium	77	19.25	19.14	19.23	**19.21**	0.0603	0.314
Selenium	78	18.18	18.11	18.58	**18.29**	0.2504	1.369
Selenium	82	18.56	18.45	18.5	**18.5**	0.0524	0.283
Thallium	203	27.15	27.58	27.31	**27.34**	0.2197	0.8034
Thallium	205	27.87	27.78	27.7	**27.78**	0.083	0.2989
Uranium	238	0.1785	0.1806	0.1763	**0.1785**	0.0021	1.202

Internal Standard Factors:

Rhodium	103	1.104	1.101	1.095	**1.104**	n/a	n/a
Lutetium	175	1.07	1.073	1.061	**1.07**	n/a	n/a
Gold	197	1.195	1.148	1.145	**1.195**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSW K1006676 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:30					
Arsenic	75	0.0264	-0.0122	-0.0076	**0.0022**	0.0211	963.2
Selenium	77	-0.1986	-0.1581	-0.208	**-0.1882**	0.0265	14.09
Selenium	78	-0.1173	-0.0441	-0.3058	**-0.1557**	0.1351	86.74
Selenium	82	0.1294	0.0097	0.0404	**0.0598**	0.0622	103.9
Thallium	203	0.0101	0.0124	0.0098	**0.0108**	0.0014	13.08
Thallium	205	0.0118	0.0108	0.0103	**0.011**	0.0008	7.078
Uranium	238	40.58	41.17	39.13	**40.29**	1.046	2.597

Internal Standard Factors:

Rhodium	103	1.122	1.094	1.087	**1.122**	n/a	n/a
Lutetium	175	1.072	1.05	1.039	**1.072**	n/a	n/a
Gold	197	1.193	1.185	1.169	**1.193**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:33					
Arsenic	75	57.88	57.14	56.65	**57.22**	0.617	1.078
Selenium	77	1.76	1.633	1.543	**1.645**	0.1093	6.644
Selenium	78	0.2098	0.234	0.3229	**0.2556**	0.0595	23.29
Selenium	82	0.3346	0.4906	0.6277	**0.4843**	0.1466	30.28
Thallium	203	0.5704	0.5822	0.5606	**0.5711**	0.0108	1.891
Thallium	205	0.5753	0.5612	0.5818	**0.5727**	0.0106	1.842
Uranium	238	3.701	3.549	3.603	**3.618**	0.0769	2.125

Internal Standard Factors:

Rhodium	103	1.16	1.144	1.154	**1.16**	n/a	n/a
Lutetium	175	1.088	1.079	1.085	**1.088**	n/a	n/a
Gold	197	1.296	1.286	1.283	**1.296**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/5D			Mean	SD	%RSD
TimeStamp		7/27/10 19:36					
Arsenic	75	53.04	53.46	52.94	**53.15**	0.2764	0.5201
Selenium	77	1.953	1.572	1.475	**1.666**	0.2525	15.15
Selenium	78	-0.0406	0.3299	0.0962	**0.1285**	0.1874	145.8
Selenium	82	0.2974	0.3736	0.5011	**0.3907**	0.1029	26.34
Thallium	203	0.5611	0.5548	0.5544	**0.5568**	0.0037	0.6691
Thallium	205	0.5737	0.5621	0.5661	**0.5673**	0.0059	1.037
Uranium	238	3.477	3.454	3.454	**3.462**	0.013	0.3754

Internal Standard Factors:							
Rhodium	103	1.159	1.167	1.172	**1.159**	n/a	n/a
Lutetium	175	1.095	1.077	1.077	**1.095**	n/a	n/a
Gold	197	1.348	1.324	1.302	**1.348**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/25L			Mean	SD	%RSD
TimeStamp		7/27/10 19:40					
Arsenic	75	12.61	12.54	12.7	**12.62**	0.0766	0.607
Selenium	77	0.1891	0.1574	0.1816	**0.1761**	0.0166	9.42
Selenium	78	-0.1291	-0.1567	-0.1194	**-0.1351**	0.0194	14.35
Selenium	82	0.2312	0.0487	0.1114	**0.1304**	0.0927	71.12
Thallium	203	0.108	0.108	0.1198	**0.1119**	0.0068	6.081
Thallium	205	0.1137	0.1181	0.1174	**0.1164**	0.0023	2.012
Uranium	238	0.7463	0.7443	0.7481	**0.7463**	0.0019	0.2568

Internal Standard Factors:							
Rhodium	103	1.146	1.127	1.122	**1.146**	n/a	n/a
Lutetium	175	1.083	1.072	1.097	**1.083**	n/a	n/a
Gold	197	1.238	1.239	1.208	**1.238**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 19:43					
Arsenic	75	103	103.1	100.9	**102.3**	1.247	1.219
Selenium	77	50	50.54	50.49	**50.34**	0.3015	0.5988
Selenium	78	49.26	48.42	49.34	**49.01**	0.5127	1.046
Selenium	82	50.01	49.76	49.31	**49.69**	0.3556	0.7157
Thallium	203	54.21	54.02	53.22	**53.82**	0.5283	0.9817
Thallium	205	54.47	53.76	52.76	**53.66**	0.8635	1.609
Uranium	238	59.16	58.42	57.67	**58.42**	0.7448	1.275

Internal Standard Factors:

Rhodium	103	1.125	1.127	1.123	**1.125**	n/a	n/a
Lutetium	175	1.059	1.05	1.037	**1.059**	n/a	n/a
Gold	197	1.237	1.189	1.221	**1.237**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 19:47					
Arsenic	75	51.51	51.66	51.38	**51.51**	0.1394	0.2707
Selenium	77	44.59	43.49	44.44	**44.18**	0.5938	1.344
Selenium	78	43.98	43.92	44.17	**44.02**	0.1306	0.2966
Selenium	82	44.75	44.62	44.24	**44.54**	0.2666	0.5987
Thallium	203	43.25	44.98	44.01	**44.08**	0.868	1.969
Thallium	205	44.15	43.95	44.22	**44.11**	0.1359	0.3082
Uranium	238	9.474	9.745	9.404	**9.541**	0.1801	1.888

Internal Standard Factors:							
Rhodium	103	1.127	1.108	1.105	**1.127**	n/a	n/a
Lutetium	175	1.056	1.064	1.052	**1.056**	n/a	n/a
Gold	197	1.211	1.192	1.204	**1.211**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/27/10 19:51					
Arsenic	75	24.49	24.17	24.76	**24.47**	0.2967	1.212
Selenium	77	24.84	24.69	24.42	**24.65**	0.2119	0.8597
Selenium	78	24.88	24.9	25.11	**24.96**	0.1297	0.5194
Selenium	82	25.14	25.27	25.12	**25.17**	0.0819	0.3252
Thallium	203	25.58	25.73	26.2	**25.84**	0.3229	1.25
Thallium	205	25.13	26.04	26.02	**25.73**	0.5179	2.013
Uranium	238	25.52	25.36	25.47	**25.45**	0.0863	0.3392

Internal Standard Factors:							
Rhodium	103	1.106	1.088	1.083	**1.106**	n/a	n/a
Lutetium	175	1.054	1.049	1.039	**1.054**	n/a	n/a
Gold	197	1.116	1.099	1.091	**1.116**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/27/10 19:55					
Arsenic	75	0.0993	-0.0207	-0.0497	**0.0097**	0.079	817.7
Selenium	77	-0.3474	-0.0417	-0.2408	**-0.2099**	0.1552	73.91
Selenium	78	-0.2831	-0.2504	-0.2039	**-0.2458**	0.0398	16.2
Selenium	82	0.1339	0.0223	-0.2351	**-0.0263**	0.1892	719.9
Thallium	203	0.003	-0.0005	0.0027	**0.0017**	0.0019	111.7
Thallium	205	0.0042	0.0029	0.0002	**0.0025**	0.002	82.8
Uranium	238	0.001	0.0013	0.0015	**0.0013**	0.0003	19.96

Internal Standard Factors:							
Rhodium	103	1.124	1.104	1.112	**1.124**	n/a	n/a
Lutetium	175	1.08	1.068	1.064	**1.08**	n/a	n/a
Gold	197	1.125	1.102	1.086	**1.125**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-001 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:58					
Arsenic	75	34.92	34.73	34.86	**34.84**	0.0967	0.2774
Selenium	77	2.787	2.704	2.49	**2.66**	0.1535	5.768
Selenium	78	0.3306	0.172	0.2419	**0.2482**	0.0795	32.02
Selenium	82	0.7157	0.5813	0.5091	**0.602**	0.1049	17.42
Thallium	203	0.4438	0.4387	0.4259	**0.4361**	0.0093	2.124
Thallium	205	0.4369	0.4393	0.4354	**0.4372**	0.0019	0.4405
Uranium	238	3.39	3.343	3.423	**3.385**	0.0399	1.178

Internal Standard Factors:

Rhodium	103	1.14	1.134	1.146	**1.14**	n/a	n/a
Lutetium	175	1.078	1.059	1.071	**1.078**	n/a	n/a
Gold	197	1.271	1.273	1.254	**1.271**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:01					
Arsenic	75	7.665	7.738	7.642	**7.681**	0.05	0.6506
Selenium	77	3.354	3.485	3.563	**3.468**	0.1056	3.046
Selenium	78	0.8745	0.596	0.5937	**0.6881**	0.1614	23.46
Selenium	82	0.8616	1.102	0.9913	**0.9849**	0.1202	12.21
Thallium	203	1.405	1.372	1.355	**1.377**	0.0252	1.828
Thallium	205	1.39	1.388	1.363	**1.38**	0.0151	1.092
Uranium	238	3.555	3.571	3.485	**3.537**	0.0457	1.291

Internal Standard Factors:

Rhodium	103	1.174	1.17	1.178	**1.174**	n/a	n/a
Lutetium	175	1.071	1.053	1.058	**1.071**	n/a	n/a
Gold	197	1.284	1.3	1.26	**1.284**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-003 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:05					
Arsenic	75	3.114	2.952	2.944	**3.003**	0.0958	3.19
Selenium	77	2.628	2.249	2.324	**2.4**	0.2008	8.364
Selenium	78	0.6166	0.3512	0.3741	**0.4473**	0.147	32.87
Selenium	82	1.011	0.5694	0.5372	**0.706**	0.2649	37.52
Thallium	203	0.3625	0.3432	0.3587	**0.3548**	0.0102	2.879
Thallium	205	0.3518	0.3531	0.3492	**0.3513**	0.002	0.5665
Uranium	238	3.653	3.603	3.646	**3.634**	0.0268	0.7371

Internal Standard Factors:

Rhodium	103	1.191	1.148	1.147	**1.191**	n/a	n/a
Lutetium	175	1.086	1.067	1.06	**1.086**	n/a	n/a
Gold	197	1.281	1.235	1.238	**1.281**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-004 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:08					
Arsenic	75	76.3	75.54	75.57	**75.8**	0.4313	0.569
Selenium	77	2.208	2.171	1.828	**2.069**	0.2092	10.11
Selenium	78	0.5126	0.4251	0.4242	**0.4539**	0.0508	11.19
Selenium	82	0.7039	0.7465	0.5397	**0.6633**	0.1092	16.46
Thallium	203	0.5093	0.5035	0.5165	**0.5098**	0.0065	1.275
Thallium	205	0.499	0.5025	0.5057	**0.5024**	0.0034	0.6702
Uranium	238	3.199	3.217	3.257	**3.225**	0.0299	0.9282

Internal Standard Factors:

Rhodium	103	1.167	1.16	1.164	**1.167**	n/a	n/a
Lutetium	175	1.077	1.069	1.087	**1.077**	n/a	n/a
Gold	197	1.336	1.308	1.306	**1.336**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:12					
Arsenic	75	21.35	21.22	21.46	**21.34**	0.1211	0.5672
Selenium	77	2.127	2.054	2.225	**2.135**	0.0859	4.024
Selenium	78	0.2819	0.3035	0.4552	**0.3468**	0.0944	27.22
Selenium	82	0.4995	0.3771	0.4185	**0.4317**	0.0622	14.42
Thallium	203	0.4634	0.4871	0.4785	**0.4763**	0.012	2.523
Thallium	205	0.4745	0.5077	0.4877	**0.49**	0.0167	3.411
Uranium	238	3.294	3.389	3.327	**3.337**	0.0481	1.442

Internal Standard Factors:

Rhodium	103	1.168	1.163	1.178	**1.168**	n/a	n/a
Lutetium	175	1.06	1.086	1.069	**1.06**	n/a	n/a
Gold	197	1.296	1.28	1.289	**1.296**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:16					
Arsenic	75	4.253	4.375	4.546	**4.391**	0.1473	3.355
Selenium	77	2.202	1.995	1.694	**1.964**	0.2555	13.01
Selenium	78	0.2856	0.2637	0.2919	**0.2804**	0.0148	5.275
Selenium	82	0.4821	0.5768	0.6269	**0.5619**	0.0735	13.08
Thallium	203	0.5872	0.5784	0.5792	**0.5816**	0.0049	0.8369
Thallium	205	0.6027	0.5782	0.5989	**0.5933**	0.0132	2.217
Uranium	238	2.831	2.757	2.78	**2.789**	0.0384	1.376

Internal Standard Factors:

Rhodium	103	1.172	1.164	1.181	**1.172**	n/a	n/a
Lutetium	175	1.102	1.072	1.076	**1.102**	n/a	n/a
Gold	197	1.302	1.288	1.287	**1.302**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:19					
Arsenic	75	31.18	30.85	30.52	**30.85**	0.3299	1.069
Selenium	77	2.318	2.073	1.729	**2.04**	0.2958	14.5
Selenium	78	0.3913	0.2844	0.4563	**0.3773**	0.0868	22.99
Selenium	82	0.5983	0.7896	0.7724	**0.7201**	0.1058	14.7
Thallium	203	0.5082	0.5015	0.4921	**0.5006**	0.008	1.608
Thallium	205	0.4996	0.5063	0.507	**0.5043**	0.0041	0.8035
Uranium	238	2.775	2.843	2.829	**2.815**	0.0359	1.274

Internal Standard Factors:							
Rhodium	103	1.181	1.17	1.165	**1.181**	n/a	n/a
Lutetium	175	1.06	1.074	1.067	**1.06**	n/a	n/a
Gold	197	1.3	1.265	1.282	**1.3**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-008 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:23					
Arsenic	75	75.52	74.88	75.22	**75.21**	0.3162	0.4205
Selenium	77	2.291	2.229	2.245	**2.255**	0.0318	1.408
Selenium	78	0.5789	0.205	0.2297	**0.3379**	0.2091	61.89
Selenium	82	0.7212	0.5139	0.6116	**0.6156**	0.1037	16.85
Thallium	203	0.4932	0.4795	0.4911	**0.488**	0.0074	1.509
Thallium	205	0.4829	0.4906	0.4958	**0.4898**	0.0065	1.32
Uranium	238	2.982	2.94	2.944	**2.956**	0.0234	0.793

Internal Standard Factors:

Rhodium	103	1.173	1.158	1.159	**1.173**	n/a	n/a
Lutetium	175	1.071	1.057	1.071	**1.071**	n/a	n/a
Gold	197	1.31	1.281	1.292	**1.31**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-009 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:26					
Arsenic	75	9.15	8.94	8.79	**8.96**	0.1807	2.016
Selenium	77	2.27	2.142	2.435	**2.283**	0.1468	6.43
Selenium	78	0.3881	0.2289	0.3134	**0.3101**	0.0796	25.67
Selenium	82	0.6658	0.6665	0.668	**0.6667**	0.0011	0.1684
Thallium	203	0.5919	0.5822	0.5857	**0.5866**	0.0049	0.8328
Thallium	205	0.6036	0.5647	0.5711	**0.5798**	0.0209	3.597
Uranium	238	3.06	2.986	3.015	**3.02**	0.0372	1.232

Internal Standard Factors:							
Rhodium	103	1.174	1.167	1.161	**1.174**	n/a	n/a
Lutetium	175	1.085	1.059	1.074	**1.085**	n/a	n/a
Gold	197	1.319	1.297	1.275	**1.319**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-010 1/5 7/27/10 20:30			Mean	SD	%RSD
Arsenic	75	2.554	2.546	2.444	**2.515**	0.0612	2.432
Selenium	77	2.598	2.513	2.681	**2.597**	0.084	3.234
Selenium	78	0.4699	0.3738	0.1744	**0.3394**	0.1507	44.4
Selenium	82	0.807	0.7979	0.8524	**0.8191**	0.0292	3.568
Thallium	203	0.6743	0.6746	0.6738	**0.6742**	0.0004	0.0624
Thallium	205	0.6899	0.685	0.6827	**0.6859**	0.0037	0.5377
Uranium	238	2.776	2.718	2.686	**2.727**	0.0458	1.68

Internal Standard Factors:

Rhodium	103	1.183	1.169	1.167	**1.183**	n/a	n/a
Lutetium	175	1.067	1.044	1.05	**1.067**	n/a	n/a
Gold	197	1.307	1.289	1.27	**1.307**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/27/10 20:33					
Arsenic	75	24.66	24.54	24.32	**24.51**	0.1717	0.7005
Selenium	77	25.22	24.52	25.17	**24.97**	0.3909	1.565
Selenium	78	24.74	24.36	24.18	**24.43**	0.2872	1.176
Selenium	82	25.73	24.9	24.7	**25.11**	0.5438	2.165
Thallium	203	25.63	27.11	26.77	**26.51**	0.7765	2.93
Thallium	205	25.73	26.8	26.98	**26.5**	0.6761	2.551
Uranium	238	25.52	25.41	25.26	**25.4**	0.1328	0.5228

Internal Standard Factors:							
Rhodium	103	1.126	1.098	1.095	**1.126**	n/a	n/a
Lutetium	175	1.047	1.039	1.04	**1.047**	n/a	n/a
Gold	197	1.088	1.083	1.069	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/27/10 20:38					
Arsenic	75	0.0599	0.0048	-0.0109	**0.0179**	0.0372	207.3
Selenium	77	-0.2933	-0.3176	-0.295	**-0.302**	0.0136	4.497
Selenium	78	-0.2074	-0.0773	-0.2144	**-0.1664**	0.0773	46.43
Selenium	82	0.1116	-0.1352	-0.1527	**-0.0588**	0.1478	251.4
Thallium	203	-0.0007	0.0021	0.0007	**0.0007**	0.0014	190.5
Thallium	205	0.0028	0.0026	0.0028	**0.0027**	0.0002	5.577
Uranium	238	0.0013	0.0052	0.0063	**0.0043**	0.0026	61.09

Internal Standard Factors:							
Rhodium	103	1.127	1.099	1.099	**1.127**	n/a	n/a
Lutetium	175	1.066	1.049	1.053	**1.066**	n/a	n/a
Gold	197	1.128	1.11	1.085	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-011 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:40					
Arsenic	75	66.09	64.03	63.56	**64.56**	1.344	2.082
Selenium	77	2.195	2.344	2.177	**2.239**	0.0919	4.106
Selenium	78	0.4256	0.3829	0.4107	**0.4064**	0.0217	5.329
Selenium	82	0.5861	0.6913	0.6759	**0.6511**	0.0568	8.725
Thallium	203	0.5545	0.5174	0.5135	**0.5285**	0.0226	4.281
Thallium	205	0.5414	0.5297	0.535	**0.5354**	0.0058	1.089
Uranium	238	3.295	3.237	3.249	**3.26**	0.0304	0.9315

Internal Standard Factors:

Rhodium	103	1.154	1.129	1.133	**1.154**	n/a	n/a
Lutetium	175	1.071	1.035	1.037	**1.071**	n/a	n/a
Gold	197	1.311	1.286	1.3	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-012 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:44					
Arsenic	75	14.07	13.81	13.49	**13.79**	0.2919	2.117
Selenium	77	2.263	2.204	1.92	**2.129**	0.1836	8.622
Selenium	78	0.8173	0.2137	0.3345	**0.4552**	0.3194	70.17
Selenium	82	0.4501	0.7262	0.5788	**0.585**	0.1381	23.61
Thallium	203	0.4847	0.4776	0.4947	**0.4857**	0.0086	1.767
Thallium	205	0.4833	0.4932	0.4924	**0.4897**	0.0055	1.12
Uranium	238	2.649	2.657	2.743	**2.683**	0.0523	1.95

Internal Standard Factors:

Rhodium	103	1.174	1.157	1.148	**1.174**	n/a	n/a
Lutetium	175	1.057	1.053	1.073	**1.057**	n/a	n/a
Gold	197	1.322	1.337	1.318	**1.322**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-013 1/5 7/27/10 20:47			Mean	SD	%RSD
Arsenic	75	2.652	2.815	2.701	**2.723**	0.0837	3.075
Selenium	77	2.264	1.984	2.147	**2.132**	0.1407	6.599
Selenium	78	0.2586	0.1211	0.317	**0.2322**	0.1006	43.32
Selenium	82	0.5617	0.8801	0.8651	**0.769**	0.1797	23.36
Thallium	203	0.5941	0.5997	0.5817	**0.5918**	0.0092	1.561
Thallium	205	0.5883	0.5873	0.5901	**0.5886**	0.0014	0.2435
Uranium	238	3.088	3.026	2.997	**3.037**	0.0467	1.539

Internal Standard Factors:

Rhodium	103	1.172	1.166	1.171	**1.172**	n/a	n/a
Lutetium	175	1.08	1.071	1.066	**1.08**	n/a	n/a
Gold	197	1.328	1.328	1.324	**1.328**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-014 1/5 7/27/10 20:51			Mean	SD	%RSD
Arsenic	75	57.09	56.48	57.21	**56.93**	0.3866	0.6792
Selenium	77	1.84	2.18	2.236	**2.085**	0.2143	10.28
Selenium	78	0.1341	0.3105	0.3949	**0.2798**	0.1331	47.55
Selenium	82	0.8607	0.7811	0.6178	**0.7532**	0.1238	16.44
Thallium	203	0.426	0.4242	0.4127	**0.421**	0.0072	1.721
Thallium	205	0.4348	0.4321	0.4241	**0.4303**	0.0055	1.285
Uranium	238	7.159	6.776	6.613	**6.849**	0.2802	4.09

Internal Standard Factors:							
Rhodium	103	1.179	1.164	1.182	**1.179**	n/a	n/a
Lutetium	175	1.084	1.058	1.041	**1.084**	n/a	n/a
Gold	197	1.37	1.346	1.376	**1.37**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-015 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:54					
Arsenic	75	19.39	19.12	19.05	**19.19**	0.1809	0.943
Selenium	77	2.084	1.852	1.848	**1.928**	0.1353	7.017
Selenium	78	0.1772	0.0501	0.2502	**0.1592**	0.1012	63.6
Selenium	82	0.7987	0.818	0.5261	**0.7143**	0.1632	22.85
Thallium	203	0.4016	0.4177	0.4101	**0.4098**	0.0081	1.968
Thallium	205	0.4052	0.413	0.4186	**0.4123**	0.0067	1.631
Uranium	238	3.246	3.217	3.209	**3.224**	0.0195	0.6047

Internal Standard Factors:							
Rhodium	103	1.177	1.157	1.165	**1.177**	n/a	n/a
Lutetium	175	1.074	1.08	1.081	**1.074**	n/a	n/a
Gold	197	1.361	1.317	1.337	**1.361**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-016 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:58					
Arsenic	75	10.02	9.771	9.631	**9.809**	0.1991	2.03
Selenium	77	2.784	2.614	2.659	**2.686**	0.0881	3.281
Selenium	78	0.4373	0.3178	0.6732	**0.4761**	0.1808	37.98
Selenium	82	1.045	0.4615	0.453	**0.6533**	0.3396	51.98
Thallium	203	0.5709	0.5753	0.584	**0.5767**	0.0066	1.15
Thallium	205	0.575	0.5675	0.5647	**0.569**	0.0053	0.9381
Uranium	238	3.829	3.852	3.783	**3.821**	0.0351	0.918

Internal Standard Factors:							
Rhodium	103	1.181	1.167	1.183	**1.181**	n/a	n/a
Lutetium	175	1.071	1.072	1.074	**1.071**	n/a	n/a
Gold	197	1.352	1.297	1.3	**1.352**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-017 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:01					
Arsenic	75	8.409	8.341	8.245	**8.332**	0.0825	0.9906
Selenium	77	2.831	2.811	2.574	**2.739**	0.1429	5.217
Selenium	78	0.5375	0.4373	0.422	**0.4656**	0.0627	13.47
Selenium	82	0.9632	0.6739	0.6568	**0.7646**	0.1721	22.51
Thallium	203	0.5241	0.5141	0.5154	**0.5179**	0.0054	1.049
Thallium	205	0.5177	0.5323	0.5166	**0.5222**	0.0088	1.677
Uranium	238	3.117	3.052	2.999	**3.056**	0.0592	1.936

Internal Standard Factors:							
Rhodium	103	1.203	1.181	1.185	**1.203**	n/a	n/a
Lutetium	175	1.079	1.081	1.07	**1.079**	n/a	n/a
Gold	197	1.311	1.316	1.296	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-019 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:05					
Arsenic	75	18.72	18.27	18.45	**18.48**	0.2238	1.211
Selenium	77	2.075	1.905	2.21	**2.063**	0.1527	7.399
Selenium	78	0.2895	0.4921	0.4306	**0.4041**	0.1038	25.7
Selenium	82	0.578	0.5783	0.754	**0.6368**	0.1015	15.94
Thallium	203	0.5624	0.5465	0.5395	**0.5495**	0.0117	2.133
Thallium	205	0.5433	0.546	0.5416	**0.5436**	0.0022	0.4025
Uranium	238	4.658	4.637	4.58	**4.625**	0.0403	0.8708

Internal Standard Factors:

Rhodium	103	1.199	1.178	1.181	**1.199**	n/a	n/a
Lutetium	175	1.09	1.085	1.064	**1.09**	n/a	n/a
Gold	197	1.356	1.332	1.354	**1.356**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-020 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:09					
Arsenic	75	5.54	5.448	5.46	**5.483**	0.0504	0.9199
Selenium	77	2.216	1.941	2.015	**2.057**	0.1423	6.917
Selenium	78	0.4991	0.2894	0.4601	**0.4162**	0.1115	26.8
Selenium	82	0.7659	0.4881	0.4715	**0.5751**	0.1654	28.76
Thallium	203	0.5411	0.5381	0.5315	**0.5369**	0.0049	0.9147
Thallium	205	0.5383	0.5548	0.5227	**0.5386**	0.0161	2.982
Uranium	238	5.57	5.436	5.448	**5.485**	0.0745	1.358

Internal Standard Factors:

Rhodium	103	1.201	1.175	1.195	**1.201**	n/a	n/a
Lutetium	175	1.081	1.081	1.063	**1.081**	n/a	n/a
Gold	197	1.284	1.292	1.294	**1.284**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		7/27/10 21:12					
Arsenic	75	24.54	24.45	24.19	**24.39**	0.1808	0.7411
Selenium	77	24.27	24.16	25.2	**24.54**	0.5707	2.325
Selenium	78	24.34	24.16	24.73	**24.41**	0.2919	1.196
Selenium	82	25.01	25.2	25.24	**25.15**	0.1231	0.4894
Thallium	203	25.7	26.56	26.7	**26.32**	0.5428	2.063
Thallium	205	25.99	26.85	26.36	**26.4**	0.4324	1.638
Uranium	238	25.38	25.74	25.33	**25.48**	0.2255	0.8849

Internal Standard Factors:							
Rhodium	103	1.125	1.105	1.101	**1.125**	n/a	n/a
Lutetium	175	1.054	1.05	1.038	**1.054**	n/a	n/a
Gold	197	1.101	1.066	1.074	**1.101**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		7/27/10 21:16					
Arsenic	75	0.0445	0.0853	0.089	**0.073**	0.0247	33.82
Selenium	77	-0.338	-0.346	-0.3219	**-0.3353**	0.0123	3.661
Selenium	78	-0.1583	-0.2211	-0.0429	**-0.1408**	0.0904	64.23
Selenium	82	0.0126	0.1637	0.2037	**0.1267**	0.1008	79.56
Thallium	203	0.0012	0.004	0.0029	**0.0027**	0.0014	53.44
Thallium	205	0.0036	0.0038	0.0029	**0.0034**	0.0005	13.74
Uranium	238	0.0033	0.0045	0.0051	**0.0043**	0.0009	21.61

Internal Standard Factors:

Rhodium	103	1.13	1.107	1.11	**1.13**	n/a	n/a
Lutetium	175	1.064	1.048	1.044	**1.064**	n/a	n/a
Gold	197	1.122	1.108	1.099	**1.122**	n/a	n/a

Service Request # K1006676 (HCl)_____
Calibration _____072810D_____
QC in calibration__072810D_____
QC Service Request K1006676_____
STARLIMS Batch # 210314_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Report Ag-109.

Primary Review by _____ Date 7/29/10
Secondary Review by _____ Date 7/29/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	4	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006285-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006285 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	K1006285-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006285-001 1/5D	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006285-001 1/25L	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006285-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006285-001 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006285-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006285-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006285-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006285-005 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006285-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006285-006 1/5D	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006285-006 1/25S	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006285-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006285-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006285-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006285-010 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006285-011 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006285-012 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006285-013 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006285-014 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006285-015 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	K1006285-016 1/5	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	K1006285-017 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006285-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006285-019 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006285-020 1/5	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
43	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
44	K105734-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	145
45	LCSW K1005734 1/25	Unknown	0 kg	0 ml	1.00	1	3	6	145
46	K1005734-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1005734-001 1/5D	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1005734-001 1/25S	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006453-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	LCSS K1006453 1/100	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006453-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006453-001 1/5D	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006453-001 1/25L	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
55	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
56	K1006453-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	4	3	145
57	K1006453-001 1/25S	Unknown	0 kg	0 ml	1.00	1	4	4	145
58	K1006453-002 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006453-003 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006453-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006453-005 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006453-006 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006453-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006453-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006453-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
67	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
68	K1006453-010 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
69	K1006453-011 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	K1006453-012 1/5	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	K1006453-013 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006453-014 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006453-015 1/5	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006804-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006804-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006804-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
78	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
79	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
80	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	5	11	145
81	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006615-006 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
90	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
91	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
92	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
93	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	2	2	1	145
97	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	2	2	2	145
98	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	2	2	3	145
99	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	2	2	4	145

100	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	2	2	5	145
101	CCV9	Unknown	0 kg	0 ml	1.00	0	1	7	145
102	CCB9	Unknown	0 kg	0 ml	1.00	0	1	8	145
103	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	2	2	6	145
104	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	2	2	7	145
105	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	2	2	8	145
106	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	2	2	9	145
107	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	2	2	10	145
108	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	2	2	11	145
109	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	2	2	12	145
110	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	2	3	1	145
111	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	2	3	2	145
112	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	2	3	3	145
113	CCV10	Unknown	0 kg	0 ml	1.00	0	1	7	145
114	CCB10	Unknown	0 kg	0 ml	1.00	0	1	8	145
115	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	2	3	4	145
116	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	2	3	5	145
117	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	2	3	6	145
118	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	2	3	7	145
119	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	2	3	8	145
120	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	2	3	9	145
121	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	2	3	10	145
122	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	2	3	11	145
123	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	2	3	12	145
124	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	2	4	1	145
125	CCV11	Unknown	0 kg	0 ml	1.00	0	1	7	145
126	CCB11	Unknown	0 kg	0 ml	1.00	0	1	8	145
127	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	2	4	2	145
128	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	2	4	3	145
129	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	2	4	4	145
130	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	2	4	5	145
131	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	2	4	6	145
132	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	2	4	7	145
133	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	2	4	8	145
134	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	2	4	9	145
135	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	2	4	10	145
136	CCV12	Unknown	0 kg	0 ml	1.00	0	1	7	145
137	CCB12	Unknown	0 kg	0 ml	1.00	0	1	8	145
138	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	2	4	11	145
139	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	2	4	12	145
140	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	2	5	1	145
141	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	2	5	2	145
142	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	2	5	3	145
143	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	2	5	4	145
144	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	2	5	5	145
145	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	2	5	6	145
146	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	5	7	145
147	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	5	8	145
148	CCV13	Unknown	0 kg	0 ml	1.00	0	1	7	145
149	CCB13	Unknown	0 kg	0 ml	1.00	0	1	8	145
150	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	5	9	145

151	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	5	10	145
152	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	5	11	145
153	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	5	12	145
154	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	3	1	1	145
155	K1006777-0131/5	Unknown	0 kg	0 ml	1.00	3	1	2	145
156	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	3	1	3	145
157	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	3	1	4	145
158	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	3	1	5	145
159	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	3	1	6	145
160	CCV14	Unknown	0 kg	0 ml	1.00	0	1	7	145
161	CCB14	Unknown	0 kg	0 ml	1.00	0	1	8	145

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	acqmet11	7:45:18 7/28/10

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 7:45:18 7/28/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-500.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

ExCell Mass Calibration Date: 7/28/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1298	0.715	0.003	TRUE	
7.016	1558	0.715	-0.018	TRUE	Li-7
9.012	2058	0.766	0.012	TRUE	Be-9
23.985	5872	0.715	-0.007	TRUE	Mg-24
24.986	6132	0.715	-0.028	TRUE	Co-59
25.983	6379	0.715	-0.002	TRUE	In-115
26.982	6632	0.766	0.002	TRUE	Ce-140
43.956	10955	0.766	-0.012	TRUE	Pb-208
45.953	11456	0.715	0.017	TRUE	Bi-209
50.944	12730	0.715	0.003	TRUE	U-238
51.94	12983	0.766	0.005	TRUE	
53.949	13497	0.817	-0.005	TRUE	
55.935	13997	0.766	0.016	TRUE	
56.935	14257	0.766	-0.005	TRUE	
57.934	14511	0.817	-0.004	TRUE	
58.933	14764	0.766	0.001	TRUE	
69.925	17559	0.766	0.014	TRUE	
75.92	19080	0.766	0.036	TRUE	
112.904	28508	0.765	0.005	TRUE	
114.904	29015	0.765	0.014	TRUE	
118.903	30068	0.765	-0.119	FALSE	
139.905	35392	0.714	-0.008	TRUE	
141.908	35905	0.663	-0.018	TRUE	
155.923	39480	0.663	-0.027	TRUE	
205.974	52240	0.612	-0.006	TRUE	
206.976	52493	0.663	0.004	TRUE	
207.977	52753	0.663	-0.015	TRUE	
208.98	53007	0.612	-0.006	TRUE	
238.051	60417	0.611	0.029	TRUE	

Excluded In Calib | Excluded In Results | Peak Cal Excluded | Multi Element | Serial Dilut | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	6Li	7Li	9Be	59Co	115In	208Pb
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)0.000	(P)24428.035	(P)6899.499	(P)45309.250	(P)50755.843	(P)21934.332
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)0.000	(P)24748.921	(P)6993.212	(P)45460.390	(P)51236.885	(P)22352.481
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)0.167	(P)24481.798	(P)6897.665	(P)45473.095	(P)51369.028	(P)22254.657
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)0.333	(P)24662.608	(P)7024.727	(P)45043.069	(P)51126.994	(P)22314.086
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)0.167	(P)24508.006	(P)6833.467	(P)44691.469	(P)51035.002	(P)22241.303
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)0.133	(P)24565.873	(P)6929.714	(P)45195.455	(P)51104.751	(P)22219.372
	SD of Stability 07-28-20		(P)0.139	(P)134.425	(P)77.883	(P)330.699	(P)231.516	(P)165.577
	%RSD of Stability 07		(P)104.583	(P)0.547	(P)1.124	(P)0.732	(P)0.453	(P)0.745

Run	Label	TimeStamp	209Bi	232Th	238U
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)33849.903	(P)0.000	(P)37051.522
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)34233.310	(P)0.000	(P)37714.241
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)34624.094	(P)0.000	(P)38361.799
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)34381.159	(P)0.000	(P)38348.598
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)34239.158	(P)0.000	(P)38481.961
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)34265.525	(P)0.000	(P)37991.624
	SD of Stability 07-28-20		(P)281.255	(P)0.000	(P)605.315
	%RSD of Stability 07		(P)0.821	(P)0.000	(P)1.593

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		Cal. Blk 7/28/10 15:50			Mean	SD	%RSD
Antimony	121	0.0054	-0.0035	-0.0019	**0**	0.0047	0
Antimony	123	0.0049	-0.0042	-0.0006	**0**	0.0046	0
Silver	107	0	-0.0002	0.0002	**0**	0.0002	0
Silver	109	-0.0001	0.0007	-0.0006	**0**	0.0007	0

Internal Standard Factors:

Rhodium	103	1.012	1.002	0.986	**1.012**	n/a	n/a
Indium	115	1.018	0.991	0.991	**1.018**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		7/28/10 15:52					
Antimony	121	25.11	24.84	25.05	**25**	0.1438	0.5751
Antimony	123	25.36	24.35	25.29	**25**	0.5612	2.245
Silver	107	25.05	24.91	25.04	**25**	0.0796	0.3183
Silver	109	25.16	24.86	24.99	**25**	0.1502	0.6009

Internal Standard Factors:

Rhodium	103	0.974	0.966	0.971	**0.974**	n/a	n/a
Indium	115	0.973	0.948	0.96	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:54					
Antimony	121	24.6	24.61	24.59	**24.6**	0.0078	0.0318
Antimony	123	24.56	24.63	24.35	**24.51**	0.1477	0.6024
Silver	107	12.8	12.71	12.9	**12.8**	0.0943	0.7367
Silver	109	12.78	12.75	12.76	**12.76**	0.0176	0.1381

Internal Standard Factors:

Rhodium	103	0.997	0.986	0.98	**0.997**	n/a	n/a
Indium	115	0.977	0.968	0.969	**0.977**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:56					
Antimony	121	25.28	25.19	26.06	**25.51**	0.4765	1.868
Antimony	123	25.28	24.73	25.75	**25.25**	0.5124	2.029
Silver	107	24.97	24.75	24.77	**24.83**	0.1205	0.4852
Silver	109	24.83	25.17	24.99	**25**	0.1689	0.6755

Internal Standard Factors:							
Rhodium	103	0.987	0.987	0.988	**0.987**	n/a	n/a
Indium	115	0.982	0.968	0.982	**0.982**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:03					
Antimony	121	-0.0014	-0.0061	-0.0135	**-0.007**	0.0061	86.42
Antimony	123	-0.0083	0.0029	-0.0114	**-0.0056**	0.0075	134.7
Silver	107	0.0145	0.0136	0.0112	**0.0131**	0.0017	12.99
Silver	109	0.0148	0.0107	0.0121	**0.0126**	0.0021	16.49

Internal Standard Factors:							
Rhodium	103	1.024	1.015	1.018	**1.024** n/a		n/a
Indium	115	1.027	1.015	1.006	**1.027** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:06					
Antimony	121	-0.0125	-0.0127	-0.0096	**-0.0116**	0.0017	14.87
Antimony	123	-0.0071	-0.011	-0.0099	**-0.0093**	0.0021	22.04
Silver	107	0.0104	0.0097	0.0073	**0.0091**	0.0016	17.91
Silver	109	0.0083	0.0074	0.0079	**0.0079**	0.0005	5.836

Internal Standard Factors:							
Rhodium	103	1.026	1.016	1.01	**1.026**	n/a	n/a
Indium	115	1.021	1.004	1.013	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/28/10 16:08					
Antimony	121	0.0981	0.101	0.098	**0.099**	0.0017	1.755
Antimony	123	0.0884	0.0943	0.0797	**0.0875**	0.0073	8.401
Silver	107	0.0536	0.0513	0.0564	**0.0538**	0.0026	4.765
Silver	109	0.0523	0.0544	0.0561	**0.0542**	0.0019	3.445

Internal Standard Factors:

Rhodium	103	1.024	1.009	1.01	**1.024**	n/a	n/a
Indium	115	1.005	1.001	1.01	**1.005**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/28/10 16:10					
Antimony	121	0.0927	0.0885	0.0833	**0.0882**	0.0047	5.341
Antimony	123	0.0783	0.0901	0.0854	**0.0846**	0.0059	7.024
Silver	107	0.0884	0.0829	0.0832	**0.0848**	0.0031	3.617
Silver	109	0.0801	0.0759	0.0815	**0.0792**	0.0029	3.656

Internal Standard Factors:

Rhodium	103	1.262	1.256	1.245	**1.262**	n/a	n/a
Indium	115	1.185	1.194	1.191	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/28/10 16:12					
Antimony	121	0.1155	0.1123	0.115	**0.1143**	0.0017	1.492
Antimony	123	0.0993	0.1083	0.0959	**0.1011**	0.0064	6.338
Silver	107	12.48	12.61	12.55	**12.55**	0.0652	0.5197
Silver	109	12.42	12.53	12.5	**12.49**	0.0566	0.4532

Internal Standard Factors:

Rhodium	103	1.25	1.245	1.251	**1.25**	n/a	n/a
Indium	115	1.171	1.176	1.169	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:16					
Antimony	121	-0.0271	-0.0258	-0.0251	**-0.026**	0.001	4.036
Antimony	123	-0.0253	-0.02	-0.0277	**-0.0243**	0.0039	16.14
Silver	107	0.0265	0.0252	0.0259	**0.0259**	0.0006	2.415
Silver	109	0.0247	0.0252	0.0239	**0.0246**	0.0006	2.526

Internal Standard Factors:

Rhodium	103	1.128	1.106	1.114	**1.128**	n/a	n/a
Indium	115	1.099	1.099	1.086	**1.099**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		LCSS K1006285 1/100 7/28/10 16:19			Mean	SD	%RSD
Antimony	121	8.715	8.741	8.759	**8.738**	0.0224	0.2558
Antimony	123	8.697	8.546	8.567	**8.603**	0.0817	0.9499
Silver	107	7.833	7.852	7.831	**7.839**	0.0116	0.1478
Silver	109	7.89	7.797	7.869	**7.852**	0.0486	0.6184

Internal Standard Factors:

Rhodium	103	1.055	1.057	1.05	**1.055**	n/a	n/a
Indium	115	1.041	1.032	1.035	**1.041**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:25					
Antimony	121	1.097	1.107	1.119	**1.108**	0.0111	0.9973
Antimony	123	1.091	1.111	1.111	**1.104**	0.0112	1.012
Silver	107	0.3393	0.3354	0.3315	**0.3354**	0.0039	1.167
Silver	109	0.2519	0.2478	0.2402	**0.2467**	0.0059	2.408

Internal Standard Factors:

Rhodium	103	1.16	1.157	1.156	**1.16**	n/a	n/a
Indium	115	1.109	1.112	1.111	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 16:29					
Antimony	121	2.22	2.223	2.309	**2.251**	0.0505	2.244
Antimony	123	2.276	2.249	2.276	**2.267**	0.0154	0.6804
Silver	107	0.34	0.3332	0.3312	**0.3348**	0.0046	1.374
Silver	109	0.2387	0.24	0.2409	**0.2399**	0.0011	0.4543

Internal Standard Factors:

Rhodium	103	1.178	1.172	1.168	**1.178**	n/a	n/a
Indium	115	1.122	1.118	1.126	**1.122**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-001 1/25L 7/28/10 16:32			Mean	SD	%RSD
Antimony	121	0.1786	0.1822	0.1786	**0.1798**	0.0021	1.177
Antimony	123	0.1846	0.1756	0.19	**0.1834**	0.0073	3.979
Silver	107	0.0598	0.0642	0.0628	**0.0623**	0.0022	3.589
Silver	109	0.0435	0.0434	0.0478	**0.0449**	0.0025	5.62

Internal Standard Factors:

Rhodium	103	1.096	1.089	1.1	**1.096**	n/a	n/a
Indium	115	1.063	1.071	1.065	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 16:35					
Antimony	121	51.82	51.77	50.92	**51.5**	0.5044	0.9794
Antimony	123	51.09	51.53	50.04	**50.89**	0.7693	1.512
Silver	107	9.961	9.917	9.956	**9.945**	0.024	0.241
Silver	109	9.716	9.741	9.822	**9.76**	0.0555	0.5687

Internal Standard Factors:

Rhodium	103	1.164	1.144	1.159	**1.164**	n/a	n/a
Indium	115	1.089	1.092	1.083	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 16:39					
Antimony	121	20.86	20.57	20.88	**20.77**	0.1759	0.8469
Antimony	123	20.47	20.32	20.69	**20.49**	0.1901	0.9278
Silver	107	4.159	4.159	4.174	**4.164**	0.0087	0.2079
Silver	109	4.165	4.082	4.116	**4.121**	0.0414	1.004

Internal Standard Factors:							
Rhodium	103	1.1	1.088	1.091	**1.1**	n/a	n/a
Indium	115	1.071	1.064	1.077	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-002 1/5 7/28/10 16:45			Mean	SD	%RSD
Antimony	121	1.065	1.05	1.053	**1.056**	0.0078	0.7423
Antimony	123	1.06	1.058	1.027	**1.048**	0.0186	1.77
Silver	107	0.3849	0.3649	0.3756	**0.3752**	0.01	2.67
Silver	109	0.0864	0.0832	0.0848	**0.0848**	0.0016	1.895

Internal Standard Factors:

Rhodium	103	1.202	1.194	1.192	**1.202**	n/a	n/a
Indium	115	1.14	1.137	1.136	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:48					
Antimony	121	0.2803	0.2865	0.2729	**0.2799**	0.0068	2.44
Antimony	123	0.2591	0.289	0.269	**0.2723**	0.0152	5.591
Silver	107	0.1235	0.1213	0.1162	**0.1204**	0.0037	3.115
Silver	109	0.0652	0.0662	0.0652	**0.0655**	0.0006	0.8399

Internal Standard Factors:

Rhodium	103	1.191	1.18	1.197	**1.191**	n/a	n/a
Indium	115	1.134	1.136	1.13	**1.134**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-004 1/5 7/28/10 16:51			Mean	SD	%RSD
Antimony	121	1.586	1.595	1.632	**1.604**	0.0248	1.546
Antimony	123	1.533	1.545	1.537	**1.539**	0.0062	0.4019
Silver	107	0.3254	0.3286	0.3099	**0.3213**	0.01	3.122
Silver	109	0.0893	0.0874	0.0957	**0.0908**	0.0044	4.811

Internal Standard Factors:							
Rhodium	103	1.186	1.186	1.191	**1.186**	n/a	n/a
Indium	115	1.137	1.139	1.13	**1.137**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/28/10 16:54					
Antimony	121	25.79	25.48	25.19	**25.48**	0.2988	1.172
Antimony	123	25.65	25.42	25.21	**25.42**	0.2187	0.8601
Silver	107	24.58	25.01	25.05	**24.88**	0.2619	1.052
Silver	109	24.89	25.17	25.14	**25.07**	0.1542	0.6149

Internal Standard Factors:

Rhodium	103	1.037	1.029	1.037	**1.037** n/a		n/a
Indium	115	1.027	1.019	1.012	**1.027** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/28/10 17:00					
Antimony	121	-0.0344	-0.0349	-0.0317	**-0.0337**	0.0017	5.093
Antimony	123	-0.0326	-0.0394	-0.0347	**-0.0356**	0.0035	9.719
Silver	107	0.0101	0.0093	0.0084	**0.0092**	0.0009	9.583
Silver	109	0.0104	0.0095	0.0119	**0.0106**	0.0012	11.62

Internal Standard Factors:

Rhodium	103	1.022	1.028	1.026	**1.022**	n/a	n/a
Indium	115	1.033	1.018	1.017	**1.033**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:02					
Antimony	121	0.139	0.1335	0.146	**0.1395**	0.0063	4.504
Antimony	123	0.149	0.1529	0.1543	**0.1521**	0.0028	1.827
Silver	107	0.0986	0.092	0.0881	**0.0929**	0.0053	5.73
Silver	109	0.0448	0.0476	0.0434	**0.0453**	0.0021	4.701

Internal Standard Factors:

Rhodium	103	1.188	1.198	1.186	**1.188**	n/a	n/a
Indium	115	1.141	1.112	1.131	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/5 7/28/10 17:05			Mean	SD	%RSD
Antimony	121	4.583	4.504	4.377	**4.488**	0.1037	2.31
Antimony	123	4.572	4.458	4.42	**4.484**	0.079	1.763
Silver	107	0.2809	0.277	0.2657	**0.2745**	0.0079	2.87
Silver	109	0.1218	0.116	0.117	**0.1183**	0.0031	2.602

Internal Standard Factors:

Rhodium	103	1.173	1.154	1.162	**1.173**	n/a	n/a
Indium	115	1.128	1.125	1.113	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-006 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 17:08					
Antimony	121	8.676	8.813	8.85	**8.779**	0.0918	1.045
Antimony	123	8.404	8.557	8.581	**8.514**	0.0958	1.125
Silver	107	0.2635	0.2607	0.2417	**0.2553**	0.0119	4.654
Silver	109	0.0993	0.0945	0.1029	**0.0989**	0.0042	4.254

Internal Standard Factors:							
Rhodium	103	1.151	1.151	1.15	**1.151**	n/a	n/a
Indium	115	1.102	1.103	1.11	**1.102**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-006 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 17:12					
Antimony	121	32.05	32.44	32.11	**32.2**	0.2113	0.6562
Antimony	123	31.48	32.34	31.59	**31.8**	0.4708	1.481
Silver	107	4.161	4.134	4.188	**4.161**	0.0269	0.6461
Silver	109	4.132	4.127	4.172	**4.144**	0.0245	0.5923

Internal Standard Factors:							
Rhodium	103	1.094	1.073	1.075	**1.094**	n/a	n/a
Indium	115	1.065	1.07	1.061	**1.065**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:17					
Antimony	121	13.04	13.19	13.03	**13.09**	0.0913	0.6974
Antimony	123	12.91	12.79	13.03	**12.91**	0.118	0.9139
Silver	107	0.198	0.1904	0.1899	**0.1928**	0.0046	2.366
Silver	109	0.1207	0.1125	0.1072	**0.1134**	0.0068	5.997

Internal Standard Factors:

Rhodium	103	1.203	1.196	1.203	**1.203**	n/a	n/a
Indium	115	1.152	1.15	1.161	**1.152**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-008 1/5 7/28/10 17:20			Mean	SD	%RSD
Antimony	121	0.1263	0.1032	0.1124	**0.114**	0.0116	10.22
Antimony	123	0.1127	0.113	0.1044	**0.11**	0.0049	4.475
Silver	107	0.106	0.105	0.0993	**0.1035**	0.0036	3.482
Silver	109	0.0407	0.0483	0.0391	**0.0427**	0.0049	11.54

Internal Standard Factors:							
Rhodium	103	1.238	1.205	1.215	**1.238**	n/a	n/a
Indium	115	1.151	1.161	1.157	**1.151**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:23					
Antimony	121	0.0877	0.0784	0.0873	**0.0845**	0.0052	6.205
Antimony	123	0.0973	0.1048	0.106	**0.1027**	0.0047	4.602
Silver	107	0.082	0.0836	0.0829	**0.0829**	0.0008	0.9431
Silver	109	0.038	0.0356	0.0361	**0.0366**	0.0013	3.451

Internal Standard Factors:							
Rhodium	103	1.226	1.217	1.205	**1.226**	n/a	n/a
Indium	115	1.159	1.146	1.15	**1.159**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:26					
Antimony	121	0.0646	0.0629	0.0703	**0.0659**	0.0039	5.846
Antimony	123	0.0889	0.0761	0.073	**0.0793**	0.0084	10.62
Silver	107	0.128	0.1236	0.1135	**0.1217**	0.0074	6.115
Silver	109	0.0768	0.0767	0.0717	**0.0751**	0.0029	3.9

Internal Standard Factors:

Rhodium	103	1.205	1.202	1.198	**1.205**	n/a	n/a
Indium	115	1.15	1.15	1.159	**1.15**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-011 1/5 7/28/10 17:29			Mean	SD	%RSD
Antimony	121	0.2351	0.2499	0.2314	**0.2388**	0.0098	4.115
Antimony	123	0.229	0.25	0.2268	**0.2353**	0.0128	5.444
Silver	107	0.1524	0.1626	0.1676	**0.1609**	0.0078	4.831
Silver	109	0.0778	0.0788	0.0845	**0.0804**	0.0036	4.496

Internal Standard Factors:

Rhodium	103	1.237	1.224	1.233	**1.237**	n/a	n/a
Indium	115	1.167	1.176	1.165	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-012 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:32					
Antimony	121	0.717	0.7121	0.735	**0.7214**	0.0121	1.674
Antimony	123	0.707	0.6963	0.6516	**0.685**	0.0294	4.284
Silver	107	0.2411	0.2515	0.2422	**0.2449**	0.0057	2.342
Silver	109	0.035	0.0413	0.0389	**0.0384**	0.0032	8.304

Internal Standard Factors:

Rhodium	103	1.218	1.211	1.214	**1.218**	n/a	n/a
Indium	115	1.163	1.159	1.145	**1.163**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/28/10 17:35					
Antimony	121	25.83	25.48	26.02	**25.77**	0.2734	1.061
Antimony	123	25.3	25	25.83	**25.38**	0.4181	1.648
Silver	107	25.29	24.97	25.08	**25.11**	0.1644	0.6548
Silver	109	25.28	25.08	25.06	**25.14**	0.1218	0.4846

Internal Standard Factors:

Rhodium	103	1.062	1.055	1.047	**1.062**	n/a	n/a
Indium	115	1.062	1.038	1.037	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/28/10 17:41					
Antimony	121	-0.0357	-0.0362	-0.0338	**-0.0353**	0.0013	3.572
Antimony	123	-0.0312	-0.0369	-0.0408	**-0.0363**	0.0048	13.35
Silver	107	0.0088	0.0087	0.0079	**0.0084**	0.0005	5.837
Silver	109	0.0101	0.0088	0.0072	**0.0087**	0.0014	16.13

Internal Standard Factors:

Rhodium	103	1.053	1.044	1.04	**1.053**	n/a	n/a
Indium	115	1.033	1.037	1.034	**1.033**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-013 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:43					
Antimony	121	0.3565	0.357	0.3831	**0.3655**	0.0152	4.167
Antimony	123	0.3744	0.3734	0.3451	**0.3643**	0.0166	4.555
Silver	107	0.1647	0.1527	0.1511	**0.1562**	0.0074	4.749
Silver	109	0.0417	0.0418	0.0392	**0.0409**	0.0015	3.648

Internal Standard Factors:

Rhodium	103	1.169	1.178	1.168	**1.169** n/a		n/a
Indium	115	1.133	1.129	1.133	**1.133** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-014 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:46					
Antimony	121	1.062	1.01	0.9777	**1.017**	0.0426	4.195
Antimony	123	1.031	1.002	0.9829	**1.005**	0.0243	2.416
Silver	107	0.454	0.5066	0.4807	**0.4804**	0.0263	5.467
Silver	109	0.037	0.0362	0.0343	**0.0359**	0.0014	3.842

Internal Standard Factors:

Rhodium	103	1.181	1.181	1.187	**1.181**	n/a	n/a
Indium	115	1.14	1.129	1.124	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-015 1/5 7/28/10 17:50			Mean	SD	%RSD
Antimony	121	0.5675	0.5865	0.6019	**0.5853**	0.0172	2.944
Antimony	123	0.5897	0.5596	0.5632	**0.5708**	0.0165	2.882
Silver	107	0.5162	0.5277	0.5335	**0.5258**	0.0088	1.674
Silver	109	0.0341	0.034	0.0347	**0.0343**	0.0004	1.147

Internal Standard Factors:

Rhodium	103	1.159	1.171	1.162	**1.159**	n/a	n/a
Indium	115	1.116	1.106	1.112	**1.116**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-016 1/5 7/28/10 17:53			Mean	SD	%RSD
Antimony	121	0.9052	0.8857	0.8943	**0.8951**	0.0098	1.095
Antimony	123	0.8855	0.8969	0.8361	**0.8728**	0.0323	3.702
Silver	107	0.3826	0.3794	0.35	**0.3707**	0.018	4.841
Silver	109	0.0637	0.0623	0.0672	**0.0644**	0.0025	3.896

Internal Standard Factors:

Rhodium	103	1.196	1.17	1.187	**1.196**	n/a	n/a
Indium	115	1.126	1.134	1.113	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-017 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:56					
Antimony	121	0.7407	0.7663	0.759	**0.7553**	0.0132	1.746
Antimony	123	0.7242	0.7885	0.7628	**0.7585**	0.0324	4.27
Silver	107	0.2087	0.2313	0.2173	**0.2191**	0.0114	5.202
Silver	109	0.0196	0.0192	0.02	**0.0196**	0.0004	2.127

Internal Standard Factors:

Rhodium	103	1.16	1.16	1.154	**1.16**	n/a	n/a
Indium	115	1.097	1.116	1.12	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-018 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:59					
Antimony	121	0.9514	0.9345	0.9302	**0.9387**	0.0112	1.193
Antimony	123	0.9733	0.901	0.9251	**0.9331**	0.0368	3.946
Silver	107	0.3126	0.2952	0.3213	**0.3097**	0.0133	4.296
Silver	109	0.0348	0.034	0.0331	**0.034**	0.0008	2.462

Internal Standard Factors:

Rhodium	103	1.171	1.166	1.168	**1.171**	n/a	n/a
Indium	115	1.135	1.108	1.125	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-019 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:02					
Antimony	121	4.027	3.997	3.946	**3.99**	0.041	1.028
Antimony	123	4.016	3.93	3.923	**3.956**	0.0518	1.31
Silver	107	0.3871	0.3596	0.3523	**0.3664**	0.0184	5.01
Silver	109	0.0523	0.0569	0.0563	**0.0552**	0.0025	4.544

Internal Standard Factors:

Rhodium	103	1.25	1.24	1.245	**1.25**	n/a	n/a
Indium	115	1.187	1.17	1.176	**1.187**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-020 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:05					
Antimony	121	1.361	1.362	1.412	**1.378**	0.0292	2.12
Antimony	123	1.349	1.377	1.343	**1.356**	0.0182	1.34
Silver	107	0.4161	0.386	0.4004	**0.4008**	0.015	3.751
Silver	109	0.0479	0.0413	0.0471	**0.0454**	0.0036	7.94

Internal Standard Factors:

Rhodium	103	1.246	1.225	1.236	**1.246**	n/a	n/a
Indium	115	1.167	1.173	1.155	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/28/10 18:08					
Antimony	121	25.62	25.24	25.63	**25.5**	0.2204	0.8645
Antimony	123	25.17	25.25	25.02	**25.15**	0.116	0.4612
Silver	107	24.95	24.84	25.17	**24.98**	0.1672	0.6694
Silver	109	24.61	24.98	25.1	**24.9**	0.2522	1.013

Internal Standard Factors:

Rhodium	103	1.082	1.066	1.072	**1.082**	n/a	n/a
Indium	115	1.054	1.053	1.039	**1.054**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/28/10 18:14					
Antimony	121	-0.0403	-0.0415	-0.0396	**-0.0405**	0.001	2.411
Antimony	123	-0.0319	-0.0429	-0.0475	**-0.0408**	0.0081	19.78
Silver	107	0.0087	0.009	0.0086	**0.0088**	0.0002	2.829
Silver	109	0.0087	0.0089	0.0094	**0.009**	0.0003	3.541

Internal Standard Factors:							
Rhodium	103	1.071	1.05	1.057	**1.071**	n/a	n/a
Indium	115	1.06	1.047	1.031	**1.06**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K105734-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:16					
Antimony	121	-0.0571	-0.05	-0.0574	**-0.0548**	0.0042	7.68
Antimony	123	-0.0543	-0.0589	-0.0548	**-0.056**	0.0025	4.508
Silver	107	0.0114	0.0099	0.0073	**0.0096**	0.002	21.4
Silver	109	0.0084	0.0078	0.0079	**0.008**	0.0004	4.377

Internal Standard Factors:

Rhodium	103	1.039	1.017	1.029	**1.039**	n/a	n/a
Indium	115	1.016	1.016	1.012	**1.016**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		LCSW K1005734 1/25 7/28/10 18:18			Mean	SD	%RSD
Antimony	121	42.05	42.05	40.88	**41.66**	0.6731	1.616
Antimony	123	41.04	41.67	40.63	**41.11**	0.5235	1.273
Silver	107	4.004	4.04	4.039	**4.028**	0.0202	0.5017
Silver	109	3.933	4.043	4.057	**4.011**	0.0682	1.7

Internal Standard Factors:

Rhodium	103	0.987	0.99	0.997	**0.987**	n/a	n/a
Indium	115	0.989	0.996	0.977	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1005734-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:23					
Antimony	121	0.0549	0.0518	0.0693	**0.0586**	0.0094	15.96
Antimony	123	0.0601	0.0539	0.0591	**0.0577**	0.0033	5.699
Silver	107	0.0576	0.0564	0.0569	**0.057**	0.0006	1.091
Silver	109	0.0427	0.0418	0.0406	**0.0417**	0.0011	2.583

Internal Standard Factors:

Rhodium	103	1.12	1.119	1.107	**1.12**	n/a	n/a
Indium	115	1.111	1.088	1.088	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1005734-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 18:26					
Antimony	121	0.0739	0.0719	0.0822	**0.076**	0.0054	7.161
Antimony	123	0.0654	0.0745	0.0905	**0.0768**	0.0127	16.5
Silver	107	0.0418	0.0493	0.0425	**0.0446**	0.0041	9.266
Silver	109	0.0332	0.0314	0.0331	**0.0326**	0.001	3.126

Internal Standard Factors:							
Rhodium	103	1.088	1.082	1.087	**1.088**	n/a	n/a
Indium	115	1.071	1.061	1.068	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1005734-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 18:29					
Antimony	121	39.37	38.13	39.21	**38.9**	0.677	1.74
Antimony	123	38.7	37.15	38.45	**38.1**	0.8349	2.191
Silver	107	4.064	3.937	4.049	**4.017**	0.0696	1.733
Silver	109	4.087	3.897	4.108	**4.031**	0.1164	2.888

Internal Standard Factors:							
Rhodium	103	1.048	1.02	1.045	**1.048**	n/a	n/a
Indium	115	1.037	1.013	1.027	**1.037**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:33					
Antimony	121	0.0675	0.0502	0.0432	**0.0536**	0.0126	23.4
Antimony	123	0.053	0.0546	0.0444	**0.0507**	0.0055	10.87
Silver	107	0.0117	0.0102	0.011	**0.011**	0.0007	6.829
Silver	109	0.0127	0.0113	0.0084	**0.0108**	0.0022	20.4

Internal Standard Factors:

Rhodium	103	1.072	1.052	1.06	**1.072**	n/a	n/a
Indium	115	1.048	1.057	1.032	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		LCSS K1006453 1/100 7/28/10 18:36			Mean	SD	%RSD
Antimony	121	8.672	8.82	8.626	**8.706**	0.1016	1.167
Antimony	123	8.629	8.635	8.393	**8.553**	0.138	1.613
Silver	107	7.713	7.743	7.692	**7.716**	0.0255	0.331
Silver	109	7.683	7.816	7.748	**7.749**	0.0661	0.8535

Internal Standard Factors:

Rhodium	103	1.044	1.046	1.051	**1.044**	n/a	n/a
Indium	115	1.034	1.033	1.012	**1.034**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:41					
Antimony	121	0.6511	0.6318	0.6277	**0.6369**	0.0125	1.963
Antimony	123	0.6353	0.5939	0.6324	**0.6205**	0.0231	3.721
Silver	107	0.2921	0.3078	0.2834	**0.2944**	0.0124	4.197
Silver	109	0.171	0.1711	0.1653	**0.1691**	0.0034	1.985

Internal Standard Factors:							
Rhodium	103	1.139	1.13	1.138	**1.139**	n/a	n/a
Indium	115	1.105	1.088	1.094	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 18:44					
Antimony	121	0.5303	0.5203	0.5322	**0.5276**	0.0064	1.215
Antimony	123	0.5456	0.5309	0.5379	**0.5381**	0.0074	1.368
Silver	107	0.2506	0.2645	0.251	**0.2554**	0.0079	3.088
Silver	109	0.1317	0.1316	0.1281	**0.1305**	0.002	1.561

Internal Standard Factors:							
Rhodium	103	1.13	1.141	1.135	**1.13**	n/a	n/a
Indium	115	1.113	1.093	1.089	**1.113**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-001 1/25L 7/28/10 18:47			Mean	SD	%RSD
Antimony	121	0.0634	0.0652	0.0744	**0.0676**	0.0059	8.716
Antimony	123	0.058	0.0534	0.0657	**0.059**	0.0062	10.48
Silver	107	0.0503	0.0511	0.0516	**0.051**	0.0007	1.295
Silver	109	0.0287	0.0292	0.0322	**0.03**	0.0019	6.311

Internal Standard Factors:

Rhodium	103	1.095	1.091	1.09	**1.095**	n/a	n/a
Indium	115	1.062	1.06	1.074	**1.062**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/28/10 18:51					
Antimony	121	25.45	25.65	26.13	**25.74**	0.3492	1.357
Antimony	123	25.21	25.19	25.66	**25.35**	0.2642	1.042
Silver	107	25.13	25.05	25.13	**25.1**	0.0443	0.1764
Silver	109	24.92	25.01	24.98	**24.97**	0.0434	0.1738

Internal Standard Factors:							
Rhodium	103	1.029	1.029	1.015	**1.029**	n/a	n/a
Indium	115	1.01	1.006	1.014	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/28/10 18:57					
Antimony	121	-0.0259	-0.0236	-0.0231	**-0.0242**	0.0014	5.986
Antimony	123	-0.0292	-0.0265	-0.0275	**-0.0277**	0.0013	4.78
Silver	107	0.0113	0.0111	0.0114	**0.0113**	0.0002	1.605
Silver	109	0.0114	0.0095	0.0078	**0.0096**	0.0018	18.99

Internal Standard							
Factors:							
Rhodium	103	1.028	1.022	1.018	**1.028**	n/a	n/a
Indium	115	1.013	1.014	1.004	**1.013**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 18:59					
Antimony	121	52.05	50.51	51.74	**51.44**	0.8128	1.58
Antimony	123	51.65	50.56	50.71	**50.97**	0.5931	1.164
Silver	107	10.12	10.01	10.09	**10.08**	0.0588	0.5832
Silver	109	9.951	9.795	9.89	**9.879**	0.0788	0.7973

Internal Standard Factors:

Rhodium	103	1.094	1.09	1.092	**1.094**	n/a	n/a
Indium	115	1.045	1.033	1.05	**1.045**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 19:03					
Antimony	121	21	21	20.92	**20.98**	0.0476	0.2271
Antimony	123	20.4	21	20.72	**20.71**	0.2998	1.448
Silver	107	4.244	4.179	4.177	**4.2**	0.0379	0.9023
Silver	109	4.234	4.128	4.221	**4.195**	0.0577	1.376

Internal Standard Factors:							
Rhodium	103	1.083	1.07	1.065	**1.083**	n/a	n/a
Indium	115	1.054	1.053	1.046	**1.054**	n/a	n/a

Instrument ID: X-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:08					
Antimony	121	2.698	2.725	2.746	**2.723**	0.0241	0.8841
Antimony	123	2.699	2.692	2.64	**2.677**	0.0321	1.2
Silver	107	0.4406	0.4282	0.4381	**0.4356**	0.0065	1.501
Silver	109	0.3521	0.3476	0.3647	**0.3548**	0.0089	2.496

Internal Standard Factors:

Rhodium	103	1.134	1.129	1.134	**1.134**	n/a	n/a
Indium	115	1.066	1.074	1.072	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-003 1/5 7/28/10 19:11			Mean	SD	%RSD
Antimony	121	2.044	1.986	1.998	**2.01**	0.0306	1.524
Antimony	123	2.063	1.959	1.98	**2**	0.0552	2.757
Silver	107	0.47	0.4767	0.4678	**0.4715**	0.0046	0.9792
Silver	109	0.3048	0.2945	0.2984	**0.2993**	0.0052	1.736

Internal Standard Factors:

Rhodium	103	1.159	1.144	1.159	**1.159**	n/a	n/a
Indium	115	1.103	1.103	1.099	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006453-004 1/5 7/28/10 19:14			Mean	SD	%RSD
Antimony	121	2.829	2.809	2.837	**2.825**	0.0147	0.5212
Antimony	123	2.774	2.674	2.845	**2.764**	0.0855	3.094
Silver	107	1.833	1.801	1.794	**1.809**	0.0205	1.131
Silver	109	1.685	1.677	1.689	**1.684**	0.0065	0.3886

Internal Standard Factors:							
Rhodium	103	1.169	1.161	1.148	**1.169** n/a		n/a
Indium	115	1.092	1.068	1.1	**1.092** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:18					
Antimony	121	0.115	0.0996	0.0928	**0.1025**	0.0114	11.13
Antimony	123	0.1111	0.122	0.1073	**0.1134**	0.0076	6.727
Silver	107	0.2964	0.2939	0.2741	**0.2881**	0.0122	4.248
Silver	109	0.0938	0.0895	0.084	**0.0891**	0.0049	5.519

Internal Standard Factors:

Rhodium	103	1.162	1.147	1.148	**1.162**	n/a	n/a
Indium	115	1.097	1.091	1.088	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-006 1/5 7/28/10 19:21			Mean	SD	%RSD
Antimony	121	0.4525	0.4536	0.4557	**0.4539**	0.0016	0.362
Antimony	123	0.4439	0.4577	0.442	**0.4479**	0.0085	1.906
Silver	107	0.2507	0.2339	0.2434	**0.2427**	0.0084	3.479
Silver	109	0.0849	0.0786	0.0801	**0.0812**	0.0033	4.112

Internal Standard Factors:

Rhodium	103	1.166	1.144	1.155	**1.166**	n/a	n/a
Indium	115	1.097	1.105	1.098	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:24					
Antimony	121	51.86	51.02	50.59	**51.16**	0.6434	1.258
Antimony	123	51.53	51.28	49.85	**50.89**	0.9091	1.787
Silver	107	0.2001	0.1846	0.195	**0.1932**	0.0079	4.097
Silver	109	0.1087	0.1083	0.1068	**0.1079**	0.001	0.8916

Internal Standard Factors:

Rhodium	103	1.187	1.182	1.181	**1.187**	n/a	n/a
Indium	115	1.096	1.093	1.072	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-008 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:27					
Antimony	121	3.211	3.175	3.098	**3.161**	0.0576	1.821
Antimony	123	3.124	3.171	3.067	**3.12**	0.052	1.668
Silver	107	0.4981	0.5029	0.4943	**0.4984**	0.0043	0.869
Silver	109	0.3065	0.3051	0.2999	**0.3039**	0.0035	1.138

Internal Standard Factors:

Rhodium	103	1.211	1.176	1.192	**1.211**	n/a	n/a
Indium	115	1.126	1.123	1.107	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:31					
Antimony	121	6.295	6.296	6.053	**6.215**	0.14	2.252
Antimony	123	6.176	6.153	5.993	**6.108**	0.0995	1.63
Silver	107	0.6276	0.6318	0.6209	**0.6268**	0.0055	0.8768
Silver	109	0.4761	0.4599	0.464	**0.4667**	0.0084	1.799

Internal Standard Factors:

Rhodium	103	1.185	1.17	1.188	**1.185**	n/a	n/a
Indium	115	1.115	1.126	1.112	**1.115**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		7/28/10 19:34					
Antimony	121	25.52	25.4	25.52	**25.48**	0.0728	0.2856
Antimony	123	25.5	24.77	25.11	**25.13**	0.3641	1.449
Silver	107	24.89	25.12	24.8	**24.94**	0.1663	0.6667
Silver	109	24.88	25.17	24.9	**24.98**	0.1664	0.6659

Internal Standard Factors:

Rhodium	103	1.032	1.038	1.026	**1.032**	n/a	n/a
Indium	115	1.026	1.007	1.009	**1.026**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		7/28/10 19:40					
Antimony	121	-0.032	-0.0342	-0.0364	**-0.0342**	0.0022	6.41
Antimony	123	-0.0388	-0.0457	-0.045	**-0.0432**	0.0038	8.837
Silver	107	0.0138	0.0099	0.0103	**0.0113**	0.0021	18.68
Silver	109	0.0131	0.0125	0.0096	**0.0117**	0.0018	15.74

Internal Standard Factors:

Rhodium	103	1.013	1.008	1.005	**1.013**	n/a	n/a
Indium	115	1.015	1.002	0.996	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:42					
Antimony	121	0.4643	0.4904	0.499	**0.4845**	0.0181	3.729
Antimony	123	0.4398	0.4419	0.4849	**0.4555**	0.0255	5.589
Silver	107	0.1764	0.1897	0.183	**0.183**	0.0066	3.615
Silver	109	0.0775	0.0766	0.0795	**0.0778**	0.0015	1.929

Internal Standard Factors:							
Rhodium	103	1.1	1.115	1.127	**1.1**	n/a	n/a
Indium	115	1.05	1.082	1.088	**1.05**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-011 1/5 7/28/10 19:45			Mean	SD	%RSD
Antimony	121	13.5	13.45	13.38	**13.44**	0.0604	0.449
Antimony	123	13.58	13.06	13.39	**13.34**	0.2628	1.97
Silver	107	0.4706	0.4678	0.4682	**0.4689**	0.0015	0.3175
Silver	109	0.3588	0.3766	0.3725	**0.3693**	0.0093	2.531

Internal Standard Factors:

Rhodium	103	1.139	1.154	1.147	**1.139**	n/a	n/a
Indium	115	1.029	1.01	1.026	**1.029**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-012 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:48					
Antimony	121	0.5581	0.5704	0.5808	**0.5698**	0.0114	1.995
Antimony	123	0.5592	0.5638	0.5558	**0.5596**	0.004	0.7203
Silver	107	0.309	0.293	0.2971	**0.2997**	0.0083	2.771
Silver	109	0.193	0.1963	0.1972	**0.1955**	0.0022	1.123

Internal Standard Factors:							
Rhodium	103	1.168	1.167	1.16	**1.168**	n/a	n/a
Indium	115	1.11	1.098	1.11	**1.11**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-013 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:52					
Antimony	121	0.6264	0.6336	0.6075	**0.6225**	0.0135	2.165
Antimony	123	0.6332	0.5911	0.6074	**0.6106**	0.0212	3.476
Silver	107	0.3977	0.3886	0.3869	**0.3911**	0.0058	1.493
Silver	109	0.2298	0.2353	0.2337	**0.2329**	0.0028	1.205

Internal Standard Factors:

Rhodium	103	1.165	1.174	1.17	**1.165**	n/a	n/a
Indium	115	1.123	1.11	1.11	**1.123**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-014 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:55					
Antimony	121	0.1451	0.1263	0.1299	**0.1338**	0.01	7.464
Antimony	123	0.1293	0.1329	0.1236	**0.1286**	0.0047	3.64
Silver	107	0.1231	0.1208	0.1143	**0.1194**	0.0045	3.805
Silver	109	0.037	0.0367	0.0352	**0.0363**	0.001	2.654

Internal Standard Factors:							
Rhodium	103	1.156	1.14	1.154	**1.156**	n/a	n/a
Indium	115	1.108	1.105	1.101	**1.108**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:58					
Antimony	121	0.8102	0.8245	0.8203	**0.8183**	0.0073	0.896
Antimony	123	0.818	0.7715	0.785	**0.7915**	0.0239	3.022
Silver	107	0.2763	0.2598	0.2722	**0.2694**	0.0086	3.179
Silver	109	0.0992	0.0939	0.0982	**0.0971**	0.0028	2.894

Internal Standard							
Factors:							
Rhodium	103	1.174	1.145	1.149	**1.174**	n/a	n/a
Indium	115	1.103	1.107	1.092	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006804-001 1/5 7/28/10 20:01			Mean	SD	%RSD
Antimony	121	0.0088	0.0074	0.0199	**0.012**	0.0068	56.59
Antimony	123	0.0175	0.0085	0.0157	**0.0139**	0.0047	34.16
Silver	107	0.1462	0.1469	0.1418	**0.145**	0.0028	1.937
Silver	109	0.0675	0.0677	0.0674	**0.0675**	0.0002	0.2383

Internal Standard Factors:							
Rhodium	103	1.26	1.255	1.25	**1.26**	n/a	n/a
Indium	115	1.205	1.192	1.18	**1.205**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:04					
Antimony	121	0.2534	0.2525	0.2322	**0.246**	0.012	4.869
Antimony	123	0.2602	0.2692	0.2456	**0.2584**	0.0119	4.607
Silver	107	0.2558	0.2438	0.2523	**0.2507**	0.0062	2.46
Silver	109	0.1845	0.181	0.1898	**0.1851**	0.0044	2.383

Internal Standard Factor :							
Rhodium	103	1.249	1.219	1.232	**1.249**	n/a	n/a
Indium	115	1.178	1.187	1.166	**1.178**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006804-003 1/5 7/28/10 20:07			Mean	SD	%RSD
Antimony	121	0.032	0.025	0.0319	**0.0296**	0.0041	13.68
Antimony	123	0.0348	0.032	0.0341	**0.0336**	0.0015	4.423
Silver	107	0.1921	0.1831	0.1884	**0.1879**	0.0045	2.405
Silver	109	0.1197	0.1226	0.1191	**0.1205**	0.0019	1.563

Internal Standard / Factor							
Rhodium	103	1.234	1.217	1.213	**1.234**	n/a	n/a
Indium	115	1.156	1.156	1.159	**1.156**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV7			Mean	SD	%RSD
TimeStamp		7/28/10 20:10					
Antimony	121	25.52	25.59	25.96	**25.69**	0.2398	0.9333
Antimony	123	25.72	25.46	25.46	**25.55**	0.1491	0.5836
Silver	107	24.97	25	25	**24.99**	0.0189	0.0758
Silver	109	24.99	25.12	24.85	**24.99**	0.134	0.5365

Internal Standard							
Factor							
Rhodium	103	1.093	1.095	1.09	**1.093**	n/a	n/a
Indium	115	1.073	1.066	1.058	**1.073**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB7			Mean	SD	%RSD
TimeStamp		7/28/10 20:16					
Antimony	121	-0.0395	-0.0453	-0.0403	**-0.0417**	0.0032	7.571
Antimony	123	-0.0425	-0.0391	-0.0418	**-0.0411**	0.0018	4.427
Silver	107	0.0137	0.0132	0.0142	**0.0137**	0.0005	3.705
Silver	109	0.0132	0.0122	0.0111	**0.0121**	0.001	8.53

Internal Standard							
Factor:							
Rhodium	103	1.099	1.095	1.09	**1.099**	n/a	n/a
Indium	115	1.073	1.067	1.065	**1.073**	n/a	n/a

Instrument ID: K-ICP-MS-02
Environment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:18					
Antimony	121	-0.054	-0.057	-0.0538	**-0.0549**	0.0018	3.229
Antimony	123	-0.0545	-0.0563	-0.0559	**-0.0556**	0.001	1.71
Silver	107	0.0094	0.0081	0.0067	**0.0081**	0.0014	17.13
Silver	109	0.009	0.0072	0.0043	**0.0069**	0.0024	34.77

Internal Standard							
Factor:							
Rhodium	103	1.088	1.066	1.074	**1.088**	n/a	n/a
Indium	115	1.063	1.048	1.044	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/28/10 20:20					
Antimony	121	9.607	9.595	9.622	**9.608**	0.0132	0.1378
Antimony	123	9.469	9.461	9.479	**9.47**	0.0092	0.0972
Silver	107	8.386	8.104	8.259	**8.25**	0.1413	1.713
Silver	109	8.389	8.191	8.235	**8.272**	0.1039	1.257

Internal Standard							
Factor							
Rhodium	103	1.038	1.028	1.02	**1.038**	n/a	n/a
Indium	115	1.01	0.987	1.004	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:27					
Antimony	121	0.1454	0.1532	0.1486	**0.1491**	0.0039	2.599
Antimony	123	0.1656	0.1669	0.141	**0.1578**	0.0146	9.261
Silver	107	0.1825	0.186	0.1765	**0.1817**	0.0048	2.659
Silver	109	0.0906	0.087	0.0819	**0.0865**	0.0044	5.091

Internal Standard
Factor:

Rhodium	103	1.154	1.137	1.152	**1.154**	n/a	n/a
Indium	115	1.098	1.101	1.089	**1.098**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 20:30					
Antimony	121	0.1617	0.1494	0.1598	**0.157**	0.0066	4.205
Antimony	123	0.152	0.1595	0.1601	**0.1572**	0.0045	2.881
Silver	107	0.1714	0.1671	0.1736	**0.1707**	0.0033	1.955
Silver	109	0.0652	0.0701	0.0678	**0.0677**	0.0024	3.59

Internal Standard							
Factor:							
Rhenium	103	1.163	1.167	1.159	**1.163**	n/a	n/a
Indium	115	1.128	1.107	1.114	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 20:33					
Antimony	121	-0.0295	-0.0331	-0.0257	**-0.0294**	0.0037	12.61
Antimony	123	-0.0283	-0.0325	-0.0328	**-0.0312**	0.0025	8.104
Silver	107	0.0253	0.0291	0.0299	**0.0281**	0.0025	8.844
Silver	109	0.012	0.0131	0.0132	**0.0128**	0.0007	5.31

Internal Standard							
Factor:							
Rhodium	103	1.101	1.11	1.114	**1.101**	n/a	n/a
Indium	115	1.089	1.072	1.077	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 20:36					
Antimony	121	51.57	51.24	51.82	**51.54**	0.2882	0.5591
Antimony	123	51.43	50.41	50.26	**50.7**	0.6369	1.256
Silver	107	9.857	9.942	9.894	**9.897**	0.0427	0.4318
Silver	109	9.663	9.842	9.75	**9.752**	0.0897	0.9195
Internal Standard Factors:							
Rhodium	103	1.131	1.145	1.145	**1.131** n/a		n/a
Indium	115	1.075	1.065	1.063	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 20:39					
Antimony	121	21.14	21.48	21.5	**21.37**	0.2005	0.9383
Antimony	123	21.21	20.93	20.86	**21**	0.1886	0.8979
Silver	107	4.038	4.154	4.094	**4.096**	0.0582	1.422
Silver	109	3.996	4.099	4.115	**4.07**	0.0646	1.588

Internal Standard							
Factor							
Rhodium	103	1.117	1.11	1.119	**1.117**	n/a	n/a
Indium	115	1.075	1.08	1.078	**1.075**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:44					
Antimony	121	0.7826	0.7803	0.7377	**0.7669**	0.0253	3.298
Antimony	123	0.7709	0.7817	0.7607	**0.7711**	0.0105	1.36
Silver	107	0.3584	0.3395	0.3431	**0.347**	0.0101	2.903
Silver	109	0.248	0.2273	0.226	**0.2338**	0.0124	5.287

Internal Standard							
Factor							
Rhodium	103	1.173	1.153	1.153	**1.173**	n/a	n/a
Indium	115	1.107	1.101	1.094	**1.107**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:48					
Antimony	121	0.2075	0.219	0.2136	**0.2134**	0.0058	2.705
Antimony	123	0.2137	0.2133	0.2179	**0.215**	0.0026	1.191
Silver	107	0.2167	0.2197	0.2155	**0.2173**	0.0022	1.001
Silver	109	0.1089	0.1061	0.1071	**0.1074**	0.0014	1.324

Internal Standard							
Factor:							
Rhodium	103	1.166	1.17	1.166	**1.166**	n/a	n/a
Indium	115	1.106	1.101	1.109	**1.106**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:51					
Antimony	121	0.1622	0.1721	0.1557	**0.1633**	0.0082	5.049
Antimony	123	0.1827	0.148	0.1473	**0.1593**	0.0203	12.71
Silver	107	0.2114	0.1983	0.2002	**0.2033**	0.0071	3.474
Silver	109	0.0594	0.0626	0.0604	**0.0608**	0.0017	2.771

Internal Standard							
Factor:							
Rhodium	103	1.18	1.174	1.178	**1.18**	n/a	n/a
Indium	115	1.14	1.115	1.116	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV8			Mean	SD	%RSD
TimeStamp		7/28/10 20:54					
Antimony	121	25.55	25.86	25.64	**25.68**	0.1588	0.6185
Antimony	123	25.3	25.92	25.36	**25.53**	0.3446	1.35
Silver	107	24.68	24.8	25.14	**24.87**	0.2399	0.9644
Silver	109	24.76	24.73	25.02	**24.84**	0.1625	0.6542

Internal Standard							
Factor:							
Rhodium	103	1.051	1.031	1.029	**1.051**	n/a	n/a
Indium	115	1.011	1.013	1.01	**1.011**	n/a	n/a

Instrument ID: ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB8			Mean	SD	%RSD
TimeStamp		7/28/10 21:00					
Antimony	121	-0.0435	-0.0411	-0.0421	**-0.0423**	0.0012	2.864
Antimony	123	-0.0416	-0.0453	-0.0459	**-0.0443**	0.0023	5.287
Silver	107	0.014	0.0132	0.0131	**0.0134**	0.0005	3.677
Silver	109	0.0148	0.0125	0.0144	**0.0139**	0.0012	8.96

Internal Standard							
Factor:							
Rhodium	103	1.05	1.034	1.024	**1.05**	n/a	n/a
Indium	115	1.026	1.013	1.017	**1.026**	n/a	n/a

Instrument ID: [illegible]-ICP-MS-02
Experiment: [illegible]28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-004 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:02					
Antimony	121	0.7282	0.7291	0.737	**0.7314**	0.0048	0.6628
Antimony	123	0.7119	0.7536	0.727	**0.7308**	0.0211	2.888
Silver	107	0.2744	0.2777	0.2694	**0.2738**	0.0042	1.536
Silver	109	0.1829	0.176	0.1722	**0.177**	0.0054	3.066

Internal Standard							
Factor							
Rhodium	103	1.121	1.116	1.111	**1.121**	n/a	n/a
Indium	115	1.075	1.069	1.075	**1.075**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:05					
Antimony	121	0.2534	0.2584	0.2549	**0.2556**	0.0025	0.9952
Antimony	123	0.2492	0.2438	0.2452	**0.2461**	0.0028	1.149
Silver	107	0.2681	0.2552	0.2594	**0.2609**	0.0066	2.527
Silver	109	0.0696	0.0749	0.0782	**0.0742**	0.0043	5.813

Internal Standard							
Factor:							
Rhodium	103	1.155	1.16	1.152	**1.155**	n/a	n/a
Indium	115	1.108	1.101	1.095	**1.108**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:09					
Antimony	121	0.6036	0.5814	0.5765	**0.5872**	0.0145	2.462
Antimony	123	0.5799	0.5582	0.5576	**0.5653**	0.0127	2.248
Silver	107	0.2573	0.2691	0.2684	**0.265**	0.0067	2.51
Silver	109	0.1351	0.1512	0.1442	**0.1435**	0.0081	5.639

Internal Standard							
Factor:							
Rhodium	103	1.138	1.146	1.146	**1.138**	n/a	n/a
Indium	115	1.095	1.08	1.09	**1.095**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-008 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:12					
Antimony	121	0.2453	0.2365	0.2344	**0.2387**	0.0058	2.433
Antimony	123	0.2218	0.2244	0.2261	**0.2241**	0.0022	0.9601
Silver	107	0.1792	0.1667	0.1602	**0.1687**	0.0096	5.715
Silver	109	0.0857	0.088	0.0877	**0.0871**	0.0013	1.441

Internal Standard							
Factor:							
Rhodium	103	1.141	1.142	1.135	**1.141**	n/a	n/a
Indium	115	1.09	1.075	1.081	**1.09**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:15					
Antimony	121	0.3505	0.338	0.3422	**0.3436**	0.0064	1.853
Antimony	123	0.34	0.3688	0.3171	**0.342**	0.0259	7.571
Silver	107	0.2693	0.2716	0.2614	**0.2675**	0.0054	2.001
Silver	109	0.1658	0.166	0.1714	**0.1677**	0.0032	1.907

Internal Standard
Factor:

Rhodium	103	1.215	1.199	1.2	**1.215**	n/a	n/a
Indium	115	1.135	1.145	1.126	**1.135**	n/a	n/a

ment ID: K-ICP-MS-02
riment: 07-28-10D
: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-001 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:18					
Antimony	121	0.9161	0.9397	0.9415	**0.9324**	0.0142	1.523
Antimony	123	0.912	0.9326	0.8968	**0.9138**	0.0179	1.964
Silver	107	0.3393	0.3326	0.3597	**0.3438**	0.0141	4.097
Silver	109	0.2174	0.2162	0.2269	**0.2201**	0.0059	2.667

Internal Standard							
Factor:							
Rhodium	103	1.154	1.145	1.15	**1.154** n/a		n/a
Indium	115	1.09	1.093	1.09	**1.09** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: ug/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:21					
Antimony	121	0.2132	0.2321	0.2279	**0.2244**	0.0099	4.414
Antimony	123	0.2467	0.2274	0.2234	**0.2325**	0.0125	5.363
Silver	107	0.3089	0.308	0.3035	**0.3068**	0.0029	0.9423
Silver	109	0.1226	0.115	0.1168	**0.1181**	0.004	3.367

Internal Standard
Factor:

Rhodium	103	1.159	1.162	1.142	**1.159**	n/a	n/a
Indium	115	1.112	1.102	1.1	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-003 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:24					
Antimony	121	0.188	0.1821	0.1824	**0.1842**	0.0034	1.819
Antimony	123	0.1867	0.1777	0.1862	**0.1835**	0.0051	2.759
Silver	107	0.335	0.3172	0.3214	**0.3246**	0.0093	2.876
Silver	109	0.1197	0.1248	0.122	**0.1222**	0.0026	2.1

Internal Standard							
Factor:							
Rhodium	103	1.17	1.175	1.171	**1.17**	n/a	n/a
Indium	115	1.121	1.106	1.099	**1.121**	n/a	n/a

ment ID: K-ICP-MS-02
iment: 07-28-10D
: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006636-005 1/5 7/28/10 21:27			Mean	SD	%RSD
Antimony	121	1.136	1.125	1.114	**1.125**	0.0107	0.9534
Antimony	123	1.103	1.117	1.131	**1.117**	0.0138	1.234
Silver	107	0.4152	0.4121	0.4	**0.4091**	0.008	1.965
Silver	109	0.295	0.2785	0.2825	**0.2853**	0.0086	3.016

Internal Standard
Factor:

Rhodium	103	1.163	1.158	1.142	**1.163**	n/a	n/a
Indium	115	1.098	1.081	1.079	**1.098**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-006 1/5			Mean	SD	%RSD
Time Stamp		7/28/10 21:31					
Antimony	121	0.3177	0.3059	0.2932	**0.3056**	0.0122	4.001
Antimony	123	0.3106	0.2919	0.3055	**0.3027**	0.0097	3.195
Silver	107	0.2768	0.2588	0.2707	**0.2688**	0.0091	3.403
Silver	109	0.1208	0.1193	0.1179	**0.1193**	0.0015	1.223

Internal Standard
Factor:

Rhodium	103	1.16	1.148	1.163	**1.16**	n/a	n/a
Indium	115	1.109	1.099	1.084	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Segment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV9			Mean	SD	%RSD
Time Stamp		7/28/10 21:34					
Antimony	121	25.88	26.25	25.56	**25.9**	0.3454	1.333
Antimony	123	25.39	25.63	25.56	**25.53**	0.125	0.4898
Silver	107	24.87	24.99	24.96	**24.94**	0.0615	0.2467
Silver	109	24.85	25.07	25.06	**24.99**	0.1221	0.4887

Internal Standard
Factor:

Rhodium	103	1.054	1.046	1.032	**1.054**	n/a	n/a
Indium	115	1.03	1.022	1.019	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB9			Mean	SD	%RSD
Time Stamp		7/28/10 21:39					
Antimony	121	-0.0537	-0.0534	-0.0539	**-0.0536**	0.0002	0.4556
Antimony	123	-0.0527	-0.0544	-0.0545	**-0.0538**	0.001	1.809
Silver	107	0.0064	0.0068	0.0036	**0.0056**	0.0017	30.66
Silver	109	0.0062	0.0048	0.0053	**0.0054**	0.0007	12.73

Internal Standard
Element

Rhodium	103	1.063	1.05	1.042	**1.063**	n/a	n/a
Indium	115	1.048	1.022	1.009	**1.048**	n/a	n/a

ment ID: K-ICP-MS-02
iment: 07-28-10D
µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006636-007 1/5 7/28/10 21:42			Mean	SD	%RSD
Antimony	121	0.1731	0.1664	0.1775	**0.1723**	0.0056	3.238
Antimony	123	0.1751	0.1849	0.1897	**0.1832**	0.0074	4.064
Sil	107	0.316	0.295	0.3084	**0.3065**	0.0106	3.471
Silver	109	0.1265	0.1229	0.1241	**0.1245**	0.0018	1.479

Internal Standard
Fo

Rhodium	103	1.162	1.164	1.162	**1.162**	n/a	n/a
Indium	115	1.111	1.09	1.109	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-MB 1/5			Mean	SD	%RSD
Timestamp		7/28/10 21:45					
Antimony	121	-0.053	-0.0523	-0.0482	**-0.0512**	0.0026	5.105
Antimony	123	-0.0499	-0.0592	-0.0593	**-0.0561**	0.0054	9.546
Silver	107	0.0053	0.0068	0.0038	**0.0053**	0.0015	27.95
Silver	109	0.0027	0.0024	0.0024	**0.0025**	0.0002	7.666

Internal Standard
Factor

Rhodium	103	1.062	1.046	1.038	**1.062**	n/a	n/a
Indium	115	1.03	1.015	1.022	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006676 1/100			Mean	SD	%RSD
Time Stamp		7/28/10 21:47					
Antimony	121	8.447	8.322	8.501	**8.424**	0.0919	1.091
Antimony	123	8.353	8.097	8.231	**8.227**	0.1281	1.557
Silver	107	7.739	7.674	7.666	**7.693**	0.0399	0.5184
Silver	109	7.613	7.65	7.668	**7.644**	0.0284	0.3713

Internal Standard Factors:

Rhodium	103	1.038	1.045	1.051	**1.038**	n/a	n/a
Indium	115	1.007	0.987	1	**1.007**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:53					
Antimony	121	1.066	1.101	1.063	**1.077**	0.0212	1.972
Antimony	123	1.067	1.06	1.064	**1.064**	0.0034	0.3239
Silver	107	0.329	0.3334	0.332	**0.3315**	0.0022	0.6747
Silver	109	0.3163	0.3054	0.3007	**0.3075**	0.008	2.598

Internal Standard Factors:

Rhodium	103	1.151	1.137	1.15	**1.151**	n/a	n/a
Indium	115	1.077	1.095	1.073	**1.077**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 21:56					
Antimony	121	0.9835	0.967	0.9706	**0.9737**	0.0087	0.8911
Antimony	123	0.9508	0.9523	0.9619	**0.955**	0.006	0.6275
Silver	107	0.2958	0.2901	0.3003	**0.2954**	0.0051	1.725
Silver	109	0.2618	0.2631	0.2745	**0.2665**	0.007	2.633

Internal Standard Factors:

Rhodium	103	1.147	1.136	1.142	**1.147**	n/a	n/a
Indium	115	1.086	1.094	1.089	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 22:00					
Antimony	121	0.1735	0.1853	0.181	**0.1799**	0.006	3.325
Antimony	123	0.1816	0.1826	0.1833	**0.1825**	0.0009	0.4925
Silver	107	0.0637	0.0605	0.0675	**0.0639**	0.0035	5.431
Silver	109	0.0602	0.0643	0.0635	**0.0626**	0.0022	3.455

Internal Standard Factors:

Rhodium	103	1.1	1.102	1.096	**1.1**	n/a	n/a
Indium	115	1.064	1.06	1.066	**1.064**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-018 1/5 +10/50A 7/28/10 22:03			Mean	SD	%RSD
Antimony	121	53.93	53.1	53.91	**53.65**	0.471	0.878
Antimony	123	53.69	52.75	52.65	**53.03**	0.5714	1.077
Silver	107	10.34	10.43	10.34	**10.37**	0.0521	0.5026
Silver	109	10.19	10.38	10.18	**10.25**	0.112	1.092

Internal Standard Factors:

Rhodium	103	1.134	1.146	1.137	**1.134** n/a		n/a
Indium	115	1.067	1.052	1.053	**1.067** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-018 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 22:06					
Antimony	121	21.76	21.65	22.25	**21.89**	0.3189	1.457
Antimony	123	21.26	21.53	21.56	**21.45**	0.1632	0.761
Silver	107	4.186	4.181	4.235	**4.201**	0.0296	0.7043
Silver	109	4.171	4.194	4.227	**4.197**	0.0281	0.6687

Internal Standard Factors:

Rhodium	103	1.123	1.115	1.112	**1.123** n/a		n/a
Indium	115	1.067	1.076	1.085	**1.067** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:11					
Antimony	121	0.6879	0.6539	0.705	**0.6823**	0.026	3.812
Antimony	123	0.7017	0.6666	0.6442	**0.6708**	0.029	4.318
Silver	107	0.3098	0.3009	0.306	**0.3056**	0.0045	1.468
Silver	109	0.1562	0.1591	0.1594	**0.1582**	0.0018	1.134

Internal Standard Factors:

Rhodium	103	1.143	1.139	1.145	**1.143**	n/a	n/a
Indium	115	1.084	1.073	1.097	**1.084**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:14					
Antimony	121	0.2456	0.2484	0.2408	**0.245**	0.0039	1.576
Antimony	123	0.2674	0.2451	0.25	**0.2542**	0.0117	4.613
Silver	107	0.3284	0.3343	0.3532	**0.3386**	0.013	3.824
Silver	109	0.1223	0.1208	0.1228	**0.122**	0.001	0.8382

Internal Standard Factors:

Rhodium	103	1.166	1.178	1.189	**1.166**	n/a	n/a
Indium	115	1.112	1.113	1.122	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV10			Mean	SD	%RSD
TimeStamp		7/28/10 22:17					
Antimony	121	25.79	25.96	25.88	**25.88**	0.0881	0.3403
Antimony	123	24.98	25.22	24.99	**25.06**	0.1353	0.5397
Silver	107	25.07	25.2	25.08	**25.12**	0.0742	0.2954
Silver	109	25.31	25.4	25.16	**25.29**	0.119	0.4707

Internal Standard Factors:

Rhodium	103	1.035	1.038	1.032	**1.035**	n/a	n/a
Indium	115	1.009	1.003	0.999	**1.009**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB10			Mean	SD	%RSD
TimeStamp		7/28/10 22:23					
Antimony	121	-0.0514	-0.0541	-0.0542	**-0.0532**	0.0016	2.945
Antimony	123	-0.0538	-0.0572	-0.0516	**-0.0542**	0.0028	5.236
Silver	107	0.0089	0.0082	0.0085	**0.0086**	0.0003	3.889
Silver	109	0.0071	0.0062	0.0052	**0.0061**	0.0009	15.17

Internal Standard Factors:							
Rhodium	103	1.024	1.03	1.027	**1.024**	n/a	n/a
Indium	115	1.015	1	1.006	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:25					
Antimony	121	0.141	0.1409	0.1457	**0.1425**	0.0027	1.928
Antimony	123	0.1455	0.1562	0.1385	**0.1467**	0.0089	6.084
Silver	107	0.2452	0.2393	0.241	**0.2418**	0.003	1.245
Silver	109	0.0809	0.0811	0.0803	**0.0808**	0.0004	0.5045

Internal Standard Factors:

Rhodium	103	1.162	1.158	1.148	**1.162**	n/a	n/a
Indium	115	1.092	1.087	1.096	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-004 1/5 7/28/10 22:28			Mean	SD	%RSD
Antimony	121	1.167	1.195	1.155	**1.173**	0.0205	1.747
Antimony	123	1.115	1.16	1.164	**1.146**	0.0274	2.387
Silver	107	0.344	0.346	0.3344	**0.3415**	0.0062	1.82
Silver	109	0.2651	0.2634	0.2693	**0.2659**	0.0031	1.147

Internal Standard Factors:

Rhodium	103	1.153	1.146	1.135	**1.153**	n/a	n/a
Indium	115	1.088	1.084	1.085	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:31					
Antimony	121	0.2463	0.2447	0.2269	**0.2393**	0.0108	4.491
Antimony	123	0.2302	0.2375	0.2333	**0.2337**	0.0037	1.574
Silver	107	0.2083	0.2007	0.2082	**0.2057**	0.0043	2.104
Silver	109	0.1101	0.1088	0.1176	**0.1121**	0.0047	4.223

Internal Standard Factors:

Rhodium	103	1.167	1.157	1.148	**1.167**	n/a	n/a
Indium	115	1.105	1.101	1.101	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-006 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:35					
Antimony	121	0.1533	0.1409	0.1348	**0.143**	0.0094	6.608
Antimony	123	0.1272	0.141	0.1438	**0.1374**	0.0089	6.466
Silver	107	0.1677	0.1663	0.1756	**0.1699**	0.005	2.956
Silver	109	0.0734	0.0741	0.0748	**0.0741**	0.0007	0.9287

Internal Standard Factors:

Rhodium	103	1.164	1.146	1.157	**1.164**	n/a	n/a
Indium	115	1.091	1.099	1.089	**1.091**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:38					
Antimony	121	0.2709	0.2869	0.2869	**0.2816**	0.0092	3.274
Antimony	123	0.2624	0.3001	0.2629	**0.2751**	0.0216	7.864
Silver	107	0.1987	0.2048	0.2059	**0.2031**	0.0039	1.906
Silver	109	0.1138	0.1191	0.1127	**0.1152**	0.0034	2.953

Internal Standard Factors:

Rhodium	103	1.163	1.151	1.146	**1.163**	n/a	n/a
Indium	115	1.093	1.095	1.096	**1.093**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-008 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:41					
Antimony	121	0.76	0.7638	0.8105	**0.7781**	0.0281	3.616
Antimony	123	0.7952	0.7968	0.7779	**0.79**	0.0105	1.329
Silver	107	0.2728	0.2794	0.2891	**0.2804**	0.0082	2.936
Silver	109	0.1791	0.1864	0.1848	**0.1834**	0.0038	2.091

Internal Standard Factors:

Rhodium	103	1.147	1.14	1.152	**1.147**	n/a	n/a
Indium	115	1.086	1.091	1.071	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:44					
Antimony	121	0.1894	0.1916	0.1727	**0.1846**	0.0104	5.609
Antimony	123	0.1844	0.1834	0.183	**0.1836**	0.0007	0.399
Silver	107	0.2402	0.2383	0.2352	**0.2379**	0.0026	1.072
Silver	109	0.0952	0.0924	0.0954	**0.0944**	0.0017	1.759

Internal Standard Factors:

Rhodium	103	1.164	1.138	1.149	**1.164**	n/a	n/a
Indium	115	1.094	1.088	1.092	**1.094**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:47					
Antimony	121	0.1683	0.1525	0.1471	**0.156**	0.011	7.06
Antimony	123	0.1712	0.1437	0.1511	**0.1553**	0.0142	9.156
Silver	107	0.2109	0.2174	0.215	**0.2144**	0.0033	1.539
Silver	109	0.0804	0.0862	0.082	**0.0829**	0.003	3.621

Internal Standard Factors:

Rhodium	103	1.17	1.155	1.157	**1.17**	n/a	n/a
Indium	115	1.102	1.101	1.092	**1.102**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:50					
Antimony	121	0.7131	0.6762	0.679	**0.6894**	0.0206	2.987
Antimony	123	0.6951	0.6674	0.6626	**0.675**	0.0175	2.595
Silver	107	0.3223	0.318	0.2969	**0.3124**	0.0136	4.358
Silver	109	0.1899	0.1963	0.197	**0.1944**	0.0039	2.006

Internal Standard Factors:

Rhodium	103	1.155	1.15	1.149	**1.155**	n/a	n/a
Indium	115	1.117	1.083	1.091	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-012 1/5 7/28/10 22:54			Mean	SD	%RSD
Antimony	121	0.308	0.2899	0.2901	**0.296**	0.0104	3.516
Antimony	123	0.2868	0.2805	0.3037	**0.2903**	0.012	4.122
Silver	107	0.2529	0.2654	0.2512	**0.2565**	0.0077	3.018
Silver	109	0.1126	0.1113	0.1128	**0.1123**	0.0008	0.7433

Internal Standard Factors:

Rhodium	103	1.163	1.144	1.155	**1.163**	n/a	n/a
Indium	115	1.1	1.1	1.097	**1.1**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV11			Mean	SD	%RSD
TimeStamp		7/28/10 22:57					
Antimony	121	25.88	25.53	25.91	**25.77**	0.2104	0.8163
Antimony	123	25.27	25.62	25.58	**25.49**	0.192	0.7534
Silver	107	24.88	25.03	25.21	**25.04**	0.1652	0.6598
Silver	109	25.05	24.92	25.13	**25.03**	0.105	0.4195

Internal Standard Factors:

Rhodium	103	1.048	1.039	1.032	**1.048**	n/a	n/a
Indium	115	1.011	1.003	1.004	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB11			Mean	SD	%RSD
TimeStamp		7/28/10 23:02					
Antimony	121	-0.0551	-0.0593	-0.0515	**-0.0553**	0.0039	7.063
Antimony	123	-0.0539	-0.0525	-0.0554	**-0.0539**	0.0015	2.728
Silver	107	0.0074	0.0081	0.0076	**0.0077**	0.0003	4.325
Silver	109	0.0092	0.0057	0.0069	**0.0072**	0.0018	24.58

Internal Standard Factors:

Rhodium	103	1.045	1.027	1.013	**1.045**	n/a	n/a
Indium	115	1.005	0.996	1.006	**1.005**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-013 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:05					
Antimony	121	0.1939	0.1849	0.178	**0.1856**	0.008	4.308
Antimony	123	0.1789	0.1849	0.1826	**0.1821**	0.003	1.66
Silver	107	0.2693	0.2686	0.2722	**0.27**	0.0019	0.7038
Silver	109	0.1031	0.1006	0.0967	**0.1001**	0.0032	3.239

Internal Standard Factors:

Rhodium	103	1.151	1.139	1.148	**1.151**	n/a	n/a
Indium	115	1.092	1.084	1.082	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-014 1/5 7/28/10 23:08			Mean	SD	%RSD
Antimony	121	0.6752	0.6811	0.6778	**0.678**	0.003	0.4362
Antimony	123	0.6685	0.6438	0.6784	**0.6635**	0.0178	2.688
Silver	107	0.3115	0.3087	0.3071	**0.3091**	0.0022	0.7181
Silver	109	0.2508	0.2457	0.2533	**0.25**	0.0039	1.541

Internal Standard Factors:

Rhodium	103	1.144	1.15	1.133	**1.144**	n/a	n/a
Indium	115	1.089	1.076	1.087	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:11					
Antimony	121	0.238	0.239	0.2207	**0.2326**	0.0103	4.422
Antimony	123	0.2312	0.2364	0.2383	**0.2353**	0.0037	1.558
Silver	107	0.1858	0.1715	0.181	**0.1794**	0.0073	4.073
Silver	109	0.117	0.1202	0.126	**0.1211**	0.0046	3.76

Internal Standard Factors:

Rhodium	103	1.138	1.123	1.133	**1.138**	n/a	n/a
Indium	115	1.09	1.082	1.075	**1.09**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-016 1/5 7/28/10 23:14			Mean	SD	%RSD
Antimony	121	0.1742	0.1806	0.1873	**0.1807**	0.0066	3.648
Antimony	123	0.1866	0.1834	0.173	**0.181**	0.0071	3.931
Silver	107	0.2081	0.1801	0.1862	**0.1915**	0.0148	7.705
Silver	109	0.1211	0.1161	0.1232	**0.1201**	0.0037	3.044

Internal Standard Factors:

Rhodium	103	1.15	1.132	1.141	**1.15**	n/a	n/a
Indium	115	1.097	1.095	1.091	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-017 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:17					
Antimony	121	0.1865	0.1801	0.183	**0.1832**	0.0032	1.747
Antimony	123	0.1955	0.1924	0.1886	**0.1922**	0.0034	1.791
Silver	107	0.1951	0.19	0.1906	**0.1919**	0.0028	1.453
Silver	109	0.1238	0.1268	0.1309	**0.1272**	0.0036	2.835

Internal Standard Factors:

Rhodium	103	1.154	1.145	1.142	**1.154**	n/a	n/a
Indium	115	1.088	1.093	1.089	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-019 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:20					
Antimony	121	0.2325	0.235	0.2327	**0.2334**	0.0014	0.5925
Antimony	123	0.2304	0.221	0.2533	**0.2349**	0.0166	7.063
Silver	107	0.2786	0.2667	0.2848	**0.2767**	0.0092	3.325
Silver	109	0.2327	0.2319	0.2413	**0.2353**	0.0052	2.222

Internal Standard Factors:

Rhodium	103	1.173	1.159	1.16	**1.173**	n/a	n/a
Indium	115	1.088	1.103	1.1	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-020 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:23					
Antimony	121	0.1233	0.1413	0.1428	**0.1358**	0.0108	7.966
Antimony	123	0.1404	0.1391	0.1339	**0.1378**	0.0034	2.473
Silver	107	0.3144	0.3169	0.315	**0.3155**	0.0013	0.4213
Silver	109	0.2502	0.2505	0.2418	**0.2475**	0.005	2.003

Internal Standard Factors:

Rhodium	103	1.159	1.169	1.158	**1.159**	n/a	n/a
Indium	115	1.097	1.078	1.092	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:27					
Antimony	121	-0.0554	-0.0551	-0.0567	**-0.0557**	0.0008	1.509
Antimony	123	-0.0565	-0.0583	-0.0554	**-0.0567**	0.0015	2.611
Silver	107	0.0007	0.0005	0.0019	**0.001**	0.0008	75.32
Silver	109	0.0007	-0.0006	0.0004	**0.0002**	0.0007	368.6

Internal Standard Factors:

Rhodium	103	1.075	1.056	1.051	**1.075**	n/a	n/a
Indium	115	1.03	1.034	1.028	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		LCSS K1006777 1/100 7/28/10 23:29			Mean	SD	%RSD
Antimony	121	8.412	8.18	8.168	**8.253**	0.1378	1.669
Antimony	123	8.284	8.138	8.127	**8.183**	0.0874	1.068
Silver	107	8.159	8.194	8.159	**8.171**	0.0204	0.2497
Silver	109	8.224	8.194	8.23	**8.216**	0.0189	0.2301

Internal Standard Factors:

Rhodium	103	1.051	1.051	1.059	**1.051**	n/a	n/a
Indium	115	1.02	1.009	1.003	**1.02**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV12			Mean	SD	%RSD
TimeStamp		7/28/10 23:35					
Antimony	121	26.01	25.03	26.01	**25.68**	0.5691	2.216
Antimony	123	25.94	25.7	25.77	**25.8**	0.1223	0.4742
Silver	107	25.33	25.14	25.4	**25.29**	0.1338	0.5292
Silver	109	25.32	25.22	25.32	**25.28**	0.0586	0.2318

Internal Standard Factors:

Rhodium	103	1.035	1.026	1.036	**1.035**	n/a	n/a
Indium	115	1.021	1	0.999	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB12			Mean	SD	%RSD
TimeStamp		7/28/10 23:41					
Antimony	121	-0.0546	-0.0538	-0.0501	**-0.0529**	0.0024	4.534
Antimony	123	-0.0544	-0.0534	-0.0578	**-0.0552**	0.0023	4.125
Silver	107	0.0114	0.0094	0.0093	**0.01**	0.0012	11.95
Silver	109	0.0099	0.0082	0.0095	**0.0092**	0.0009	9.942

Internal Standard Factors:

Rhodium	103	1.042	1.031	1.039	**1.042**	n/a	n/a
Indium	115	1.001	1.013	1.005	**1.001**	n/a	n/a

Subcontract Laboratory Results

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

August 02, 2010

Report to:
Lynda Huckestein
Columbia Analytical Services
1317 S. 13th Ave.
Kelso, WA 98626

Bill to:
Accounts Payable
Columbia Analytical Services
1317 South 13th Ave.
Kelso, WA 98626

cc: Columbia Analytical Services, Inc.

Project ID: K1006676
ACZ Project ID: L83049

Lynda Huckestein:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 01, 2010. This project has been assigned to ACZ's project number, L83049. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L83049. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after September 02, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

Columbia Analytical Services

August 02, 2010

Project ID: K1006676
ACZ Project ID: L83049

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 20 soil samples from Columbia Analytical Services on July 1, 2010. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L83049. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic, radiochemistry parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-7 0-2 COMP

ACZ Sample ID: ***L83049-01***
Date Sampled: *06/27/10 18:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:15	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:00	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-7 2-12 COMP

ACZ Sample ID: ***L83049-02***
Date Sampled: *06/27/10 18:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:16	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:09	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-7 12-18 COMP

ACZ Sample ID: ***L83049-03***
Date Sampled: *06/27/10 18:55*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:18	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:18	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-8 0-2 COMP

ACZ Sample ID: ***L83049-04***
Date Sampled: *06/26/10 18:40*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:19	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:28	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-8 2-12 COMP

ACZ Sample ID: ***L83049-05***
Date Sampled: *06/26/10 18:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:21	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:37	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-8 12-18 COMP

ACZ Sample ID: ***L83049-06***
Date Sampled: *06/26/10 18:55*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:22	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:47	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-101 2-12 COMP

ACZ Sample ID: ***L83049-07***
Date Sampled: *06/26/10 18:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:24	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 16:56	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-11 0-2 COMP

ACZ Sample ID: ***L83049-08***
Date Sampled: *06/27/10 14:25*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:26	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 17:06	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-11 2-12 COMP

ACZ Sample ID: ***L83049-09***
Date Sampled: *06/27/10 14:30*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:27	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 17:15	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-11 12-18 COMP

ACZ Sample ID: ***L83049-10***
Date Sampled: *06/27/10 14:35*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:29	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 17:25	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-12 0-2 COMP

ACZ Sample ID: ***L83049-11***
Date Sampled: *06/26/10 15:40*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:30	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 17:34	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-12 2-12 COMP

ACZ Sample ID: ***L83049-12***
Date Sampled: *06/26/10 15:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:32	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 17:44	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-12 12-18 COMP

ACZ Sample ID: ***L83049-13***
Date Sampled: *06/26/10 15:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:34	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 17:53	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-15 0-2 COMP

ACZ Sample ID: ***L83049-14***
Date Sampled: *06/25/10 14:35*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:35	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:03	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-15 2-12 COMP

ACZ Sample ID: ***L83049-15***
Date Sampled: *06/25/10 14:40*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:37	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:12	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-15 12-18 COMP

ACZ Sample ID: ***L83049-16***
Date Sampled: *06/25/10 14:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:38	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:22	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-102 2-12 COMP

ACZ Sample ID: ***L83049-17***
Date Sampled: *06/25/10 14:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:40	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:31	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-16 0-2 COMP

ACZ Sample ID: ***L83049-18***
Date Sampled: *06/26/10 11:10*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:41	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:40	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-16 2-12 COMP

ACZ Sample ID: ***L83049-19***
Date Sampled: *06/26/10 11:15*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:43	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:50	nrc

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-16 12-18 COMP

ACZ Sample ID: ***L83049-20***
Date Sampled: *06/26/10 11:20*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/14/10 22:45	meg
Crush and Pulverize	USDA No. 1, 1972							07/20/10 18:59	nrc

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.

(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

(5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.

(6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.

(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Inorganic Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L83049***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-7 0-2 COMP
Locator:

ACZ Sample ID: ***L83049-01***
Date Sampled: *06/27/10 18:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		0.29	1.5	5.1	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:44		4.5	0.71	0.95	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:50		0.75	0.47	0.65	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:02		0.93	0.46	0.24	pCi/g	*	mwm
Uranium 235	07/27/10 14:02		0.06	0.14	0.24	pCi/g	*	mwm
Uranium 238	07/27/10 14:02		0.67	0.32	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-7 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-02***
Date Sampled: *06/27/10 18:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		3.6	1.5	4.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:46		5.3	0.76	0.93	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:52		1.3	0.53	0.66	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:04		1.2	0.48	0.23	pCi/g	*	mwm
Uranium 235	07/27/10 14:04		-0.18	0.18	0.23	pCi/g	*	mwm
Uranium 238	07/27/10 14:04		0.73	0.35	0.23	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-7 12-18 COMP
Locator:

ACZ Sample ID: ***L83049-03***
Date Sampled: *06/27/10 18:55*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		4.5	1.5	4.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:47		2	0.5	0.96	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:53		0.89	0.47	0.6	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:05		0.83	0.45	0.21	pCi/g	*	mwm
Uranium 235	07/27/10 14:05		0.12	0.17	0.21	pCi/g	*	mwm
Uranium 238	07/27/10 14:05		0.77	0.32	0.21	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-8 0-2 COMP
Locator:

ACZ Sample ID: ***L83049-04***
Date Sampled: *06/26/10 18:40*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		1.6	1.7	5.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:49		1.8	0.46	0.94	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:55		0.19	0.43	0.65	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:07		-0.11	0.39	0.24	pCi/g	*	mwm
Uranium 235	07/27/10 14:07		0.03	0.1	0.24	pCi/g	*	mwm
Uranium 238	07/27/10 14:07		0.71	0.37	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-8 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-05***
Date Sampled: *06/26/10 18:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		0.0	1.5	5.3	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:50		2.2	0.51	0.96	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:56		0.54	0.45	0.63	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:08		0.3	0.39	0.24	pCi/g	*	mwm
Uranium 235	07/27/10 14:08		-0.16	0.14	0.24	pCi/g	*	mwm
Uranium 238	07/27/10 14:08		0.79	0.32	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-8 12-18 COMP
Locator:

ACZ Sample ID: ***L83049-06***
Date Sampled: *06/26/10 18:55*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		0.72	1.4	4.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:52		12	1.1	0.89	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:58		0.83	0.56	0.68	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:10		0.6	0.46	0.23	pCi/g	*	mwm
Uranium 235	07/27/10 14:10		0.13	0.2	0.23	pCi/g	*	mwm
Uranium 238	07/27/10 14:10		0.74	0.37	0.23	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-101 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-07***
Date Sampled: *06/26/10 18:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		3.7	1.5	4.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:53		2.2	0.51	0.94	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 7:59		0.09	0.52	0.64	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:11		0.2	0.43	0.21	pCi/g	*	mwm
Uranium 235	07/27/10 14:11		-0.15	0.22	0.21	pCi/g	*	mwm
Uranium 238	07/27/10 14:11		0.54	0.32	0.21	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-11 0-2 COMP
Locator:

ACZ Sample ID: ***L83049-08***
Date Sampled: *06/27/10 14:25*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 10:12		1.2	1.6	5.5	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:54		1.9	0.46	0.87	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:00		0.46	0.46	0.56	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:12		0.18	0.43	0.22	pCi/g	*	mwm
Uranium 235	07/27/10 14:12		-0.15	0.25	0.22	pCi/g	*	mwm
Uranium 238	07/27/10 14:12		0.36	0.25	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-11 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-09***
Date Sampled: *06/27/10 14:30*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.0	1.7	5.7	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:56		1.3	0.31	0.6	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:02		0.02	0.46	0.65	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:14		0.69	0.43	0.19	pCi/g	*	mwm
Uranium 235	07/27/10 14:14		-0.11	0.19	0.19	pCi/g	*	mwm
Uranium 238	07/27/10 14:14		0.27	0.25	0.19	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-11 12-18 COMP
Locator:

ACZ Sample ID: ***L83049-10***
Date Sampled: *06/27/10 14:35*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.74	1.5	4.9	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:57		2.2	0.49	0.87	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:03		1.2	0.61	0.66	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:15		0.39	0.44	0.21	pCi/g	*	mwm
Uranium 235	07/27/10 14:15		0.14	0.19	0.21	pCi/g	*	mwm
Uranium 238	07/27/10 14:15		0.58	0.35	0.21	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-12 0-2 COMP
Locator:

ACZ Sample ID: ***L83049-11***
Date Sampled: *06/26/10 15:40*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.43	1.5	4.9	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 9:59		1.6	0.43	0.86	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:05		0.57	0.42	0.58	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:17		0.79	0.46	0.22	pCi/g	*	mwm
Uranium 235	07/27/10 14:17		0.08	0.18	0.22	pCi/g	*	mwm
Uranium 238	07/27/10 14:17		0.49	0.29	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-12 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-12***
Date Sampled: *06/26/10 15:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		2.2	1.4	4.5	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:00		1.6	0.41	0.82	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:06		0.98	0.44	0.62	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:18		0.78	0.37	0.21	pCi/g	*	mwm
Uranium 235	07/27/10 14:18		-0.07	0.09	0.21	pCi/g	*	mwm
Uranium 238	07/27/10 14:18		0.49	0.29	0.21	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-12 12-18 COMP
Locator:

ACZ Sample ID: ***L83049-13***
Date Sampled: *06/26/10 15:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.0	1.5	5.2	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:02		2.7	0.55	0.9	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:08		0.66	0.45	0.63	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:20		0.71	0.42	0.22	pCi/g	*	mwm
Uranium 235	07/27/10 14:20		0.08	0.18	0.22	pCi/g	*	mwm
Uranium 238	07/27/10 14:20		0.48	0.3	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-15 0-2 COMP
Locator:

ACZ Sample ID: ***L83049-14***
Date Sampled: *06/25/10 14:35*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		1.1	1.7	5.7	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:03		3.2	0.63	1	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:09		0.8	0.51	0.66	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:21		2.8	0.66	0.23	pCi/g	*	mwm
Uranium 235	07/27/10 14:21		0.21	0.23	0.23	pCi/g	*	mwm
Uranium 238	07/27/10 14:21		2.69	0.61	0.23	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-15 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-15***
Date Sampled: *06/25/10 14:40*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.0	1.6	5.5	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:05		2.4	0.48	0.8	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:11		0.54	0.46	0.58	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:23		0.99	0.53	0.24	pCi/g	*	mwm
Uranium 235	07/27/10 14:23		0.19	0.23	0.24	pCi/g	*	mwm
Uranium 238	07/27/10 14:23		1.19	0.45	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-15 12-18 COMP
Locator:

ACZ Sample ID: ***L83049-16***
Date Sampled: *06/25/10 14:45*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.0	1.4	4.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:06		2	0.45	0.82	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:12		1.3	0.58	0.7	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:24		0.29	0.49	0.24	pCi/g	*	mwm
Uranium 235	07/27/10 14:24		-0.16	0.24	0.24	pCi/g	*	mwm
Uranium 238	07/27/10 14:24		0.6	0.36	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-102 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-17***
Date Sampled: *06/25/10 14:50*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.92	1.4	4.7	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:07		1.9	0.46	0.86	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:13		0.41	0.4	0.62	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:25		0.37	0.51	0.24	pCi/g	*	mwm
Uranium 235	07/27/10 14:25		-0.14	0.28	0.24	pCi/g	*	mwm
Uranium 238	07/27/10 14:25		1.05	0.4	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-16 0-2 COMP
Locator:

ACZ Sample ID: ***L83049-18***
Date Sampled: *06/26/10 11:10*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 11:52		0.0	1.5	5.2	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:09		7.3	0.81	0.78	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:15		0.69	0.44	0.64	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:27		0.37	0.44	0.23	pCi/g	*	mwm
Uranium 235	07/27/10 14:27		-0.03	0.25	0.23	pCi/g	*	mwm
Uranium 238	07/27/10 14:27		0.65	0.34	0.23	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-16 2-12 COMP
Locator:

ACZ Sample ID: ***L83049-19***
Date Sampled: *06/26/10 11:15*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 14:02		0.0	1.6	5.4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:10		6	0.76	0.83	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:16		1.1	0.49	0.59	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:28		0.85	0.57	0.25	pCi/g	*	mwm
Uranium 235	07/27/10 14:28		0.09	0.2	0.25	pCi/g	*	mwm
Uranium 238	07/27/10 14:28		0.83	0.44	0.25	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006676
Sample ID: BG-16 12-18 COMP
Locator:

ACZ Sample ID: ***L83049-20***
Date Sampled: *06/26/10 11:20*
Date Received: *07/01/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	07/28/10 14:02		1.3	1.4	4.4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	07/30/10 10:12		2.4	0.51	0.86	pCi/g		mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/28/10 8:18		0.89	0.51	0.62	pCi/g	*	mwm

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	07/27/10 14:30		0.93	0.51	0.25	pCi/g	*	mwm
Uranium 235	07/27/10 14:30		-0.03	0.16	0.25	pCi/g	*	mwm
Uranium 238	07/27/10 14:30		1.32	0.45	0.25	pCi/g	*	mwm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services ACZ Project ID: ***L83049***

Project ID: K1006676

Lead 210 (3050) Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286995																
WG286535LCSS	LCSS	07/28/10	RC100623-1	77.2				48	2.3	4.7	62.2	47	102			
WG286535PBS	PBS	07/28/10						0	1.6	5.4			10.8			
L83049-10MS	MS	07/28/10	RC100623-1	77.2	0.74	1.5	4.9	49	2.5	5.1	62.5	47	102			
L83049-20DUP	DUP-RER	07/28/10			1.3	1.4	4.4	2.8	1.4	4.4				0.76	2	
L83049-01DUP	DUP-RER	07/28/10			0.29	1.5	5.1	.44	1.6	5.3				0.07	2	

Radium 226 + Alpha Emitting Radium M9315 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287058																
WG286648PBS	PBS	07/30/10						.11	0.15	0.86			1.72			
WG286648LCSS	LCSS	07/30/10	RC100624-2	47.83				39	2	0.87	81.5	71	121			
L83049-01DUP	DUP-RER	07/30/10			4.5	0.71	0.95	4	0.63	0.83				0.53	2	
L83049-20DUP	DUP-RER	07/30/10			2.4	0.51	0.86	3.4	0.6	0.88				1.27	2	
L83049-10MS	MS	07/30/10	RC100624-2	47.83	2.2	0.49	0.87	41	2	0.82	81.1	71	121			

Thorium 230 (3050) ESM 4506 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286947																
WG286560PBS	PBS	07/28/10						-.12	0.43	0.65			1.3			
WG286560LCSS	LCSS	07/28/10	RC091215-1	162.12				160	4.7	0.7	98.7	90	120			
L83049-01DUP	DUP-RER	07/28/10			0.75	0.47	0.65	1.2	0.52	0.6				0.64	2	
L83049-20DUP	DUP-RER	07/28/10			0.89	0.51	0.62	.36	0.45	0.6				0.78	2	
L83049-10MS	MS	07/28/10	RC091215-1	162.12	1.2	0.61	0.66	170	4.4	590	104.1	90	120			

Uranium 234 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287011																
WG286629PBS	PBS	07/27/10						-.09	0.41	0.23			0.46			
WG286629LCSS	LCSS	07/27/10	RC100223-2	33.13				34	2.5	0.35	102.6	89	132			
L83049-01DUP	DUP-RER	07/27/10			0.93	0.46	0.24	.98	0.47	0.28				0.08	2	
L83049-20DUP	DUP-RER	07/27/10			0.93	0.51	0.25	.6	0.4	0.21				0.51	2	
L83049-10MS	MS	07/27/10	RC100223-2	33.13	0.39	0.44	0.21	38	2.8	0.4	113.5	89	132			

Uranium 235 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287011																
WG286629PBS	PBS	07/27/10						-.05	0.19	0.23			0.46			
WG286629LCSS	LCSS	07/27/10	RC100223-2	1.58				1.1	0.59	0.35	69.6	45	150			
L83049-01DUP	DUP-RER	07/27/10			0.06	0.14	0.24	.03	0.18	0.28				0.13	2	
L83049-20DUP	DUP-RER	07/27/10			-0.03	0.16	0.25	.02	0.15	0.21				0.23	2	
L83049-10MS	MS	07/27/10	RC100223-2	1.58	0.14	0.19	0.21	1.2	0.59	0.4	67.1	45	150			

Columbia Analytical Services
Project ID: K1006676

ACZ Project ID: ***L83049***

Uranium 238 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287011																
WG286629PBS	PBS	07/27/10						.19	0.2	0.23			0.46			
WG286629LCSS	LCSS	07/27/10	RC100223-2	34.39				35.9	2.5	0.35	104.4	87	132			
L83049-01DUP	DUP-RER	07/27/10			0.67	0.32	0.24	1.23	0.47	0.28				0.98	2	
L83049-20DUP	DUP-RER	07/27/10			1.32	0.45	0.25	1.01	0.38	0.21				0.53	2	
L83049-10MS	MS	07/27/10	RC100223-2	34.39	0.58	0.35	0.21	39.1	2.8	0.4	112	87	132			

Columbia Analytical Services

ACZ Project ID: ***L83049***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lead 210 (3050)	Eichrom
Thorium 230 (3050)	ESM 4506
Uranium 234	Eichrom
Uranium 235	Eichrom
Uranium 238	Eichrom

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006676

ACZ Project ID: L83049
Date Received: 07/01/2010 10:28
Received By: gac
Date Printed: 7/1/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
na11142		4.3	14
na11141		3.5	13

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006676

ACZ Project ID: L83049
Date Received: 07/01/2010 10:28
Received By: gac
Date Printed: 7/1/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L83049-01	BG-7 0-2 COMP									X		
L83049-02	BG-7 2-12 COMP									X		
L83049-03	BG-7 12-18 COMP									X		
L83049-04	BG-8 0-2 COMP									X		
L83049-05	BG-8 2-12 COMP									X		
L83049-06	BG-8 12-18 COMP									X		
L83049-07	BG-101 2-12 COMP									X		
L83049-08	BG-11 0-2 COMP									X		
L83049-09	BG-11 2-12 COMP									X		
L83049-10	BG-11 12-18 COMP									X		
L83049-11	BG-12 0-2 COMP									X		
L83049-12	BG-12 2-12 COMP									X		
L83049-13	BG-12 12-18 COMP									X		
L83049-14	BG-15 0-2 COMP									X		
L83049-15	BG-15 2-12 COMP									X		
L83049-16	BG-15 12-18 COMP									X		
L83049-17	BG-102 2-12 COMP									X		
L83049-18	BG-16 0-2 COMP									X		
L83049-19	BG-16 2-12 COMP									X		
L83049-20	BG-16 12-18 COMP									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

L83049

Project Number: K1006676
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006676-001	BG-7 0-2 COMP	1	Soil	6/27/10	1845	ACZ	✓	✓	✓	✓
K1006676-002	BG-7 2-12 COMP	1	Soil	6/27/10	1850	ACZ				
K1006676-003	BG-7 12-18 COMP	1	Soil	6/27/10	1855	ACZ				
K1006676-004	BG-8 0-2 COMP	1	Soil	6/26/10	1840	ACZ				
K1006676-005	BG-8 2-12 COMP	1	Soil	6/26/10	1845	ACZ				
K1006676-006	BG-8 12-18 COMP	1	Soil	6/26/10	1855	ACZ				
K1006676-007	BG-101 2-12 COMP	1	Soil	6/26/10	1850	ACZ				
K1006676-008	BG-11 0-2 COMP	1	Soil	6/27/10	1425	ACZ				
K1006676-009	BG-11 2-12 COMP	1	Soil	6/27/10	1430	ACZ				
K1006676-010	BG-11 12-18 COMP	1	Soil	6/27/10	1435	ACZ				
K1006676-011	BG-12 0-2 COMP	1	Soil	6/26/10	1540	ACZ				
K1006676-012	BG-12 2-12 COMP	1	Soil	6/26/10	1545	ACZ				

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Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Follow Barr/Rhodia QAPP

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
✓ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 07/16/10

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD

Invoice Information
PO# K1006676
Bill to

Relinquished By: John Jones/CAS Kelso 6/30/10 1045 Received By: 7.1.10 10:20 Airbill Number:

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

Project Number: K1006676
Project Manager: Lynda Huckestein

L83049

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006676-013	BG-12 12-18 COMP	1	Soil	6/26/10	1550	ACZ	✓	✓	✓	✓
K1006676-014	BG-15 0-2 COMP	1	Soil	6/25/10	1435	ACZ	↓	↓	↓	↓
K1006676-015	BG-15 2-12 COMP	1	Soil	6/25/10	1440	ACZ				
K1006676-016	BG-15 12-18 COMP	1	Soil	6/25/10	1445	ACZ				
K1006676-017	BG-102 2-12 COMP	1	Soil	6/25/10	1450	ACZ				
K1006676-018	BG-16 0-2 COMP	3	Soil	6/26/10	1110	ACZ				
K1006676-019	BG-16 2-12 COMP	1	Soil	6/26/10	1115	ACZ				
K1006676-020	BG-16 12-18 COMP	1	Soil	6/26/10	1120	ACZ				

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Test Comments

MISC_OUT_1 - None	K1006676-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	Lead 210/Eichrom to ACZ
MISC_OUT_2 - None	K1006676-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	Uranium-isotopic/Eichrom
MISC_OUT_3 - None	K1006676-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	Thorium-isotopic/ESM 4506
MISC_OUT_4 - None	K1006676-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20	Radium 226 ~~and 228~~/M9315 ~~and M9320~~

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
__X__ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 07/16/10

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
__X__ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD

Invoice Information
PO# K1006676
Bill to

Relinquished By: John Jones /CAS KL/SO 6/30/10 1045
Received By: 7-1-10 10:30
Airbill Number:

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

L83049

Folder Comments:
-018=QC. Extra volume rec'd.

513

Special Instructions/Comments	**Turnaround Requirements**	**Report Requirements**	**Invoice Information**
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com	____ **RUSH** (Surcharges Apply) **PLEASE CIRCLE WORK DAYS** 1 2 3 4 5 ____ **STANDARD** Requested FAX Date: _____ Requested Report Date: 07/16/10	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD	PO# K1006676 Bill to

Relinquished By: John Jones/CAS Kelso 6/30/10 1045 Received By: 7-1-10 10:20 Airbill Number:

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286075

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 22:19
Start Date/Time: 07/14/2010 22:15
End Date/Time: 07/14/2010 22:45

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L83049-01	BG-7 0-2 COMP	As Rec			07/14/10 22:15	7/14/2010	
2	L83049-02	BG-7 2-12 COMP	As Rec			07/14/10 22:16	7/14/2010	
3	L83049-03	BG-7 12-18 COMP	As Rec			07/14/10 22:18	7/14/2010	
4	L83049-04	BG-8 0-2 COMP	As Rec			07/14/10 22:19	7/14/2010	
5	L83049-05	BG-8 2-12 COMP	As Rec			07/14/10 22:21	7/14/2010	
6	L83049-06	BG-8 12-18 COMP	As Rec			07/14/10 22:22	7/14/2010	
7	L83049-07	BG-101 2-12 COMP	As Rec			07/14/10 22:24	7/14/2010	
8	L83049-08	BG-11 0-2 COMP	As Rec			07/14/10 22:26	7/14/2010	
9	L83049-09	BG-11 2-12 COMP	As Rec			07/14/10 22:27	7/14/2010	
10	L83049-10	BG-11 12-18 COMP	As Rec			07/14/10 22:29	7/14/2010	
11	L83049-11	BG-12 0-2 COMP	As Rec			07/14/10 22:30	7/14/2010	
12	L83049-12	BG-12 2-12 COMP	As Rec			07/14/10 22:32	7/14/2010	
13	L83049-13	BG-12 12-18 COMP	As Rec			07/14/10 22:34	7/14/2010	
14	L83049-14	BG-15 0-2 COMP	As Rec			07/14/10 22:35	7/14/2010	
15	L83049-15	BG-15 2-12 COMP	As Rec			07/14/10 22:37	7/14/2010	
16	L83049-16	BG-15 12-18 COMP	As Rec			07/14/10 22:38	7/14/2010	
17	L83049-17	BG-102 2-12 COMP	As Rec			07/14/10 22:40	7/14/2010	
18	L83049-18	BG-16 0-2 COMP	As Rec			07/14/10 22:41	7/14/2010	
19	L83049-19	BG-16 2-12 COMP	As Rec			07/14/10 22:43	7/14/2010	
20	L83049-20	BG-16 12-18 COMP	As Rec			07/14/10 22:45	7/14/2010	

Report Comments: _____

Internal Comments _____

AREV: MEG 7/14/2010
Initials, Date

SREV: BRD 7/19/10
Initials, Date

7/14/2010 11:30:43 PM 72410

KBJ 7/19/10

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286075

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 22:19
Start Date/Time: 07/14/2010 22:15
End Date/Time: 07/14/2010 22:45

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 11:30:43 PM 72410

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: MEG
Date: 7/14/2010

Approved: BRD
Date: 7/19/10

Analyst: MEG

Workgroup: 286075

Analysis Date: 7/14/2010

Sample type used: As Rec

Extraction / Digestion / Analysis / ~~Prep~~ / Calc: DRY

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	X ✓		
2. Is the %solid or TS attached for dilution factors?			X ✓
3. Were proper volumes of reagents used per final volume?			X ✓
4. Was the proper sub-sample used (~~as received~~, <2000, <500, <250, dry)?	X	✓	
5. Were the dilution factor calculation checked (final volume, weight, %solid)?			X ✓
6. Did the RPD pass? OK c SREV BRD 7/19/10	X		X ✓
7. Does all the spike information correlate with each other?			X ✓
8. Is the appropriate spike in the computer-designated line?			X ✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	X ✓		
10. Is the standard/reagent information complete and current?	X ✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments: _____

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286075

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/14/2010 22:19
Start Date/Time: 7/14/ 22:15
End Date/Time: 7/14/ 22:45

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L83049-01 ✓	BG-7 0-2 COMP	AsRec			7/14/2010	7/14/2010	
2	L83049-02 ✓	BG-7 2-12 COMP						
3	L83049-03 ✓	BG-7 12-18 COMP						
4	L83049-04 ✓	BG-8 0-2 COMP						
5	L83049-05 ✓	BG-8 2-12 COMP						
6	L83049-06 ✓	BG-8 12-18 COMP						
7	L83049-07 ✓	BG-101 2-12 COMP						
8	L83049-08 ✓	BG-11 0-2 COMP						
9	L83049-09 ✓	BG-11 2-12 COMP						
10	L83049-10 ✓	BG-11 12-18 COMP						
11	L83049-11 ✓	BG-12 0-2 COMP						
12	L83049-12 ✓	BG-12 2-12 COMP						
13	L83049-13 ✓	BG-12 12-18 COMP						
14	L83049-14 ✓	BG-15 0-2 COMP						
15	L83049-15 ✓	BG-15 2-12 COMP						
16	L83049-16 ✓	BG-15 12-18 COMP						
17	L83049-17 ✓	BG-102 2-12 COMP						
18	L83049-18 ✓	BG-16 0-2 COMP						
19	L83049-19 ✓	BG-16 2-12 COMP						
20	L83049-20 ✓	BG-16 12-18 COMP						

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 10:19:40 PM 72410

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286075

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/14/2010 22:19
Start Date/Time:
End Date/Time:

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/14/2010 10:19:40 PM 72410

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286075

Date Reported: 19-Jul-10
Run ID: R733460
Date Analyzed: 14-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L83049-01

Tag:

Measured: 7/14/2010 10:15:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-02

Tag:

Measured: 7/14/2010 10:16:35 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-03

Tag:

Measured: 7/14/2010 10:18:10 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-04

Tag:

Measured: 7/14/2010 10:19:45 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-05

Tag:

Measured: 7/14/2010 10:21:20 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-06

Tag:

Measured: 7/14/2010 10:22:55 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-07

Tag:

Measured: 7/14/2010 10:24:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-08

Tag:

Measured: 7/14/2010 10:26:05 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-09

Tag:

Measured: 7/14/2010 10:27:40 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-10

Tag:

Measured: 7/14/2010 10:29:15 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-11

Tag: Measured: 7/14/2010 10:30:50 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-12

Tag: Measured: 7/14/2010 10:32:25 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-13

Tag: Measured: 7/14/2010 10:34:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-14

Tag: Measured: 7/14/2010 10:35:35 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-15

Tag: Measured: 7/14/2010 10:37:10 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-16

Tag: Measured: 7/14/2010 10:38:45 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-17

Tag: Measured: 7/14/2010 10:40:20 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-18

Tag: Measured: 7/14/2010 10:41:55 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-19

Tag: Measured: 7/14/2010 10:43:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83049-20

Tag: Measured: 7/14/2010 10:45:05 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286374

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:33
Start Date/Time: 07/20/2010 16:00
End Date/Time: 07/20/2010 19:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L83049-01	BG-7 0-2 COMP	dry		07/20/10 16:00	7/20/2010	
2	L83049-02	BG-7 2-12 COMP	dry		07/20/10 16:09	7/20/2010	
3	L83049-03	BG-7 12-18 COMP	dry		07/20/10 16:18	7/20/2010	
4	L83049-04	BG-8 0-2 COMP	dry		07/20/10 16:28	7/20/2010	
5	L83049-05	BG-8 2-12 COMP	dry		07/20/10 16:37	7/20/2010	
6	L83049-06	BG-8 12-18 COMP	dry		07/20/10 16:47	7/20/2010	
7	L83049-07	BG-101 2-12 COMP	dry		07/20/10 16:56	7/20/2010	
8	L83049-08	BG-11 0-2 COMP	dry		07/20/10 17:06	7/20/2010	
9	L83049-09	BG-11 2-12 COMP	dry		07/20/10 17:15	7/20/2010	
10	L83049-10	BG-11 12-18 COMP	dry		07/20/10 17:25	7/20/2010	
11	L83049-11	BG-12 0-2 COMP	dry		07/20/10 17:34	7/20/2010	
12	L83049-12	BG-12 2-12 COMP	dry		07/20/10 17:44	7/20/2010	
13	L83049-13	BG-12 12-18 COMP	dry		07/20/10 17:53	7/20/2010	
14	L83049-14	BG-15 0-2 COMP	dry		07/20/10 18:03	7/20/2010	
15	L83049-15	BG-15 2-12 COMP	dry		07/20/10 18:12	7/20/2010	
16	L83049-16	BG-15 12-18 COMP	dry		07/20/10 18:22	7/20/2010	
17	L83049-17	BG-102 2-12 COMP	dry		07/20/10 18:31	7/20/2010	
18	L83049-18	BG-16 0-2 COMP	dry		07/20/10 18:40	7/20/2010	
19	L83049-19	BG-16 2-12 COMP	dry		07/20/10 18:50	7/20/2010	
20	L83049-20	BG-16 12-18 COMP	dry		07/20/10 18:59	7/20/2010	

Report Comments: _____

Internal Comments _____

AREV: NRC 7/22/10
Initials, Date

SREV: BRD 7/22/10
Initials, Date

7/21/2010 11:49:43 AM 72410

KBJ 7/23/10

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286374

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:33
Start Date/Time: 07/20/2010 16:00
End Date/Time: 07/20/2010 19:00

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/21/2010 11:49:43 AM 72410

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: NRC
Date: 7/21/10

Approved: BRD
Date: 7/22/10

Analyst: NED CREMIN

Workgroup: 286374

Analysis Date: 7/21/10

Sample type used: SOIL

Extraction / Digestion / Analysis / (Prep) / Calc: CRUSH & PULVERIZE

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓✓		
2. Is the %solid or TS attached for dilution factors?			✓✓
3. Were proper volumes of reagents used per final volume?			✓✓
4. Was the proper sub-sample used (as received, <2000, <500, <250, (dry))?	✓✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?			✓✓
6. Did the RPD pass?			✓✓
7. Does all the spike information correlate with each other?			✓✓
8. Is the appropriate spike in the computer-designated line?			✓✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓✓		
10. Is the standard/reagent information complete and current?	✓✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments: _____

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286374

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: NAL
ACZ Dept: 20
Create Date: 07/20/2010 15:33
Start Date/Time: 7/20/10
End Date/Time: 7/20/10

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L83049-01	BG-7 0-2 COMP	DRY		7/20/10	7/20/10	SIEVED < 2000
2	L83049-02	BG-7 2-12 COMP					
3	L83049-03	BG-7 12-18 COMP					
4	L83049-04	BG-8 0-2 COMP					
5	L83049-05	BG-8 2-12 COMP					
6	L83049-06	BG-8 12-18 COMP					
7	L83049-07	BG-101 2-12 COMP					
8	L83049-08	BG-11 0-2 COMP					
9	L83049-09	BG-11 2-12 COMP					
10	L83049-10	BG-11 12-18 COMP					
11	L83049-11	BG-12 0-2 COMP					
12	L83049-12	BG-12 2-12 COMP					
13	L83049-13	BG-12 12-18 COMP					
14	L83049-14	BG-15 0-2 COMP					
15	L83049-15	BG-15 2-12 COMP					
16	L83049-16	BG-15 12-18 COMP					
17	L83049-17	BG-102 2-12 COMP					
18	L83049-18	BG-16 0-2 COMP					
19	L83049-19	BG-16 2-12 COMP					
20	L83049-20	BG-16 12-18 COMP					

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/20/2010 4:03:08 PM 72410

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286374

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/20/2010 15:33
Start Date/Time:
End Date/Time:

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

_____

Internal Comments _____

_____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/20/2010 4:03:08 PM 72410

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286374

Date Reported: 22-Jul-10
Run ID: R734572
Date Analyzed: 20-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L83049-01

Tag:

Measured: 7/20/2010 4:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-02

Tag:

Measured: 7/20/2010 4:09:28 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-03

Tag:

Measured: 7/20/2010 4:18:56 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-04

Tag:

Measured: 7/20/2010 4:28:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-05

Tag:

Measured: 7/20/2010 4:37:52 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-06

Tag:

Measured: 7/20/2010 4:47:20 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-07

Tag:

Measured: 7/20/2010 4:56:48 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-08

Tag:

Measured: 7/20/2010 5:06:16 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-09

Tag:

Measured: 7/20/2010 5:15:44 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-10

Tag:

Measured: 7/20/2010 5:25:12 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-11

Tag: Measured: 7/20/2010 5:34:40 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-12

Tag: Measured: 7/20/2010 5:44:08 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-13

Tag: Measured: 7/20/2010 5:53:36 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-14

Tag: Measured: 7/20/2010 6:03:04 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-15

Tag: Measured: 7/20/2010 6:12:32 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-16

Tag: Measured: 7/20/2010 6:22:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-17

Tag: Measured: 7/20/2010 6:31:28 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-18

Tag: Measured: 7/20/2010 6:40:56 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-19

Tag: Measured: 7/20/2010 6:50:24 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83049-20

Tag: Measured: 7/20/2010 6:59:52 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286377PBS1	NONE	<2000		07/21/10 9:00	0	7.5	5	5	50				
2	WG286377PBS2	NONE	<2000		07/21/10 10:02	0	7.5	5	5	50				
3	L83049-01	BG-7 0-2 COMP	<2000		07/21/10 11:05	0.5	7.5	5	5	50		98.94		
4	L83049-01DUP	NONE	<2000		07/21/10 12:07	0.5	7.5	5	5	50		98.94		
5	L83049-02	BG-7 2-12 COMP	<2000		07/21/10 13:10	0.5	7.5	5	5	50		98.43		
6	L83049-03	BG-7 12-18 COMP	<2000		07/21/10 14:12	0.5	7.5	5	5	50		98.99		
7	L83049-04	BG-8 0-2 COMP	<2000		07/21/10 15:15	0.5	7.5	5	5	50		98.79		
8	L83049-05	BG-8 2-12 COMP	<2000		07/21/10 16:17	0.5	7.5	5	5	50		98.99		
9	L83049-06	BG-8 12-18 COMP	<2000		07/21/10 17:20	0.5	7.5	5	5	50		99.2		
10	L83049-07	BG-101 2-12 COMP	<2000		07/21/10 18:22	0.5	7.5	5	5	50		99.13		
11	L83049-08	BG-11 0-2 COMP	<2000		07/21/10 19:25	0.5	7.5	5	5	50		99.24		
12	L83049-09	BG-11 2-12 COMP	<2000		07/21/10 20:27	0.5	7.5	5	5	50		99.23		
13	L83049-10	BG-11 12-18 COMP	<2000		07/21/10 21:30	0.5	7.5	5	5	50		99.13		
14	L83049-10DUP	NONE	<2000		07/21/10 22:32	0.5	7.5	5	5	50		99.13		
15	L83049-11	BG-12 0-2 COMP	<2000		07/21/10 23:35	0.5	7.5	5	5	50		99.05		
16	L83049-12	BG-12 2-12 COMP	<2000		07/22/10 0:37	0.5	7.5	5	5	50		99.39		
17	L83049-13	BG-12 12-18 COMP	<2000		07/22/10 1:40	0.5	7.5	5	5	50		98.67		
18	L83049-14	BG-15 0-2 COMP	<2000		07/22/10 2:42	0.5	7.5	5	5	50		99		
19	L83049-15	BG-15 2-12 COMP	<2000		07/22/10 3:45	0.5	7.5	5	5	50		99.43		
20	L83049-16	BG-15 12-18 COMP	<2000		07/22/10 4:47	0.5	7.5	5	5	50		99.12		
21	L83049-17	BG-102 2-12 COMP	<2000		07/22/10 5:50	0.5	7.5	5	5	50		98.96		
22	L83049-18	BG-16 0-2 COMP	<2000		07/22/10 6:52	0.5	7.5	5	5	50		99.21		
23	L83049-19	BG-16 2-12 COMP	<2000		07/22/10 7:55	0.5	7.5	5	5	50		99.23		

Report Comments: _____

Internal Comments _____

AREV: NRC 7/22/10
Initials, Date

SREV: [illegible] 7/22/10
Initials, Date

7/22/2010 10:57:04 AM 72410

KBS 7/23/10

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
24	L83049-20	BG-16 12-18 COMP	<2000		07/22/10 8:57	0.5	7.5	5	5	50		99.17		
25	L83049-20DUP	NONE	<2000		07/22/10 10:00	0.5	7.5	5	5	50		99.17		

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:18 AM 72410

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: NED
Date: 7/22/10

Approved: TSD
Date: 7/22/10

Analyst: NED CREMIN

Workgroup: 286377

Analysis Date: 7/22/10

Sample type used: SOIL

Extraction / Digestion / Analysis / (Prep) / Calc:

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?	✓		
3. Were proper volumes of reagents used per final volume?	✓		
4. Was the proper sub-sample used (as received, <~~2000~~, <500, <250, dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?	✓		
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date
H_2O_2	35028	7/11/11
HCl	34826	11/30/12
HNO_3	34951	2/28/13
H_2O_2	35027	6/25/11

Comments: _____

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# : 286377

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.266	14.847	1.266	0	0.5	50	#DIV/0!
83049-1	1.264	12.076	11.961	0.98936367	0.5	50	101
83049-2	1.262	13.071	12.886	0.984333983	0.5	50	102
83049-3	1.263	12.251	12.140	0.989898071	0.5	50	101
83049-4	1.265	13.550	13.401	0.987871388	0.5	50	101
83049-5	1.273	14.368	14.236	0.989919817	0.5	50	101
83049-6	1.283	12.190	12.103	0.992023471	0.5	50	101
83049-7	1.286	16.864	16.728	0.991269739	0.5	50	101
83049-8	1.285	14.558	14.457	0.992390567	0.5	50	101
83049-9	1.291	15.386	15.278	0.992337708	0.5	50	101
83049-10	1.287	14.042	13.931	0.99129753	0.5	50	101
83049-11	1.283	12.357	12.252	0.990518331	0.5	50	101
83049-12	1.281	13.898	13.821	0.993897123	0.5	50	101
83049-13	1.273	13.762	13.596	0.986708303	0.5	50	101
83049-14	1.276	15.144	15.006	0.990049034	0.5	50	101
83049-15	1.280	13.211	13.143	0.994300562	0.5	50	101
83049-16	1.282	13.162	13.058	0.991245791	0.5	50	101
83049-17	1.275	12.631	12.513	0.989609017	0.5	50	101
83049-18	1.284	15.538	15.426	0.992142556	0.5	50	101
83049-19	1.284	16.321	16.205	0.992285695	0.5	50	101
83049-20	1.285	16.720	16.592	0.991707159	0.5	50	101
83049-20 DUP	1.280	15.494	15.397	0.993175742	0.5	50	101

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# : 786377

Analyst: NRe
Date: 7/21/10
Time In: 11.40
Time Out:

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.266	14.847	~~11.956~~ 1.266	#DIV/0!			#DIV/0!
83049-1	1.264	12.076	~~12.879~~ 11.16	#DIV/0!			#DIV/0!
2	1.262	13.071	12.886	#DIV/0!			#DIV/0!
3	1.263	12.251	12.140	#DIV/0!			#DIV/0!
4	1.265	13.550	13.401	#DIV/0!			#DIV/0!
5	1.273	14.368	14.236	#DIV/0!			#DIV/0!
6	1.283	12.190	12.103	#DIV/0!			#DIV/0!
7	1.286	16.864	16.728	#DIV/0!			#DIV/0!
8	1.285	14.558	14.457	#DIV/0!			#DIV/0!
9	1.291	15.386	15.278	#DIV/0!			#DIV/0!
10	1.287	14.042	13.931	#DIV/0!			#DIV/0!
11	1.283	12.357	12.252	#DIV/0!			#DIV/0!
12	1.291	13.898	13.821	#DIV/0!			#DIV/0!
13	1.273	13.762	13.596	#DIV/0!			#DIV/0!
14	1.276	15.144	15.006	#DIV/0!			#DIV/0!
15	1.280	13.211	13.143	#DIV/0!			#DIV/0!
16	1.282	13.162	13.058	#DIV/0!			#DIV/0!
17	1.275	12.631	12.513	#DIV/0!			#DIV/0!
18	1.284	15.538	15.426	#DIV/0!			#DIV/0!
19	1.284	16.321	16.205	#DIV/0!			#DIV/0!
20	1.285	16.720	16.592	#DIV/0!			#DIV/0!
20 Dup	1.280	15.494	15.397	#DIV/0!			#DIV/0!
				#DIV/0!			#VALUE!
				#DIV/0!			#VALUE!

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: MW
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 7/21/10 1 pm
End Date/Time: 7/22/10 10 Am

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286377PBS1	NONE			7/21/10		7.5	5		50				
2	WG286377PBS2	NONE												
3	L83049-01	BG-7 0-2 COMP				.5								
4	L83049-01DUP	NONE												
5	L83049-02	BG-7 2-12 COMP												
6	L83049-03	BG-7 12-18 COMP												
7	L83049-04	BG-8 0-2 COMP												
8	L83049-05	BG-8 2-12 COMP												
9	L83049-06	BG-8 12-18 COMP												
10	L83049-07	BG-101 2-12 COMP												
11	L83049-08	BG-11 0-2 COMP												
12	L83049-09	BG-11 2-12 COMP												
13	L83049-10	BG-11 12-18 COMP												
14	L83049-10DUP	NONE												
15	L83049-11	BG-12 0-2 COMP												
16	L83049-12	BG-12 2-12 COMP												
17	L83049-13	BG-12 12-18 COMP												
18	L83049-14	BG-15 0-2 COMP												
19	L83049-15	BG-15 2-12 COMP												
20	L83049-16	BG-15 12-18 COMP												
21	L83049-17	BG-102 2-12 COMP												
22	L83049-18	BG-16 0-2 COMP												
23	L83049-19	BG-16 2-12 COMP												

Report Comments: 4 products

Internal Comments

AREV: _____ Initials, Date

SREV: _____ Initials, Date

7/20/2010 4:03:35 PM 72410

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time:
End Date/Time:

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
24	L83049-20	BG-16 12-18 COMP				.6	7.5	5		50				
25	L83049-20DUP	NONE				↓	↓	↓		↓				

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/20/2010 4:03:35 PM 72410

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286377

Date Reported: 22-Jul-10
Run ID: R734849
Date Analyzed: 21-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

WG286377PBS1

Tag:

Measured: 7/21/2010 9:00:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

WG286377PBS2

Tag:

Measured: 7/21/2010 10:02:30 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

L83049-01

Tag:

Measured: 7/21/2010 11:05:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.94	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-01DUP

Tag:

Measured: 7/21/2010 12:07:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	98.94	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L83049-02

Tag:

Measured: 7/21/2010 1:10:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.43	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-03

Tag:

Measured: 7/21/2010 2:12:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.99	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-04

Tag:

Measured: 7/21/2010 3:15:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.79	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-05

Tag:

Measured: 7/21/2010 4:17:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.99	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-06

Tag:

Measured: 7/21/2010 5:20:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.2	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-07

Tag:

Measured: 7/21/2010 6:22:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.13	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-08

Tag:

Measured: 7/21/2010 7:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.24	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-09

Tag:

Measured: 7/21/2010 8:27:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.23	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-10

Tag:

Measured: 7/21/2010 9:30:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.13	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-10DUP

Tag:

Measured: 7/21/2010 10:32:30 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.13	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L83049-11

Tag:

Measured: 7/21/2010 11:35:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.05	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-12

Tag:

Measured: 7/22/2010 12:37:30 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.39	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-13

Tag:

Measured: 7/22/2010 1:40:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.67	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-14

Tag:

Measured: 7/22/2010 2:42:30 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-15

Tag:

Measured: 7/22/2010 3:45:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.43	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-16

Tag:

Measured: 7/22/2010 4:47:30 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.12	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-17

Tag:

Measured: 7/22/2010 5:50:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.96	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-18

Tag:

Measured: 7/22/2010 6:52:30 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.21	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-19

Tag:

Measured: 7/22/2010 7:55:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.23	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-20

Tag:

Measured: 7/22/2010 8:57:30 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.17	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83049-20DUP **Tag:** **Measured: 7/22/2010 10:00:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	99.17	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

ACZ Laboratories, Inc. WG286947
Thorium in Soil
ESM 4506

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: jjg
Dept: 55
Prep Date: 7/23/2010
Analysis Date: 7/28/2010
Start Time:
End Time:
Approved: MWM 7-30-10
Approved: 7-30-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230						Thorium 232					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g	Th232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
1	WG286560PBS		0.5	1.0000	9.52	664	0.698			0			0.25	22.1716	28.0100	6	-0.12	0.43	0.65			0	0.00	0.00	0.25
2	WG286560LC	RC091215-1	0.5	1.0000	9.52	620	0.652			0	0.00	0.00	0.27	16.0000	5366.6000	5351	164.01	4.73	0.70			0	0.00	0.00	0.27
3	L83049-01	BG-7 0-2 CC	0.494682	1.0000	9.52	673	0.708			0	0.00	0.00	0.25	12.4175	48.5800	36	0.75	0.47	0.65			0	0.00	0.00	0.25
4	L83049-02	BG-7 2-12 C	0.492167	1.0000	9.52	669	0.703			0	0.00	0.00	0.25	11.0000	65.0000	54	1.28	0.53	0.66			0	0.00	0.00	0.25
5	L83049-03	BG-7 12-18	0.494949	1.0000	9.52	730	0.768			0	0.00	0.00	0.23	14.0000	57.5800	44	0.89	0.47	0.60			0	0.00	0.00	0.23
6	L83049-04	BG-8 0-2 CC	0.493936	1.0000	9.52	678	0.713			0	0.00	0.00	0.25	18.0000	34.5900	17	0.19	0.43	0.65			0	0.00	0.00	0.25
7	L83049-05	BG-8 2-12 C	0.49496	1.0000	9.52	700	0.736			0	0.00	0.00	0.24	16.0000	45.4100	29	0.54	0.45	0.63			0	0.00	0.00	0.24
8	L83049-06	BG-8 12-18	0.496012	1.0000	9.52	647	0.680			0	0.00	0.00	0.26	21.4109	59.4100	38	0.83	0.56	0.68			0	0.00	0.00	0.26
9	L83049-07	BG-101 2-12	0.495635	1.0000	9.52	680	0.715			0	0.00	0.00	0.25	31.4109	44.3400	13	0.09	0.52	0.64			0	0.00	0.00	0.25
10	L83049-08	BG-11 0-2 C	0.496195	1.0000	9.52	776	0.816			0	0.00	0.00	0.22	25.0000	53.5800	29	0.46	0.46	0.56			0	0.00	0.00	0.22
11	L83049-09	BG-11 2-12	0.496189	1.0000	9.52	675	0.710			0	0.00	0.00	0.25	24.4109	35.0000	11	0.02	0.46	0.65			0	0.00	0.00	0.25
12	L83049-10	BG-11 12-18	0.495649	1.0000	9.52	668	0.702			0	0.00	0.00	0.25	25.5891	77.0000	51	1.19	0.61	0.66			0	0.00	0.00	0.25
13	L83049-11	BG-12 0-2 C	0.495259	1.0000	9.52	753	0.792			0	0.00	0.00	0.22	14.2393	46.4100	32	0.57	0.42	0.58			0	0.00	0.00	0.22
14	L83049-12	BG-12 2-12	0.496949	1.0000	9.52	704	0.740			0	0.00	0.00	0.24	7.0000	52.8400	46	0.98	0.44	0.62			0	0.00	0.00	0.24
15	L83049-13	BG-12 12-18	0.493354	1.0000	9.52	693	0.729			0	0.00	0.00	0.24	13.4175	46.9900	34	0.66	0.45	0.63			0	0.00	0.00	0.24
16	L83049-14	BG-15 0-2 C	0.495025	1.0000	9.52	669	0.703			0	0.00	0.00	0.25	17.0000	54.8400	38	0.80	0.51	0.66			0	0.00	0.00	0.25
17	L83049-15	BG-15 2-12	0.49715	1.0000	9.52	754	0.793			0	0.00	0.00	0.22	22.1716	53.4200	31	0.54	0.46	0.58			0	0.00	0.00	0.22
18	L83049-16	BG-15 12-18	0.495623	1.0000	9.52	628	0.660			0	0.00	0.00	0.27	16.0000	66.8400	51	1.25	0.58	0.70			0	0.00	0.00	0.27
19	L83049-17	BG-102 2-12	0.494805	1.0000	9.52	705	0.741			0	0.00	0.00	0.24	12.4175	37.1600	25	0.41	0.40	0.62			0	0.00	0.00	0.24
20	L83049-18	BG-16 0-2 C	0.496071	1.0000	9.52	684	0.719			0	0.00	0.00	0.25	11.0000	45.5800	35	0.69	0.44	0.64			0	0.00	0.00	0.25
21	L83049-19	BG-16 2-12	0.496143	1.0000	9.52	745	0.783			0	0.00	0.00	0.23	14.0000	66.5800	53	1.10	0.49	0.59			0	0.00	0.00	0.23
22	L83049-20	BG-16 12-18	0.495854	1.0000	9.52	708	0.744			0	0.00	0.00	0.24	18.0000	60.8400	43	0.89	0.51	0.62			0	0.00	0.00	0.24
23	L83049-01DUP		0.494682	1.0000	9.52	726	0.763			0	0.00	0.00	0.23	16.0000	72.5800	57	1.24	0.52	0.60			0	0.00	0.00	0.23
24	L83049-20DUP		0.495854	1.0000	9.52	729	0.767			0	0.00	0.00	0.23	21.4109	45.0100	24	0.36	0.45	0.60			0	0.00	0.00	0.23
25	L83049-10MS	RC091215-1	0.495649	1.0000	9.52	740	0.778			0	0.00	0.00	0.23	31.4109	6564.9000	6533	169.32	4.43	591.91			0	0.00	0.00	0.23

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC021.01.09.ver02

KBJ 8/2/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: ~~7-23-10~~ MWM 7-30-10 7-30-10
Approved: M.B
Date: 7-30-10

Work Group: WG286947
Sample Type: Sol. d
Analysis Date: 7-28-10
Analyst: MWM
Prep Date: 7-23-10

Weekly background file: 7-26-10
Daily background file: 7-26-10
Alpha performance file: 7-26-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286947

Date Reported: 30-Jul-10
Run ID: R736250
Date Analyzed: 28-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286560PBS

Tag: Measured: 7/28/2010 7:48:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	-0.12	1		pCi/g	++	0.65	0.43		
SREV	THORIUM 232	FOUND	0	1		pCi/g	++	0.25	0		

WG286560LCSS

Tag: Measured: 7/28/2010 7:49:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	160	1		pCi/g	++	0.7	4.7	RC091215-1	
SREV	THORIUM 230	REC	98.7	1		%	++	0.7	4.7	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	0.7	4.7	RC091215-1	

L83049-01

Tag: Measured: 7/28/2010 7:50:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	0.75	1		pCi/g	++	0.65	0.47		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-02

Tag: Measured: 7/28/2010 7:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	1.3	1		pCi/g	++	0.66	0.53		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-03

Tag: Measured: 7/28/2010 7:53:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	0.89	1		pCi/g	++	0.6	0.47		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L83049-04

Tag: Measured: 7/28/2010 7:55:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	0.19	1		pCi/g	++	0.65	0.43		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-05

Tag: Measured: 7/28/2010 7:56:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.54	1		pCi/g	++	0.63	0.45		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L83049-06 Tag: **Measured: 7/28/2010 7:58:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.26	0		TB
SREV	THORIUM 230	ESM-3050	0.83	1		pCi/g	++	0.68	0.56		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.26	0		TB

L83049-07 Tag: **Measured: 7/28/2010 7:59:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	0.09	1		pCi/g	++	0.64	0.52		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-08 Tag: **Measured: 7/28/2010 8:00:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.22	0		TB
SREV	THORIUM 230	ESM-3050	0.46	1		pCi/g	++	0.56	0.46		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.22	0		TB

L83049-09 Tag: **Measured: 7/28/2010 8:02:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	0.02	1		pCi/g	++	0.65	0.46		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-10 Tag: **Measured: 7/28/2010 8:03:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	1.2	1		pCi/g	++	0.66	0.61		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-11 Tag: **Measured: 7/28/2010 8:05:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.22	0		TB
SREV	THORIUM 230	ESM-3050	0.57	1		pCi/g	++	0.58	0.42		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.22	0		TB

L83049-12 Tag: **Measured: 7/28/2010 8:06:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.98	1		pCi/g	++	0.62	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L83049-13 Tag: **Measured: 7/28/2010 8:08:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.66	1		pCi/g	++	0.63	0.45		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L83049-14

Tag: Measured: 7/28/2010 8:09:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	0.8	1		pCi/g	++	0.66	0.51		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-15

Tag: Measured: 7/28/2010 8:11:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.22	0		TB
SREV	THORIUM 230	ESM-3050	0.54	1		pCi/g	++	0.58	0.46		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.22	0		TB

L83049-16

Tag: Measured: 7/28/2010 8:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.27	0		TB
SREV	THORIUM 230	ESM-3050	1.3	1		pCi/g	++	0.7	0.58		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.27	0		TB

L83049-17

Tag: Measured: 7/28/2010 8:13:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.41	1		pCi/g	++	0.62	0.4		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L83049-18

Tag: Measured: 7/28/2010 8:15:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.25	0		TB
SREV	THORIUM 230	ESM-3050	0.69	1		pCi/g	++	0.64	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.25	0		TB

L83049-19

Tag: Measured: 7/28/2010 8:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.23	0		TB
SREV	THORIUM 230	ESM-3050	1.1	1		pCi/g	++	0.59	0.49		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.23	0		TB

L83049-20

Tag: Measured: 7/28/2010 8:18:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0.24	0		TB
SREV	THORIUM 230	ESM-3050	0.89	1		pCi/g	++	0.62	0.51		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0.24	0		TB

L83049-01DUP

Tag: Measured: 7/28/2010 8:19:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0.23	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0.23	0		
SREV	THORIUM 230	FOUND	1.2	1		pCi/g	++	0.6	0.52		
SREV	THORIUM 230	RER	0.64	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	46.2	1		pCi/g	ALRT	0.6	0.52		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0.23	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0.23	0		

L83049-20DUP

Tag: Measured: 7/28/2010 8:21:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0.23	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0.23	0		
SREV	THORIUM 230	FOUND	0.36	1		pCi/g	++	0.6	0.45		
SREV	THORIUM 230	RER	0.78	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	84.8	1		pCi/g	ALRT	0.6	0.45		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0.23	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0.23	0		

L83049-10MS

Tag: Measured: 7/28/2010 8:22:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	590	4.4	RC091215-1	
SREV	THORIUM 230	REC	104.1	1		%	++	590	4.4	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	590	4.4	RC091215-1	

ACZ Laboratories, Inc.
Thorium in Soil
ESM 4506

WG286560

JJG 7/25/10 1PM

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: PREP

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. 50 ML 7/23/10	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50	1	0.00					0						0			
2	LCSS				0.00					0						0			
3	L83049-01	BG-7 0-2 COMP			0.00					0						0			
4	L83049-02	BG-7 2-12 C			0.00					0						0			
5	L83049-03	BG-7 12-18 COMP			0.00					0						0			
6	L83049-04	BG-8 0-2 COMP			0.00					0						0			
7	L83049-05	BG-8 2-12 COMP			0.00					0						0			
8	L83049-06	BG-8 12-18 COMP			0.00					0						0			
9	L83049-07	BG-101 2-12 COMP			0.00					0						0			
10	L83049-08	BG-11 0-2 COMP			0.00					0						0			
11	L83049-09	BG-11 2-12 COMP			0.00					0						0			
12	L83049-10	BG-11 12-18 COMP			0.00					0						0			
13	L83049-11	BG-12 0-2 COMP			0.00					0						0			
14	L83049-12	BG-12 2-12 COMP			0.00					0						0			
15	L83049-13	BG-12 12-18 COMP			0.00					0						0			
16	L83049-14	BG-15 0-2 COMP			0.00					0						0			
17	L83049-15	BG-15 2-12 COMP			0.00					0						0			
18	L83049-16	BG-15 12-18 COMP			0.00					0						0			
19	L83049-17	BG-102 2-12 COMP			0.00					0						0			
20	L83049-18	BG-16 0-2 COMP			0.00					0						0			
21	L83049-19	BG-16 2-12 COMP			0.00					0						0			
22	L83049-20	BG-16 12-18 COMP			0.00					0						0			
23	DUP	049-1 Dup			0.00					0						0			
24	DUP	049-20 Dup			0.00					0						0			
25	MS	049-6 Dup			0.00					0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

Analyst: jjg
Dept: 50
rep Date:
/sis Date:
tart Time:
:nd Time:
\pproved:
\pproved:

Thorium 232

Th232 Backgroun	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			

Radioactive Standa

LCS & MS RC09215-1

Reagents

Iron chloride RC100701-1

HCl 35120

TOPO RC100708-1

Cerium solution RC100720-1

COMMENTS:

FRMRC021.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Radium 226 903.1
Water

ANALYST:
Second analyst:
wg286560 7/23/2010 DATE/TIME of prep start:

PROJECT/WG:
Method

INSTR: Octete

Approved:

rds

Tracer Rc100322-1

Nitric Acid	35036	Ammonium Hydroxide.	34604
Nitric Acid (2N)	35036	Cerous Flouride substrate	RC100527-3
Sulfuric Acid 0.3N	34189	Ethanol	33789
HF	33549		

RCTHOR-S.xls

Calculations for dry weight:

Login #
83049-1
83049-2
83049-3
83049-4
83049-5
83049-6
83049-7
83049-8
83049-9
83049-10
83049-11
83049-12
83049-13
83049-14
83049-15
83049-16
83049-17
83049-18
83049-19
83049-20

air dried solid(g)	soils sx wt (g)
0.98936367	0.5
0.984333983	0.5
0.989898071	0.5
0.987871388	0.5
0.989919817	0.5
0.992023471	0.5
0.991269739	0.5
0.992390567	0.5
0.992337708	0.5
0.99129753	0.5
0.990518331	0.5
0.993897123	0.5
0.986708303	0.5
0.990049034	0.5
0.994300562	0.5
0.991245791	0.5
0.989609017	0.5
0.992142556	0.5
0.992285695	0.5
0.991707159	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.49468	50	50	0.494682
0.49217	50	50	0.492167
0.49495	50	50	0.494949
0.49394	50	50	0.493936
0.49496	50	50	0.494960
0.49601	50	50	0.496012
0.49563	50	50	0.495635
0.49620	50	50	0.496195
0.49617	50	50	0.496169
0.49565	50	50	0.495649
0.49526	50	50	0.495259
0.49695	50	50	0.496949
0.49335	50	50	0.493354
0.49502	50	50	0.495025
0.49715	50	50	0.497150
0.49562	50	50	0.495623
0.49480	50	50	0.494805
0.49607	50	50	0.496071
0.49614	50	50	0.496143
0.49585	50	50	0.495854
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286377PBS1	NONE	<2000		07/21/10 9:00	0	7.5	5	5	50				
2	WG286377PBS2	NONE	<2000		07/21/10 10:02	0	7.5	5	5	50				
3	L83049-01	BG-7 0-2 COMP	<2000		07/21/10 11:05	0.5	7.5	5	5	50		98.94		
4	L83049-01DUP	NONE	<2000		07/21/10 12:07	0.5	7.5	5	5	50		98.94		
5	L83049-02	BG-7 2-12 COMP	<2000		07/21/10 13:10	0.5	7.5	5	5	50		98.43		
6	L83049-03	BG-7 12-18 COMP	<2000		07/21/10 14:12	0.5	7.5	5	5	50		98.99		
7	L83049-04	BG-8 0-2 COMP	<2000		07/21/10 15:15	0.5	7.5	5	5	50		98.79		
8	L83049-05	BG-8 2-12 COMP	<2000		07/21/10 16:17	0.5	7.5	5	5	50		98.99		
9	L83049-06	BG-8 12-18 COMP	<2000		07/21/10 17:20	0.5	7.5	5	5	50		99.2		
10	L83049-07	BG-101 2-12 COMP	<2000		07/21/10 18:22	0.5	7.5	5	5	50		99.13		
11	L83049-08	BG-11 0-2 COMP	<2000		07/21/10 19:25	0.5	7.5	5	5	50		99.24		
12	L83049-09	BG-11 2-12 COMP	<2000		07/21/10 20:27	0.5	7.5	5	5	50		99.23		
13	L83049-10	BG-11 12-18 COMP	<2000		07/21/10 21:30	0.5	7.5	5	5	50		99.13		
14	L83049-10DUP	NONE	<2000		07/21/10 22:32	0.5	7.5	5	5	50		99.13		
15	L83049-11	BG-12 0-2 COMP	<2000		07/21/10 23:35	0.5	7.5	5	5	50		99.05		
16	L83049-12	BG-12 2-12 COMP	<2000		07/22/10 0:37	0.5	7.5	5	5	50		99.39		
17	L83049-13	BG-12 12-18 COMP	<2000		07/22/10 1:40	0.5	7.5	5	5	50		98.67		
18	L83049-14	BG-15 0-2 COMP	<2000		07/22/10 2:42	0.5	7.5	5	5	50		99		
19	L83049-15	BG-15 2-12 COMP	<2000		07/22/10 3:45	0.5	7.5	5	5	50		99.43		
20	L83049-16	BG-15 12-18 COMP	<2000		07/22/10 4:47	0.5	7.5	5	5	50		99.12		
21	L83049-17	BG-102 2-12 COMP	<2000		07/22/10 5:50	0.5	7.5	5	5	50		98.96		
22	L83049-18	BG-16 0-2 COMP	<2000		07/22/10 6:52	0.5	7.5	5	5	50		99.21		
23	L83049-19	BG-16 2-12 COMP	<2000		07/22/10 7:55	0.5	7.5	5	5	50		99.23		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:08 AM 72410

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
24	L83049-20	BG-16 12-18 COMP	<2000		07/22/10 8:57	0.5	7.5	5	5	50		99.17		
25	L83049-20DUP	NONE	<2000		07/22/10 10:00	0.5	7.5	5	5	50		99.17		

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:04 AM 72410

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:13:33PM 7/28/2010

Analyst: ORTEC

Sample

Sample: WG286560 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

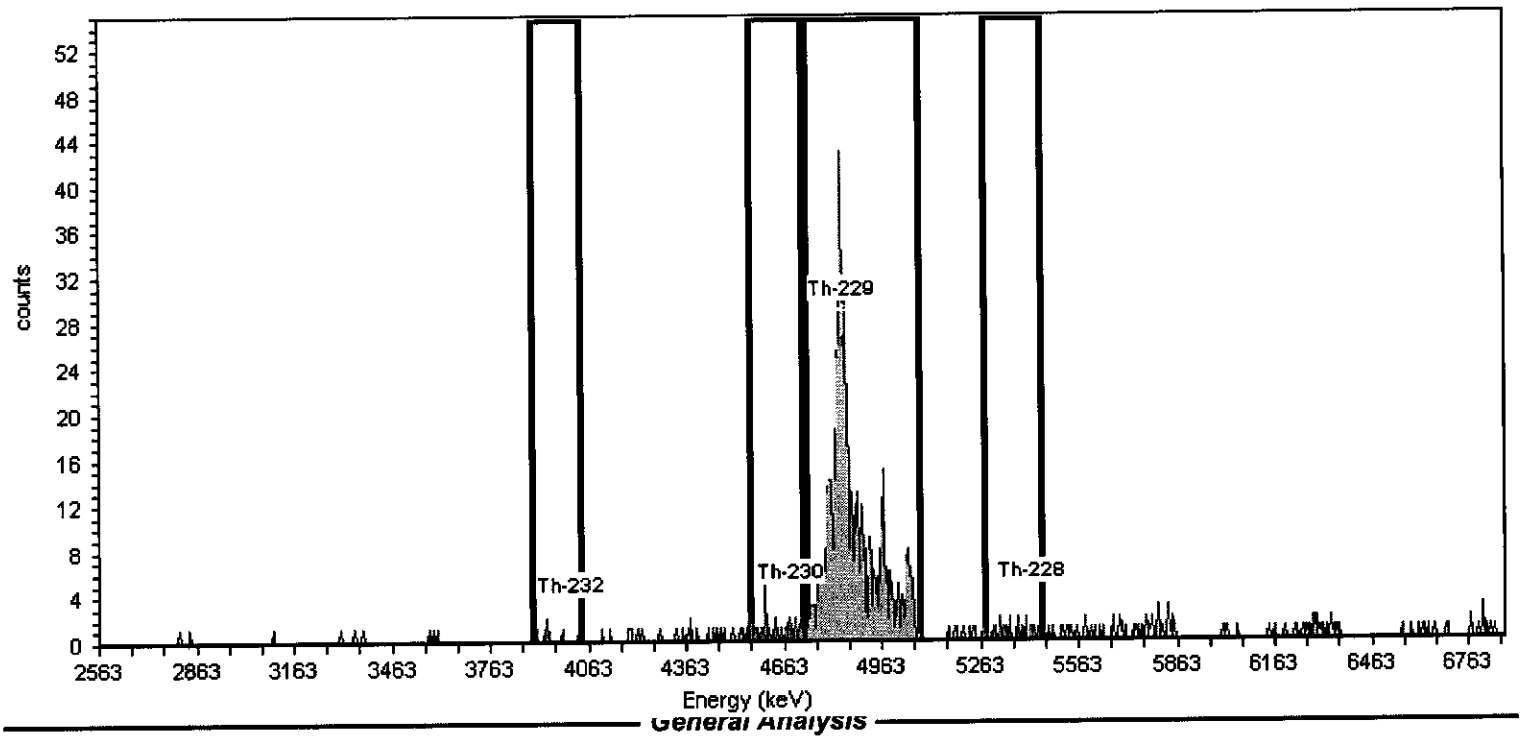
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 125.02%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/28/2010 7:47:51AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.810	100.0	6.00	3.8591	2	3.059E-002	1.347E-001	6.529E-002	1.692E-001
Th-230	4687.000	4561.000	4717.000	102.219	99.7	28.01	22.1716	6	8.371E-002	3.051E-001	1.570E-001	3.527E-001
Th-229	4845.000	4737.000	5080.000	39.115	99.6	686.66	23.0010	664	1.190E+001	1.503E+000	1.600E-001	3.589E-001
Th-228	5423.000	5280.000	5453.000	95.733	99.4	21.91	19.0000	3	4.182E-002	2.759E-001	1.457E-001	3.304E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 1:14:19PM 7/28/2010

Sample

Sample: WG286560 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

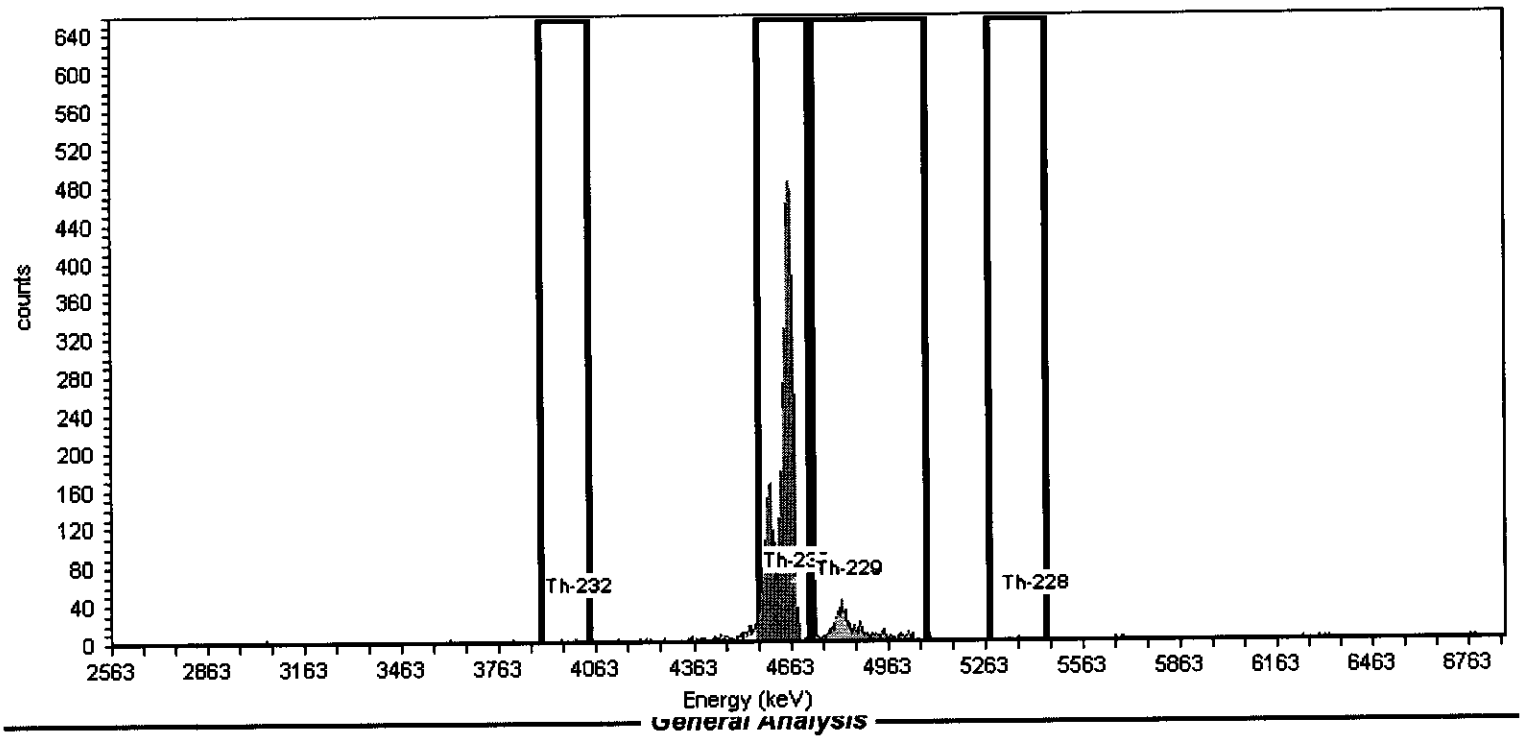
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 124.24%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/28/2010 7:47:42AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	.000	100.0	13.82	4.0000	10	1.501E-001	1.964E-001	7.112E-002	1.836E-001
Th-230	4687.000	4561.000	4717.000	35.677	99.7	5,366.60	16.0000	5,351	8.203E+001	1.845E+001	1.427E-001	3.268E-001
Th-229	4845.000	4737.000	5080.000	45.331	99.6	635.99	15.6631	620	1.183E+001	1.532E+000	1.413E-001	3.241E-001
Th-228	5423.000	5280.000	5453.000	46.713	99.4	12.00	5.0000	7	1.076E-001	1.917E-001	7.999E-002	2.016E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:14:15PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

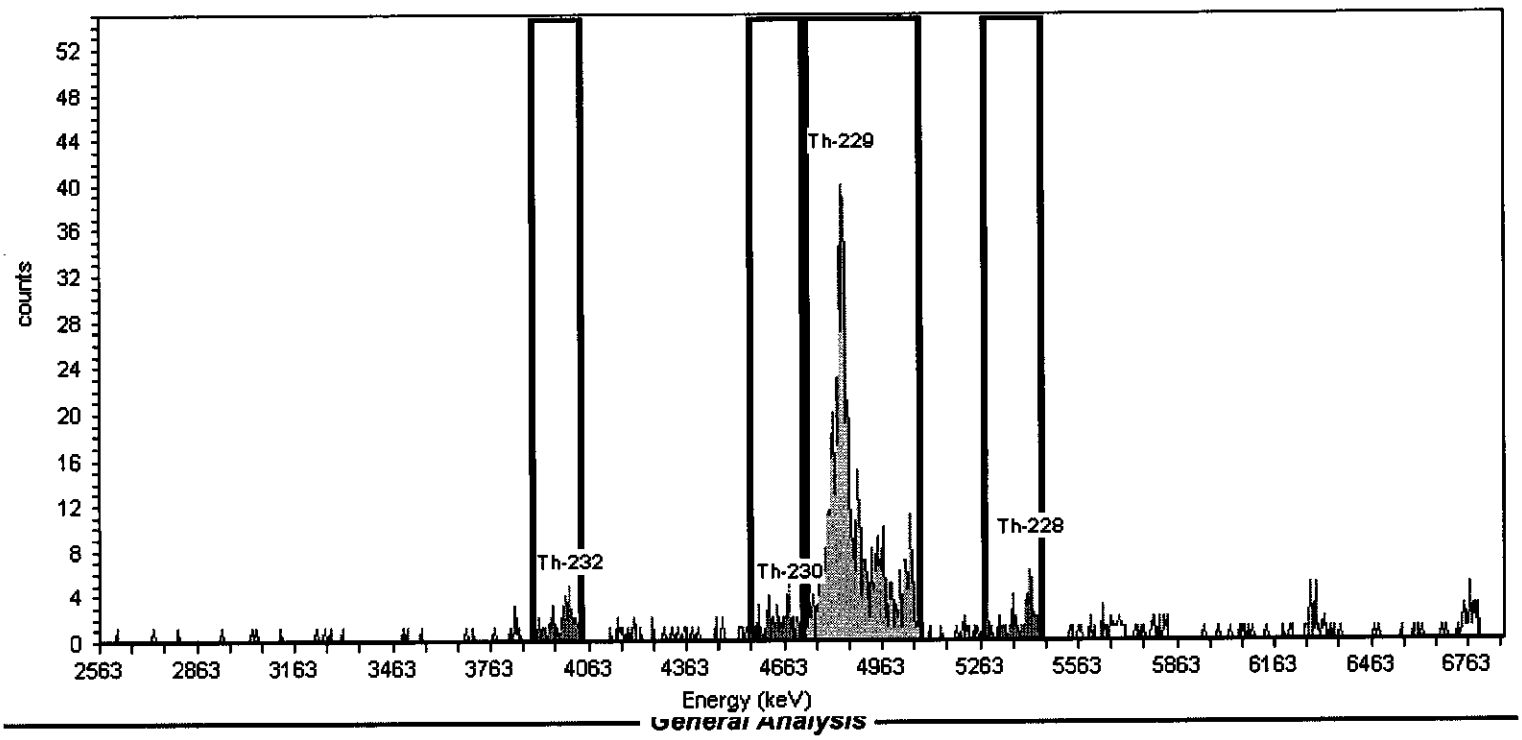
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 133.64%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/28/2010 7:47:43AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	43.003	100.0	46.00	2.0409	44	6.196E-001	3.228E-001	4.684E-002	1.318E-001
Th-230	4687.000	4561.000	4717.000	76.233	99.7	48.58	12.4175	36	5.113E-001	3.495E-001	1.159E-001	2.701E-001
Th-229	4845.000	4737.000	5080.000	44.334	99.6	687.00	14.3252	673	1.272E+001	1.583E+000	1.246E-001	2.875E-001
Th-228	5423.000	5280.000	5453.000	40.983	99.4	51.00	7.7944	43	6.127E-001	3.525E-001	9.210E-002	2.226E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:16:42PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

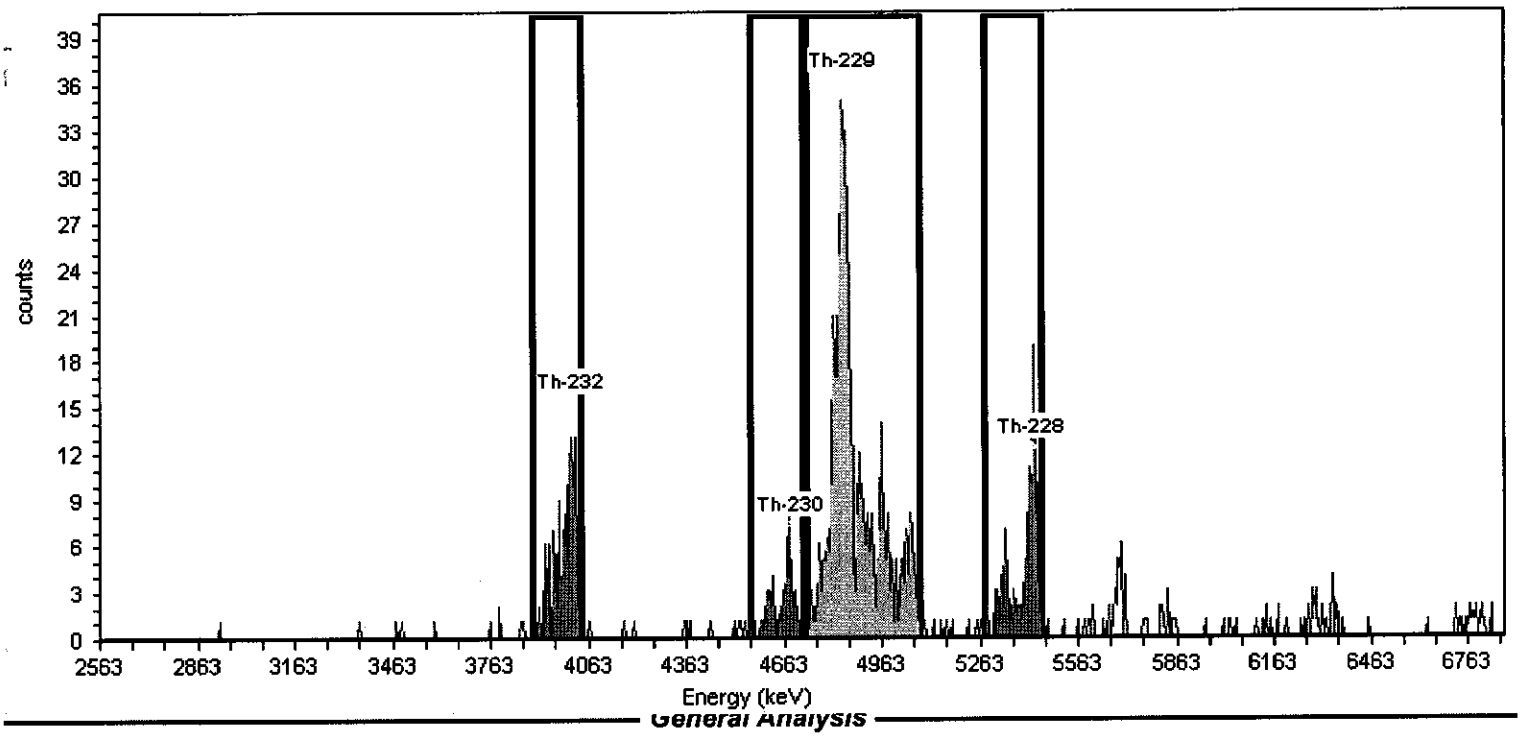
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 134.10%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/28/2010 7:47:43AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	21.600	100.0	162.00	4.0409	158	2.240E+000	7.347E-001	6.631E-002	1.710E-001
Th-230	4687.000	4561.000	4717.000	87.658	99.7	65.00	11.0000	54	7.680E-001	4.080E-001	1.097E-001	2.580E-001
Th-229	4845.000	4737.000	5080.000	46.838	99.6	682.99	14.3252	669	1.277E+001	1.593E+000	1.254E-001	2.892E-001
Th-228	5423.000	5280.000	5453.000	13.479	99.4	154.09	9.7039	144	2.060E+000	7.088E-001	1.034E-001	2.454E-001

AlphaVision v5.3 *Alpha-Spectroscopy Analysis Report*

ORTEC
Oak Ridge, TN 37830
7:38:46AM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83049-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

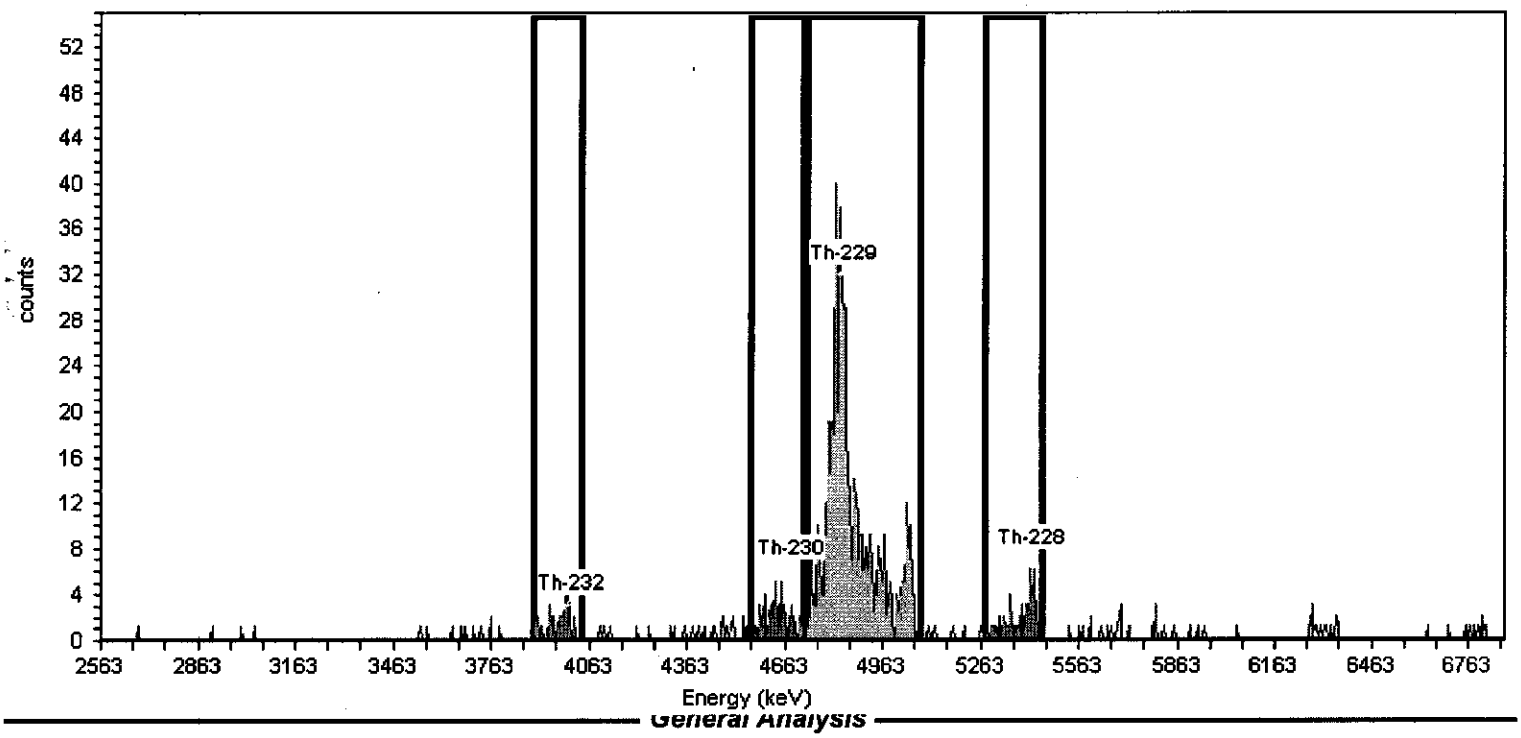
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.70%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/28/2010 7:47:44AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	109.956	100.0	41.36	7.0000	34	4.461E-001	2.874E-001	7.991E-002	1.949E-001
Th-230	4687.000	4561.000	4717.000	114.094	99.7	57.58	14.0000	44	5.675E-001	3.524E-001	1.133E-001	2.619E-001
Th-229	4845.000	4737.000	5080.000	57.127	99.6	746.33	16.0000	730	1.359E+001	1.628E+000	1.213E-001	2.779E-001
Th-228	5423.000	5280.000	5453.000	22.471	99.4	59.86	13.8849	46	6.005E-001	3.605E-001	1.132E-001	2.618E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

1:17:24PM 7/28/2010

Sample

Sample: L83049-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

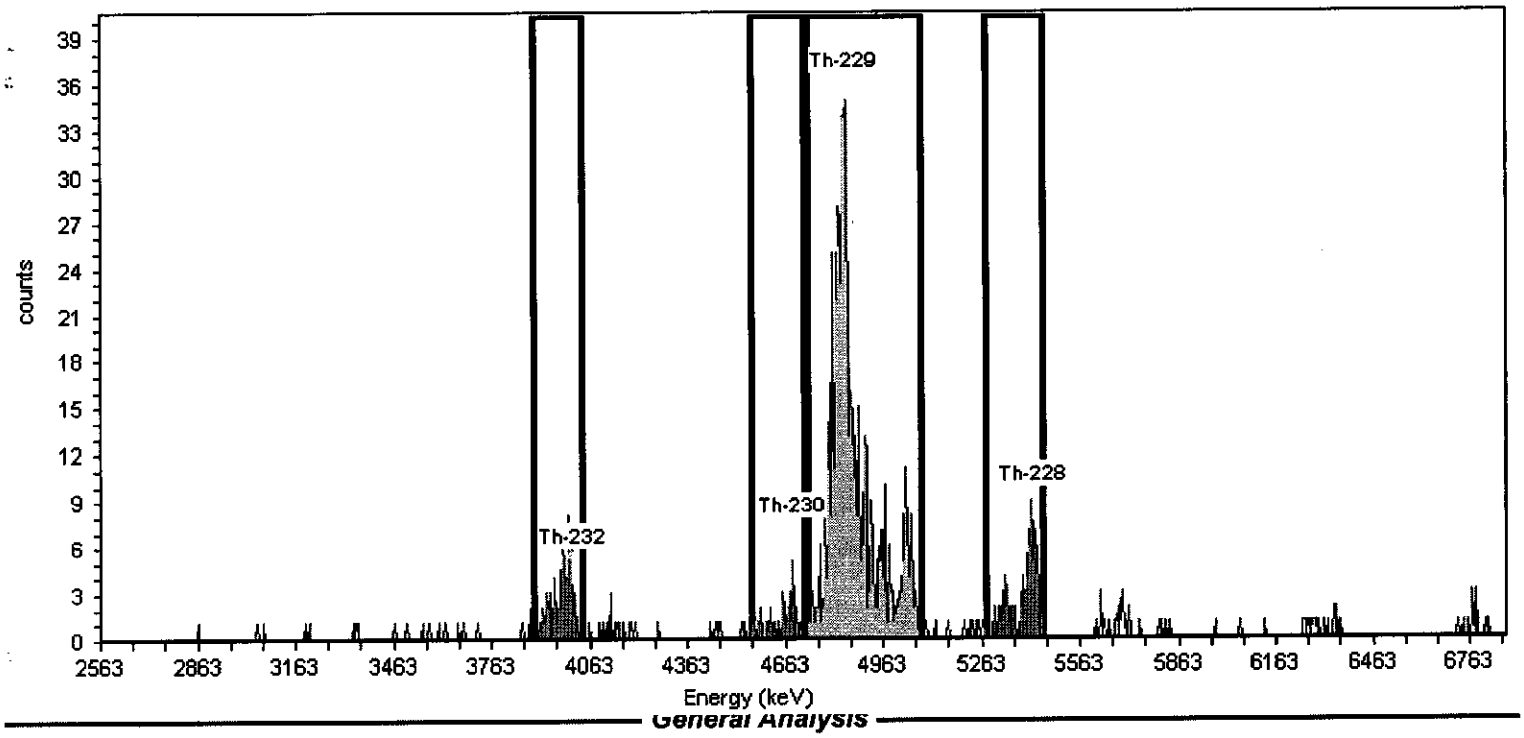
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 131.81%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/28/2010 7:47:45AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	48.032	100.0	79.96	3.0000	77	1.077E+000	4.488E-001	5.638E-002	1.506E-001
Th-230	4687.000	4561.000	4717.000	13.924	99.7	34.59	18.0000	17	2.328E-001	3.095E-001	1.385E-001	3.150E-001
Th-229	4845.000	4737.000	5080.000	51.936	99.6	698.00	20.3496	678	1.255E+001	1.566E+000	1.474E-001	3.329E-001
Th-228	5423.000	5280.000	5453.000	25.408	99.4	90.88	8.0000	83	1.167E+000	4.911E-001	9.262E-002	2.233E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:39:06AM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83049-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 002
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

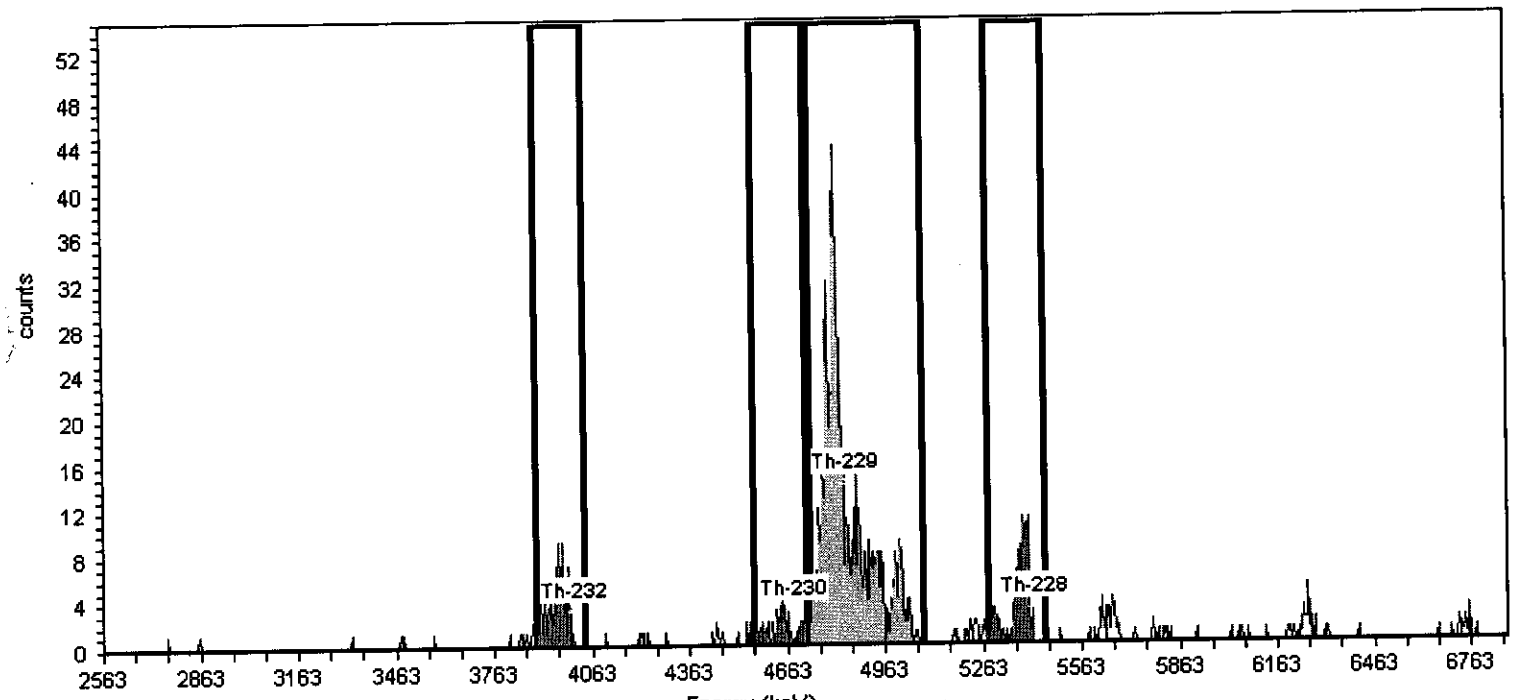
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 138.49%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/28/2010 7:47:45AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 017
Efficiency Calibration:2010.07.26 017
Calibration Date: 7/26/2010 10:20:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.77% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 7:46:20AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	32.497	100.0	85.18	2.0000	83	1.127E+000	4.512E-001	4.457E-002	1.258E-001
Th-230	4687.000	4561.000	4717.000	76.726	99.7	45.41	16.0000	29	3.996E-001	3.309E-001	1.264E-001	2.896E-001
Th-229	4845.000	4737.000	5080.000	56.660	99.6	712.63	12.6748	700	1.318E+001	1.606E+000	1.126E-001	2.621E-001
Th-228	5423.000	5280.000	5453.000	37.813	99.4	108.09	6.0905	102	1.390E+000	5.306E-001	7.824E-002	1.934E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 6:41:50PM 7/28/2010

Sample

Sample: L83049-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

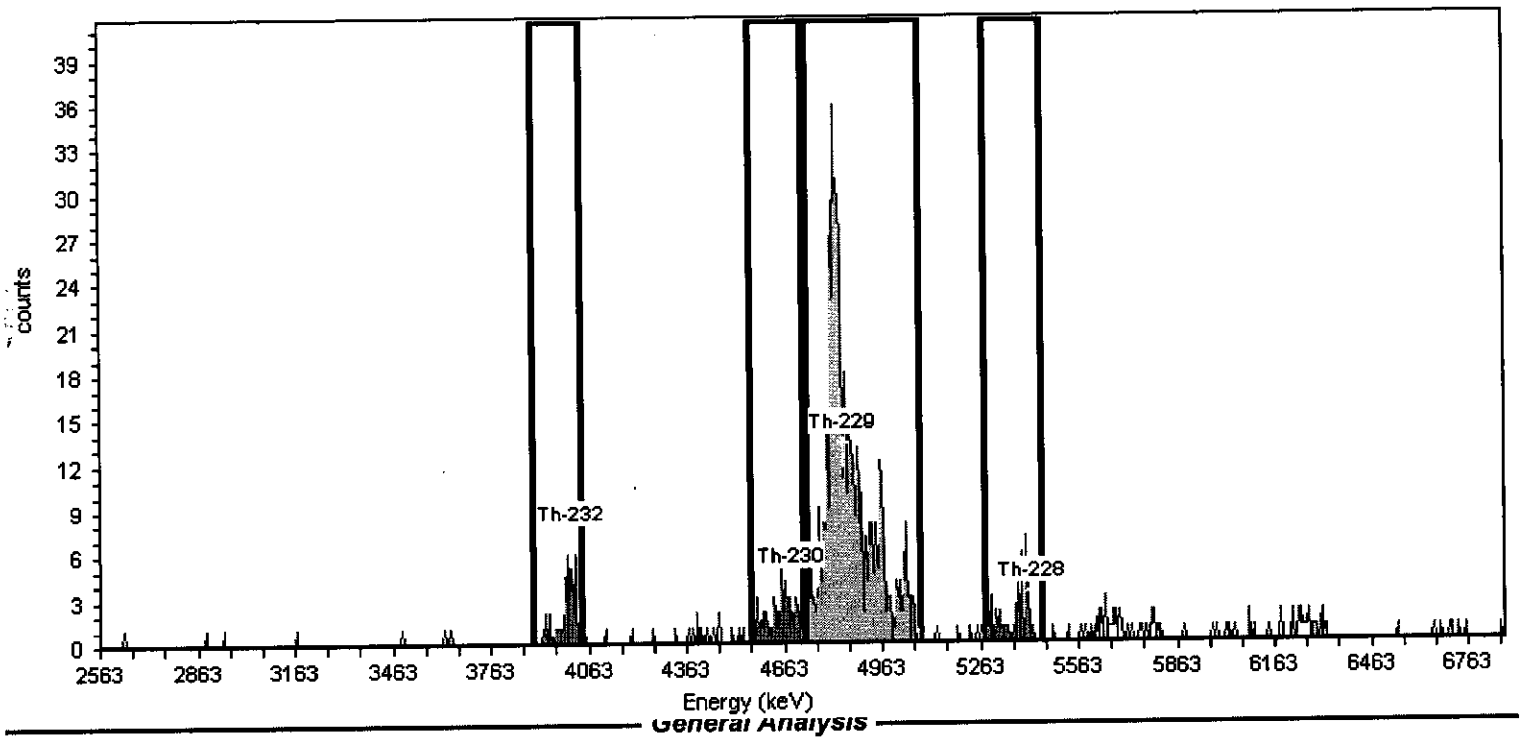
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 124.57%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/28/2010 1:23:52PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	9.949	100.0	45.00	1.0000	44	6.448E-001	3.300E-001	3.409E-002	1.078E-001
Th-230	4687.000	4561.000	4717.000	52.998	99.7	59.41	21.4109	38	5.586E-001	4.149E-001	1.582E-001	3.562E-001
Th-229	4845.000	4737.000	5080.000	45.486	99.6	660.98	14.0000	647	1.186E+001	1.500E+000	1.281E-001	2.960E-001
Th-228	5423.000	5280.000	5453.000	48.075	99.4	50.00	12.0000	38	5.603E-001	3.693E-001	1.188E-001	2.775E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 6:41:55PM 7/28/2010

Sample

Sample: L83049-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

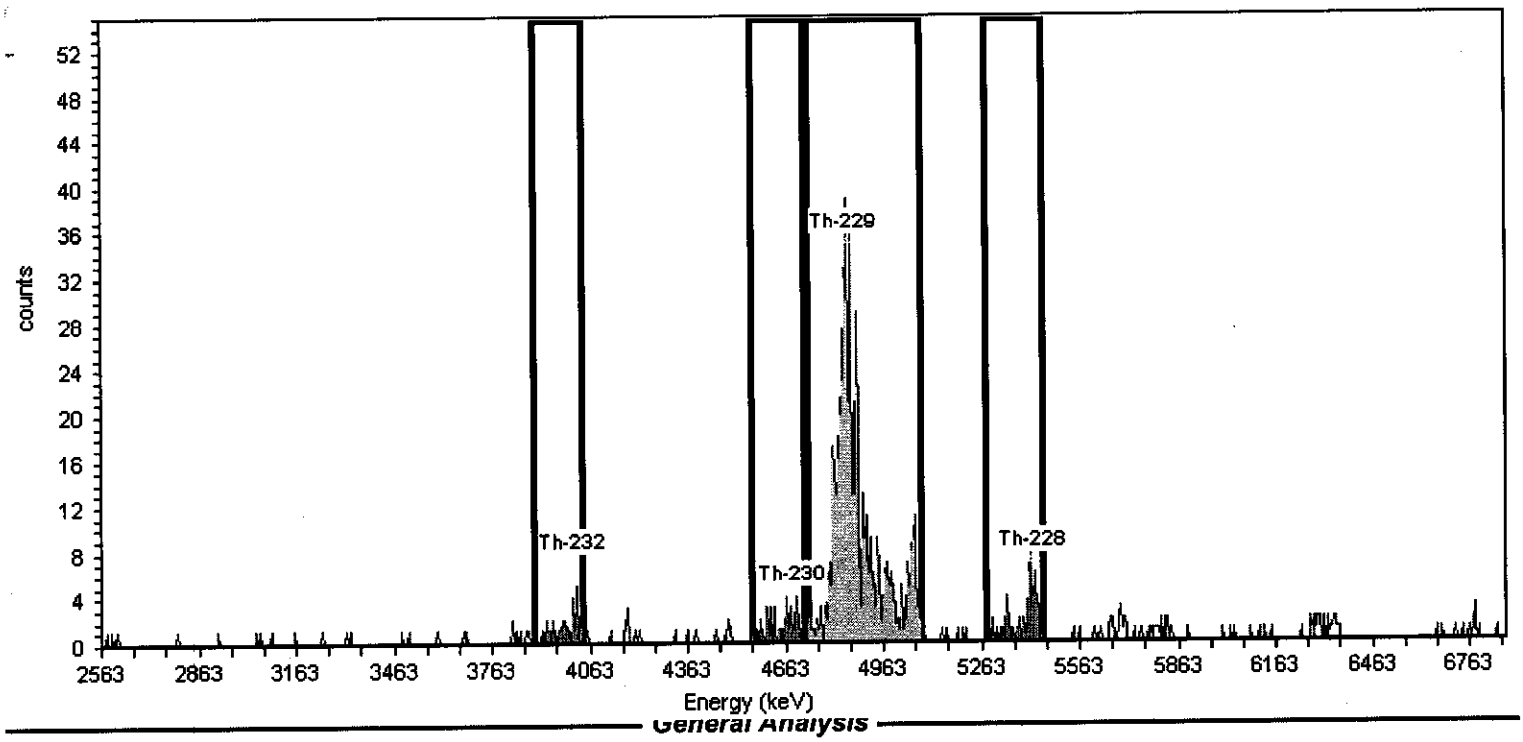
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 126.41%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/28/2010 1:23:54PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	10.282	100.0	42.00	3.0000	39	5.440E-001	3.048E-001	5.621E-002	1.502E-001
Th-230	4687.000	4561.000	4717.000	8.414	99.7	44.34	31.4109	13	1.809E-001	3.674E-001	1.824E-001	4.027E-001
Th-229	4845.000	4737.000	5080.000	51.219	99.6	703.70	24.0000	680	1.203E+001	1.503E+000	1.596E-001	3.572E-001
Th-228	5423.000	5280.000	5453.000	26.595	99.4	62.00	9.8849	52	7.314E-001	3.910E-001	1.026E-001	2.433E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 6:42:03PM 7/28/2010

Sample

Sample: L83049-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

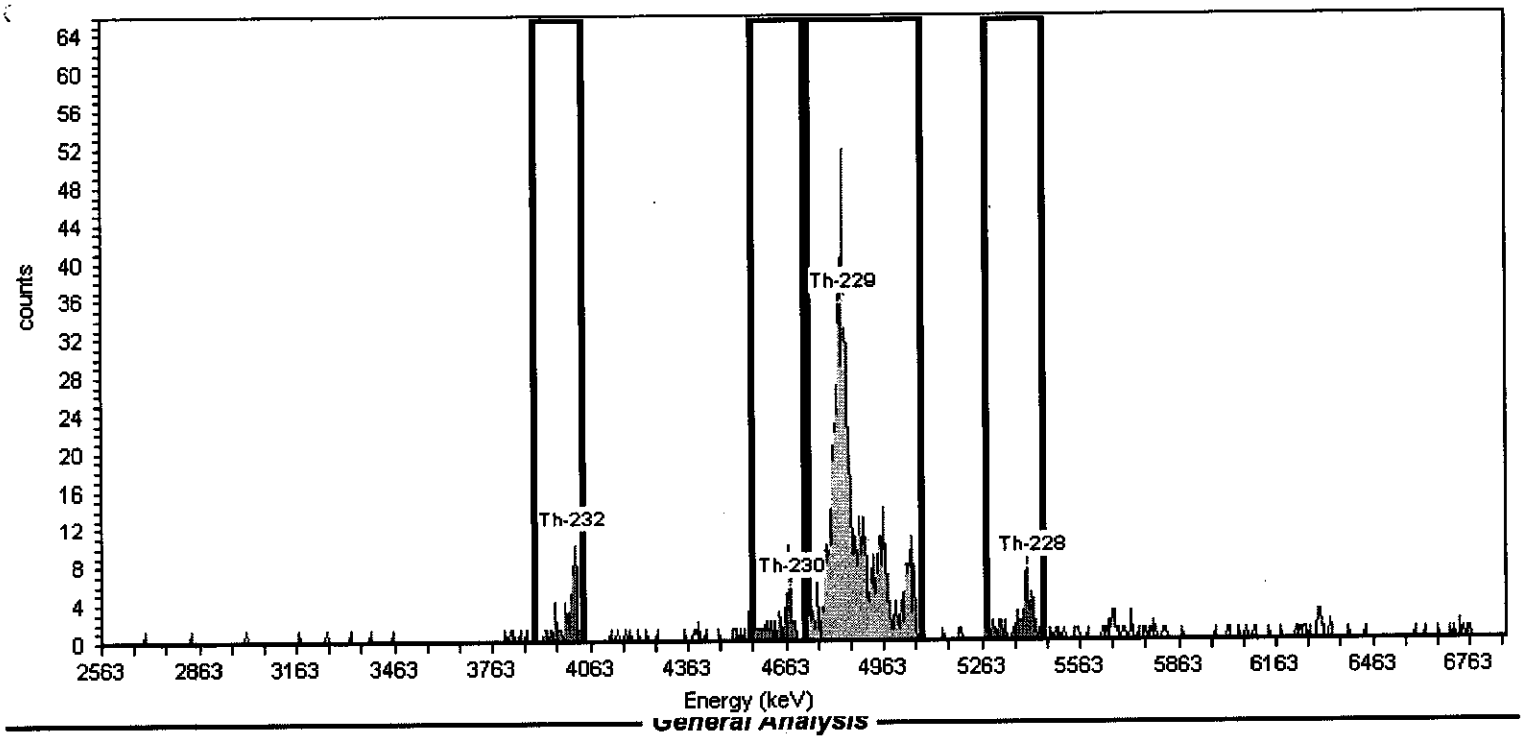
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.48%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/28/2010 1:23:36PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	8.726	100.0	55.00	1.0000	54	6.598E-001	3.084E-001	2.842E-002	8.991E-002
Th-230	4687.000	4561.000	4717.000	37.806	99.7	53.58	25.0000	29	3.503E-001	3.344E-001	1.426E-001	3.183E-001
Th-229	4845.000	4737.000	5080.000	44.266	99.6	792.67	16.6748	776	1.404E+001	1.635E+000	1.165E-001	2.663E-001
Th-228	5423.000	5280.000	5453.000	33.087	99.4	61.02	8.0000	53	6.518E-001	3.365E-001	8.088E-002	1.950E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:41:59PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

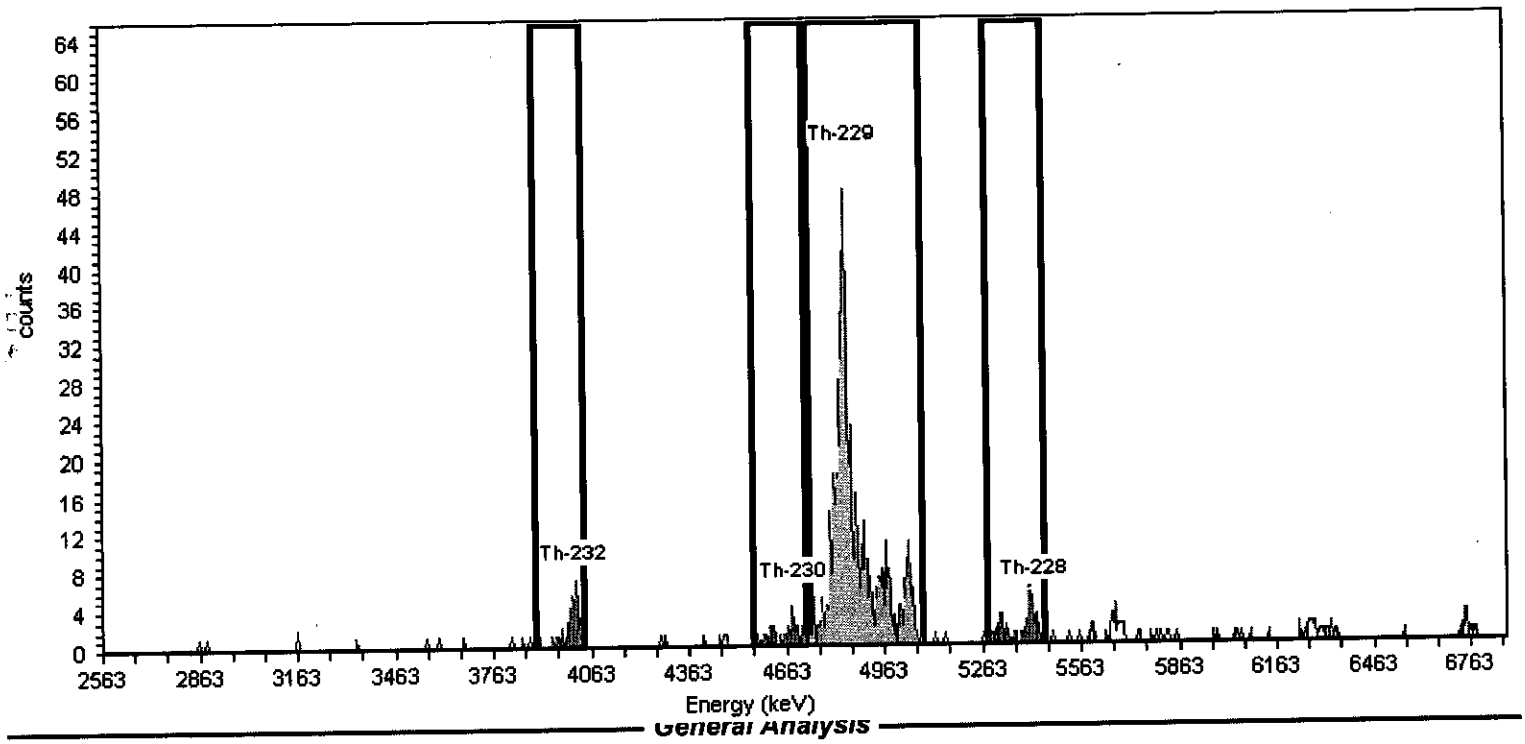
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 129.38%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/28/2010 1:23:36PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	10.686	100.0	49.00	3.8182	45	6.350E-001	3.362E-001	6.388E-002	1.658E-001
Th-230	4687.000	4561.000	4717.000	.000	99.7	35.00	24.4109	11	1.493E-001	3.276E-001	1.620E-001	3.622E-001
Th-229	4845.000	4737.000	5080.000	43.057	99.6	688.34	13.6631	675	1.232E+001	1.526E+000	1.213E-001	2.809E-001
Th-228	5423.000	5280.000	5453.000	29.292	99.4	54.91	5.1151	50	7.040E-001	3.626E-001	7.439E-002	1.870E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 7:03:08AM 7/29/2010

Sample

Sample: L83049-10 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

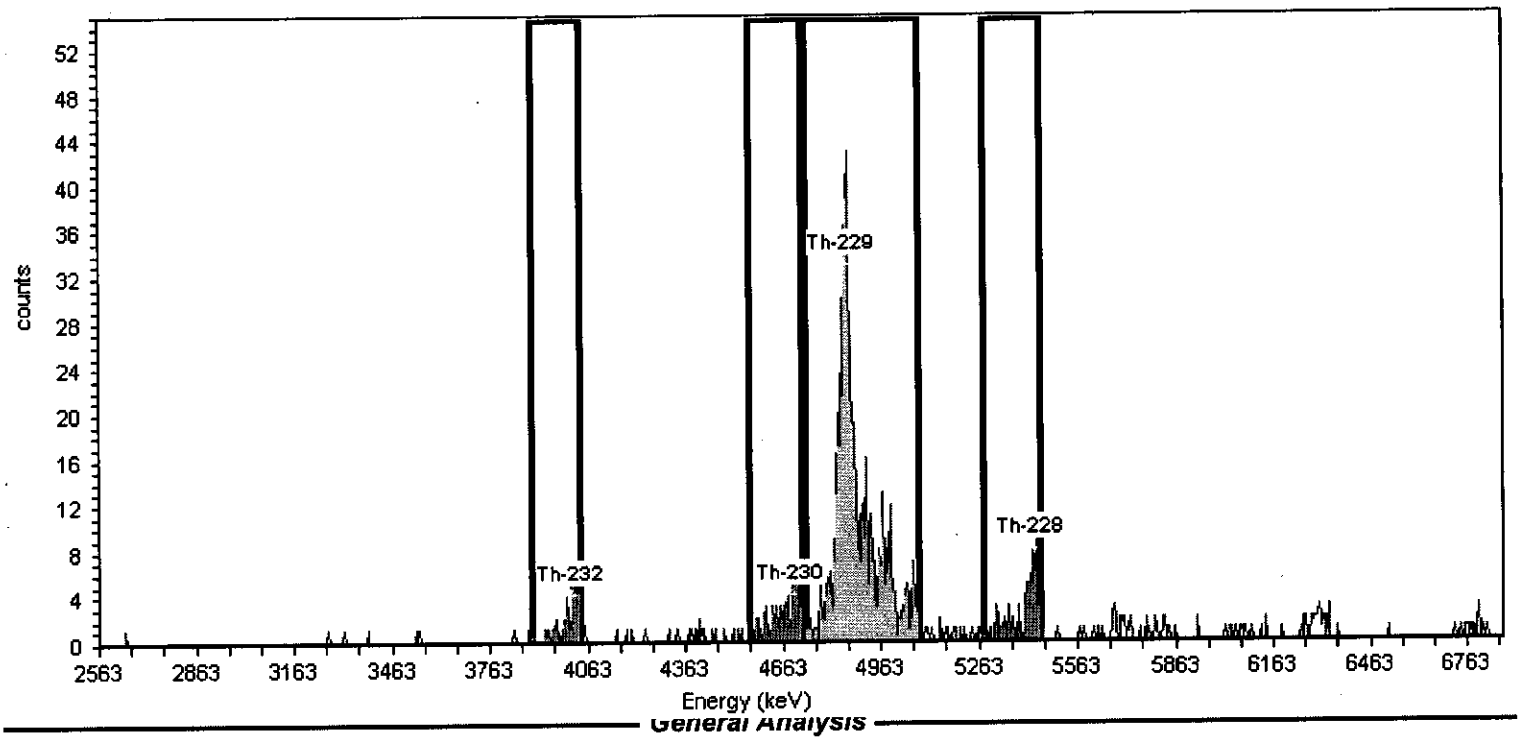
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 126.20%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/28/2010 1:23:39PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	27.350	100.0	57.70	5.2226	52	7.448E-001	3.749E-001	7.546E-002	1.893E-001
Th-230	4687.000	4561.000	4717.000	21.561	99.7	77.00	25.5891	51	7.319E-001	4.612E-001	1.675E-001	3.736E-001
Th-229	4845.000	4737.000	5080.000	42.875	99.6	686.01	18.0000	668	1.201E+001	1.503E+000	1.407E-001	3.199E-001
Th-228	5423.000	5280.000	5453.000	16.324	99.4	81.68	15.0905	67	9.508E-001	4.698E-001	1.290E-001	2.967E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 7:03:12AM 7/29/2010

Sample

Sample: L83049-11 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

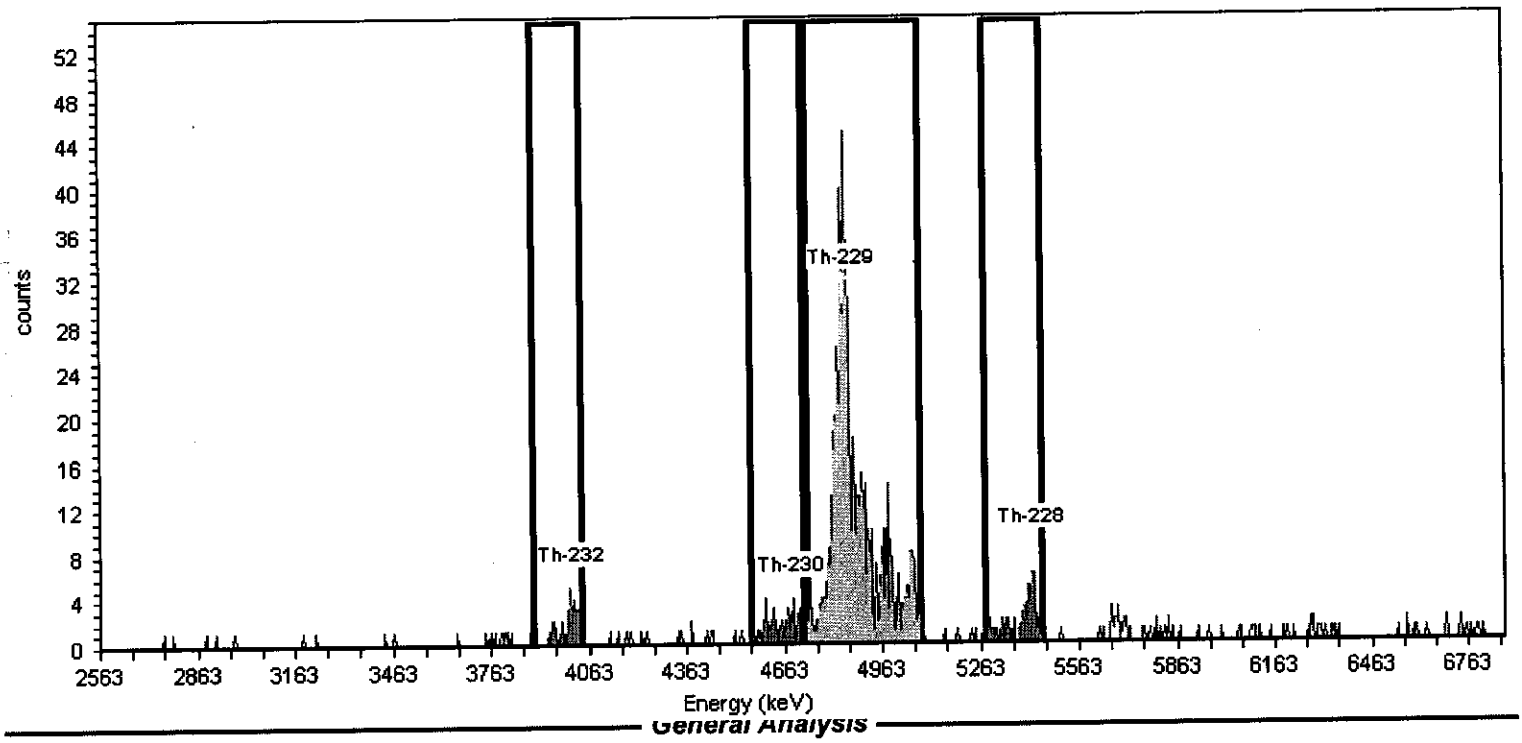
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 145.24%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/28/2010 1:23:40PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	22.279	100.0	37.00	3.0000	34	4.283E-001	2.562E-001	5.076E-002	1.356E-001
Th-230	4687.000	4561.000	4717.000	9.500	99.7	46.41	14.2393	32	4.065E-001	3.079E-001	1.109E-001	2.560E-001
Th-229	4845.000	4737.000	5080.000	47.568	99.6	776.66	24.0000	753	1.383E+001	1.648E+000	1.442E-001	3.225E-001
Th-228	5423.000	5280.000	5453.000	24.103	99.4	62.00	8.1151	54	6.829E-001	3.506E-001	8.399E-002	2.023E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 7:03:20AM 7/29/2010

Sample

Sample: L83049-12 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

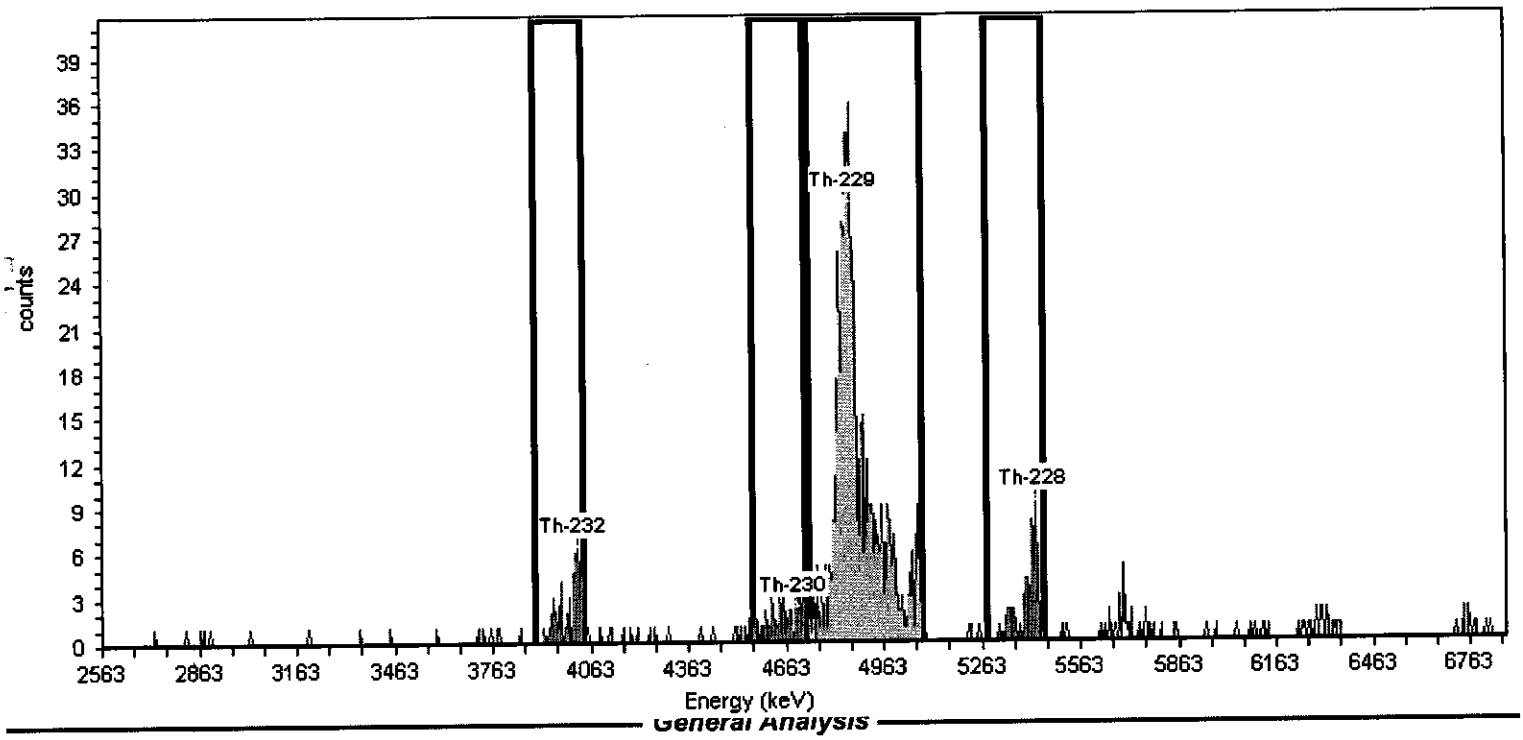
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 134.98%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/28/2010 1:23:42PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	73.847	100.0	61.88	1.0000	61	8.203E-001	3.663E-001	3.135E-002	9.915E-002
Th-230	4687.000	4561.000	4717.000	18.065	99.7	52.84	7.0000	46	6.195E-001	3.411E-001	8.318E-002	2.029E-001
Th-229	4845.000	4737.000	5080.000	56.460	99.6	715.69	12.0000	704	1.285E+001	1.558E+000	1.090E-001	2.547E-001
Th-228	5423.000	5280.000	5453.000	7.451	99.4	65.00	12.0000	53	7.184E-001	3.892E-001	1.092E-001	2.552E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 7:03:16AM 7/29/2010

Sample

Sample: L83049-13 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

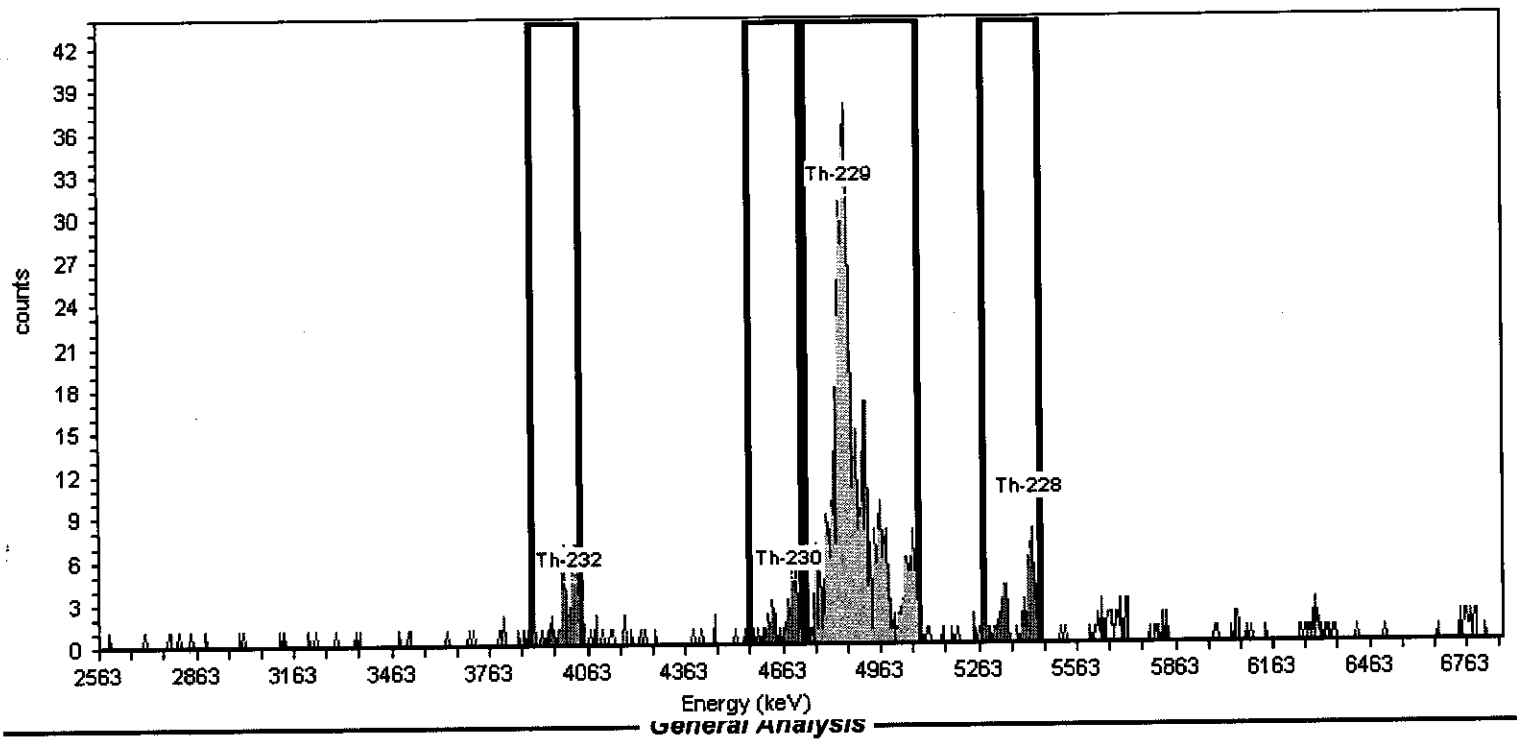
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 133.11%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/28/2010 1:23:44PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	28.940	100.0	63.32	5.0000	58	7.980E-001	3.808E-001	7.117E-002	1.794E-001
Th-230	4687.000	4561.000	4717.000	17.967	99.7	46.99	13.4175	34	4.608E-001	3.352E-001	1.169E-001	2.710E-001
Th-229	4845.000	4737.000	5080.000	48.617	99.6	705.67	12.6748	693	1.267E+001	1.549E+000	1.138E-001	2.647E-001
Th-228	5423.000	5280.000	5453.000	14.141	99.4	73.14	13.9753	59	8.144E-001	4.239E-001	1.197E-001	2.767E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:28:32PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-14 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

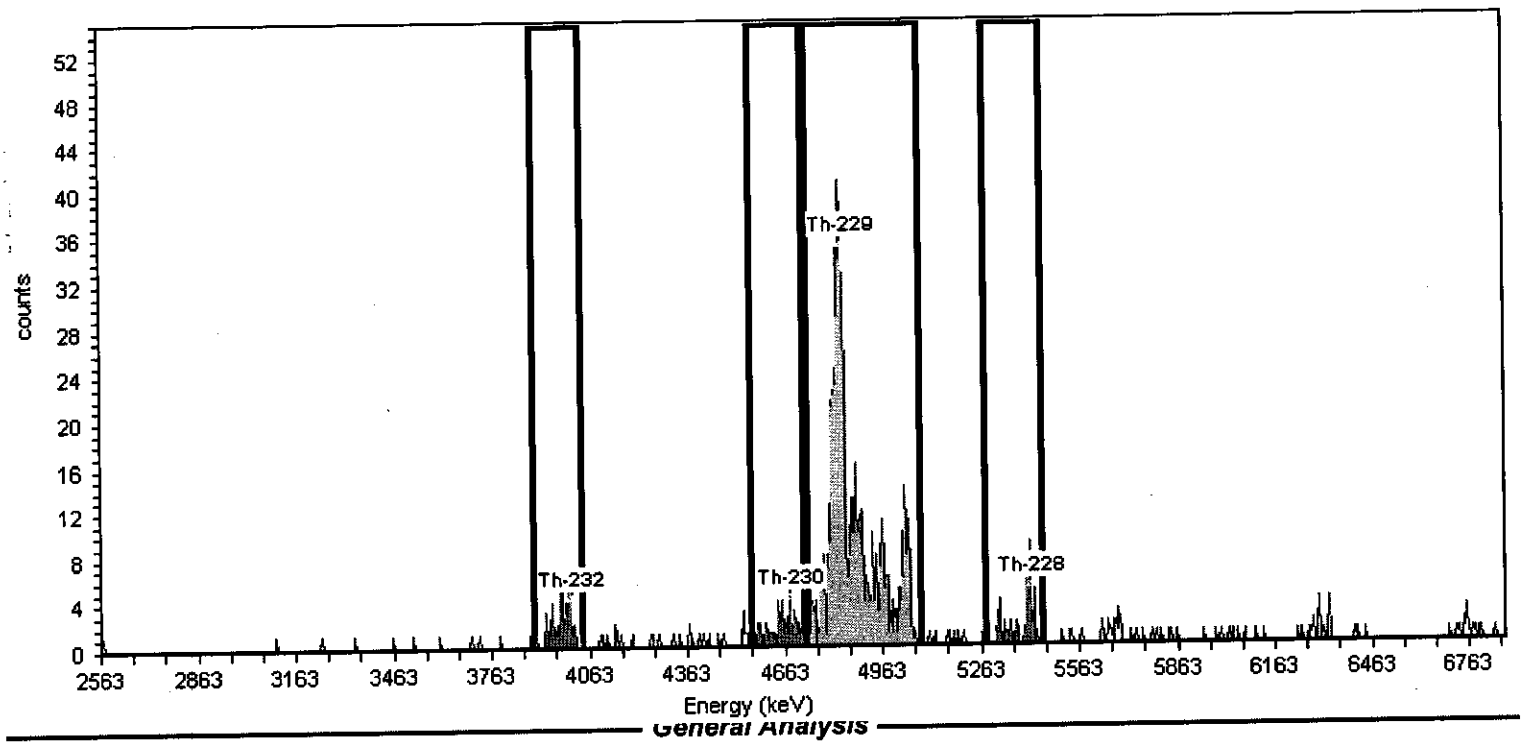
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 129.18%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/28/2010 1:23:44PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	45.514	100.0	60.18	4.0000	56	7.963E-001	3.822E-001	6.594E-002	1.702E-001
Th-230	4687.000	4561.000	4717.000	61.991	99.7	54.84	17.0000	38	5.379E-001	3.799E-001	1.364E-001	3.112E-001
Th-229	4845.000	4737.000	5080.000	40.852	99.6	676.99	8.0117	669	1.230E+001	1.519E+000	9.371E-002	2.259E-001
Th-228	5423.000	5280.000	5453.000	26.759	99.4	56.00	16.0000	40	5.703E-001	3.836E-001	1.327E-001	3.040E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:28:37PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-15 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

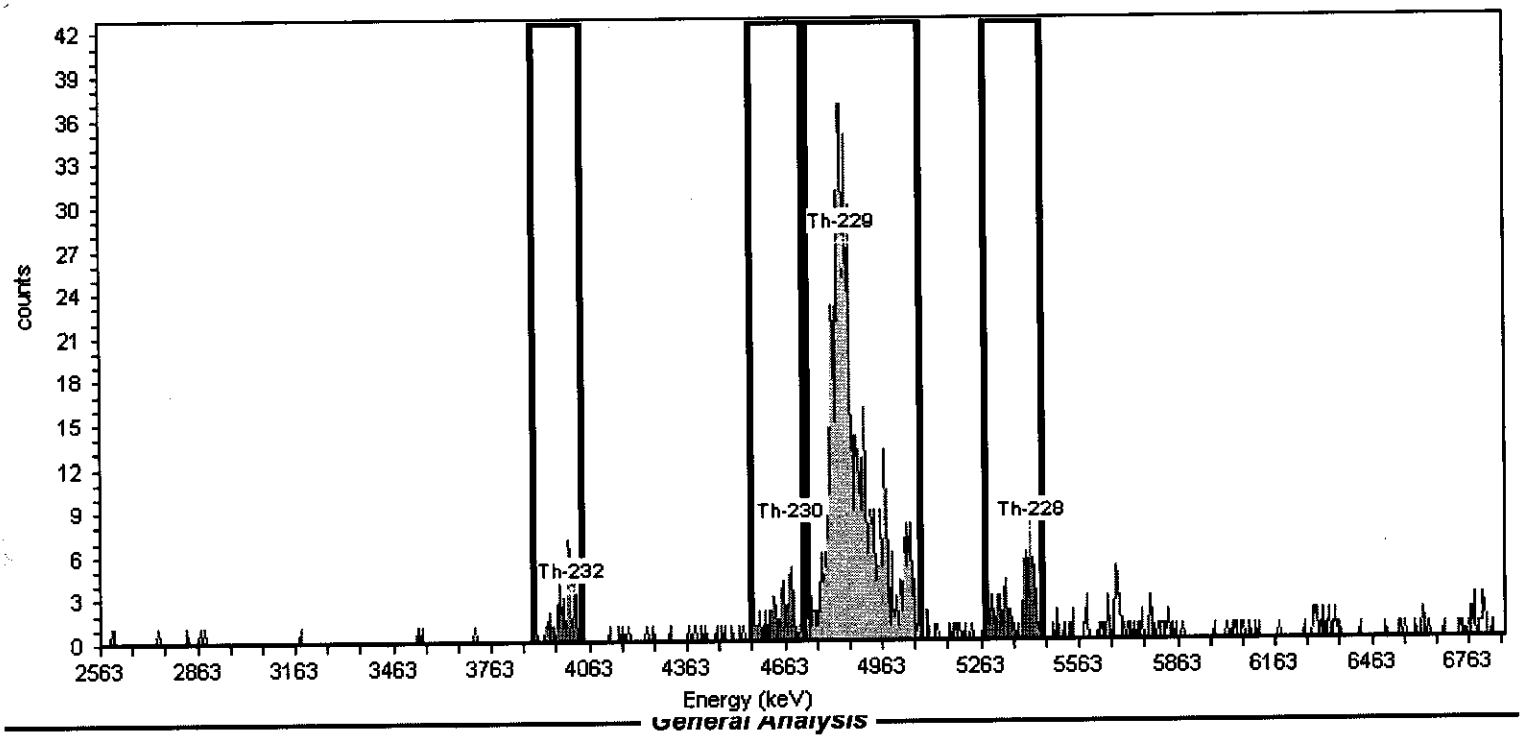
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.04%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/28/2010 1:23:45PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	27.050	100.0	50.14	3.8591	46	5.820E-001	3.041E-001	5.747E-002	1.490E-001
Th-230	4687.000	4561.000	4717.000	29.151	99.7	53.42	22.1716	31	3.941E-001	3.397E-001	1.382E-001	3.104E-001
Th-229	4845.000	4737.000	5080.000	60.627	99.6	777.02	23.0010	754	1.352E+001	1.606E+000	1.409E-001	3.159E-001
Th-228	5423.000	5280.000	5453.000	30.583	99.4	81.00	19.0000	62	7.843E-001	4.152E-001	1.283E-001	2.908E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:28:45PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-16 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

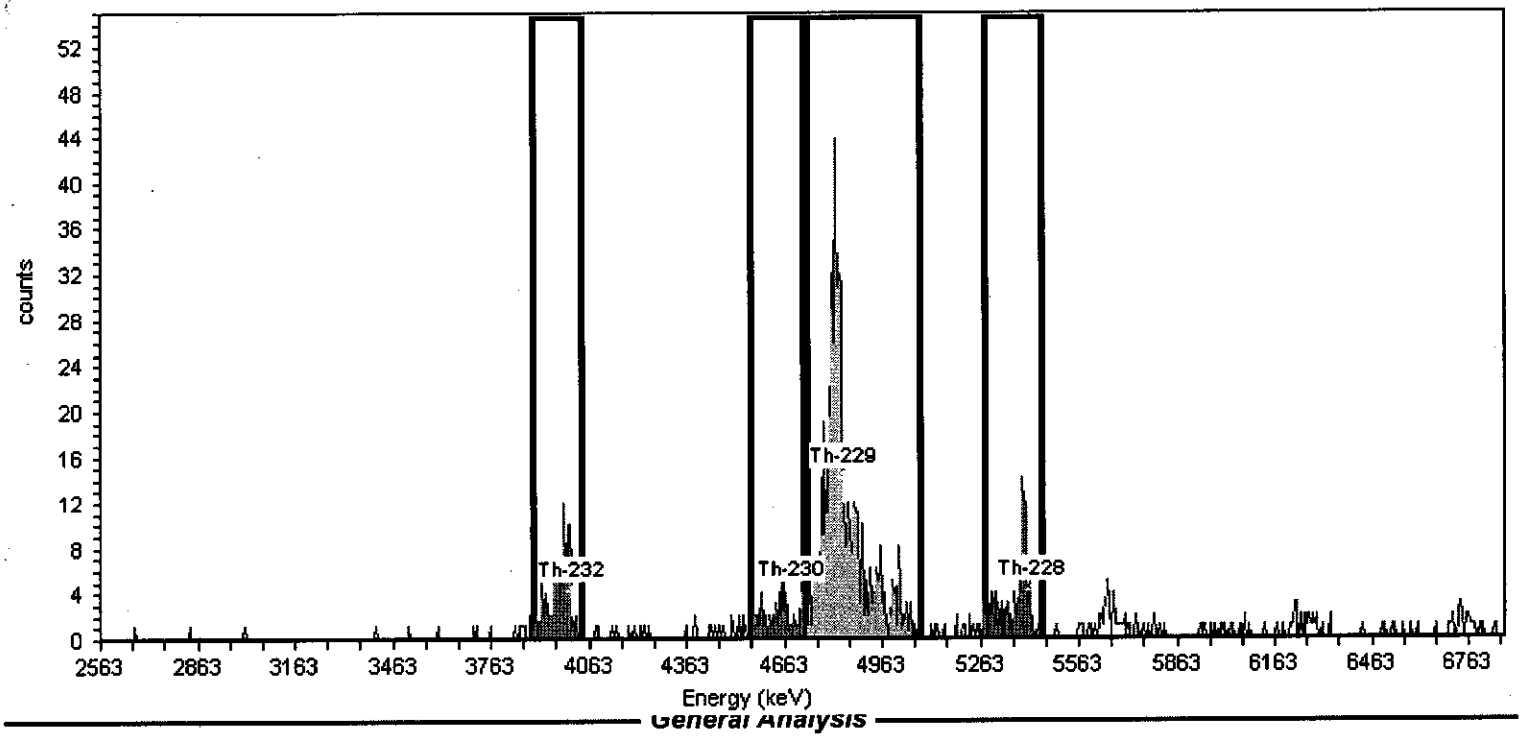
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 125.77%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/28/2010 1:23:45PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	52.720	100.0	119.18	4.0000	115	1.739E+000	6.325E-001	7.025E-002	1.814E-001
Th-230	4687.000	4561.000	4717.000	31.245	99.7	66.84	16.0000	51	7.698E-001	4.470E-001	1.409E-001	3.228E-001
Th-229	4845.000	4737.000	5080.000	44.037	99.6	643.65	15.6631	628	1.197E+001	1.542E+000	1.396E-001	3.202E-001
Th-228	5423.000	5280.000	5453.000	30.323	99.4	122.00	5.0000	117	1.777E+000	6.462E-001	7.901E-002	1.991E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:28:41PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-17 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

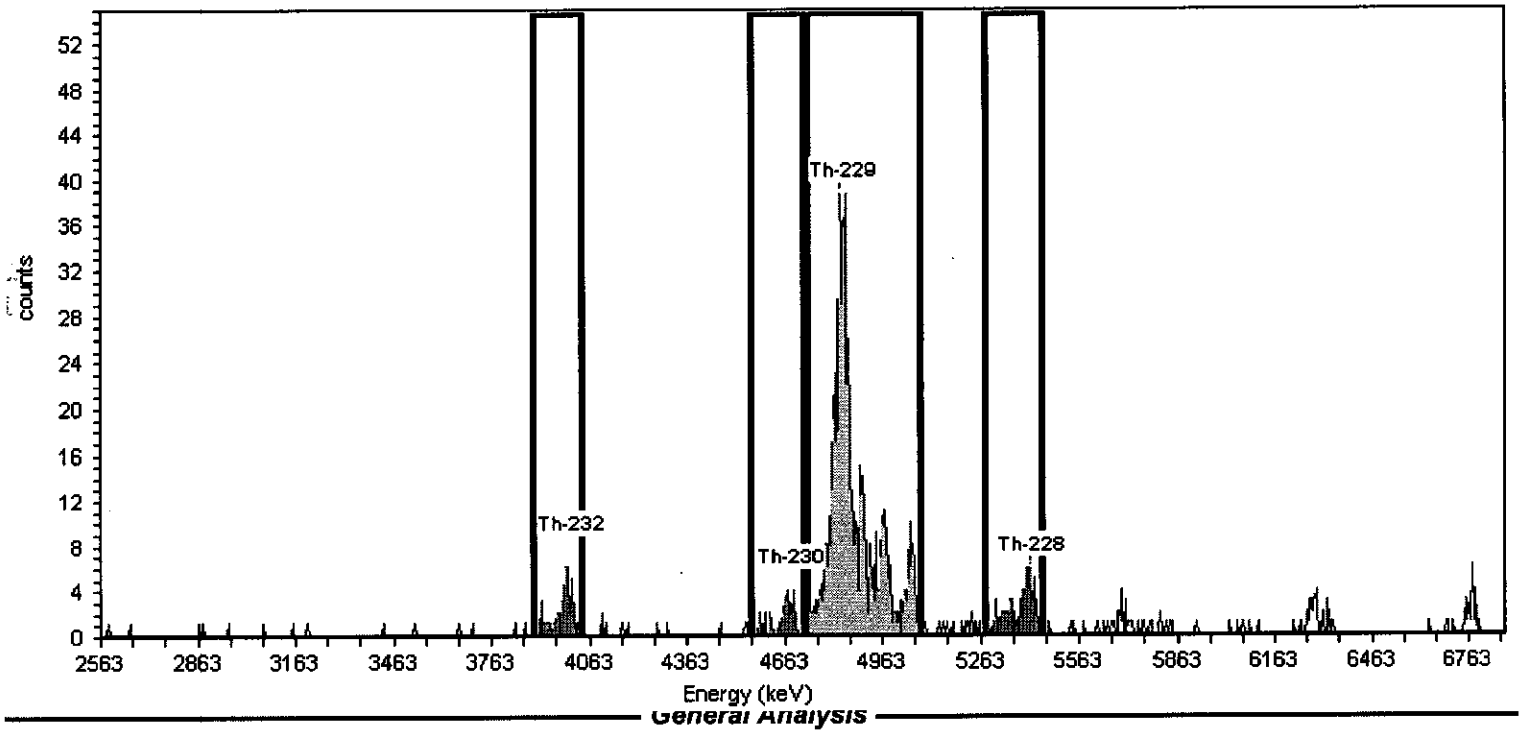
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 139.99%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/28/2010 1:23:46PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	41.510	100.0	56.00	2.0409	54	7.261E-001	3.454E-001	4.472E-002	1.258E-001
Th-230	4687.000	4561.000	4717.000	10.482	99.7	37.16	12.4175	25	3.340E-001	2.941E-001	1.106E-001	2.578E-001
Th-229	4845.000	4737.000	5080.000	48.460	99.6	718.98	14.3252	705	1.333E+001	1.622E+000	1.190E-001	2.745E-001
Th-228	5423.000	5280.000	5453.000	41.692	99.4	79.00	7.7944	71	9.639E-001	4.322E-001	8.792E-002	2.125E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:31:28PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-18 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

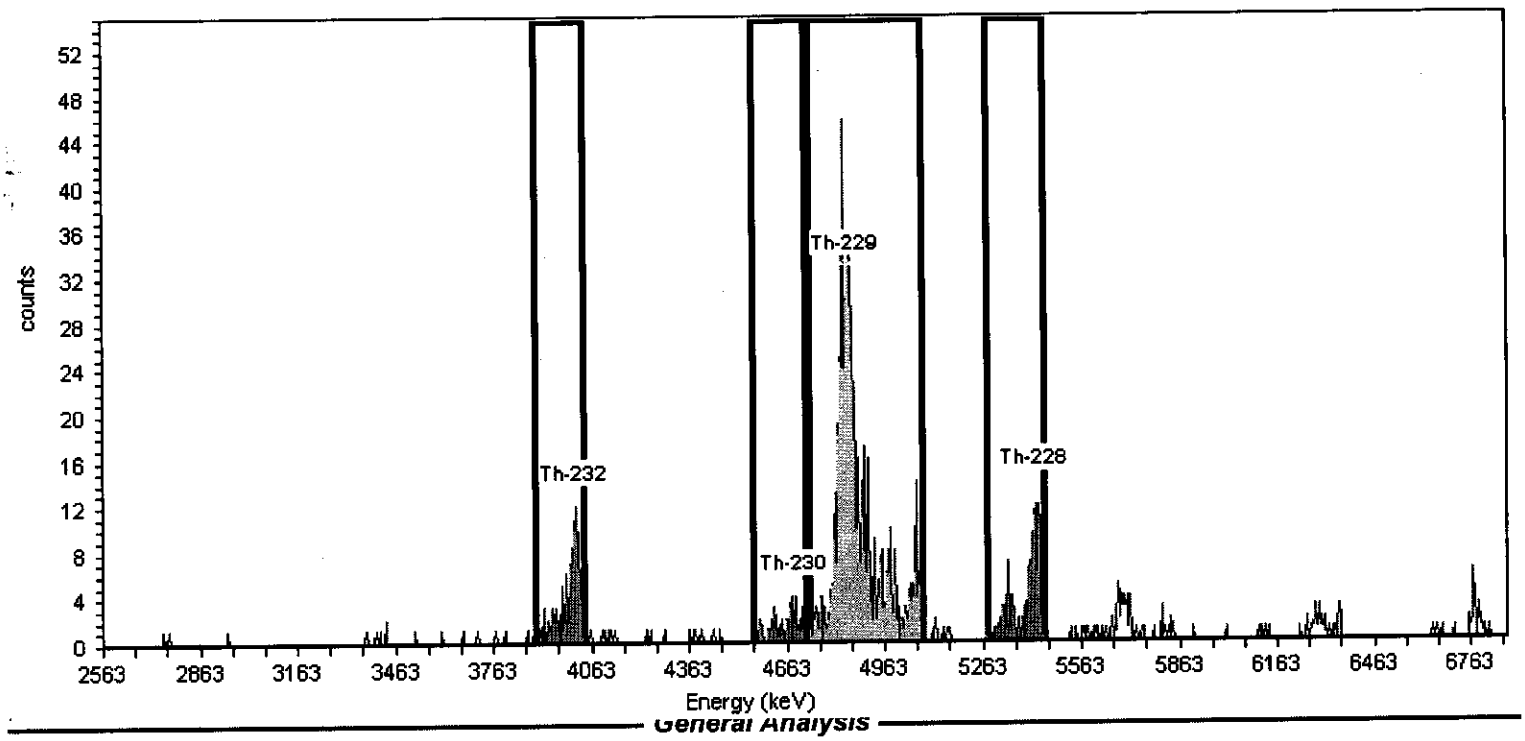
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 137.11%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/28/2010 1:23:47PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	15.642	100.0	121.00	4.0409	117	1.622E+000	5.841E-001	6.486E-002	1.672E-001
Th-230	4687.000	4561.000	4717.000	10.109	99.7	45.58	11.0000	35	4.810E-001	3.309E-001	1.073E-001	2.523E-001
Th-229	4845.000	4737.000	5080.000	53.398	99.6	698.00	14.3252	684	1.305E+001	1.612E+000	1.226E-001	2.829E-001
Th-228	5423.000	5280.000	5453.000	15.254	99.4	126.00	9.7039	116	1.623E+000	6.021E-001	1.011E-001	2.400E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
6:31:33PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-19 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

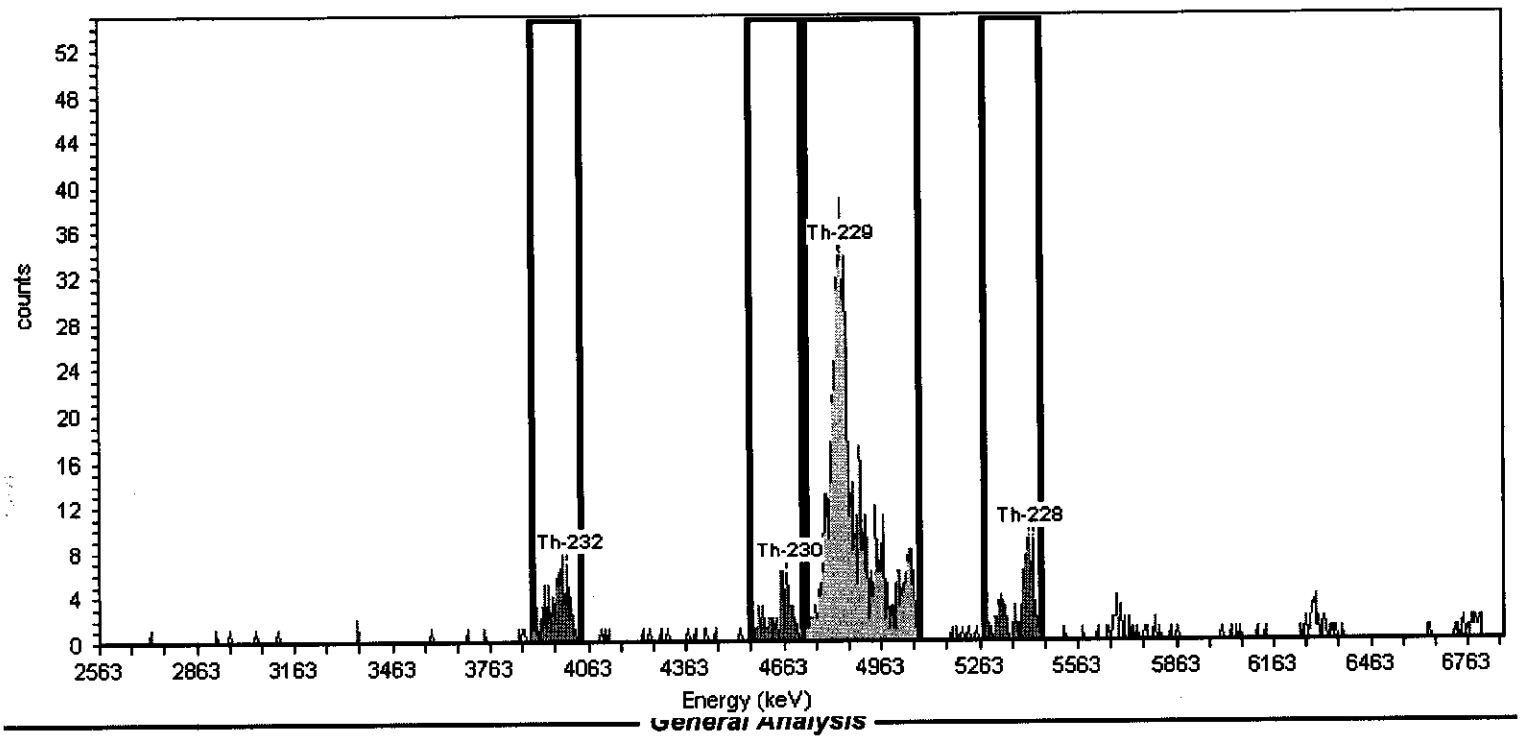
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 145.57%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/28/2010 1:23:48PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	72.197	100.0	95.00	7.0000	88	1.120E+000	4.546E-001	7.833E-002	1.911E-001
Th-230	4687.000	4561.000	4717.000	46.325	99.7	66.58	14.0000	53	6.712E-001	3.728E-001	1.111E-001	2.568E-001
Th-229	4845.000	4737.000	5080.000	48.151	99.6	761.00	16.0000	745	1.386E+001	1.646E+000	1.189E-001	2.724E-001
Th-228	5423.000	5280.000	5453.000	34.821	99.4	104.09	13.8849	90	1.155E+000	4.855E-001	1.110E-001	2.566E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 6:31:37PM 7/28/2010

Sample

Sample: L83049-20 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

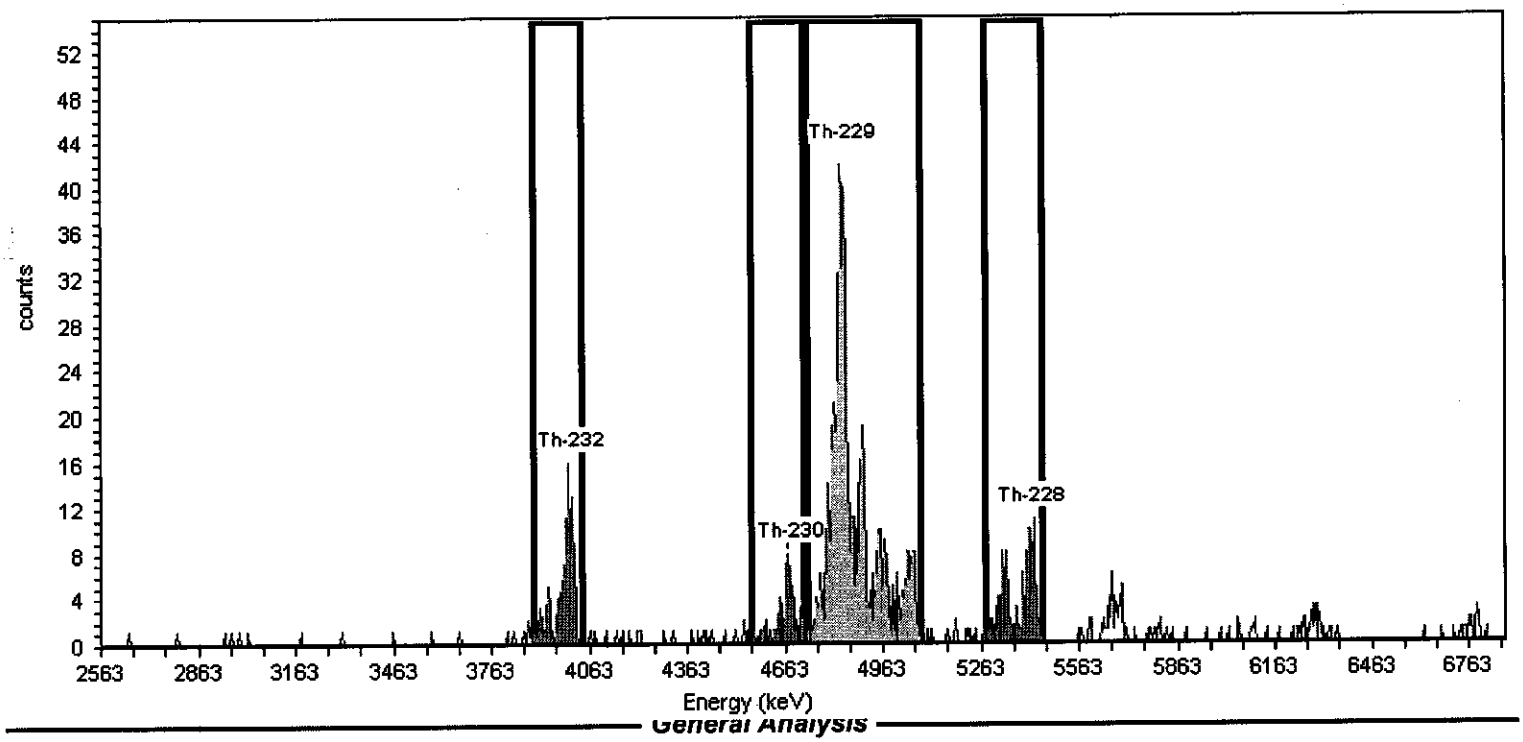
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 137.78%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/28/2010 1:23:49PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	41.617	100.0	128.00	3.0000	125	1.673E+000	5.856E-001	5.394E-002	1.441E-001
Th-230	4687.000	4561.000	4717.000	33.671	99.7	60.84	18.0000	43	5.751E-001	3.787E-001	1.325E-001	3.014E-001
Th-229	4845.000	4737.000	5080.000	39.993	99.6	728.69	20.3496	708	1.312E+001	1.603E+000	1.410E-001	3.185E-001
Th-228	5423.000	5280.000	5453.000	27.470	99.4	127.00	8.0000	119	1.602E+000	5.840E-001	8.861E-002	2.137E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 6:31:41PM 7/28/2010

Sample

Sample: L83049-01 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 003
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

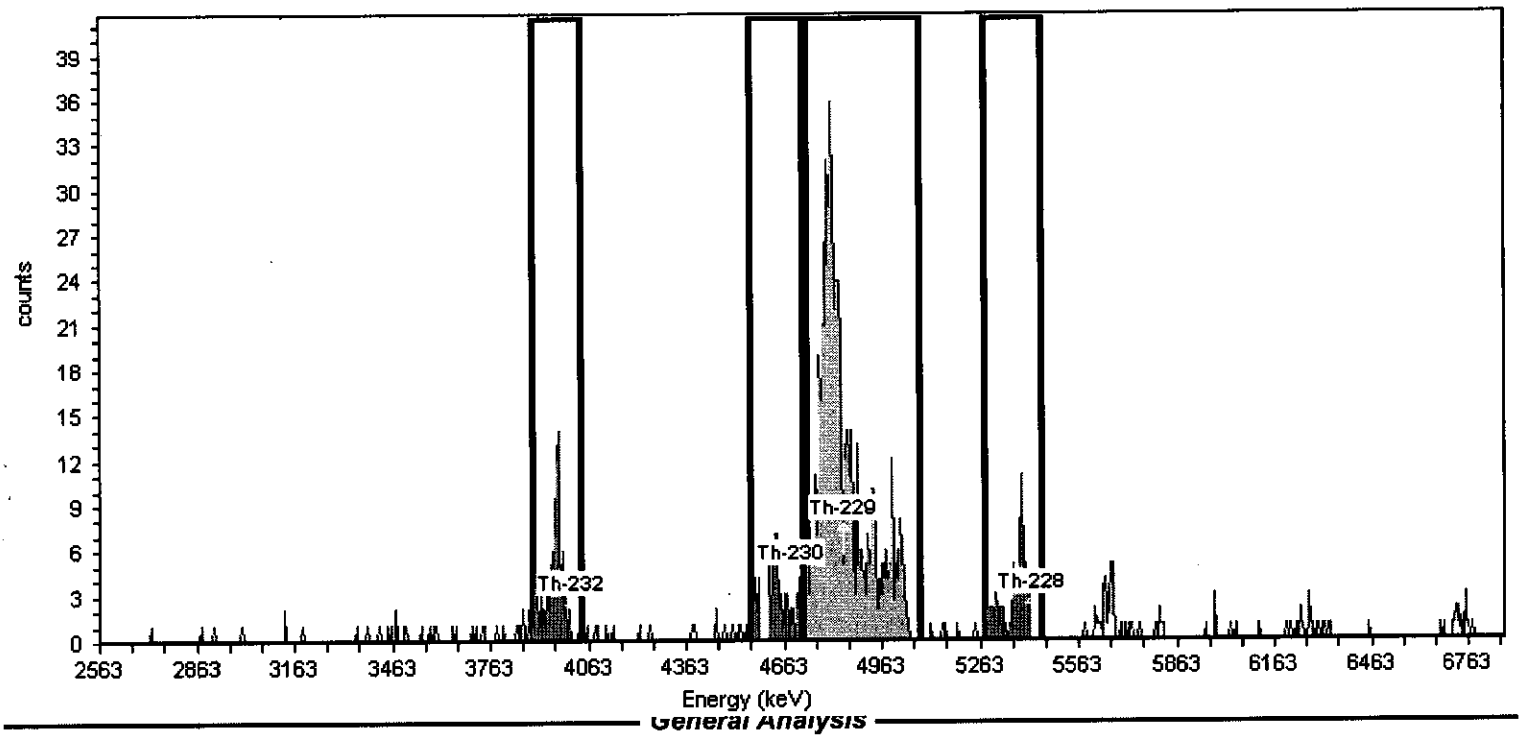
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 143.64%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/28/2010 1:23:50PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 017
Efficiency Calibration:2010.07.26 017
Calibration Date: 7/26/2010 10:20:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.77% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/28/2010 1:21:39PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	31.614	100.0	92.73	2.0000	91	1.185E+000	4.589E-001	4.297E-002	1.213E-001
Th-230	4687.000	4561.000	4717.000	84.942	99.7	72.58	16.0000	57	7.411E-001	4.029E-001	1.219E-001	2.792E-001
Th-229	4845.000	4737.000	5080.000	61.427	99.6	738.70	12.6748	726	1.367E+001	1.638E+000	1.086E-001	2.527E-001
Th-228	5423.000	5280.000	5453.000	35.307	99.4	93.09	6.0905	87	1.143E+000	4.635E-001	7.543E-002	1.864E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:49:39PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83049-20 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 001
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

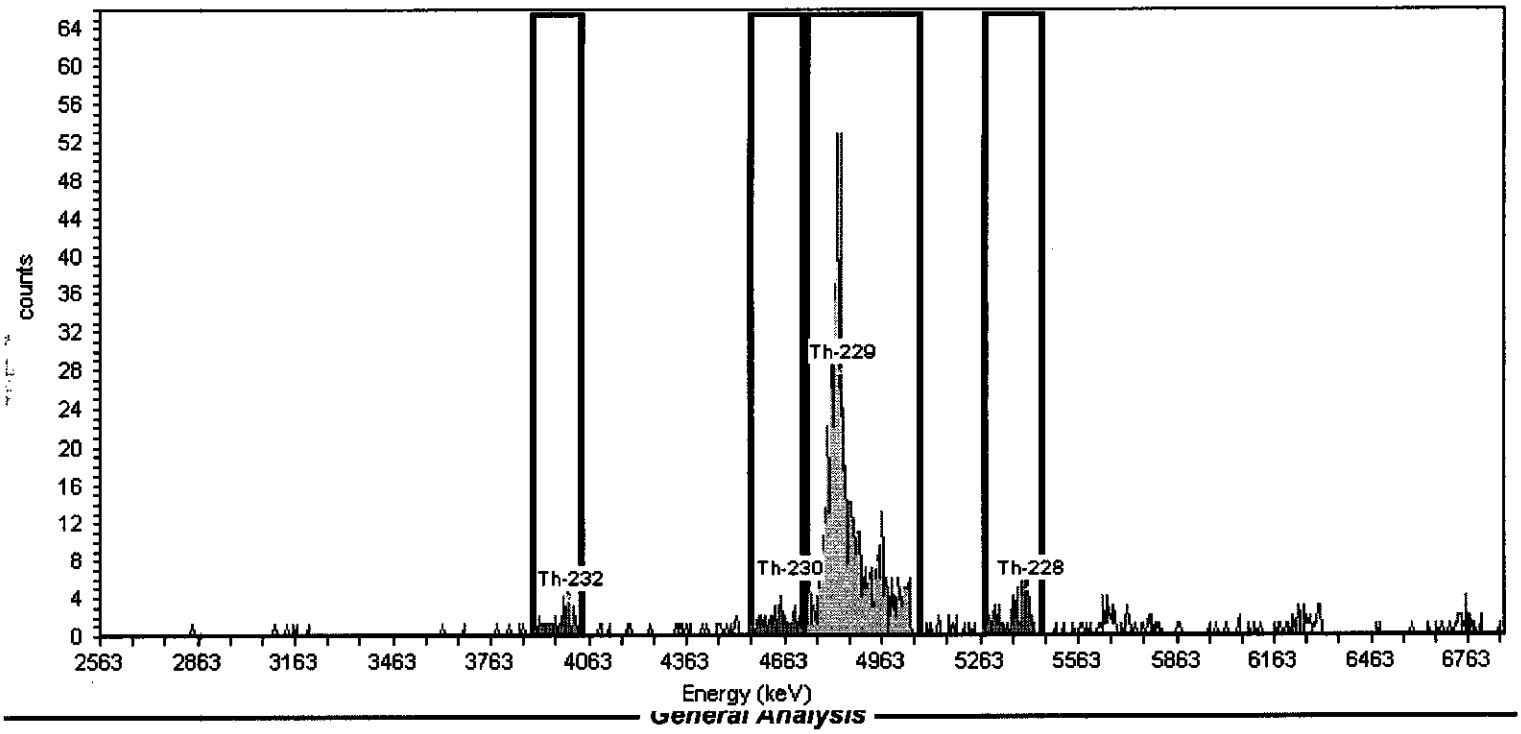
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 140.43%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/29/2010 7:48:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:48:19AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	35.588	100.0	45.18	1.0000	44	5.744E-001	2.925E-001	3.024E-002	9.567E-002
Th-230	4687.000	4561.000	4717.000	10.605	99.7	45.01	21.4109	24	3.077E-001	3.256E-001	1.404E-001	3.160E-001
Th-229	4845.000	4737.000	5080.000	38.690	99.6	743.30	14.0000	729	1.337E+001	1.598E+000	1.136E-001	2.626E-001
Th-228	5423.000	5280.000	5453.000	32.345	99.4	68.00	12.0000	56	7.324E-001	3.848E-001	1.054E-001	2.462E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:49:43PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83049-10 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 001
:
Description: WG286560

Client Name: Undefined
Client Contact:

Tracer

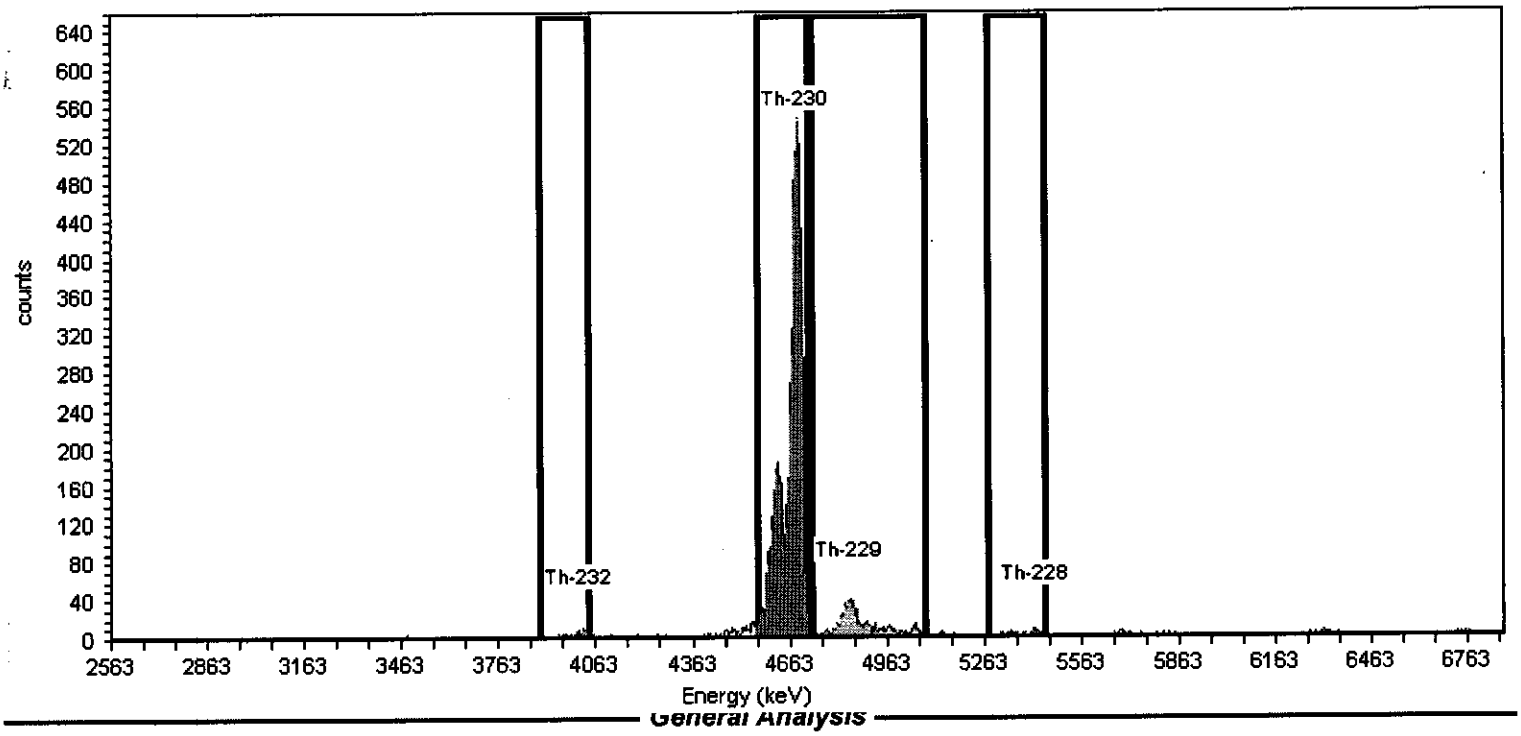
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 137.62%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/29/2010 7:48:50AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:48:19AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	24.229	100.0	70.96	3.0000	68	8.707E-001	3.801E-001	5.163E-002	1.379E-001
Th-230	4687.000	4561.000	4717.000	19.257	99.7	6,564.90	31.4109	6,533	8.396E+001	1.836E+001	1.676E-001	3.699E-001
Th-229	4845.000	4737.000	5080.000	49.578	99.6	764.00	24.0000	740	1.310E+001	1.571E+000	1.466E-001	3.281E-001
Th-228	5423.000	5280.000	5453.000	29.788	99.4	72.88	9.8849	63	8.121E-001	3.929E-001	9.428E-002	2.234E-001

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286535

Project:
SDG#:
SOP#:

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/23/2010
Analysis Date: 7/28/2010
Start Time:
End Time:
Approved: MWM 7-30-10
Approved: MTB 7-30-10

Seq #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 ~~Error~~ pCi/g	LLD (+ -)	LLD pCi/g
1	WG286535PBS		0.5000	9.065	9.0837	**0.0187**	**0.839**	**0.9350**	0.00	1.57	5.40
2	WG286535LCSS	RC100623-1	0.5000	9.0816	9.0999	**0.0183**	**0.821**	**0.9150**	48.04	2.31	4.74
3	L83049-01	BG-7 0-2 COMP	0.4947	9.0755	9.0936	**0.0181**	**0.812**	**0.9050**	0.29	1.49	5.11
4	L83049-02	BG-7 2-12 COMP	0.4922	9.0441	9.0611	**0.0170**	**0.762**	**0.8500**	3.62	1.48	4.76
5	L83049-03	BG-7 12-18 COMP	0.4949	9.0555	9.0743	**0.0188**	**0.843**	**0.9400**	4.45	1.51	4.82
6	L83049-04	BG-8 0-2 COMP	0.4939	9.0646	9.0818	**0.0172**	**0.771**	**0.8600**	1.57	1.72	5.78
7	L83049-05	BG-8 2-12 COMP	0.4950	9.084	9.1022	**0.0182**	**0.816**	**0.9100**	0.00	1.54	5.30
8	L83049-06	BG-8 12-18 COMP	0.4960	9.0757	9.0944	**0.0187**	**0.839**	**0.9350**	0.72	1.41	4.79
9	L83049-07	BG-101 2-12 COMP	0.4956	9.0653	9.0827	**0.0174**	**0.780**	**0.8700**	3.71	1.48	4.76
10	L83049-08	BG-11 0-2 COMP	0.4962	9.0731	9.0911	**0.0180**	**0.807**	**0.9000**	1.17	1.62	5.46
11	L83049-09	BG-11 2-12 COMP	0.4962	9.0684	9.0862	**0.0178**	**0.798**	**0.8900**	0.00	1.66	5.66
12	L83049-10	BG-11 12-18 COMP	0.4956	9.0415	9.0592	**0.0177**	**0.794**	**0.8850**	0.74	1.46	4.90
13	L83049-11	BG-12 0-2 COMP	0.4953	9.07	9.0887	**0.0187**	**0.839**	**0.9350**	0.43	1.45	4.89
14	L83049-12	BG-12 2-12 COMP	0.4969	9.075	9.0928	**0.0178**	**0.798**	**0.8900**	2.24	1.37	4.46
15	L83049-13	BG-12 12-18 COMP	0.4934	9.0606	9.078	**0.0174**	**0.780**	**0.8700**	0.00	1.52	5.17
16	L83049-14	BG-15 0-2 COMP	0.4950	9.0738	9.0911	**0.0173**	**0.776**	**0.8650**	1.06	1.69	5.68
17	L83049-15	BG-15 2-12 COMP	0.4972	9.0618	9.0791	**0.0173**	**0.776**	**0.8650**	0.00	1.62	5.50
18	L83049-16	BG-15 12-18 COMP	0.4956	9.0563	9.075	**0.0187**	**0.839**	**0.9350**	0.00	1.39	4.75
19	L83049-17	BG-102 2-12 COMP	0.4948	9.0248	9.0422	**0.0174**	**0.780**	**0.8700**	0.92	1.41	4.72
20	L83049-18	BG-16 0-2 COMP	0.4961	9.0389	9.0577	**0.0188**	**0.843**	**0.9400**	0.00	1.52	5.18
21	L83049-19	BG-16 2-12 COMP	0.4961	9.0738	9.0923	**0.0185**	**0.830**	**0.9250**	0.00	1.60	5.38
22	L83049-20	BG-16 12-18 COMP	0.4959	9.0813	9.1006	**0.0193**	**0.865**	**0.9650**	1.30	1.35	4.43
23	L83049-01DUP		0.4947	9.0767	9.0939	**0.0172**	**0.771**	**0.8600**	0.44	1.57	5.26
24	L83049-20DUP		0.4959	9.0674	9.0853	**0.0179**	**0.803**	**0.8950**	2.77	1.38	4.38
25	L83049-10MS	RC100623-1	0.4956	9.0611	9.0785	**0.0174**	**0.780**	**0.8700**	48.88	2.47	5.09

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

KBJ
8/2/10

Seq #	ACZ Sample No.	GR CPM Beta	Det #	BG β	NET CPM β	ADJ CPM β	Start Ingrow	Analysis Time	Ingrow minutes	Efficiency Beta	Det #	Det BG β
1	*WG286535PBS*	2.56	1	2.56	0	0.00	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	1	2.56
2	*WG286535LCSS*	8.73	2	1.89	6.84	6.84	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	2	1.89
3	*L83049-01*	2.14	3	2.10	0.041	0.04	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	3	2.1
4	*L83049-02*	2.06	4	1.59	0.471	0.47	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	4	1.59
5	*L83049-03*	2.66	5	2.02	0.644	0.64	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	5	2.02
6	*L83049-04*	2.63	6	2.42	0.207	0.21	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	6	2.42
7	*L83049-05*	2.29	7	2.29	0	0.00	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	7	2.29
8	*L83049-06*	2.08	8	1.98	0.104	0.10	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	8	1.98
9	*L83049-07*	2.19	9	1.69	0.498	0.50	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	9	1.69
10	*L83049-08*	2.55	10	2.39	0.162	0.16	7/23/2010 14:30	7/28/2010 10:12	6987	**0.3197**	10	2.39
11	*L83049-09*	2.56	1	2.56	0	0.00	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
12	*L83049-10*	1.99	2	1.89	0.102	0.10	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
13	*L83049-11*	2.16	3	2.10	0.063	0.06	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
14	*L83049-12*	1.90	4	1.59	0.311	0.31	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
15	*L83049-13*	2.02	5	2.02	0	0.00	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
16	*L83049-14*	2.56	6	2.42	0.142	0.14	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
17	*L83049-15*	2.29	7	2.29	0	0.00	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
18	*L83049-16*	1.98	8	1.98	0	0.00	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
19	*L83049-17*	1.81	9	1.69	0.124	0.12	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
20	*L83049-18*	2.39	10	2.39	0	0.00	7/23/2010 14:30	7/28/2010 11:52	7087	**0.3197**		
21	*L83049-19*	2.56	1	2.56	0	0.00	7/23/2010 14:30	7/28/2010 14:02	7217	**0.3197**		
22	*L83049-20*	2.09	2	1.89	0.198	0.20	7/23/2010 14:30	7/28/2010 14:02	7217	**0.3197**		
23	*L83049-01DUP*	2.16	3	2.10	0.06	0.06	7/23/2010 14:30	7/28/2010 14:02	7217	**0.3197**		
24	*L83049-20DUP*	1.98	4	1.59	0.391	0.39	7/23/2010 14:30	7/28/2010 14:02	7217	**0.3197**		
25	*L83049-10MS*	8.73	5	2.02	6.71	6.71	7/23/2010 14:30	7/28/2010 14:02	7217	**0.3197**		

Decay Equation for Pb210:	Pb-210
Standard Preparation Date	4/1/2002
Initial True Value (pCi/mL)	100.00
Decayed Value (pCi/mL)	77.20

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-30-10

Approved: MTB
Date: 7-30-10

Work Group: WG286795
Sample Type: Solid
Analysis Date: 7-28-10
Analyst: MWM
Prep Date: 7-23-10

Weekly background file: Back4523
Daily background file: Back4526

Alpha performance file: —
Beta performance file: Perb2264

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?		✓	
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

AGZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286995

Date Reported: 30-Jul-10
Run ID: R736291
Date Analyzed: 28-Jul-10
ICAL Workgroup:
Instrument ID: PREP

L83049-01

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.29	1		pCi/g	++	5.1	1.5		TB

L83049-02

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	3.6	1		pCi/g	++	4.8	1.5		TB

L83049-03

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	4.5	1		pCi/g	++	4.8	1.5		TB

L83049-04

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.6	1		pCi/g	++	5.8	1.7		TB

L83049-05

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.3	1.5		TB

L83049-06

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.72	1		pCi/g	++	4.8	1.4		TB

L83049-07

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	3.7	1		pCi/g	++	4.8	1.5		TB

L83049-08

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.2	1		pCi/g	++	5.5	1.6		TB

WG286535LCSS

Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	48	1		pCi/g	++	4.7	2.3	RC100623-1	
SREV	LEAD 210	REC	62.2	1		%	++	4.7	2.3	RC100623-1	
SREV	LEAD 210	TRUE	77.2	1		pCi/g	++	4.7	2.3	RC100623-1	

WG286535PBS Tag: Measured: 7/28/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0	1		pCi/g	++	5.4	1.6		

L83049-09 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.7	1.7		TB

L83049-10 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.74	1		pCi/g	++	4.9	1.5		TB

L83049-11 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.43	1		pCi/g	++	4.9	1.5		TB

L83049-12 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.2	1		pCi/g	++	4.5	1.4		TB

L83049-13 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.2	1.5		TB

L83049-14 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.1	1		pCi/g	++	5.7	1.7		TB

L83049-15 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.5	1.6		TB

L83049-16 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	4.8	1.4		TB

L83049-17 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.92	1		pCi/g	++	4.7	1.4		TB

L83049-18 Tag: Measured: 7/28/2010 11:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.2	1.5		TB

L83049-01DUP

Tag: Measured: 7/28/2010 2:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0.44	1		pCi/g	++	5.3	1.6		
SREV	LEAD 210	RER	0.07	1		%	++	10	5		
FAIL	LEAD 210	RPD	41.1	1		pCi/g	ALRT	5.3	1.6		

L83049-10MS

Tag: Measured: 7/28/2010 2:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	49	1		pCi/g	++	5.1	2.5	RC100623-1	
SREV	LEAD 210	REC	62.5	1		%	++	5.1	2.5	RC100623-1	
SREV	LEAD 210	TRUE	77.2	1		pCi/g	++	5.1	2.5	RC100623-1	

L83049-19

Tag: Measured: 7/28/2010 2:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	5.4	1.6		TB

L83049-20

Tag: Measured: 7/28/2010 2:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.3	1		pCi/g	++	4.4	1.4		TB

L83049-20DUP

Tag: Measured: 7/28/2010 2:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	2.8	1		pCi/g	++	4.4	1.4		
SREV	LEAD 210	RER	0.76	1		%	++	10	5		
FAIL	LEAD 210	RPD	73.2	1		pCi/g	ALRT	4.4	1.4		

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286535

Project: _____
SDG#: _____
SOP#: _____

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-23-07 1:30
Analysis Date: _____
Start Time: _____
End Time: _____
Approved: _____
Approved: _____

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 Error pCi/g	LLD (+ -)	LLD pCi/g
1	PBS		50mL						#DIV/0!		
2	LCSS								#DIV/0!		
3	L83049-01	BG-7 0-2 COMP							#DIV/0!		
4	L83049-02	BG-7 2-12 COMP							#DIV/0!		
5	L83049-03	BG-7 12-18 COMP							#DIV/0!		
6	L83049-04	BG-8 0-2 COMP							#DIV/0!		
7	L83049-05	BG-8 2-12 COMP							#DIV/0!		
8	L83049-06	BG-8 12-18 COMP							#DIV/0!		
9	L83049-07	BG-101 2-12 COMP							#DIV/0!		
10	L83049-08	BG-11 0-2 COMP							#DIV/0!		
11	L83049-09	BG-11 2-12 COMP							#DIV/0!		
12	L83049-10	BG-11 12-18 COMP							#DIV/0!		
13	L83049-11	BG-12 0-2 COMP							#DIV/0!		
14	L83049-12	BG-12 2-12 COMP							#DIV/0!		
15	L83049-13	BG-12 12-18 COMP							#DIV/0!		
16	L83049-14	BG-15 0-2 COMP							#DIV/0!		
17	L83049-15	BG-15 2-12 COMP							#DIV/0!		
18	L83049-16	BG-15 12-18 COMP							#DIV/0!		
19	L83049-17	BG-102 2-12 COMP							#DIV/0!		
20	L83049-18	BG-16 0-2 COMP							#DIV/0!		
21	L83049-19	BG-16 2-12 COMP							#DIV/0!		
22	L83049-20	BG-16 12-18 COMP							#DIV/0!		
23	DUP 1								#DIV/0!		
24	DUP 20								#DIV/0!		
25	MS 10								#DIV/0!		

Comments: _____

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

MWM
7-23-10

Radioactive Standards

Ingrow ~~35~~ 7-23-10 14:30

LCS & MS 100623-1

Lead Carrier	100625-1	Sulfuric acid	34642
Iron Chloride	100701-1	Nitric Acid	35035
Nitric Acid 1N	35036	0.1N HNO_3	35035
NH_4OH	34804	2N HNO_3	—
		H_2O_2	—

COMMENTS:

Calculations for dry weight:

Login #
83049-1
83049-2
83049-3
83049-4
83049-5
83049-6
83049-7
83049-8
83049-9
83049-10
83049-11
83049-12
83049-13
83049-14
83049-15
83049-16
83049-17
83049-18
83049-19
83049-20

air dried solid(g)	soils sx wt (g)
0.98936367	0.5
0.984333983	0.5
0.989898071	0.5
0.987871388	0.5
0.989919817	0.5
0.992023471	0.5
0.991269739	0.5
0.992390567	0.5
0.992337708	0.5
0.99129753	0.5
0.990518331	0.5
0.993897123	0.5
0.986708303	0.5
0.990049034	0.5
0.994300562	0.5
0.991245791	0.5
0.989609017	0.5
0.992142556	0.5
0.992285695	0.5
0.991707159	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.49468	50	50	0.494682
0.49217	50	50	0.492167
0.49495	50	50	0.494949
0.49394	50	50	0.493936
0.49496	50	50	0.494960
0.49601	50	50	0.496012
0.49563	50	50	0.495635
0.49620	50	50	0.496195
0.49617	50	50	0.496169
0.49565	50	50	0.495649
0.49526	50	50	0.495259
0.49695	50	50	0.496949
0.49335	50	50	0.493354
0.49502	50	50	0.495025
0.49715	50	50	0.497150
0.49562	50	50	0.495623
0.49480	50	50	0.494805
0.49607	50	50	0.496071
0.49614	50	50	0.496143
0.49585	50	50	0.495854
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286377PBS1	NONE	<2000		07/21/10 9:00	0	7.5	5	5	50				
2	WG286377PBS2	NONE	<2000		07/21/10 10:02	0	7.5	5	5	50				
3	L83049-01	BG-7 0-2 COMP	<2000		07/21/10 11:05	0.5	7.5	5	5	50		98.94		
4	L83049-01DUP	NONE	<2000		07/21/10 12:07	0.5	7.5	5	5	50		98.94		
5	L83049-02	BG-7 2-12 COMP	<2000		07/21/10 13:10	0.5	7.5	5	5	50		98.43		
6	L83049-03	BG-7 12-18 COMP	<2000		07/21/10 14:12	0.5	7.5	5	5	50		98.99		
7	L83049-04	BG-8 0-2 COMP	<2000		07/21/10 15:15	0.5	7.5	5	5	50		98.79		
8	L83049-05	BG-8 2-12 COMP	<2000		07/21/10 16:17	0.5	7.5	5	5	50		98.99		
9	L83049-06	BG-8 12-18 COMP	<2000		07/21/10 17:20	0.5	7.5	5	5	50		99.2		
10	L83049-07	BG-101 2-12 COMP	<2000		07/21/10 18:22	0.5	7.5	5	5	50		99.13		
11	L83049-08	BG-11 0-2 COMP	<2000		07/21/10 19:25	0.5	7.5	5	5	50		99.24		
12	L83049-09	BG-11 2-12 COMP	<2000		07/21/10 20:27	0.5	7.5	5	5	50		99.23		
13	L83049-10	BG-11 12-18 COMP	<2000		07/21/10 21:30	0.5	7.5	5	5	50		99.13		
14	L83049-10DUP	NONE	<2000		07/21/10 22:32	0.5	7.5	5	5	50		99.13		
15	L83049-11	BG-12 0-2 COMP	<2000		07/21/10 23:35	0.5	7.5	5	5	50		99.05		
16	L83049-12	BG-12 2-12 COMP	<2000		07/22/10 0:37	0.5	7.5	5	5	50		99.39		
17	L83049-13	BG-12 12-18 COMP	<2000		07/22/10 1:40	0.5	7.5	5	5	50		98.67		
18	L83049-14	BG-15 0-2 COMP	<2000		07/22/10 2:42	0.5	7.5	5	5	50		99		
19	L83049-15	BG-15 2-12 COMP	<2000		07/22/10 3:45	0.5	7.5	5	5	50		99.43		
20	L83049-16	BG-15 12-18 COMP	<2000		07/22/10 4:47	0.5	7.5	5	5	50		99.12		
21	L83049-17	BG-102 2-12 COMP	<2000		07/22/10 5:50	0.5	7.5	5	5	50		98.96		
22	L83049-18	BG-16 0-2 COMP	<2000		07/22/10 6:52	0.5	7.5	5	5	50		99.21		
23	L83049-19	BG-16 2-12 COMP	<2000		07/22/10 7:55	0.5	7.5	5	5	50		99.23		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:11 AM 72410

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
24	L83049-20	BG-16 12-18 COMP	<2000		07/22/10 8:57	0.5	7.5	5	5	50		99.17		
25	L83049-20DUP	NONE	<2000		07/22/10 10:00	0.5	7.5	5	5	50		99.17		

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:08 AM 72410

LB770 Number 1 User File: Lead 210 Sample Data File: 0728-01
Sample Set: WG286535 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.356	0.422	0.322	0.222	0.222	0.322	0.344	0.267	0.256	0.389
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.56	1.89	2.10	1.59	2.02	2.42	2.29	1.98	1.69	2.39
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-28-110 Time 10:11:48
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1155

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	4739	WG286535PBS	0.000	0.000	1	0.35	0.000	0.000	1	0.85
2	4740	WG286535LCSS	0.000	0.000	1	0.38	6.84	15.0	1	0.74
3	4741	L83049-01	0.000	0.000	1	0.34	0.041	> 100	1	0.77
4	4742	L83049-02	0.089	> 100	1	0.29	0.471	> 100	1	0.68
5	4743	L83049-03	0.000	0.000	1	0.29	0.644	> 100	1	0.76
6	4744	L83049-04	0.000	0.000	1	0.34	0.207	> 100	1	0.83
7	4745	L83049-05	0.000	0.000	1	0.35	0.000	0.000	1	0.80
8	4746	L83049-06	0.000	0.000	1	0.31	0.104	> 100	1	0.75
9	4747	L83049-07	0.000	0.000	1	0.31	0.498	> 100	1	0.70
10	4748	L83049-08	0.000	0.000	1	0.37	0.162	> 100	1	0.82

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Lead 210 Sample Data File: 0728-02
Sample Set: WG286535 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.356	0.422	0.322	0.222	0.222	0.322	0.344	0.267	0.256	0.389
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.56	1.89	2.10	1.59	2.02	2.42	2.29	1.98	1.69	2.39
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-28-110 Time 11:51:37
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1147

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	4749	L83049-09	0.000	0.000	1	0.35	0.000	0.000	1	0.85
2	4750	L83049-10	0.000	0.000	1	0.38	0.102	> 100	1	0.74
3	4751	L83049-11	0.000	0.000	1	0.34	0.063	> 100	1	0.77
4	4752	L83049-12	0.000	0.000	1	0.29	0.311	> 100	1	0.68
5	4753	L83049-13	0.000	0.000	1	0.29	0.000	0.000	1	0.76
6	4754	L83049-14	0.000	0.000	1	0.34	0.142	> 100	1	0.83
7	4755	L83049-15	0.000	0.000	1	0.35	0.000	0.000	1	0.80
8	4756	L83049-16	0.000	0.000	1	0.31	0.000	0.000	1	0.75
9	4757	L83049-17	0.000	0.000	1	0.31	0.124	> 100	1	0.70
10	4758	L83049-18	0.000	0.000	1	0.37	0.000	0.000	1	0.82

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Lead 210 Sample Data File: 0728-03
Sample Set: WG286535/WG286474 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.356	0.422	0.322	0.222	0.222	0.322	0.344	0.267	0.256	0.389
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.56	1.89	2.10	1.59	2.02	2.42	2.29	1.98	1.69	2.39
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-28-110 Time 14:02:25
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1157

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	4759	L83049-19	0.000	0.000	1	0.35	0.000	0.000	1	0.85
2	4760	L83049-20	0.000	0.000	1	0.38	0.198	> 100	1	0.74
3	4761	L83049-01DUP	0.000	0.000	1	0.34	0.060	> 100	1	0.77
4	4762	L83049-20DUP	0.000	0.000	1	0.29	0.391	> 100	1	0.68
5	4763	L83049-10MS	0.000	0.000	1	0.29	6.71	15.4	1	0.76
6	4764	WG286474PBW	0.000	0.000	1	0.34	0.000	0.000	1	0.83
7	4765	WG286474LCSW	0.000	0.000	1	0.35	8.83	13.1	1	0.80
8	4766	L83298-02	0.000	0.000	1	0.31	0.000	0.000	1	0.75
9	4767	L83298-03	0.000	0.000	1	0.31	0.161	> 100	1	0.70
10	4768	L83298-04	0.000	0.000	1	0.37	0.000	0.000	1	0.82

MDA = Minimum Detectable Activity [cpm]

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG287011

Project:
SDG#:
SOP#: SOPRC020.04.10.07

Instrument: Octete
Matrix Class: SOLID
List Type: UISO
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/26/2010
Analysis Date: 7/27/2010
Start Time:
End Time:
Approved: MWM 7-30-10
Approved:

MWM
50.00

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235							Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g		U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	WG286629PBS		0.5	1	10.30	779	0.757	29.000	25.540	-3.460	-0.09	0.41	0.23	7.00	5.00	-2.000	-0.05	0.19	0.23		3.00	10.00	7.000	0.19	0.20	0.23
2	WG286629LCSS	RC100223-2	0.5	1	10.30	514	0.500	21.770	869.480	847.710	33.97	2.51	0.35	11.02	38.06	27.038	1.09	0.59	0.35		8.00	903.00	895.000	35.87	2.54	0.35
3	L83049-01	BG-7 0-2 COMP	0.49468	1	10.30	748	0.727	14.230	47.710	33.480	0.93	0.46	0.24	2.02	4.02	1.998	0.06	0.14	0.24		3.00	27.00	24.000	0.67	0.32	0.24
4	L83049-02	BG-7 2-12 COMP	0.49217	1	10.30	799	0.777	15.060	60.000	44.940	1.18	0.48	0.23	9.00	2.00	-7.000	-0.18	0.18	0.23		6.57	34.57	27.999	0.73	0.35	0.23
5	L83049-03	BG-7 12-18 COMP	0.49495	1	10.30	864	0.840	23.000	57.520	34.520	0.83	0.45	0.21	3.00	7.96	4.960	0.12	0.17	0.21		4.00	36.00	32.000	0.77	0.32	0.21
6	L83049-04	BG-8 0-2 COMP	0.49394	1	10.30	765	0.743	25.060	21.060	-4.000	-0.11	0.39	0.24	1.00	2.00	1.000	0.03	0.10	0.24		8.00	34.00	26.000	0.71	0.37	0.24
7	L83049-05	BG-8 2-12 COMP	0.49496	1	10.30	767	0.745	18.000	29.000	11.000	0.30	0.39	0.24	5.96	0.00	-5.965	-0.16	0.14	0.24		1.00	30.00	29.000	0.79	0.32	0.24
8	L83049-06	BG-8 12-18 COMP	0.49601	1	10.30	791	0.769	24.000	46.770	22.770	0.60	0.46	0.23	4.04	8.96	4.925	0.13	0.20	0.23		8.00	36.00	28.000	0.74	0.37	0.23
9	L83049-07	BG-101 2-12 COMP	0.49563	1	10.30	853	0.829	30.459	38.770	8.311	0.20	0.43	0.21	12.00	6.02	-5.980	-0.15	0.22	0.21		8.00	30.00	22.000	0.54	0.32	0.21
10	L83049-08	BG-11 0-2 COMP	0.4962	1	10.30	831	0.808	30.770	37.940	7.170	0.18	0.43	0.22	14.04	7.93	-6.105	-0.15	0.25	0.22		4.43	19.00	14.571	0.36	0.25	0.22
11	L83049-09	BG-11 2-12 COMP	0.49617	1	10.30	932	0.906	25.711	56.880	31.169	0.69	0.43	0.19	11.00	6.00	-5.000	-0.11	0.19	0.19		7.57	19.90	12.329	0.27	0.25	0.19
12	L83049-10	BG-11 12-18 COMP	0.49565	1	10.30	865	0.841	29.340	45.710	16.370	0.39	0.44	0.21	4.00	10.00	6.000	0.14	0.19	0.21		12.00	36.34	24.340	0.58	0.35	0.21
13	L83049-11	BG-12 0-2 COMP	0.49526	1	10.30	809	0.786	21.000	51.540	30.540	0.79	0.46	0.22	4.06	6.98	2.923	0.08	0.18	0.22		5.00	24.00	19.000	0.49	0.29	0.22
14	L83049-12	BG-12 2-12 COMP	0.49695	1	10.30	849	0.825	10.060	42.000	31.940	0.78	0.37	0.21	3.01	0.00	-3.014	-0.07	0.09	0.21		6.00	26.00	20.000	0.49	0.29	0.21
15	L83049-13	BG-12 12-18 COMP	0.49335	1	10.30	829	0.806	18.000	46.000	28.000	0.71	0.42	0.22	4.00	7.00	3.000	0.08	0.18	0.22		7.00	26.00	19.000	0.48	0.30	0.22
16	L83049-14	BG-15 0-2 COMP	0.49502	1	10.30	800	0.777	17.940	126.060	108.120	2.81	0.66	0.23	5.00	12.98	7.980	0.21	0.23	0.23		11.00	114.33	103.330	2.69	0.61	0.23
17	L83049-15	BG-15 2-12 COMP	0.49715	1	10.30	747	0.726	24.000	59.770	35.770	0.99	0.53	0.24	4.04	10.98	6.945	0.19	0.23	0.24		8.00	51.00	43.000	1.19	0.45	0.24
18	L83049-16	BG-15 12-18 COMP	0.49562	1	10.30	757	0.736	30.459	41.060	10.601	0.29	0.49	0.24	12.00	6.04	-5.960	-0.16	0.24	0.24		8.00	30.00	22.000	0.60	0.36	0.24
19	L83049-17	BG-102 2-12 COMP	0.4948	1	10.30	745	0.724	30.770	44.060	13.290	0.37	0.51	0.24	14.04	9.00	-5.035	-0.14	0.28	0.24		4.43	42.00	37.571	1.05	0.40	0.24
20	L83049-18	BG-16 0-2 COMP	0.49607	1	10.30	805	0.782	25.711	40.170	14.459	0.37	0.44	0.23	11.00	9.96	-1.040	-0.03	0.25	0.23		7.57	32.67	25.099	0.65	0.34	0.23
21	L83049-19	BG-16 2-12 COMP	0.49614	1	10.30	722	0.702	29.340	58.770	29.430	0.85	0.57	0.25	4.00	7.04	3.040	0.09	0.20	0.25		12.00	40.90	28.900	0.83	0.44	0.25
22	L83049-20	BG-16 12-18 COMP	0.49585	1	10.30	735	0.714	21.000	54.000	33.000	0.93	0.51	0.25	4.06	3.02	-1.037	-0.03	0.16	0.25		5.00	51.86	46.860	1.32	0.45	0.25
23	L83049-01DUP		0.49468	1	10.30	661	0.642	10.060	41.060	31.000	0.98	0.47	0.28	3.01	4.00	0.987	0.03	0.18	0.28		6.00	44.96	38.960	1.23	0.47	0.28
24	L83049-20DUP		0.49585	1	10.30	853	0.829	18.000	42.770	24.770	0.60	0.40	0.21	4.00	5.00	1.000	0.02	0.15	0.21		7.00	48.43	41.430	1.01	0.38	0.21
25	L83049-10MS	RC100223-2	0.49565	1	10.30	454	0.441	17.940	843.060	825.120	37.77	2.82	0.40	5.00	32.06	27.060	1.24	0.59	0.40		11.00	864.33	853.330	39.06	2.84	0.40

Comments:

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

KBS 8/2/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-30-10

Approved: [signature]
Date: 7-30-10

Work Group: WG287011
Sample Type: Sol-d
Analysis Date: 7-27-10
Analyst: MWM
Prep Date: 7-26-10

Weekly background file: 7-26-10
Daily background file: 7-26-10

Alpha performance file: 7-26-10
Beta performance file: –

GAB dry date/time: –

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287011

Date Reported: 30-Jul-10
Run ID: R736372
Date Analyzed: 27-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286629PBS

Tag: Measured: 7/27/2010 2:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	-0.09	1		pCi/g	++	0.23	0.41		
SREV	URANIUM 235	FOUND	-0.05	1		pCi/g	++	0.23	0.19		
SREV	URANIUM 238	FOUND	0.19	1		pCi/g	++	0.23	0.2		

WG286629LCSS

Tag: Measured: 7/27/2010 2:01:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	34	1		pCi/g	++	0.35	2.5	RC100223-2	
SREV	URANIUM 234	REC	102.6	1		%	++	0.35	2.5	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.35	2.5	RC100223-2	
SREV	URANIUM 235	FOUND	1.1	1		pCi/g	++	0.35	0.59	RC100223-2	
SREV	URANIUM 235	REC	69.6	1		%	++	0.35	0.59	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.35	0.59	RC100223-2	
SREV	URANIUM 238	FOUND	35.9	1		pCi/g	++	0.35	2.5	RC100223-2	
SREV	URANIUM 238	REC	104.4	1		%	++	0.35	2.5	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.35	2.5	RC100223-2	

L83049-01

Tag: Measured: 7/27/2010 2:02:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.93	1		pCi/g	++	0.24	0.46		TB
SREV	URANIUM 235	OM-3050	0.06	1		pCi/g	++	0.24	0.14		TB
SREV	URANIUM 238	OM-3050	0.67	1		pCi/g	++	0.24	0.32		TB

L83049-02

Tag: Measured: 7/27/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1.2	1		pCi/g	++	0.23	0.48		TB
SREV	URANIUM 235	OM-3050	-0.18	1		pCi/g	++	0.23	0.18		TB
SREV	URANIUM 238	OM-3050	0.73	1		pCi/g	++	0.23	0.35		TB

L83049-03

Tag: Measured: 7/27/2010 2:05:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.83	1		pCi/g	++	0.21	0.45		TB
SREV	URANIUM 235	OM-3050	0.12	1		pCi/g	++	0.21	0.17		TB
SREV	URANIUM 238	OM-3050	0.77	1		pCi/g	++	0.21	0.32		TB

L83049-04

Tag: Measured: 7/27/2010 2:07:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	-0.11	1		pCi/g	++	0.24	0.39		TB
SREV	URANIUM 235	OM-3050	0.03	1		pCi/g	++	0.24	0.1		TB
SREV	URANIUM 238	OM-3050	0.71	1		pCi/g	++	0.24	0.37		TB

L83049-05 Tag: **Measured: 7/27/2010 2:08:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.3	1		pCi/g	++	0.24	0.39		TB
SREV	URANIUM 235	OM-3050	-0.16	1		pCi/g	++	0.24	0.14		TB
SREV	URANIUM 238	OM-3050	0.79	1		pCi/g	++	0.24	0.32		TB

L83049-06 Tag: **Measured: 7/27/2010 2:10:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.6	1		pCi/g	++	0.23	0.46		TB
SREV	URANIUM 235	OM-3050	0.13	1		pCi/g	++	0.23	0.2		TB
SREV	URANIUM 238	OM-3050	0.74	1		pCi/g	++	0.23	0.37		TB

L83049-07 Tag: **Measured: 7/27/2010 2:11:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.2	1		pCi/g	++	0.21	0.43		TB
SREV	URANIUM 235	OM-3050	-0.15	1		pCi/g	++	0.21	0.22		TB
SREV	URANIUM 238	OM-3050	0.54	1		pCi/g	++	0.21	0.32		TB

L83049-08 Tag: **Measured: 7/27/2010 2:12:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.18	1		pCi/g	++	0.22	0.43		TB
SREV	URANIUM 235	OM-3050	-0.15	1		pCi/g	++	0.22	0.25		TB
SREV	URANIUM 238	OM-3050	0.36	1		pCi/g	++	0.22	0.25		TB

L83049-09 Tag: **Measured: 7/27/2010 2:14:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.69	1		pCi/g	++	0.19	0.43		TB
SREV	URANIUM 235	OM-3050	-0.11	1		pCi/g	++	0.19	0.19		TB
SREV	URANIUM 238	OM-3050	0.27	1		pCi/g	++	0.19	0.25		TB

L83049-10 Tag: **Measured: 7/27/2010 2:15:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.39	1		pCi/g	++	0.21	0.44		TB
SREV	URANIUM 235	OM-3050	0.14	1		pCi/g	++	0.21	0.19		TB
SREV	URANIUM 238	OM-3050	0.58	1		pCi/g	++	0.21	0.35		TB

L83049-11 Tag: **Measured: 7/27/2010 2:17:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.79	1		pCi/g	++	0.22	0.46		TB
SREV	URANIUM 235	OM-3050	0.08	1		pCi/g	++	0.22	0.18		TB
SREV	URANIUM 238	OM-3050	0.49	1		pCi/g	++	0.22	0.29		TB

L83049-12 Tag: **Measured: 7/27/2010 2:18:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.78	1		pCi/g	++	0.21	0.37		TB
SREV	URANIUM 235	OM-3050	-0.07	1		pCi/g	++	0.21	0.09		TB
SREV	URANIUM 238	OM-3050	0.49	1		pCi/g	++	0.21	0.29		TB

L83049-13 Tag: **Measured: 7/27/2010 2:20:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.71	1		pCi/g	++	0.22	0.42		TB
SREV	URANIUM 235	OM-3050	0.08	1		pCi/g	++	0.22	0.18		TB
SREV	URANIUM 238	OM-3050	0.48	1		pCi/g	++	0.22	0.3		TB

L83049-14 Tag: **Measured: 7/27/2010 2:21:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	2.8	1		pCi/g	++	0.23	0.66		TB
SREV	URANIUM 235	OM-3050	0.21	1		pCi/g	++	0.23	0.23		TB
SREV	URANIUM 238	OM-3050	2.69	1		pCi/g	++	0.23	0.61		TB

L83049-15 Tag: **Measured: 7/27/2010 2:23:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.99	1		pCi/g	++	0.24	0.53		TB
SREV	URANIUM 235	OM-3050	0.19	1		pCi/g	++	0.24	0.23		TB
SREV	URANIUM 238	OM-3050	1.19	1		pCi/g	++	0.24	0.45		TB

L83049-16 Tag: **Measured: 7/27/2010 2:24:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.29	1		pCi/g	++	0.24	0.49		TB
SREV	URANIUM 235	OM-3050	-0.16	1		pCi/g	++	0.24	0.24		TB
SREV	URANIUM 238	OM-3050	0.6	1		pCi/g	++	0.24	0.36		TB

L83049-17 Tag: **Measured: 7/27/2010 2:25:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.37	1		pCi/g	++	0.24	0.51		TB
SREV	URANIUM 235	OM-3050	-0.14	1		pCi/g	++	0.24	0.28		TB
SREV	URANIUM 238	OM-3050	1.05	1		pCi/g	++	0.24	0.4		TB

L83049-18 Tag: **Measured: 7/27/2010 2:27:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.37	1		pCi/g	++	0.23	0.44		TB
SREV	URANIUM 235	OM-3050	-0.03	1		pCi/g	++	0.23	0.25		TB
SREV	URANIUM 238	OM-3050	0.65	1		pCi/g	++	0.23	0.34		TB

L83049-19 Tag: **Measured: 7/27/2010 2:28:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.85	1		pCi/g	++	0.25	0.57		TB
SREV	URANIUM 235	OM-3050	0.09	1		pCi/g	++	0.25	0.2		TB
SREV	URANIUM 238	OM-3050	0.83	1		pCi/g	++	0.25	0.44		TB

L83049-20 Tag: **Measured: 7/27/2010 2:30:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.93	1		pCi/g	++	0.25	0.51		TB
SREV	URANIUM 235	OM-3050	-0.03	1		pCi/g	++	0.25	0.16		TB
SREV	URANIUM 238	OM-3050	1.32	1		pCi/g	++	0.25	0.45		TB

L83049-01DUP

Tag: Measured: 7/27/2010 2:31:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.98	1		pCi/g	++	0.28	0.47		
SREV	URANIUM 234	RER	0.08	1		%	++				
FAIL	URANIUM 234	RPD	5.2	1		pCi/g	++	0.28	0.47		
SREV	URANIUM 235	FOUND	0.03	1		pCi/g	++	0.28	0.18		
SREV	URANIUM 235	RER	0.13	1		%	++				
FAIL	URANIUM 235	RPD	66.7	1		pCi/g	ALRT	0.28	0.18		
SREV	URANIUM 238	FOUND	1.23	1		pCi/g	++	0.28	0.47		
SREV	URANIUM 238	RER	0.98	1		%	++				
FAIL	URANIUM 238	RPD	58.9	1		pCi/g	ALRT	0.28	0.47		

L83049-20DUP

Tag: Measured: 7/27/2010 2:33:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.6	1		pCi/g	++	0.21	0.4		
SREV	URANIUM 234	RER	0.51	1		%	++				
FAIL	URANIUM 234	RPD	43.1	1		pCi/g	ALRT	0.21	0.4		
SREV	URANIUM 235	FOUND	0.02	1		pCi/g	++	0.21	0.15		
SREV	URANIUM 235	RER	0.23	1		%	++				
FAIL	URANIUM 235	RPD	1000	1		pCi/g	ALRT	0.21	0.15		
SREV	URANIUM 238	FOUND	1.01	1		pCi/g	++	0.21	0.38		
SREV	URANIUM 238	RER	0.53	1		%	++				
FAIL	URANIUM 238	RPD	26.6	1		pCi/g	ALRT	0.21	0.38		

L83049-10MS

Tag: Measured: 7/27/2010 2:34:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	38	1		pCi/g	++	0.4	2.8	RC100223-2	
SREV	URANIUM 234	REC	113.5	1		%	++	0.4	2.8	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.4	2.8	RC100223-2	
SREV	URANIUM 235	FOUND	1.2	1		pCi/g	++	0.4	0.59	RC100223-2	
SREV	URANIUM 235	REC	67.1	1		%	++	0.4	0.59	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.4	0.59	RC100223-2	
SREV	URANIUM 238	FOUND	39.1	1		pCi/g	++	0.4	2.8	RC100223-2	
SREV	URANIUM 238	REC	112	1		%	++	0.4	2.8	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.4	2.8	RC100223-2	

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG286629

Analyst: MWM
Dept: 50
Prep Date: 7-26-10 730
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

MWM
50.00

Project:
SDG#:
SOP#:

Instrument: Octete
Matrix Class: SOLID
List Type: UISO
List Function: PREP

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50mL	1	0.00					0.000						0.000						0.000			
2	LCSS				0.00					0.000						0.000						0.000			
3	L83049-01	BG-7 0-2 COMP			0.00					0.000						0.000						0.000			
4	L83049-02	BG-7 2-12 COMP			0.00					0.000						0.000						0.000			
5	L83049-03	BG-7 12-18 COMP			0.00					0.000						0.000						0.000			
6	L83049-04	BG-8 0-2 COMP			0.00					0.000						0.000						0.000			
7	L83049-05	BG-8 2-12 COMP			0.00					0.000						0.000						0.000			
8	L83049-06	BG-8 12-18 COMP			0.00					0.000						0.000						0.000			
9	L83049-07	BG-101 2-12 COMP			0.00					0.000						0.000						0.000			
10	L83049-08	BG-11 0-2 COMP			0.00					0.000						0.000						0.000			
11	L83049-09	BG-11 2-12 COMP			0.00					0.000						0.000						0.000			
12	L83049-10	BG-11 12-18 COMP			0.00					0.000						0.000						0.000			
13	L83049-11	BG-12 0-2 COMP			0.00					0.000						0.000						0.000			
14	L83049-12	BG-12 2-12 COMP			0.00					0.000						0.000						0.000			
15	L83049-13	BG-12 12-18 COMP			0.00					0.000						0.000						0.000			
16	L83049-14	BG-15 0-2 COMP			0.00					0.000						0.000						0.000			
17	L83049-15	BG-15 2-12 COMP			0.00					0.000						0.000						0.000			
18	L83049-16	BG-15 12-18 COMP			0.00					0.000						0.000						0.000			
19	L83049-17	BG-102 2-12 COMP			0.00					0.000						0.000						0.000			
20	L83049-18	BG-16 0-2 COMP			0.00					0.000						0.000						0.000			
21	L83049-19	BG-16 2-12 COMP			0.00					0.000						0.000						0.000			
22	L83049-20	BG-16 12-18 COMP			0.00					0.000						0.000						0.000			
23	DUP 1				0.00					0.000						0.000						0.000			
24	DUP 20				0.00					0.000						0.000						0.000			
25	MS 10				0.00					0.000						0.000						0.000			

Comments:

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Uranium iso
Water

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: wg286629 7/26/2010 7:37 AM

PROJECT/WG: _____ INSTR: Octete
Method _____

Radioactive Standards

LCS & MS 100223-2 Tracer: 100223-1

Reagents

3M Nitric Acid	34534	Aluminum nitrate / 3M nitric acid	100715-1
Nitric Acid (concentrated)	35036	HF	33549
0.05M oxalic acid / 5M HCl	100715-2	Titanium Choride	100629-1
0.01M Hydrochloric acid	34317	Cerium solution	100721-1
9M Hydrochloric acid	33927	Ethanol	33789

COMMENTS:

*12/29/08 MTB adjusted template to error using Gross cpm and specific backgrounds used to calculate net cpm

RSUISO-S.xls

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
83049-1	0.98936367	0.5	0.49468	50	50	0.494682
83049-2	0.984333983	0.5	0.49217	50	50	0.492167
83049-3	0.989898071	0.5	0.49495	50	50	0.494949
83049-4	0.987871388	0.5	0.49394	50	50	0.493936
83049-5	0.989919817	0.5	0.49496	50	50	0.494960
83049-6	0.992023471	0.5	0.49601	50	50	0.496012
83049-7	0.991269739	0.5	0.49563	50	50	0.495635
83049-8	0.992390567	0.5	0.49620	50	50	0.496195
83049-9	0.992337708	0.5	0.49617	50	50	0.496169
83049-10	0.99129753	0.5	0.49565	50	50	0.495649
83049-11	0.990518331	0.5	0.49526	50	50	0.495259
83049-12	0.993897123	0.5	0.49695	50	50	0.496949
83049-13	0.986708303	0.5	0.49335	50	50	0.493354
83049-14	0.990049034	0.5	0.49502	50	50	0.495025
83049-15	0.994300562	0.5	0.49715	50	50	0.497150
83049-16	0.991245791	0.5	0.49562	50	50	0.495623
83049-17	0.989609017	0.5	0.49480	50	50	0.494805
83049-18	0.992142556	0.5	0.49607	50	50	0.496071
83049-19	0.992285695	0.5	0.49614	50	50	0.496143
83049-20	0.991707159	0.5	0.49585	50	50	0.495854
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286377PBS1	NONE	<2000		07/21/10 9:00	0	7.5	5	5	50				
2	WG286377PBS2	NONE	<2000		07/21/10 10:02	0	7.5	5	5	50				
3	L83049-01	BG-7 0-2 COMP	<2000		07/21/10 11:05	0.5	7.5	5	5	50		98.94		
4	L83049-01DUP	NONE	<2000		07/21/10 12:07	0.5	7.5	5	5	50		98.94		
5	L83049-02	BG-7 2-12 COMP	<2000		07/21/10 13:10	0.5	7.5	5	5	50		98.43		
6	L83049-03	BG-7 12-18 COMP	<2000		07/21/10 14:12	0.5	7.5	5	5	50		98.99		
7	L83049-04	BG-8 0-2 COMP	<2000		07/21/10 15:15	0.5	7.5	5	5	50		98.79		
8	L83049-05	BG-8 2-12 COMP	<2000		07/21/10 16:17	0.5	7.5	5	5	50		98.99		
9	L83049-06	BG-8 12-18 COMP	<2000		07/21/10 17:20	0.5	7.5	5	5	50		99.2		
10	L83049-07	BG-101 2-12 COMP	<2000		07/21/10 18:22	0.5	7.5	5	5	50		99.13		
11	L83049-08	BG-11 0-2 COMP	<2000		07/21/10 19:25	0.5	7.5	5	5	50		99.24		
12	L83049-09	BG-11 2-12 COMP	<2000		07/21/10 20:27	0.5	7.5	5	5	50		99.23		
13	L83049-10	BG-11 12-18 COMP	<2000		07/21/10 21:30	0.5	7.5	5	5	50		99.13		
14	L83049-10DUP	NONE	<2000		07/21/10 22:32	0.5	7.5	5	5	50		99.13		
15	L83049-11	BG-12 0-2 COMP	<2000		07/21/10 23:35	0.5	7.5	5	5	50		99.05		
16	L83049-12	BG-12 2-12 COMP	<2000		07/22/10 0:37	0.5	7.5	5	5	50		99.39		
17	L83049-13	BG-12 12-18 COMP	<2000		07/22/10 1:40	0.5	7.5	5	5	50		98.67		
18	L83049-14	BG-15 0-2 COMP	<2000		07/22/10 2:42	0.5	7.5	5	5	50		99		
19	L83049-15	BG-15 2-12 COMP	<2000		07/22/10 3:45	0.5	7.5	5	5	50		99.43		
20	L83049-16	BG-15 12-18 COMP	<2000		07/22/10 4:47	0.5	7.5	5	5	50		99.12		
21	L83049-17	BG-102 2-12 COMP	<2000		07/22/10 5:50	0.5	7.5	5	5	50		98.96		
22	L83049-18	BG-16 0-2 COMP	<2000		07/22/10 6:52	0.5	7.5	5	5	50		99.21		
23	L83049-19	BG-16 2-12 COMP	<2000		07/22/10 7:55	0.5	7.5	5	5	50		99.23		

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:11 AM 72410

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
24	L83049-20	BG-16 12-18 COMP	<2000		07/22/10 8:57	0.5	7.5	5	5	50		99.17		
25	L83049-20DUP	NONE	<2000		07/22/10 10:00	0.5	7.5	5	5	50		99.17		

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/22/2010 10:57:08 AM 72410

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:00:59PM 7/27/2010

Analyst: ORTEC

Sample

Sample: WG286629 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

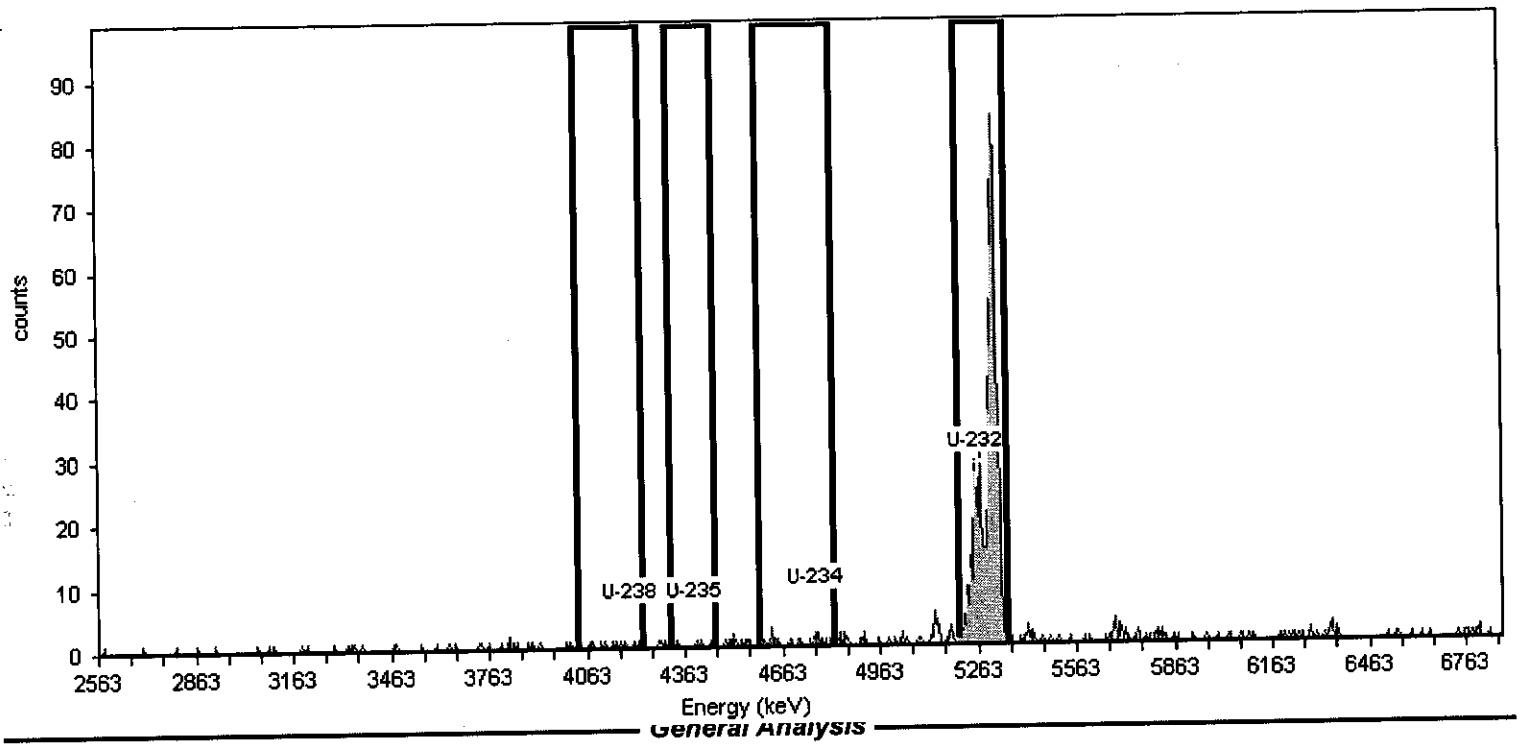
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 58.17%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/27/2010 11:59:40AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	5.760	100.2	10.00	3.0000	7	9.660E-002	1.507E-001	5.560E-002	1.485E-001
U-235	4396.000	4318.000	4453.000	6.039	80.9	5.00	7.0000	-2	-3.419E-002	1.778E-001	1.052E-001	2.567E-001
U-234	4765.000	4592.000	4819.000	214.064	100.0	25.54	29.0000	-3	-4.783E-002	3.065E-001	1.732E-001	3.838E-001
U-232	5263.000	5203.000	5350.000	18.552	99.8	791.00	11.8309	779	6.864E+000	7.930E-001	1.212E-001	2.833E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:07:11AM 7/28/2010

Analyst: ORTEC

Sample

Sample: WG286629 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

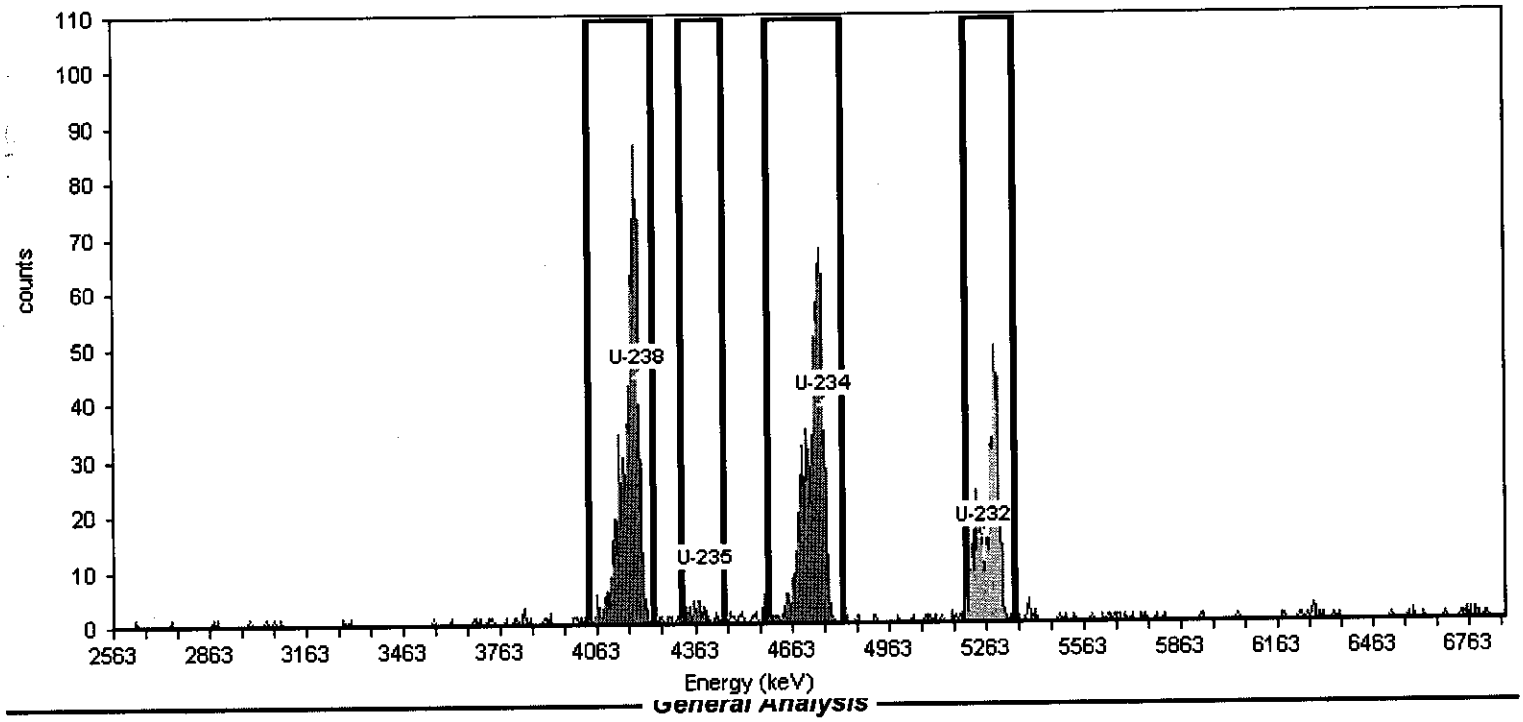
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 40.80%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/27/2010 11:59:43AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	35.904	100.2	903.00	8.0000	895	1.872E+001	4.650E+000	1.376E-001	3.319E-001
U-235	4396.000	4318.000	4453.000	60.487	80.9	38.06	11.0216	27	7.007E-001	5.674E-001	2.002E-001	4.705E-001
U-234	4765.000	4592.000	4819.000	42.592	100.0	869.48	21.7704	848	1.777E+001	4.446E+000	2.275E-001	5.117E-001
U-232	5263.000	5203.000	5350.000	33.956	99.8	517.99	4.0000	514	4.814E+000	6.691E-001	1.068E-001	2.758E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:07:17AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

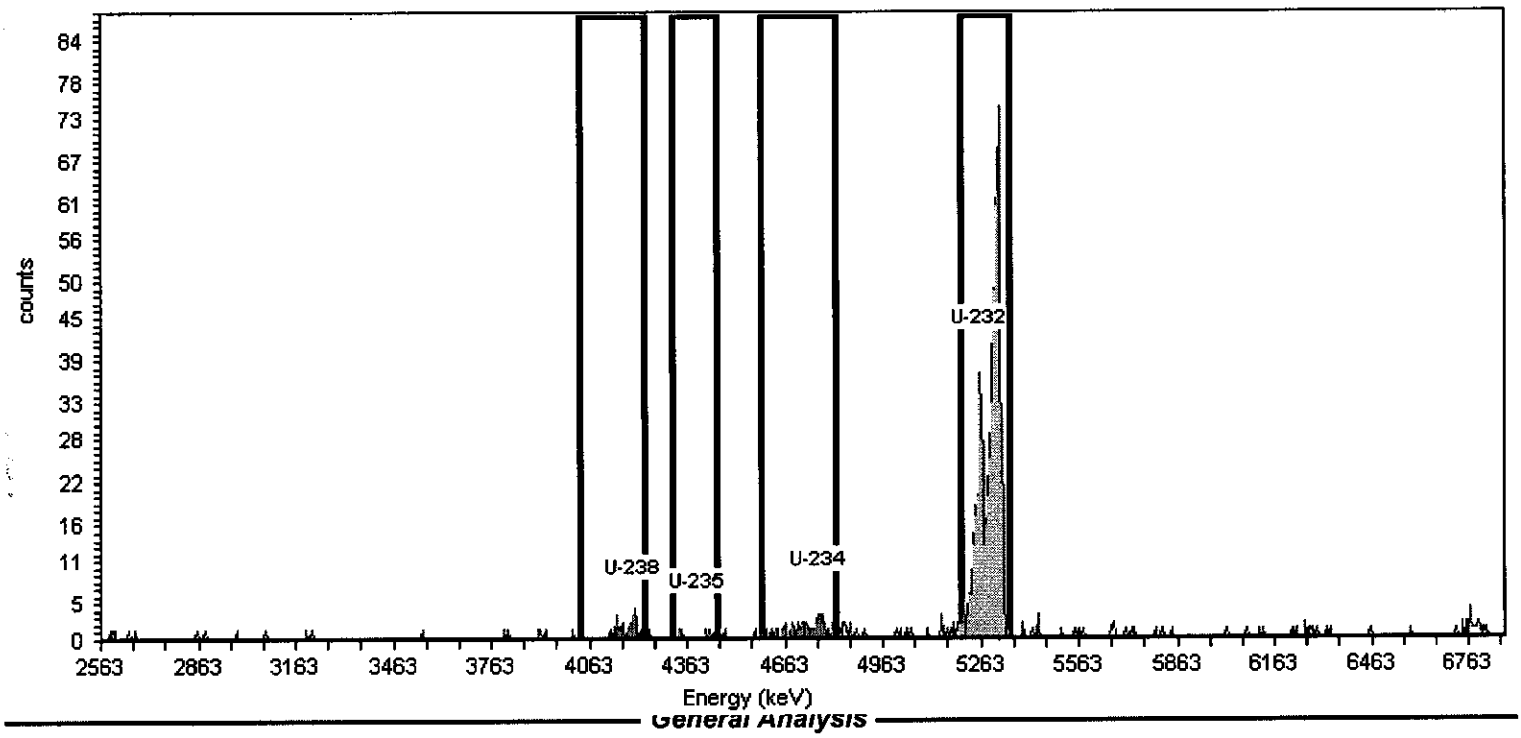
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 58.91%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/27/2010 11:59:45AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	25.373	100.2	27.00	3.0000	24	3.449E-001	2.474E-001	5.790E-002	1.547E-001
U-235	4396.000	4318.000	4453.000	17.140	80.9	4.02	2.0216	2	3.560E-002	1.315E-001	5.889E-002	1.659E-001
U-234	4765.000	4592.000	4819.000	51.400	100.0	47.71	14.2296	33	4.820E-001	3.552E-001	1.263E-001	2.916E-001
U-232	5263.000	5203.000	5350.000	10.458	99.8	755.28	7.0000	748	6.952E+000	8.160E-001	9.706E-002	2.368E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:07:21AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

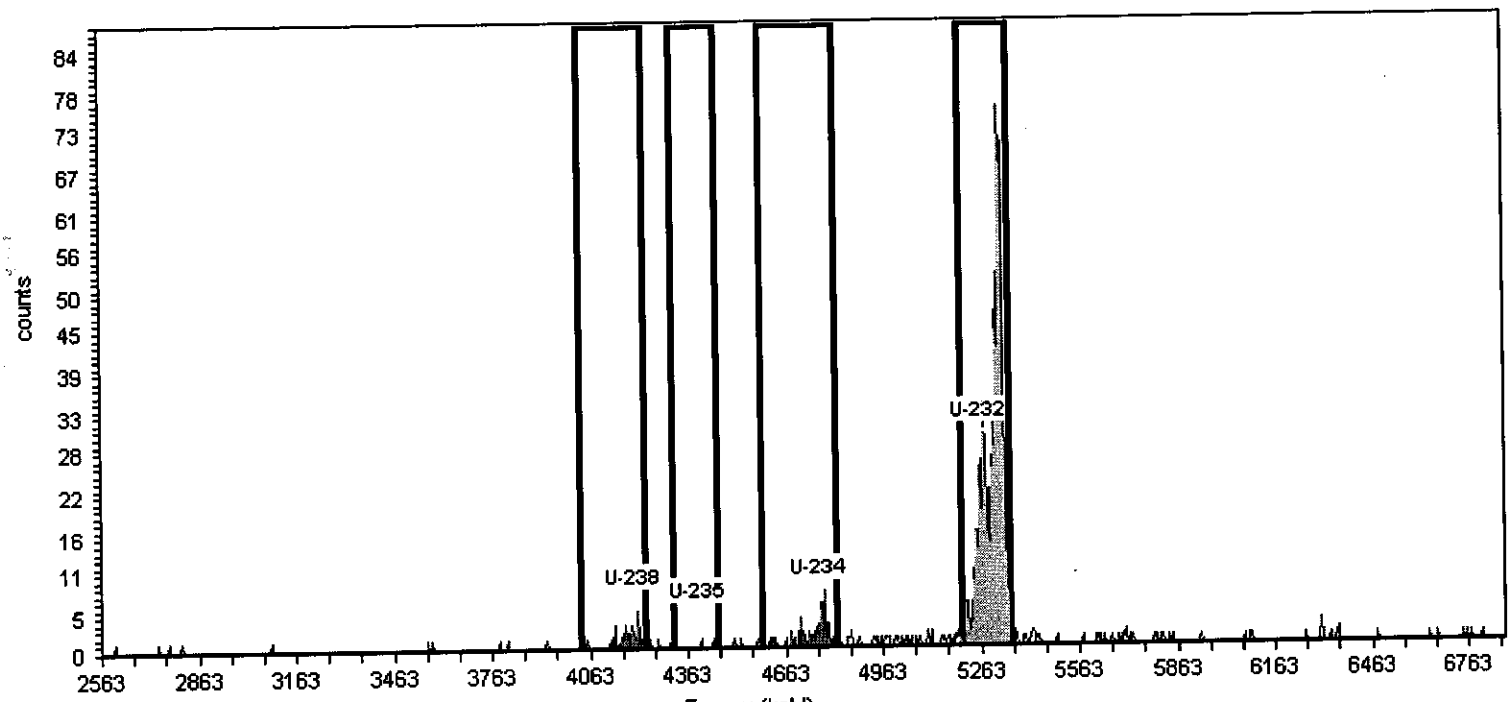
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.53%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/27/2010 11:59:47AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-234	4765.000	4592.000	4819.000	34.380	100.0	60.00	15.0596	45	6.056E-001	3.732E-001	1.217E-001	2.798E-001
U-232	5263.000	5203.000	5350.000	20.939	99.8	810.38	11.0000	799	7.497E+000	8.583E-001	1.139E-001	2.677E-001
U-238	4193.000	4037.000	4232.000	6.864	100.2	34.57	6.5711	28	3.766E-001	2.709E-001	8.021E-002	1.968E-001
U-235	4396.000	4318.000	4453.000	6.025	80.9	2.00	9.0000	-7	-1.167E-001	1.677E-001	1.163E-001	2.777E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:01:08PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L83049-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

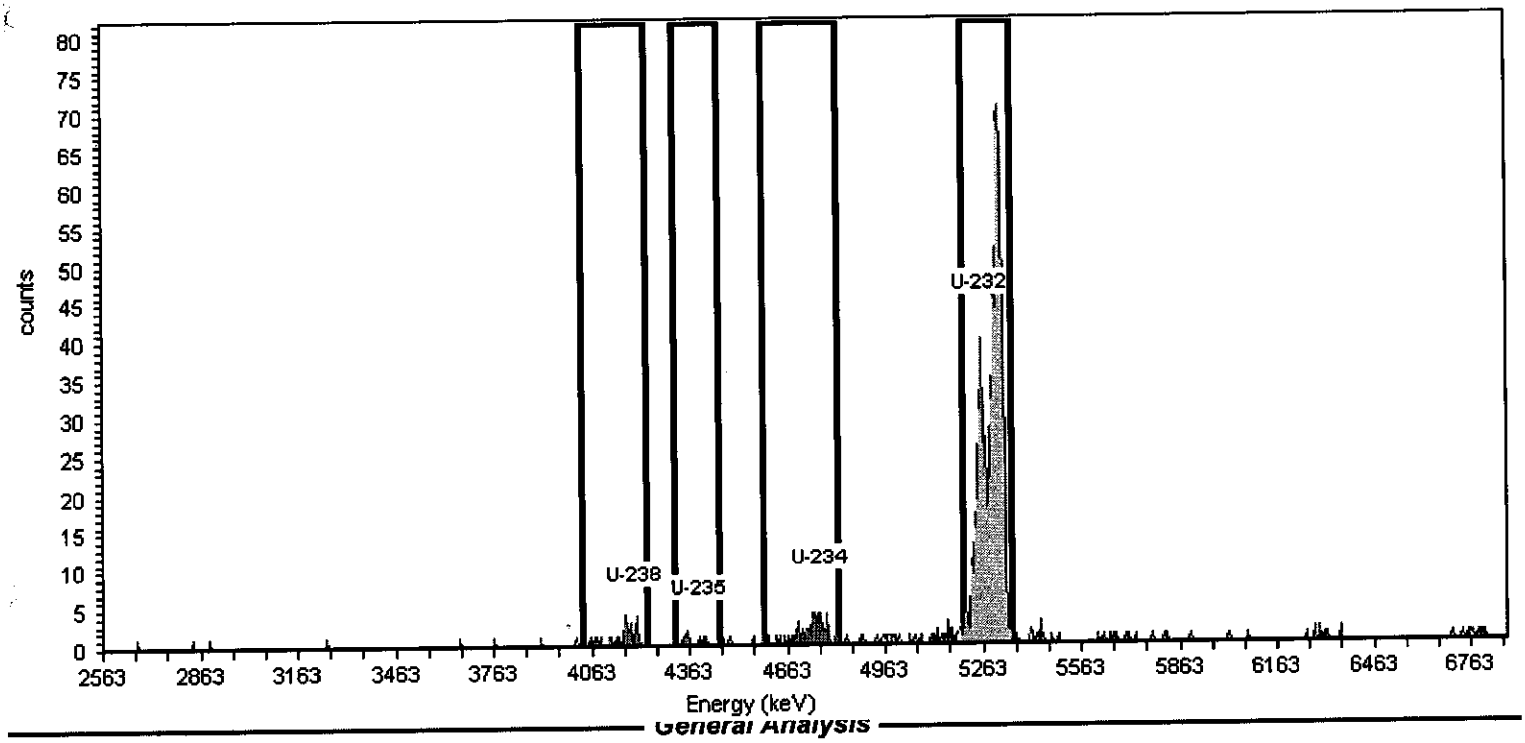
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.90%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/27/2010 11:59:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants; Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	53.881	100.2	36.00	4.0000	32	3.982E-001	2.506E-001	5.790E-002	1.495E-001
U-235	4396.000	4318.000	4453.000	46.996	80.9	7.96	3.0000	5	7.655E-002	1.540E-001	6.213E-002	1.660E-001
U-234	4765.000	4592.000	4819.000	49.245	100.0	57.52	23.0000	35	4.304E-001	3.477E-001	1.391E-001	3.120E-001
U-232	5263.000	5203.000	5350.000	20.997	99.8	882.80	18.8309	864	7.895E+000	8.781E-001	1.379E-001	3.127E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:01:04PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L83049-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

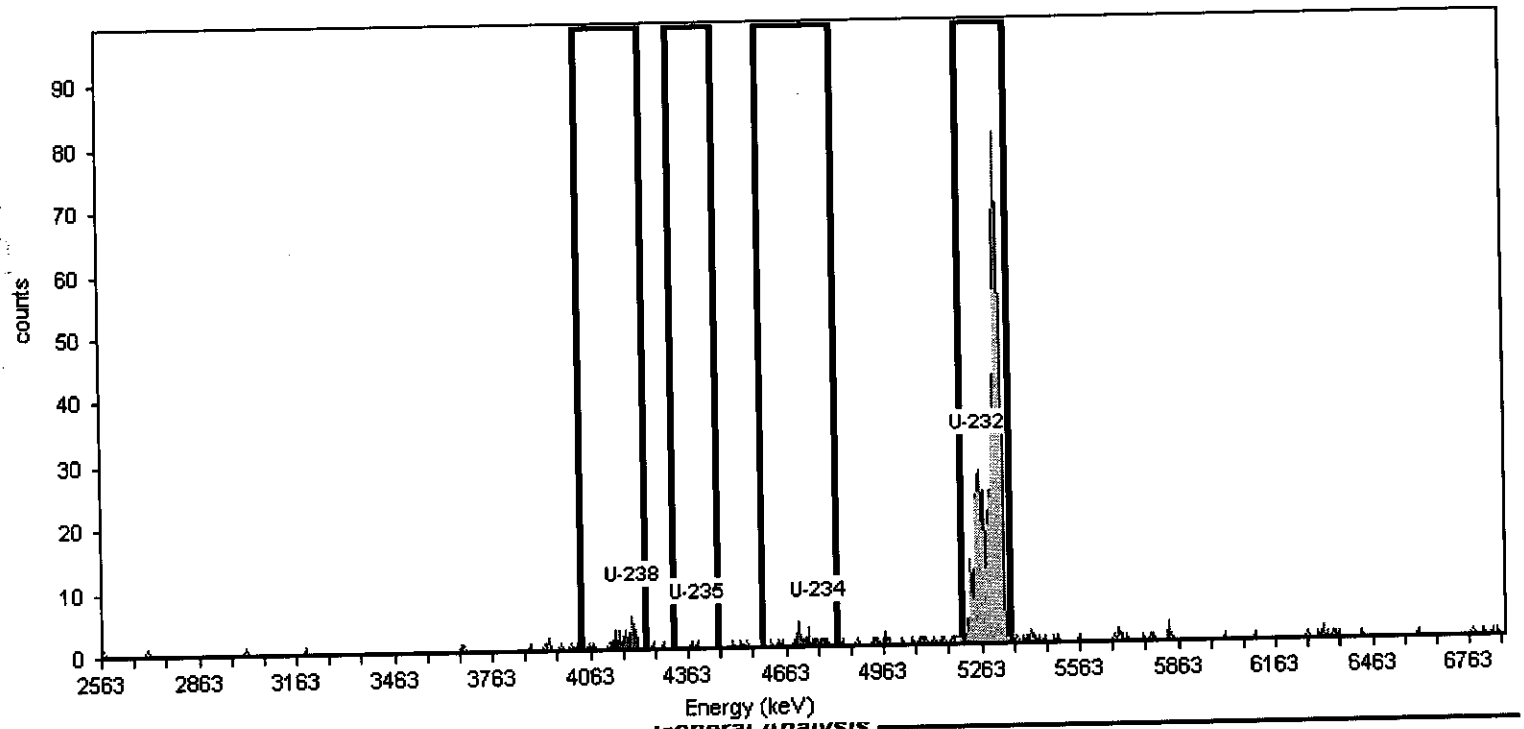
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 58.95%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/27/2010 11:59:36AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	66.686	100.2	34.00	8.0000	26	3.656E-001	2.843E-001	9.252E-002	2.231E-001
U-235	4396.000	4318.000	4453.000	27.320	80.9	2.00	1.0000	1	1.742E-002	9.060E-002	4.053E-002	1.282E-001
U-234	4765.000	4592.000	4819.000	100.970	100.0	21.06	25.0596	-4	-5.635E-002	2.873E-001	1.641E-001	3.662E-001
U-232	5263.000	5203.000	5350.000	14.553	99.8	775.00	10.3100	765	6.956E+000	8.105E-001	1.153E-001	2.723E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
4:59:40PM 7/27/2010

Analyst: ORTEC

Sample

Sample: L83049-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 002
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

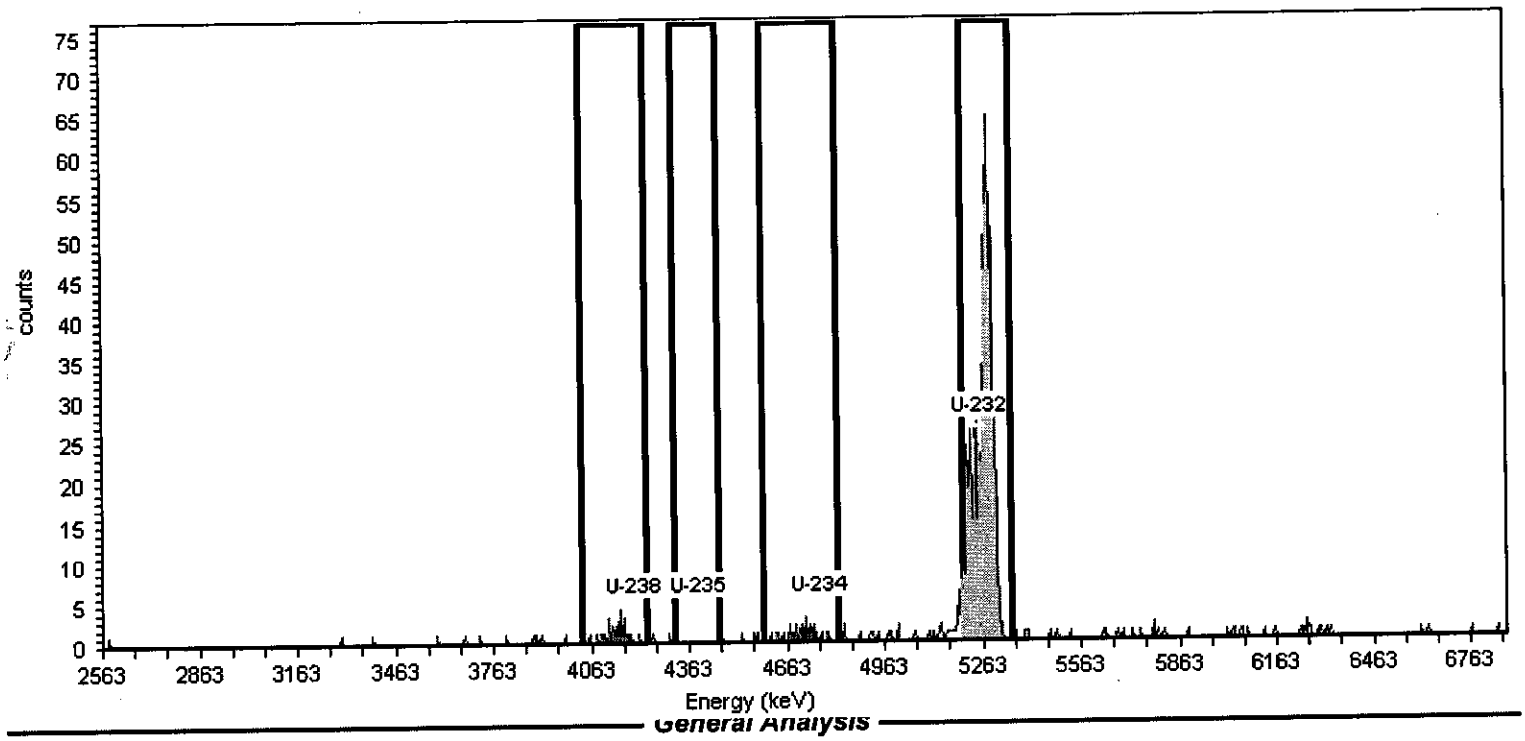
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 60.15%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/27/2010 11:59:38AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 017
Efficiency Calibration:2010.07.26 017
Calibration Date: 7/26/2010 10:20:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.77% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 11:58:23AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	53.621	100.2	30.00	1.0000	29	4.064E-001	2.497E-001	3.261E-002	1.031E-001
U-235	4396.000	4318.000	4453.000	.000	80.9	0.00	5.9649	-6	-1.036E-001	1.392E-001	9.866E-002	2.443E-001
U-234	4765.000	4592.000	4819.000	73.354	100.0	29.00	18.0000	11	1.545E-001	2.907E-001	1.386E-001	3.152E-001
U-232	5263.000	5203.000	5350.000	37.915	99.8	775.17	8.0000	767	7.098E+000	8.245E-001	1.012E-001	2.440E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:17:59AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

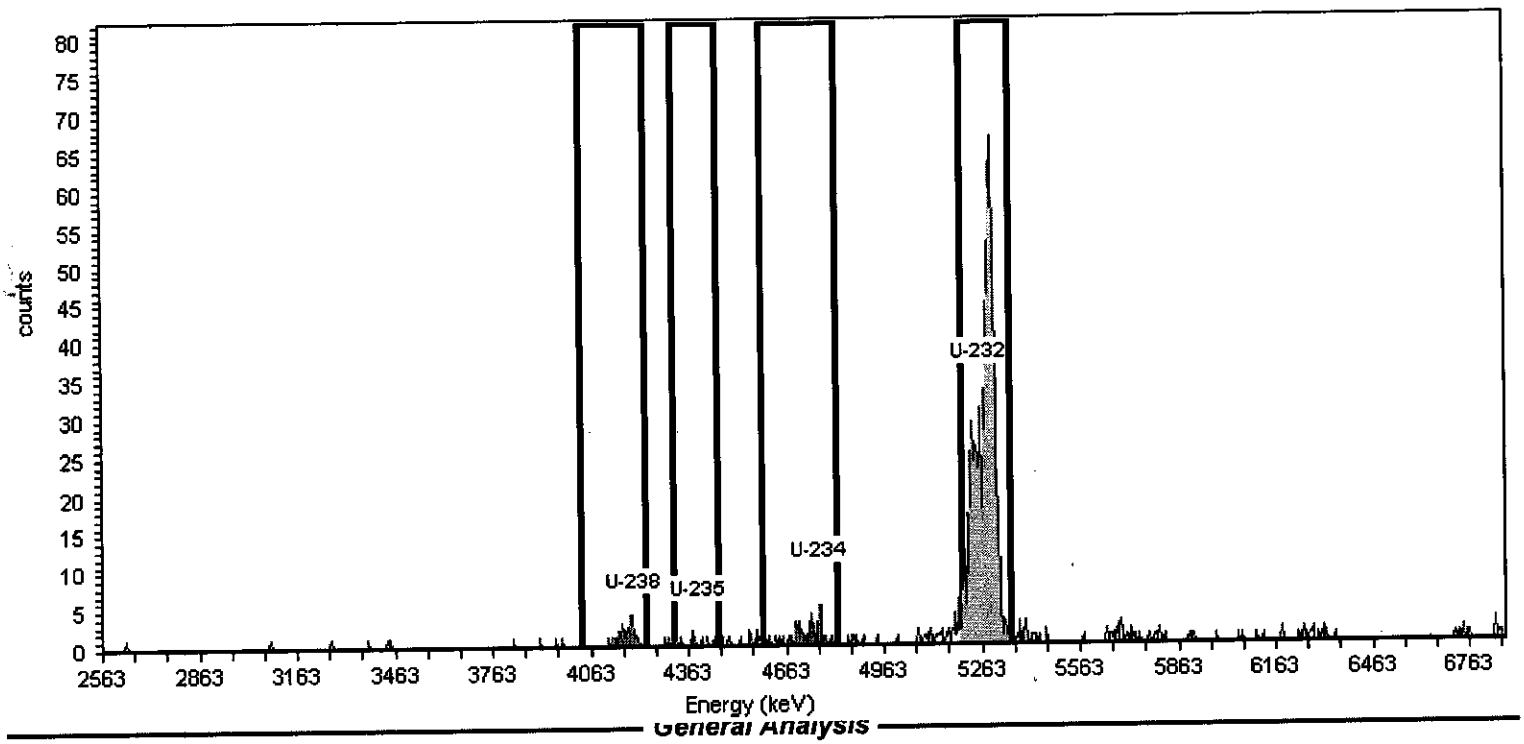
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 60.36%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/27/2010 1:59:26PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-234	4765.000	4592.000	4819.000	92.148	100.0	46.77	24.0000	23	3.101E-001	3.500E-001	1.552E-001	3.473E-001
U-232	5263.000	5203.000	5350.000	37.090	99.8	796.69	5.6900	791	7.123E+000	8.127E-001	8.278E-002	2.059E-001
U-238	4193.000	4037.000	4232.000	55.597	100.2	36.00	8.0000	28	3.806E-001	2.823E-001	8.944E-002	2.157E-001
U-235	4396.000	4318.000	4453.000	5.865	80.9	8.96	4.0351	5	8.302E-002	1.830E-001	7.870E-002	2.030E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:19:09AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

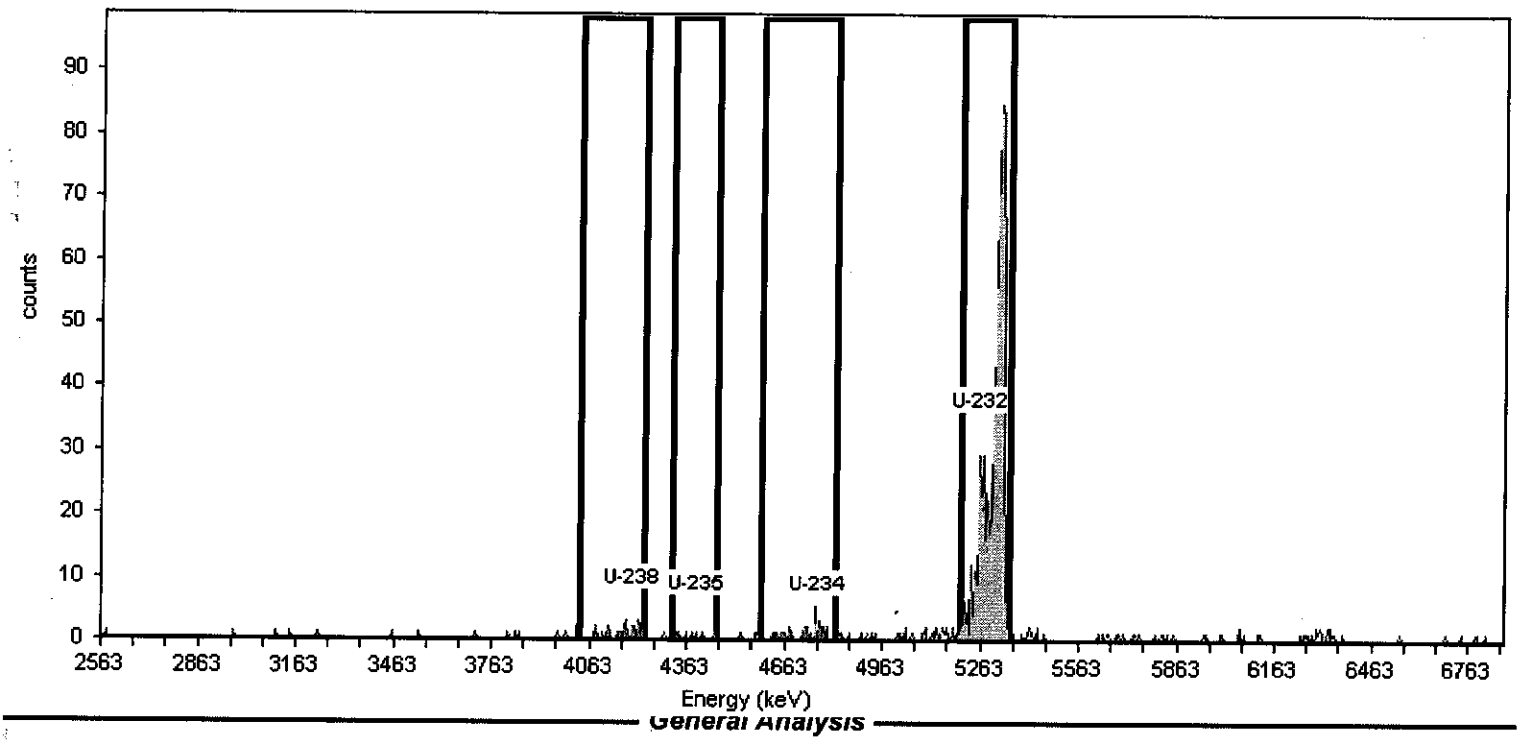
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.85%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/27/2010 1:59:26PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch²
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.546	100.2	30.00	8.0000	22	2.774E-001	2.404E-001	8.297E-002	2.001E-001
U-235	4396.000	4318.000	4453.000	.183	80.9	6.02	12.0000	-6	-9.340E-002	1.999E-001	1.259E-001	2.941E-001
U-234	4765.000	4592.000	4819.000	66.894	100.0	38.77	30.4592	8	1.050E-001	3.161E-001	1.622E-001	3.586E-001
U-232	5263.000	5203.000	5350.000	17.972	99.8	859.83	7.1691	853	7.416E+000	8.178E-001	8.620E-002	2.099E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:19:14AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

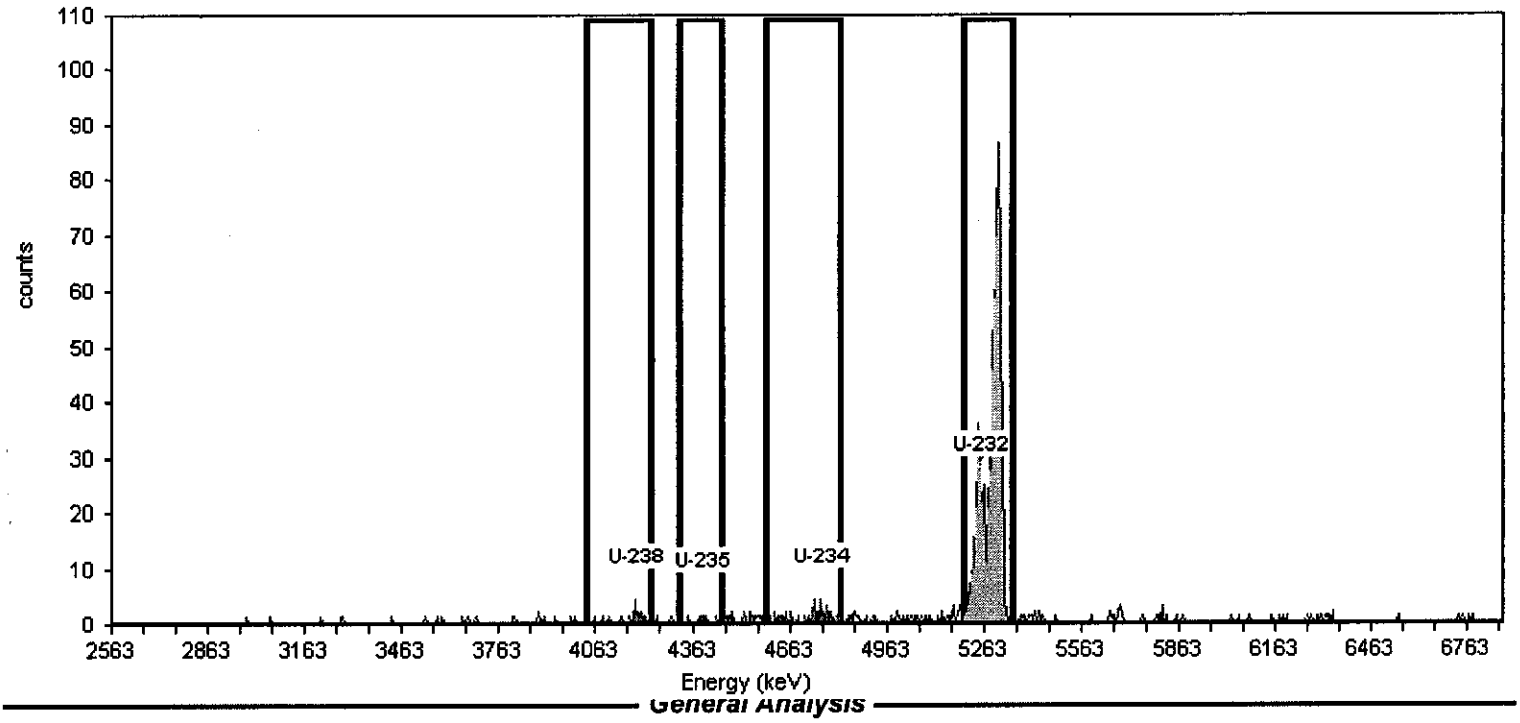
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.56%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/27/2010 1:59:28PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	31.252	100.2	19.00	4.4289	15	1.886E-001	1.922E-001	6.338E-002	1.618E-001
U-235	4396.000	4318.000	4453.000	123.222	80.9	7.93	14.0351	-6	-9.793E-002	2.265E-001	1.398E-001	3.230E-001
U-234	4765.000	4592.000	4819.000	47.593	100.0	37.94	30.7704	7	9.300E-002	3.231E-001	1.674E-001	3.699E-001
U-232	5263.000	5203.000	5350.000	37.259	99.8	837.83	7.3100	831	7.382E+000	8.248E-001	8.937E-002	2.172E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:19:17AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

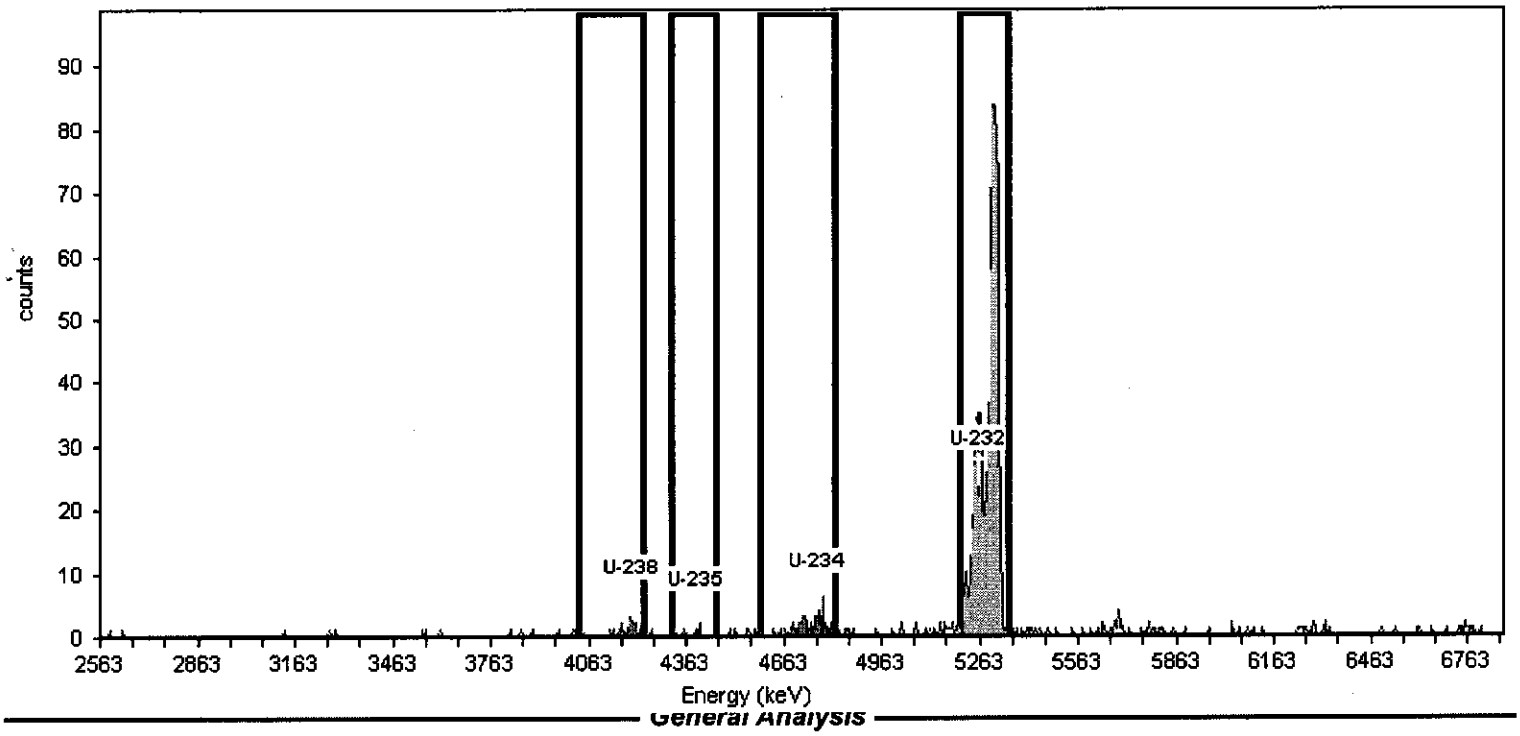
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 70.82%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/27/2010 1:59:32PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	30.216	100.2	19.90	7.5711	12	1.423E-001	1.838E-001	7.386E-002	1.789E-001
U-235	4396.000	4318.000	4453.000	14.966	80.9	6.00	11.0000	-5	-7.148E-002	1.774E-001	1.103E-001	2.593E-001
U-234	4765.000	4592.000	4819.000	90.964	100.0	56.88	25.7108	31	3.603E-001	3.240E-001	1.364E-001	3.040E-001
U-232	5263.000	5203.000	5350.000	24.490	99.8	936.17	4.3100	932	8.357E+000	8.851E-001	6.116E-002	1.566E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:32AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-10 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

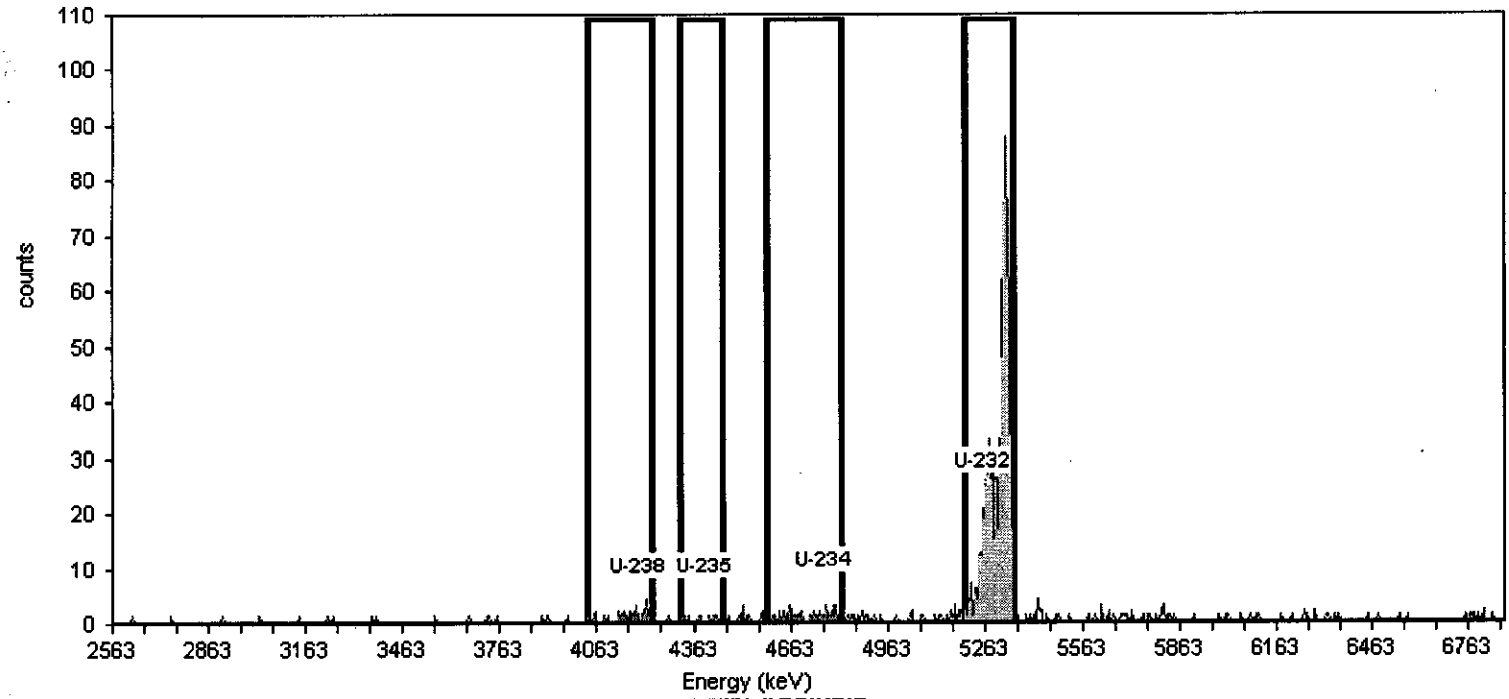
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.74%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/27/2010 1:59:35PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	12.916	100.2	36.34	12.0000	24	3.026E-001	2.670E-001	1.002E-001	2.340E-001
U-235	4396.000	4318.000	4453.000	6.881	80.9	10.00	4.0000	6	9.243E-002	1.740E-001	7.167E-002	1.850E-001
U-234	4765.000	4592.000	4819.000	16.003	100.0	45.71	29.3399	16	2.039E-001	3.266E-001	1.570E-001	3.477E-001
U-232	5263.000	5203.000	5350.000	23.879	99.8	879.07	14.3100	865	7.640E+000	8.439E-001	1.201E-001	2.771E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:36AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-11 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

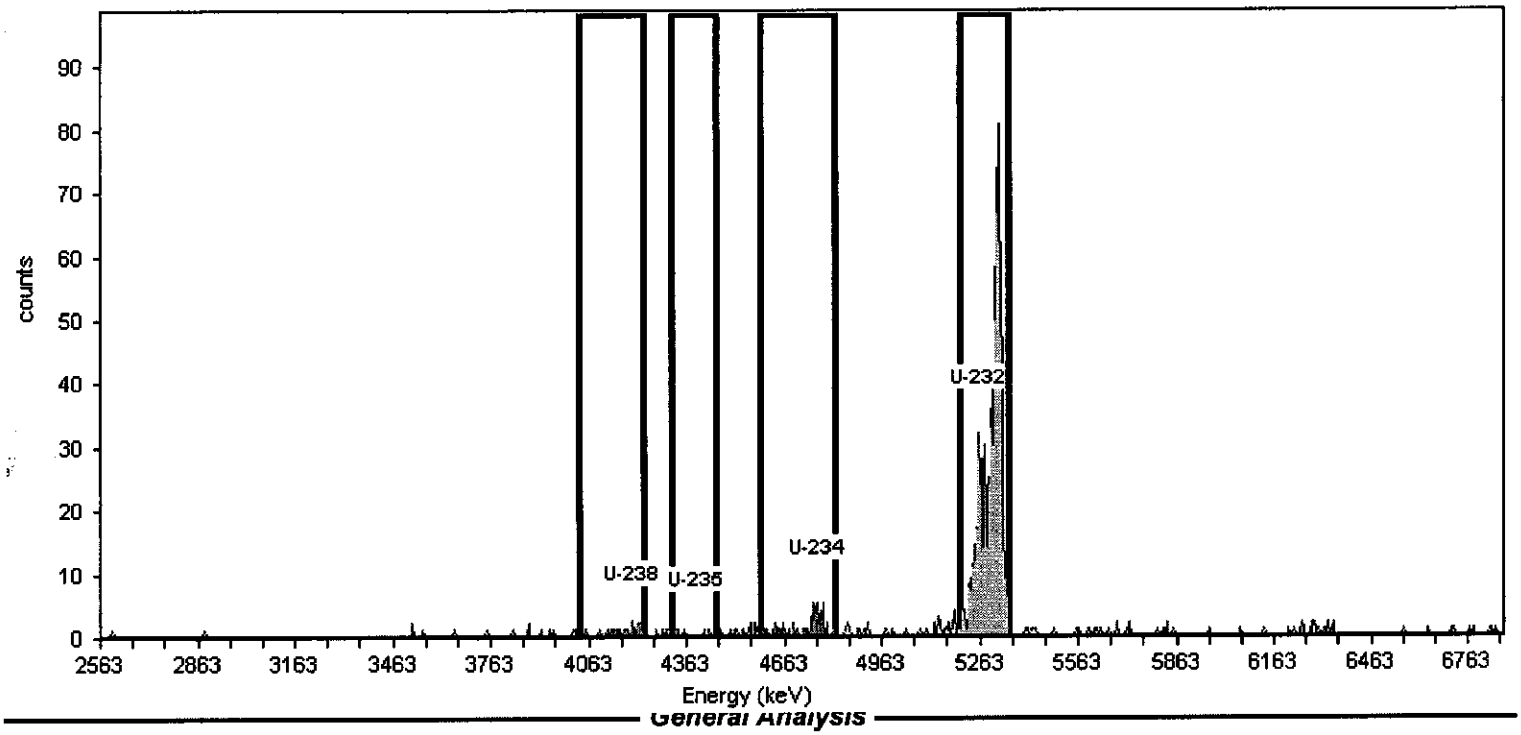
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 61.84%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/27/2010 1:59:38PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	17.567	100.2	24.00	5.0000	19	2.526E-001	2.214E-001	6.917E-002	1.743E-001
U-235	4396.000	4318.000	4453.000	109.703	80.9	6.98	4.0567	3	4.813E-002	1.645E-001	7.719E-002	1.990E-001
U-234	4765.000	4592.000	4819.000	38.465	100.0	51.54	21.0000	31	4.069E-001	3.512E-001	1.420E-001	3.201E-001
U-232	5263.000	5203.000	5350.000	16.471	99.8	819.93	11.3100	809	7.297E+000	8.295E-001	1.142E-001	2.678E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:40AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-12 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

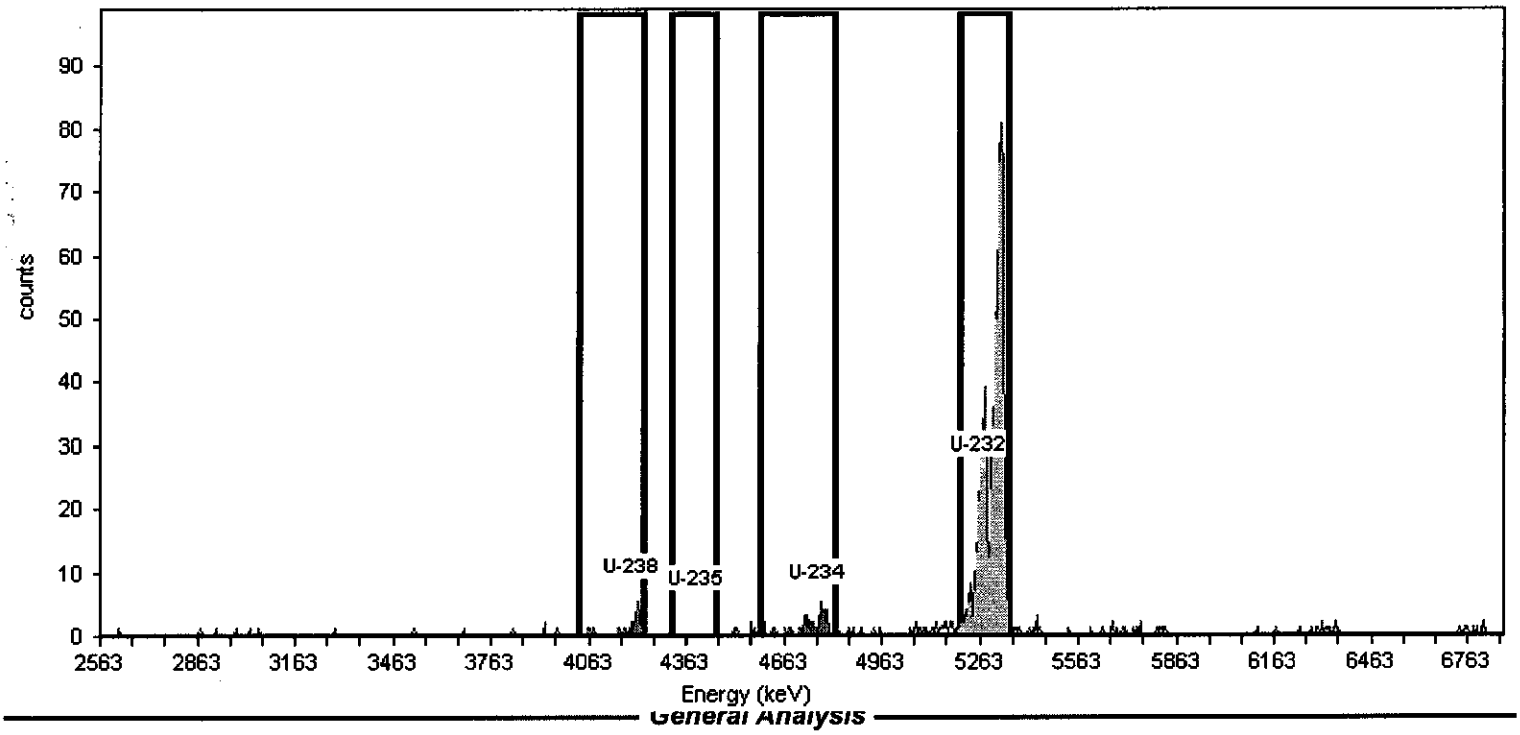
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.58%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/27/2010 1:59:42PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	14.514	100.2	26.00	6.0000	20	2.531E-001	2.213E-001	7.213E-002	1.785E-001
U-235	4396.000	4318.000	4453.000	.000	80.9	0.00	3.0135	-3	-4.726E-002	9.477E-002	6.333E-002	1.691E-001
U-234	4765.000	4592.000	4819.000	6.590	100.0	42.00	10.0596	32	4.050E-001	2.874E-001	9.357E-002	2.215E-001
U-232	5263.000	5203.000	5350.000	21.874	99.8	855.17	5.6900	849	7.620E+000	8.420E-001	7.708E-002	1.918E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:43AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-13 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

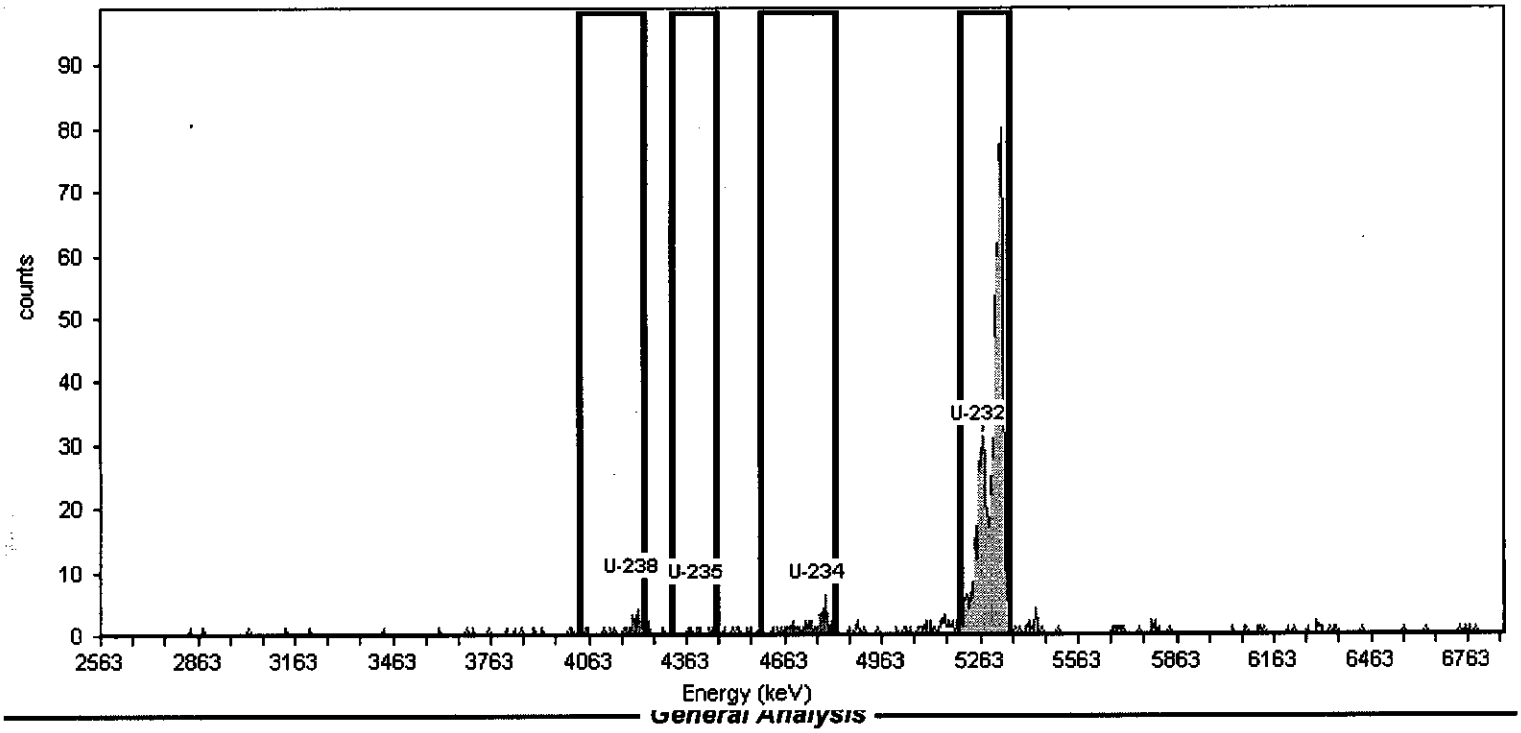
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.10%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/27/2010 1:59:45PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	7.915	100.2	26.00	7.0000	19	2.464E-001	2.295E-001	7.983E-002	1.948E-001
U-235	4396.000	4318.000	4453.000	14.092	80.9	7.00	4.0000	3	4.821E-002	1.602E-001	7.477E-002	1.930E-001
U-234	4765.000	4592.000	4819.000	6.807	100.0	46.00	18.0000	28	3.639E-001	3.212E-001	1.283E-001	2.917E-001
U-232	5263.000	5203.000	5350.000	21.357	99.8	838.14	9.1691	829	7.446E+000	8.348E-001	1.003E-001	2.391E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:05:16AM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-14 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.27 003
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

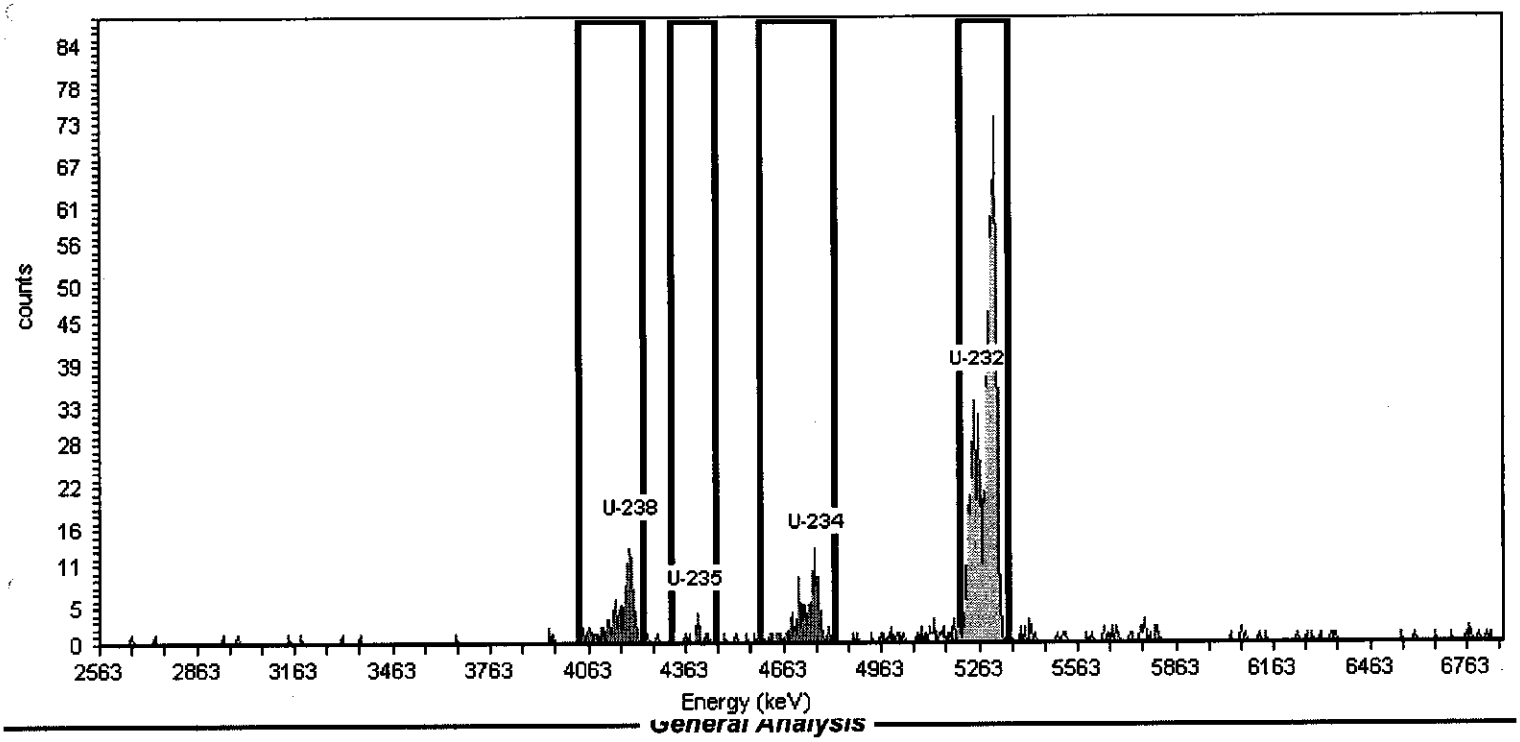
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 61.22%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/27/2010 1:59:48PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/27/2010 1:57:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-234	4765.000	4592.000	4819.000	62.949	100.0	126.06	17.9404	108	1.456E+000	5.748E-001	1.327E-001	3.018E-001
U-232	5263.000	5203.000	5350.000	37.565	99.8	807.00	7.0000	800	7.224E+000	8.214E-001	9.079E-002	2.215E-001
U-238	4193.000	4037.000	4232.000	30.997	100.2	114.33	11.0000	103	1.389E+000	5.390E-001	1.037E-001	2.438E-001
U-235	4396.000	4318.000	4453.000	48.400	80.9	12.98	5.0000	8	1.329E-001	2.137E-001	8.662E-002	2.183E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:20:25PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-15 Type: Sample
Spectrum #1 Analysis #1

Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

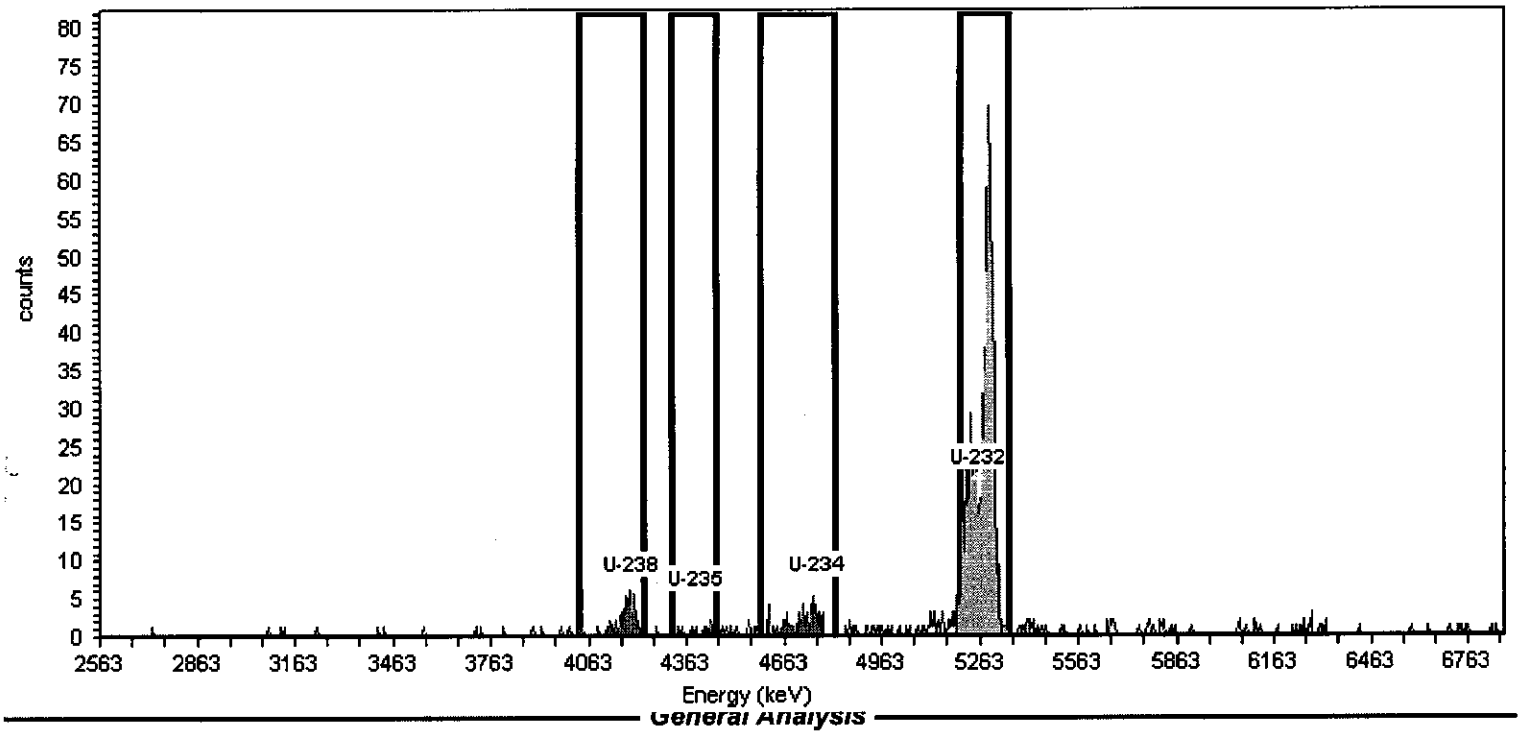
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 57.03%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/28/2010 7:45:58AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	46.258	100.2	51.00	8.0000	43	6.187E-001	3.570E-001	9.467E-002	2.283E-001
U-235	4396.000	4318.000	4453.000	8.400	80.9	10.98	4.0351	7	1.238E-001	2.089E-001	8.330E-002	2.148E-001
U-234	4765.000	4592.000	4819.000	72.475	100.0	59.77	24.0000	36	5.156E-001	4.109E-001	1.643E-001	3.676E-001
U-232	5263.000	5203.000	5350.000	33.777	99.8	752.97	5.6900	747	6.729E+000	7.877E-001	8.763E-002	2.180E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:20:29PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-16 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

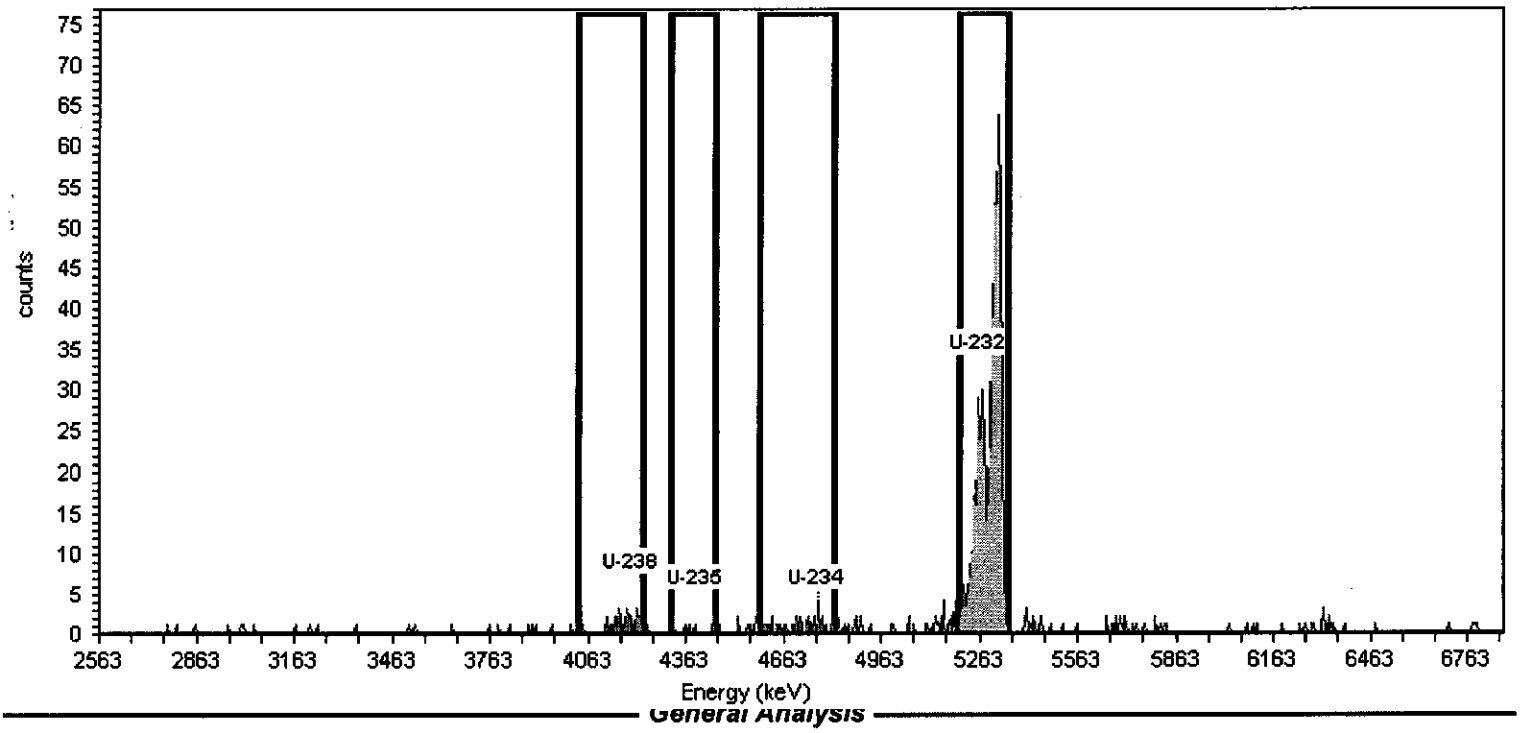
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 55.83%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/28/2010 7:46:00AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	17.375	100.2	30.00	8.0000	22	3.123E-001	2.708E-001	9.340E-002	2.252E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	6.04	12.0000	-6	-1.048E-001	2.252E-001	1.417E-001	3.310E-001
U-234	4765.000	4592.000	4819.000	33.707	100.0	41.06	30.4592	11	1.507E-001	3.622E-001	1.826E-001	4.037E-001
U-232	5263.000	5203.000	5350.000	16.031	99.8	764.66	7.1691	757	6.588E+000	7.664E-001	9.703E-002	2.362E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:18:23PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-17 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

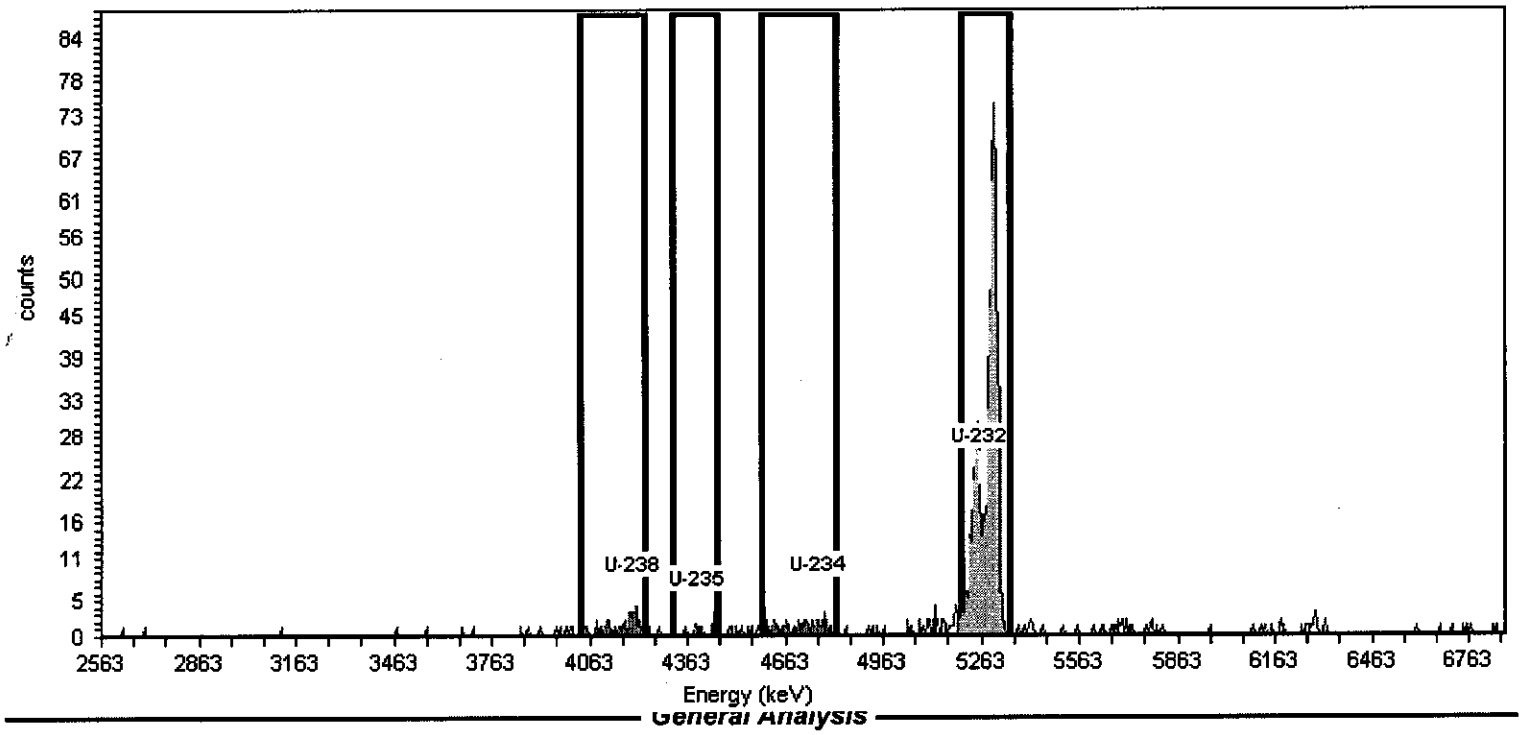
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 56.12%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/28/2010 7:45:47AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	32.502	100.2	42.00	4.4289	38	5.422E-001	3.170E-001	7.065E-002	1.804E-001
U-235	4396.000	4318.000	4453.000	6.021	80.9	9.00	14.0351	-5	-9.003E-002	2.582E-001	1.558E-001	3.600E-001
U-234	4765.000	4592.000	4819.000	6.331	100.0	44.06	30.7704	13	1.921E-001	3.775E-001	1.866E-001	4.123E-001
U-232	5263.000	5203.000	5350.000	37.261	99.8	752.34	7.3100	745	6.622E+000	7.772E-001	9.962E-002	2.421E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:19:13PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-18 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

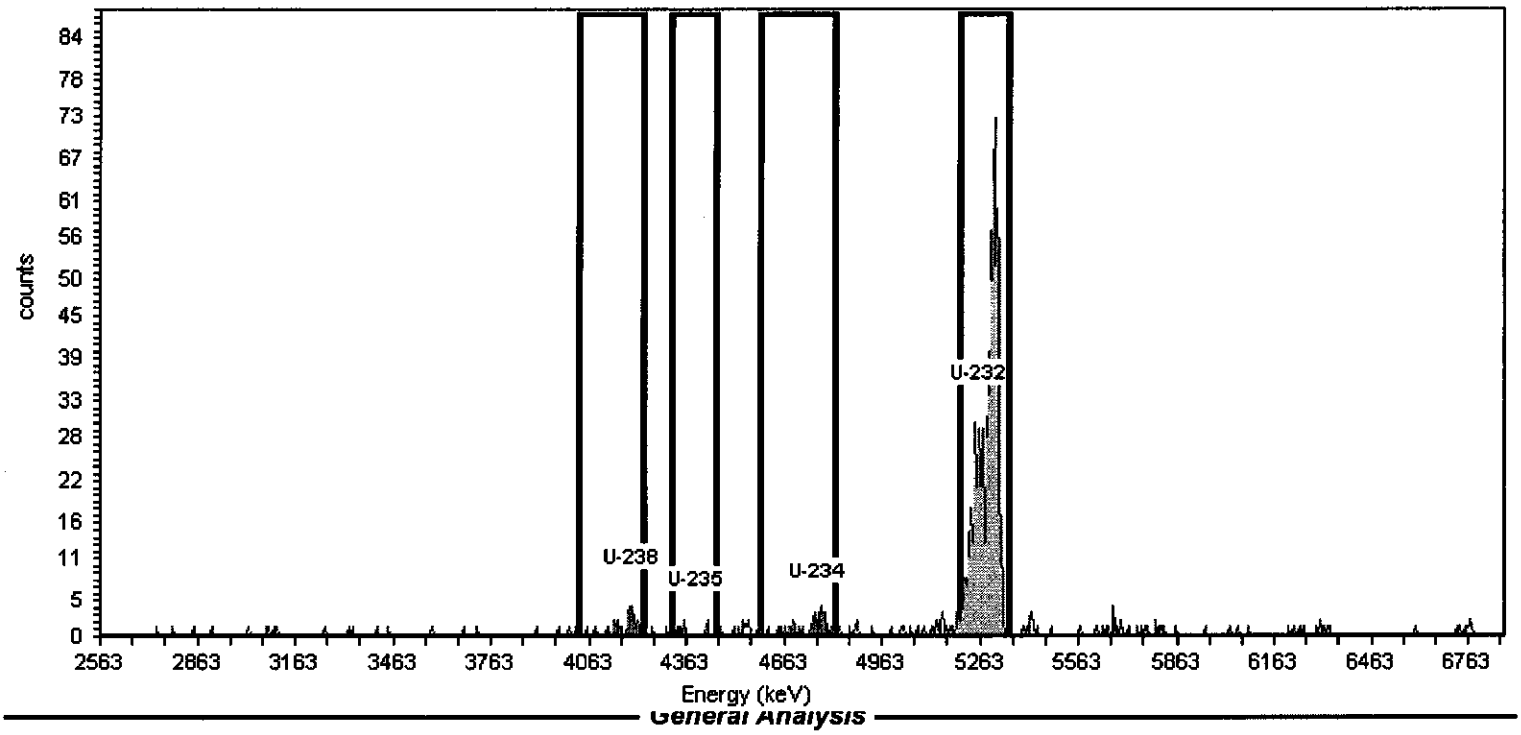
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 61.18%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/28/2010 7:45:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	39.186	100.2	32.67	7.5711	25	3.352E-001	2.639E-001	8.549E-002	2.071E-001
U-235	4396.000	4318.000	4453.000	5.775	80.9	9.96	11.0000	-1	-1.726E-002	2.273E-001	1.277E-001	3.001E-001
U-234	4765.000	4592.000	4819.000	23.025	100.0	40.17	25.7108	14	1.935E-001	3.284E-001	1.578E-001	3.519E-001
U-232	5263.000	5203.000	5350.000	28.367	99.8	809.34	4.3100	805	7.219E+000	8.159E-001	7.079E-002	1.813E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:19:16PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-19 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

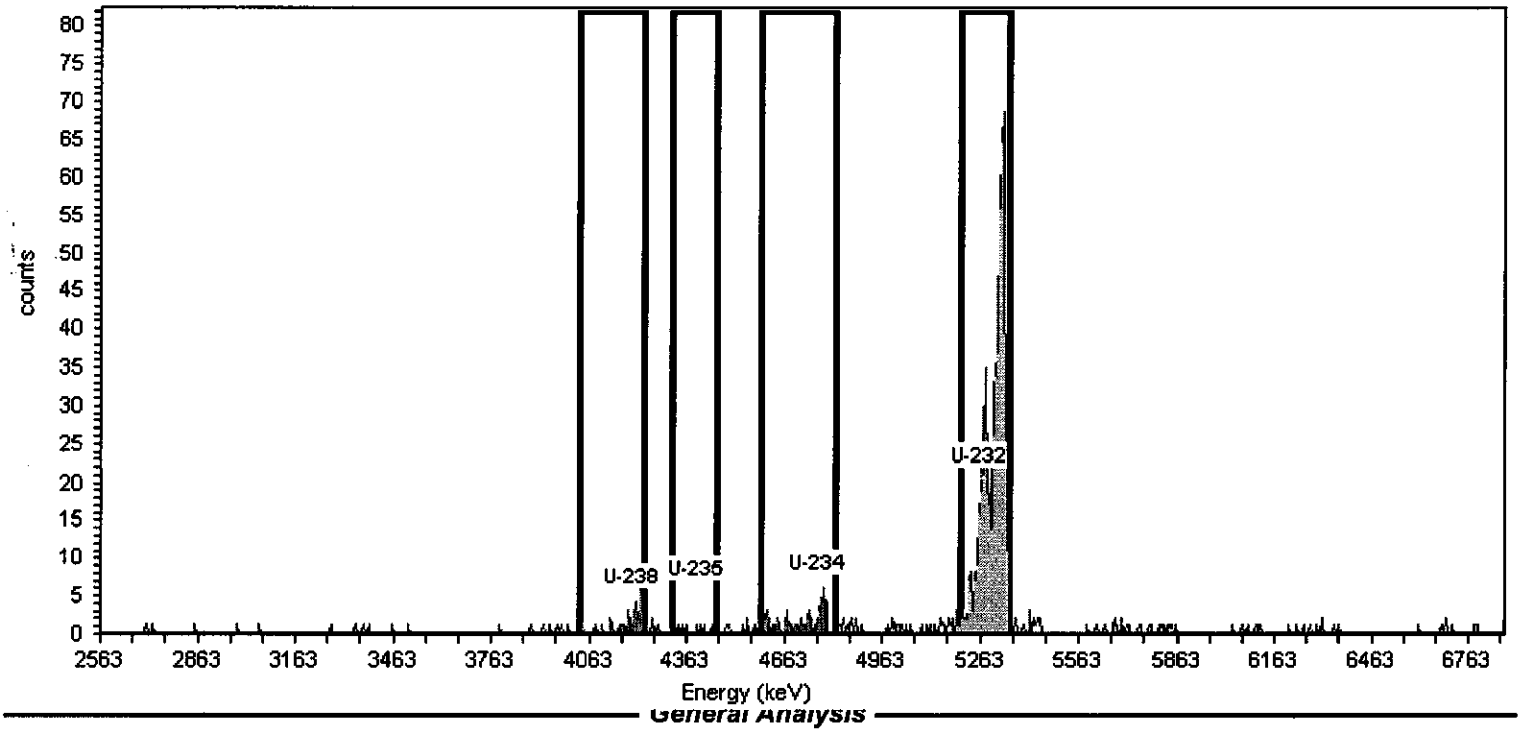
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 54.07%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/28/2010 7:45:50AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	19.421	100.2	40.90	12.0000	29	4.303E-001	3.379E-001	1.200E-001	2.803E-001
U-235	4396.000	4318.000	4453.000	6.023	80.9	7.04	4.0000	3	5.599E-002	1.842E-001	8.583E-002	2.216E-001
U-234	4765.000	4592.000	4819.000	20.397	100.0	58.77	29.3399	29	4.390E-001	4.306E-001	1.880E-001	4.163E-001
U-232	5263.000	5203.000	5350.000	23.037	99.8	736.44	14.3100	722	6.380E+000	7.658E-001	1.438E-001	3.318E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:21:06PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-20 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

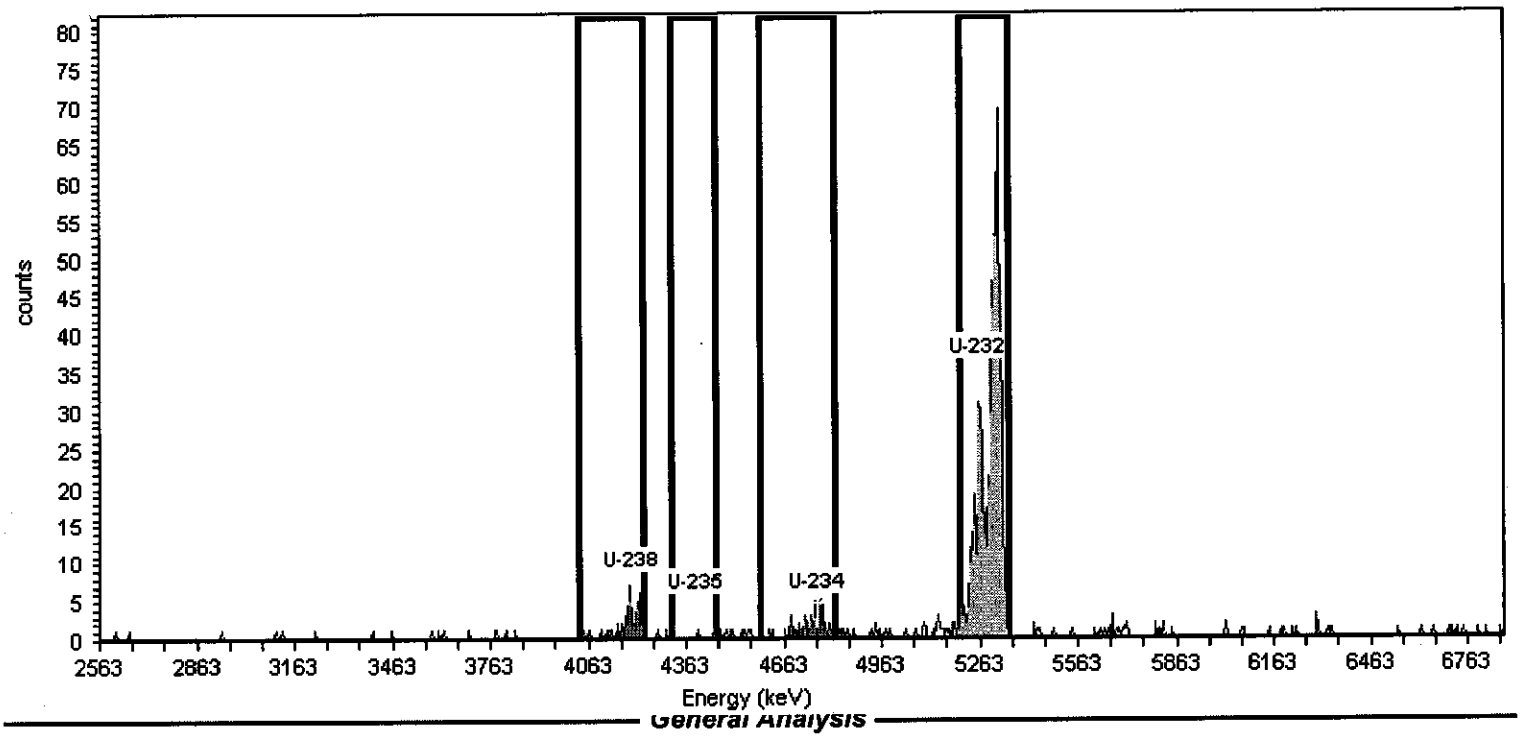
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 56.18%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/28/2010 7:45:52AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	14.741	100.2	51.86	5.0000	47	6.858E-001	3.624E-001	7.614E-002	1.919E-001
U-235	4396.000	4318.000	4453.000	128.568	80.9	3.02	4.0567	-1	-1.877E-002	1.448E-001	8.497E-002	2.190E-001
U-234	4765.000	4592.000	4819.000	38.289	100.0	54.00	21.0000	33	4.839E-001	3.949E-001	1.563E-001	3.524E-001
U-232	5263.000	5203.000	5350.000	14.931	99.8	745.90	11.3100	735	6.629E+000	7.874E-001	1.257E-001	2.948E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:19:20PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-01 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

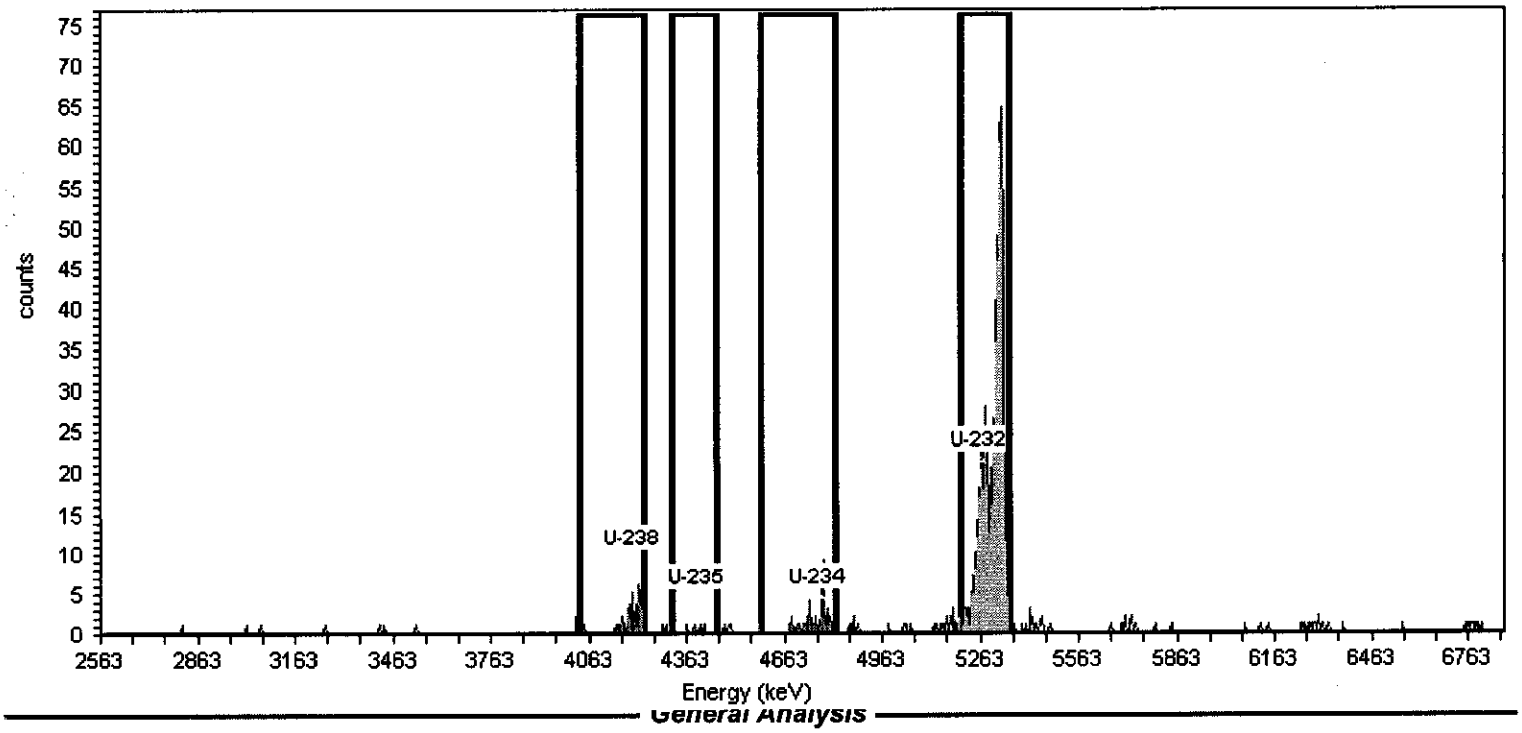
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 50.23%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/28/2010 7:45:54AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.222	100.2	44.96	6.0000	39	6.340E-001	3.748E-001	9.273E-002	2.295E-001
U-235	4396.000	4318.000	4453.000	63.064	80.9	4.00	3.0135	1	1.989E-002	1.602E-001	8.142E-002	2.174E-001
U-234	4765.000	4592.000	4819.000	22.097	100.0	41.06	10.0596	31	5.054E-001	3.666E-001	1.203E-001	2.847E-001
U-232	5263.000	5203.000	5350.000	20.141	99.8	666.38	5.6900	661	5.927E+000	7.338E-001	9.911E-002	2.466E-001

AlphaVision v5.3 *Alpha-Spectroscopy Analysis Report*

ORTEC
Oak Ridge, TN 37830
1:21:10PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-20 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

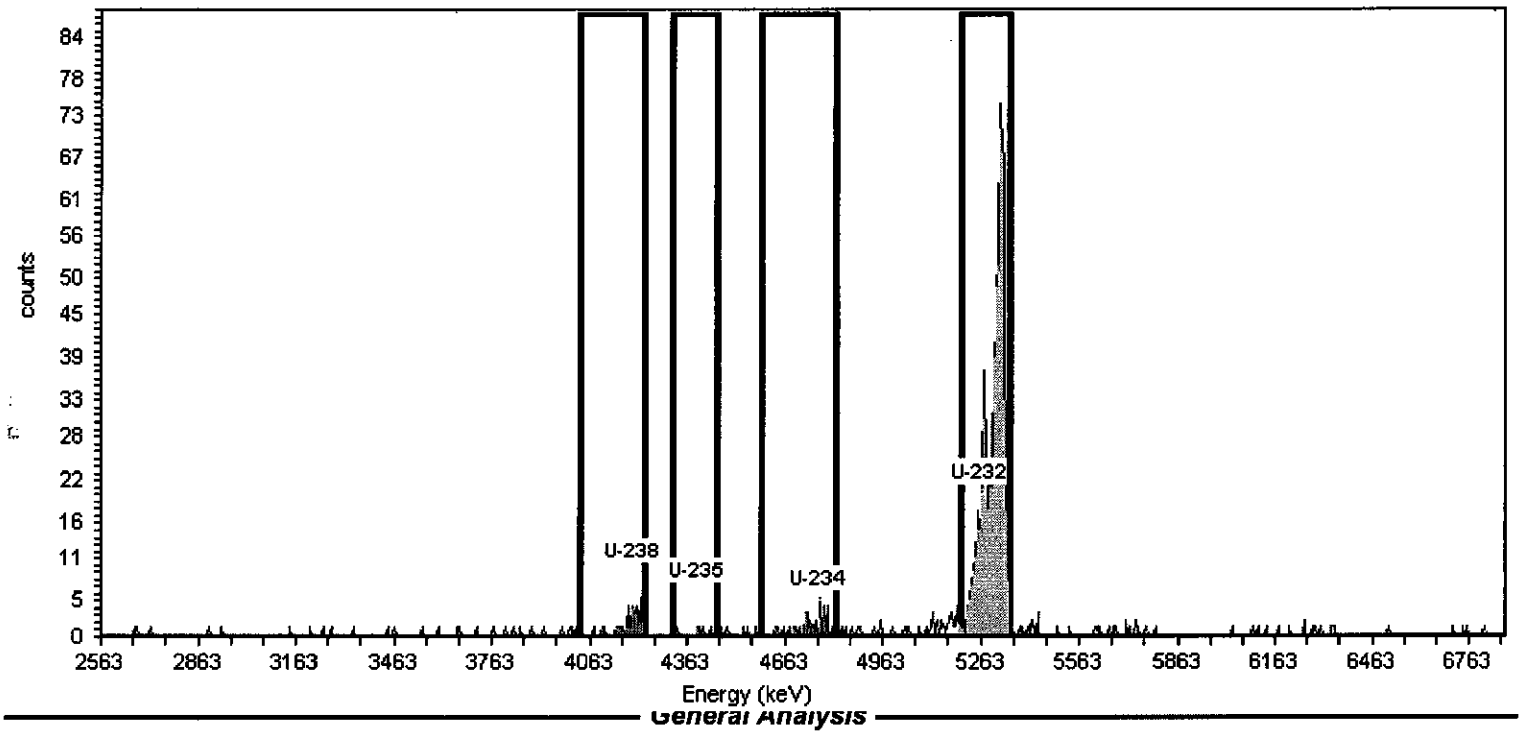
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 64.92%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/28/2010 7:45:56AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	23.156	100.2	48.43	7.0000	41	5.223E-001	3.023E-001	7.759E-002	1.893E-001
U-235	4396.000	4318.000	4453.000	5.664	80.9	5.00	4.0000	1	1.562E-002	1.406E-001	7.267E-002	1.876E-001
U-234	4765.000	4592.000	4819.000	8.120	100.0	42.77	18.0000	25	3.129E-001	3.026E-001	1.247E-001	2.835E-001
U-232	5263.000	5203.000	5350.000	21.063	99.8	862.06	9.1691	853	7.661E+000	8.480E-001	9.746E-002	2.324E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
1:12:13PM 7/28/2010

Analyst: ORTEC

Sample

Sample: L83049-10 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.28 001
:
Description: WG286629

Client Name: Undefined
Client Contact:

Tracer

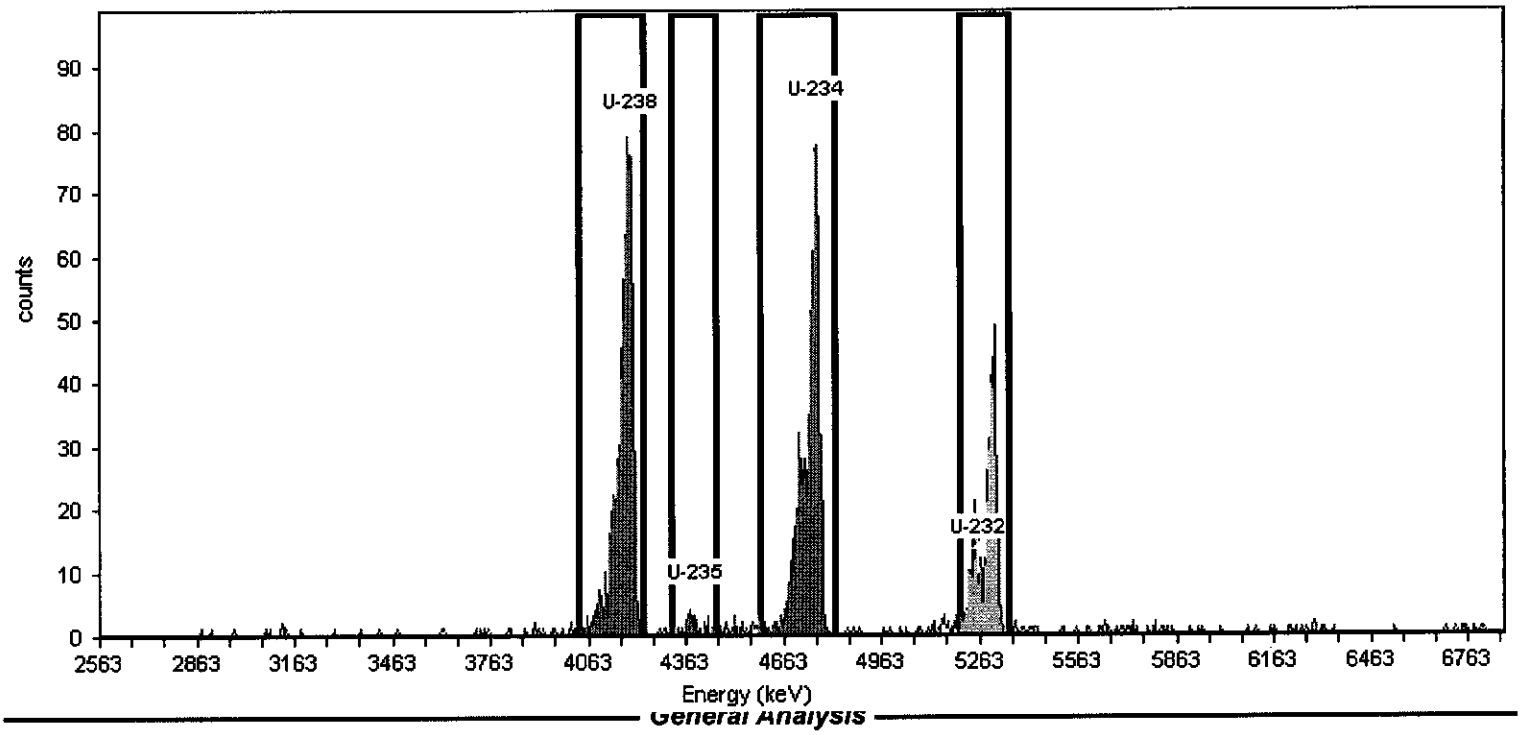
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 34.71%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/28/2010 7:45:56AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/28/2010 7:43:56AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	37.235	100.2	864.33	11.0000	853	2.023E+001	5.151E+000	1.829E-001	4.300E-001
U-235	4396.000	4318.000	4453.000	66.646	80.9	32.06	5.0000	27	7.947E-001	5.673E-001	1.528E-001	3.851E-001
U-234	4765.000	4592.000	4819.000	34.817	100.0	843.06	17.9404	825	1.960E+001	5.012E+000	2.340E-001	5.324E-001
U-232	5263.000	5203.000	5350.000	36.226	99.8	460.52	7.0000	454	4.095E+000	6.066E-001	1.601E-001	3.907E-001

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG287058

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 7/26/2010
Analysis Date: 7/30/2010
Start Time:
End Time:
Approved: MWM 8-2-10
Approved: MTB 8-2-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	WG286648PBS		0.5	9.0771	9.1284	0.0513	2.5650		89.87	0.11	0.15	0.86
2	WG286648LCSS	RC100624-2	0.5	9.0933	9.1442	0.0509	2.5450		89.87	39.37	1.98	0.87
3	L83049-01	BG-7 0-2 COMP	0.49468	9.0657	9.1127	0.0470	2.3500		89.87	4.46	0.71	0.95
4	L83049-02	BG-7 2-12 COMP	0.49217	9.0669	9.1154	0.0485	2.4250		89.87	5.34	0.76	0.93
5	L83049-03	BG-7 12-18 COMP	0.49495	9.0613	9.1077	0.0464	2.3200		89.87	2.04	0.50	0.96
6	L83049-04	BG-8 0-2 COMP	0.49394	9.0254	9.0728	0.0474	2.3700		89.87	1.81	0.46	0.94
7	L83049-05	BG-8 2-12 COMP	0.49496	9.0769	9.1232	0.0463	2.3150		89.87	2.18	0.51	0.96
8	L83049-06	BG-8 12-18 COMP	0.49601	9.1035	9.1536	0.0501	2.5050		89.87	11.93	1.11	0.89
9	L83049-07	BG-101 2-12 COMP	0.49563	9.0664	9.1138	0.0474	2.3700		89.87	2.21	0.51	0.94
10	L83049-08	BG-11 0-2 COMP	0.4962	9.0667	9.1181	0.0514	2.5700		89.87	1.94	0.46	0.87
11	L83049-09	BG-11 2-12 COMP	0.49617	9.0593	9.1323	0.0730	3.6500		92.85	1.32	0.31	0.60
12	L83049-10	BG-11 12-18 COMP	0.49565	9.0523	9.1029	0.0506	2.5300		92.85	2.19	0.49	0.87
13	L83049-11	BG-12 0-2 COMP	0.49526	9.0347	9.0859	0.0512	2.5600		92.85	1.64	0.43	0.86
14	L83049-12	BG-12 2-12 COMP	0.49695	9.0687	9.1221	0.0534	2.6700		92.85	1.58	0.41	0.82
15	L83049-13	BG-12 12-18 COMP	0.49335	9.07	9.1192	0.0492	2.4600		92.85	2.72	0.55	0.90
16	L83049-14	BG-15 0-2 COMP	0.49502	9.072	9.1147	0.0427	2.1350		92.85	3.22	0.63	1.03
17	L83049-15	BG-15 2-12 COMP	0.49715	9.0665	9.1215	0.0550	2.7500		92.85	2.39	0.48	0.80
18	L83049-16	BG-15 12-18 COMP	0.49562	9.0963	9.15	0.0537	2.6850		92.85	2.03	0.45	0.82
19	L83049-17	BG-102 2-12 COMP	0.4948	9.0701	9.1216	0.0515	2.5750		92.85	1.92	0.46	0.86
20	L83049-18	BG-16 0-2 COMP	0.49607	9.0533	9.1099	0.0566	2.8300		92.85	7.29	0.81	0.78
21	L83049-19	BG-16 2-12 COMP	0.49614	9.0904	9.1431	0.0527	2.6350		94.43	6.02	0.76	0.83
22	L83049-20	BG-16 12-18 COMP	0.49585	9.055	9.1057	0.0507	2.5350		94.43	2.39	0.51	0.86
23	L83049-01DUP		0.49468	9.0788	9.1316	0.0528	2.6400		94.43	4.01	0.63	0.83
24	L83049-20DUP		0.49585	9.0513	9.1009	0.0496	2.4800		94.43	3.44	0.60	0.88
25	L83049-10MS	RC100624-2	0.49565	9.076	9.1295	0.0535	2.6750		94.43	41.01	1.95	0.82

Ra226 Decay	Date:	
	Time:	
Ba Correction Factor		0.05500
Counting Efficiency:		0.1700
Alpha BG Count @90min		0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

ACZ Sample No.	GR CPM Alpha	Detector Alpha	BG CPM Alpha	NET CPM Alpha	Ingrow date & time	Count date & time	Ingrow Factor	Counting Efficiency	Fractional Yield	Detector #	BG alpha
WG286648PBS	0.1000	1	0.0534	0.0466	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.9327	1	0.0534
WG286648LCSS	17.1300	2	0.0875	17.0425	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.9255	2	0.0875
L83049-01	1.8440	3	0.0806	1.7634	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.8545	3	0.0806
L83049-02	2.2440	4	0.0764	2.1676	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.8818	4	0.0764
L83049-03	0.8780	5	0.0819	0.7961	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.8436	5	0.0819
L83049-04	0.7670	6	0.0472	0.7198	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.8618	6	0.0472
L83049-05	0.9110	7	0.0611	0.8499	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.8418	7	0.0611
L83049-06	5.1110	8	0.0667	5.0443	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.9109	8	0.0667
L83049-07	0.9670	9	0.0847	0.8823	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.8618	9	0.0847
L83049-08	0.9110	10	0.0694	0.8416	7/26/2010 16:35	7/30/2010 9:42	2.48	0.1700	0.9345	10	0.0694
L83049-09	0.8800	1	0.0534	0.8266	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	1.3273		
L83049-10	1.0330	2	0.0875	0.9455	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.9200		
L83049-11	0.8000	3	0.0806	0.7194	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.9309		
L83049-12	0.8000	4	0.0764	0.7236	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.9709		
L83049-13	1.2220	5	0.0819	1.1401	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.8945		
L83049-14	1.2220	6	0.0472	1.1748	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.7764		
L83049-15	1.1890	7	0.0611	1.1279	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	1.0000		
L83049-16	1.0000	8	0.0667	0.9333	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.9764		
L83049-17	0.9300	9	0.0847	0.8453	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	0.9364		
L83049-18	3.6000	10	0.0694	3.5306	7/26/2010 16:35	7/30/2010 12:41	2.51	0.1700	1.0291		
L83049-19	2.7890	1	0.0534	2.7356	7/26/2010 16:35	7/30/2010 14:16	2.53	0.1700	0.9582		
L83049-20	1.1330	2	0.0875	1.0455	7/26/2010 16:35	7/30/2010 14:16	2.53	0.1700	0.9218		
L83049-01DUP	1.9000	3	0.0806	1.8194	7/26/2010 16:35	7/30/2010 14:16	2.53	0.1700	0.9600		
L83049-20DUP	1.5440	4	0.0764	1.4676	7/26/2010 16:35	7/30/2010 14:16	2.53	0.1700	0.9018		
L83049-10MS	18.9700	5	0.0819	18.8881	7/26/2010 16:35	7/30/2010 14:16	2.53	0.1700	0.9727		

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 8-2-10

Work Group: WG287958
Sample Type: Sol. d
Analysis Date: 7-30-10
Analyst: TCD
Prep Date: 7-26-10

Approved: MTB
Date: 8-2-10

Weekly background file: Back618
Daily background file: Back623

Alpha performance file: Perf916
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	**Performance Check**	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287058

Date Reported: 02-Aug-10
Run ID: R736569
Date Analyzed: 30-Jul-10
ICAL Workgroup:
Instrument ID: LB770

WG286648PBS

Tag: Measured: 7/30/2010 9:42:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.11	1		pCi/g	++	0.86	0.15		

WG286648LCSS

Tag: Measured: 7/30/2010 9:43:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	39	1		pCi/g	++	0.87	2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	81.5	1		%	++	0.87	2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	0.87	2	RC100624-2	

L83049-01

Tag: Measured: 7/30/2010 9:44:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	4.5	1		pCi/g	++	0.95	0.71		

L83049-02

Tag: Measured: 7/30/2010 9:46:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5.3	1		pCi/g	++	0.93	0.76		

L83049-03

Tag: Measured: 7/30/2010 9:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2	1		pCi/g	++	0.96	0.5		

L83049-04

Tag: Measured: 7/30/2010 9:49:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.8	1		pCi/g	++	0.94	0.46		

L83049-05

Tag: Measured: 7/30/2010 9:50:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.2	1		pCi/g	++	0.96	0.51		

L83049-06

Tag: Measured: 7/30/2010 9:52:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	12	1		pCi/g	++	0.89	1.1		

L83049-07 Tag: **Measured: 7/30/2010 9:53:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.2	1		pCi/g	++	0.94	0.51		

L83049-08 Tag: **Measured: 7/30/2010 9:54:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.9	1		pCi/g	++	0.87	0.46		

L83049-09 Tag: **Measured: 7/30/2010 9:56:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.3	1		pCi/g	++	0.6	0.31		

L83049-10 Tag: **Measured: 7/30/2010 9:57:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.2	1		pCi/g	++	0.87	0.49		

L83049-11 Tag: **Measured: 7/30/2010 9:59:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.6	1		pCi/g	++	0.86	0.43		

L83049-12 Tag: **Measured: 7/30/2010 10:00:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.6	1		pCi/g	++	0.82	0.41		

L83049-13 Tag: **Measured: 7/30/2010 10:02:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.7	1		pCi/g	++	0.9	0.55		

L83049-14 Tag: **Measured: 7/30/2010 10:03:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	3.2	1		pCi/g	++	1	0.63		

L83049-15 Tag: **Measured: 7/30/2010 10:05:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.4	1		pCi/g	++	0.8	0.48		

L83049-16 Tag: **Measured: 7/30/2010 10:06:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2	1		pCi/g	++	0.82	0.45		

L83049-17

Tag: Measured: 7/30/2010 10:07:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.9	1		pCi/g	++	0.86	0.46		

L83049-18

Tag: Measured: 7/30/2010 10:09:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	7.3	1		pCi/g	++	0.78	0.81		

L83049-19

Tag: Measured: 7/30/2010 10:10:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	6	1		pCi/g	++	0.83	0.76		

L83049-20

Tag: Measured: 7/30/2010 10:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.4	1		pCi/g	++	0.86	0.51		

L83049-01DUP

Tag: Measured: 7/30/2010 10:13:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	4	1		pCi/g	++	0.83	0.63		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	0.53	1		%	++	2	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	11.8	1		pCi/g	++	0.83	0.63		

L83049-20DUP

Tag: Measured: 7/30/2010 10:15:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	3.4	1		pCi/g	++	0.88	0.6		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	1.27	1		%	++	2	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	34.5	1		pCi/g	ALRT	0.88	0.6		

L83049-10MS

Tag: Measured: 7/30/2010 10:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	41	1		pCi/g	++	0.82	2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	81.1	1		%	++	0.82	2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	0.82	2	RC100624-2	

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG286648

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: PREP

Analyst: tcd
Dept: 50
Prep Date: 7-26-10 10:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	PBS	pbs 1	50									
2	LCSS	pbs 2										
3	L83049-01	BG-7 0-2 COMP										
4	L83049-02	BG-7 2-12 COMP										
5	L83049-03	BG-7 12-18 COMP										
6	L83049-04	BG-8 0-2 COMP										
7	L83049-05	BG-8 2-12 COMP										
8	L83049-06	BG-8 12-18 COMP										
9	L83049-07	BG-101 2-12 COMP										
10	L83049-08	BG-11 0-2 COMP										
11	L83049-09	BG-11 2-12 COMP										
12	L83049-10	BG-11 12-18 COMP										
13	L83049-11	BG-12 0-2 COMP										
14	L83049-12	BG-12 2-12 COMP										
15	L83049-13	BG-12 12-18 COMP										
16	L83049-14	BG-15 0-2 COMP										
17	L83049-15	BG-15 2-12 COMP										
18	L83049-16	BG-15 12-18 COMP										
19	L83049-17	BG-102 2-12 COMP										
20	L83049-18	BG-16 0-2 COMP										
21	L83049-19	BG-16 2-12 COMP										
22	L83049-20	BG-16 12-18 COMP										
23	DUP	49-01										
24	DUP	49-20										
25	MS	49-10										

Ra226 Decay	Date:	
	Time:	
Ba Correction Factor		0.05500
Counting Efficiency:		0.1700
Alpha BG Count @90min		0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

ingrowth 16:35
7-26-10

ACZ LABORATORIES, INC.
Standards/Reagents Information
wg286648
Water 7/26/2010 10:10 AM

ANALYST: TCD

Second analyst: _____

DATE TIME of prep start: _____

PROJECT/WG: _____

Method Ra-226 9315 INSTR: LB770

Radioactive Standards

LCS & MS rc100624-2

Reagents

Barium Carrier:	rc100204-1	EDTA	rc100712-1
Sulfuric Acid	34642	Sulfuric Acid 0.1N	34642
Nitric Acid	—	Ammonium sulfate	rc100719-1
lead carrier	rc100713-1	Acetic Acid	34657
Sodium hydroxide 10 N	—	Citric acid	rc100511-1

COMMENTS:

3050

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286377PBS1	NONE	<2000		07/21/10 9:00	0	7.5	5	5	50				
2	WG286377PBS2	NONE	<2000		07/21/10 10:02	0	7.5	5	5	50				
3	L83049-01	BG-7 0-2 COMP	<2000		07/21/10 11:05	0.5	7.5	5	5	50		98.94		
4	L83049-01DUP	NONE	<2000		07/21/10 12:07	0.5	7.5	5	5	50		98.94		
5	L83049-02	BG-7 2-12 COMP	<2000		07/21/10 13:10	0.5	7.5	5	5	50		98.43		
6	L83049-03	BG-7 12-18 COMP	<2000		07/21/10 14:12	0.5	7.5	5	5	50		98.99		
7	L83049-04	BG-8 0-2 COMP	<2000		07/21/10 15:15	0.5	7.5	5	5	50		98.79		
8	L83049-05	BG-8 2-12 COMP	<2000		07/21/10 16:17	0.5	7.5	5	5	50		98.99		
9	L83049-06	BG-8 12-18 COMP	<2000		07/21/10 17:20	0.5	7.5	5	5	50		99.2		
10	L83049-07	BG-101 2-12 COMP	<2000		07/21/10 18:22	0.5	7.5	5	5	50		99.13		
11	L83049-08	BG-11 0-2 COMP	<2000		07/21/10 19:25	0.5	7.5	5	5	50		99.24		
12	L83049-09	BG-11 2-12 COMP	<2000		07/21/10 20:27	0.5	7.5	5	5	50		99.23		
13	L83049-10	BG-11 12-18 COMP	<2000		07/21/10 21:30	0.5	7.5	5	5	50		99.13		
14	L83049-10DUP	NONE	<2000		07/21/10 22:32	0.5	7.5	5	5	50		99.13		
15	L83049-11	BG-12 0-2 COMP	<2000		07/21/10 23:35	0.5	7.5	5	5	50		99.05		
16	L83049-12	BG-12 2-12 COMP	<2000		07/22/10 0:37	0.5	7.5	5	5	50		99.39		
17	L83049-13	BG-12 12-18 COMP	<2000		07/22/10 1:40	0.5	7.5	5	5	50		98.67		
18	L83049-14	BG-15 0-2 COMP	<2000		07/22/10 2:42	0.5	7.5	5	5	50		99		
19	L83049-15	BG-15 2-12 COMP	<2000		07/22/10 3:45	0.5	7.5	5	5	50		99.43		
20	L83049-16	BG-15 12-18 COMP	<2000		07/22/10 4:47	0.5	7.5	5	5	50		99.12		
21	L83049-17	BG-102 2-12 COMP	<2000		07/22/10 5:50	0.5	7.5	5	5	50		98.96		
22	L83049-18	BG-16 0-2 COMP	<2000		07/22/10 6:52	0.5	7.5	5	5	50		99.21		
23	L83049-19	BG-16 2-12 COMP	<2000		07/22/10 7:55	0.5	7.5	5	5	50		99.23		

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/22/2010 10:57:18 AM 72410

WG286377

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/20/2010 15:57
Start Date/Time: 07/21/2010 9:00
End Date/Time: 07/22/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
24	L83049-20	BG-16 12-18 COMP	<2000		07/22/10 8:57	0.5	7.5	5	5	50		99.17		
25	L83049-20DUP	NONE	<2000		07/22/10 10:00	0.5	7.5	5	5	50		99.17		

Sample	Login Comments
L83049-01	SJ || Inorganic walkin
L83049-02	SJ || Inorganic walkin
L83049-03	SJ || Inorganic walkin
L83049-04	SJ || Inorganic walkin
L83049-05	SJ || Inorganic walkin
L83049-06	SJ || Inorganic walkin
L83049-07	SJ || Inorganic walkin
L83049-08	SJ || Inorganic walkin
L83049-09	SJ || Inorganic walkin
L83049-10	SJ || Inorganic walkin
L83049-11	SJ || Inorganic walkin
L83049-12	SJ || Inorganic walkin
L83049-13	SJ || Inorganic walkin
L83049-14	SJ || Inorganic walkin
L83049-15	SJ || Inorganic walkin
L83049-16	SJ || Inorganic walkin
L83049-17	SJ || Inorganic walkin
L83049-18	SJ(3) || Inorganic walkin
L83049-19	SJ || Inorganic walkin
L83049-20	SJ || Inorganic walkin

Report Comments:

Internal Comments

AREV:
Initials, Date

SREV:
Initials, Date

7/22/2010 10:57:11 AM 72410

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
83049-1	0.98936367	0.5	0.49468	50	50	0.494682
83049-2	0.984333983	0.5	0.49217	50	50	0.492167
83049-3	0.989898071	0.5	0.49495	50	50	0.494949
83049-4	0.987871388	0.5	0.49394	50	50	0.493936
83049-5	0.989919817	0.5	0.49496	50	50	0.494960
83049-6	0.992023471	0.5	0.49601	50	50	0.496012
83049-7	0.991269739	0.5	0.49563	50	50	0.495635
83049-8	0.992390567	0.5	0.49620	50	50	0.496195
83049-9	0.992337708	0.5	0.49617	50	50	0.496169
83049-10	0.99129753	0.5	0.49565	50	50	0.495649
83049-11	0.990518331	0.5	0.49526	50	50	0.495259
83049-12	0.993897123	0.5	0.49695	50	50	0.496949
83049-13	0.986708303	0.5	0.49335	50	50	0.493354
83049-14	0.990049034	0.5	0.49502	50	50	0.495025
83049-15	0.994300562	0.5	0.49715	50	50	0.497150
83049-16	0.991245791	0.5	0.49562	50	50	0.495623
83049-17	0.989609017	0.5	0.49480	50	50	0.494805
83049-18	0.992142556	0.5	0.49607	50	50	0.496071
83049-19	0.992285695	0.5	0.49614	50	50	0.496143
83049-20	0.991707159	0.5	0.49585	50	50	0.495854
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

Sample Measurement Parameters:
Comment: WG286648
User: MWM
Instrument Name: LB770-2
Preset Time: 90:00
Cycles: 1
Outlier warning disabled
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "1.5 hour"
Protocol ID: 6
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 90:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0534 (±0.0087)	0.0167	60
2	21.63	0.0875 (±0.0110)	0.0167	60.0
3	22.23	0.0806 (±0.0106)	0.0167	60.0
4	22.39	0.0764 (±0.0103)	0.0167	60.0
5	20.50	0.0819 (±0.0107)	0.0167	60.0
6	21.48	0.0472 (±0.0081)	0.0167	60.0
7	21.84	0.0611 (±0.0092)	0.0167	60.0
8	21.74	0.0667 (±0.0096)	0.0167	60.0
9	21.77	0.0847 (±0.0108)	0.0167	60.0
10	23.74	0.0694 (±0.0098)	0.0167	60.0

		Beta	
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	9.4298 (±0.1174)	0.0167	60
2	1.3986 (±0.0441)	0.0167	60.0
3	1.3000 (±0.0425)	0.0167	60.0
4	1.3694 (±0.0436)	0.0167	60.0
5	1.6194 (±0.0474)	0.0167	60.0
6	1.6444 (±0.0478)	0.0167	60.0
7	1.3931 (±0.0440)	0.0167	60.0
8	1.3889 (±0.0439)	0.0167	60.0
9	1.4750 (±0.0453)	0.0167	60.0
10	1.7528 (±0.0493)	0.0167	60.0

Cycle 1 of 1
Start Time: 7/30/2010 9:42:16

Elapsed Time: 90:00
Guard: 1165 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7331	WG286648 PBS	0.100 (±33.3%)	0.0020	0.0007	406.1 (±0.551%)	0.0195	0.0095
2	7332	WG286648 LCSS	17.13 (±2.55%)	0.0024	0.0009	17.20 (±2.54%)	0.0095	0.0037
3	7333	L83049-01	1.844 (±7.76%)	0.0023	0.0009	4.43 (±5.01%)	0.0078	0.0035
4	7334	L83049-02	2.244 (±7.04%)	0.0023	0.0009	6.31 (±4.20%)	0.0080	0.0036
5	7335	L83049-03	0.878 (±11.3%)	0.0023	0.0009	2.39 (±6.82%)	0.0085	0.0039
6	7336	L83049-04	0.767 (±12.0%)	0.0019	0.0007	2.84 (±6.25%)	0.0085	0.0040
7	7337	L83049-05	0.911 (±11.0%)	0.0021	0.0008	2.61 (±6.52%)	0.0079	0.0037
8	7338	L83049-06	5.111 (±4.66%)	0.0022	0.0008	11.27 (±3.14%)	0.0084	0.0037
9	7339	L83049-07	0.967 (±10.7%)	0.0024	0.0009	2.98 (±6.11%)	0.0081	0.0038
10	7340	L83049-08	0.911 (±11.0%)	0.0022	0.0008	3.38 (±5.74%)	0.0088	0.0041

Sample Measurement Parameters:
Comment: WG286648
User: MWM
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 7/30/2010 12:41:09

Elapsed Time: 90:00
Guard: 1168 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7341	L83049-09	0.88 (±11.3%)	0.0020	0.0007	193.8 (±0.798%)	0.0195	0.0095
2	7342	L83049-10	1.033 (±10.4%)	0.0024	0.0009	2.71 (±6.40%)	0.0080	0.0037
3	7343	L83049-11	0.80 (±11.8%)	0.0023	0.0009	2.30 (±6.95%)	0.0077	0.0035
4	7344	L83049-12	0.80 (±11.8%)	0.0023	0.0009	2.54 (±6.61%)	0.0079	0.0036
5	7345	L83049-13	1.222 (±9.53%)	0.0023	0.0009	3.86 (±5.37%)	0.0085	0.0039
6	7346	L83049-14	1.222 (±9.53%)	0.0019	0.0007	3.46 (±5.67%)	0.0086	0.0040
7	7347	L83049-15	1.189 (±9.67%)	0.0021	0.0008	3.19 (±5.90%)	0.0080	0.0037
8	7348	L83049-16	1.000 (±10.5%)	0.0022	0.0008	2.98 (±6.11%)	0.0079	0.0037
9	7349	L83049-17	0.93 (±10.9%)	0.0024	0.0009	2.61 (±6.52%)	0.0081	0.0038
10	7350	L83049-18	3.600 (±5.56%)	0.0022	0.0008	9.59 (±3.40%)	0.0091	0.0041

Sample Measurement Parameters:
Comment: WG286648
User: MWM
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour
Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 7/30/2010 14:16:22
Elapsed Time: 90:00
Guard: 1173 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7351	L83049-19	2.789 (±6.31%)	0.0020	0.0007	188.2 (±0.810%)	0.0196	0.0095
2	7352	L83049-20	1.133 (±9.90%)	0.0024	0.0009	3.10 (±5.99%)	0.0080	0.0037
3	7353	L83049-01DUP	1.900 (±7.65%)	0.0023	0.0009	4.96 (±4.74%)	0.0078	0.0035
4	7354	L83049-20DUP	1.544 (±8.48%)	0.0023	0.0009	3.77 (±5.43%)	0.0079	0.0036
5	7355	L83049-10MS	18.97 (±2.42%)	0.0023	0.0009	19.28 (±2.40%)	0.0099	0.0039
6	7356		0.033 (±57.7%)	0.0019	0.0007	1.79 (±7.88%)	0.0085	0.0040
7	7357		0.089 (±35.4%)	0.0021	0.0008	1.54 (±8.48%)	0.0078	0.0037
8	7358		0.033 (±57.7%)	0.0022	0.0008	1.51 (±8.57%)	0.0078	0.0037
9	7359		0.122 (±30.2%)	0.0024	0.0009	1.51 (±8.57%)	0.0080	0.0038
10	7360		0.100 (±33.3%)	0.0022	0.0008	1.66 (±8.19%)	0.0087	0.0041

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83049

Soil Preparation

WG286075 **Air Dry**

Sample	Date	SCN	SP AIRDRY
L83049-01	07/14/10 22:15		X
L83049-02	07/14/10 22:16		X
L83049-03	07/14/10 22:18		X
L83049-04	07/14/10 22:19		X
L83049-05	07/14/10 22:21		X
L83049-06	07/14/10 22:22		X
L83049-07	07/14/10 22:24		X
L83049-08	07/14/10 22:26		X
L83049-09	07/14/10 22:27		X
L83049-10	07/14/10 22:29		X
L83049-11	07/14/10 22:30		X
L83049-12	07/14/10 22:32		X
L83049-13	07/14/10 22:34		X
L83049-14	07/14/10 22:35		X
L83049-15	07/14/10 22:37		X
L83049-16	07/14/10 22:38		X
L83049-17	07/14/10 22:40		X
L83049-18	07/14/10 22:41		X
L83049-19	07/14/10 22:43		X
L83049-20	07/14/10 22:45		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83049

Soil Preparation

WG286374 **Crush Pulverize**

Sample	Date	SCN	SP CRUSHPULV
L83049-01	07/20/10 16:00		X
L83049-02	07/20/10 16:09		X
L83049-03	07/20/10 16:18		X
L83049-04	07/20/10 16:28		X
L83049-05	07/20/10 16:37		X
L83049-06	07/20/10 16:47		X
L83049-07	07/20/10 16:56		X
L83049-08	07/20/10 17:06		X
L83049-09	07/20/10 17:15		X
L83049-10	07/20/10 17:25		X
L83049-11	07/20/10 17:34		X
L83049-12	07/20/10 17:44		X
L83049-13	07/20/10 17:53		X
L83049-14	07/20/10 18:03		X
L83049-15	07/20/10 18:12		X
L83049-16	07/20/10 18:22		X
L83049-17	07/20/10 18:31		X
L83049-18	07/20/10 18:40		X
L83049-19	07/20/10 18:50		X
L83049-20	07/20/10 18:59		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83049

Radiochemistry

WG286947 **Th**

Sample	Date	SCN	THORIUM 228	THORIUM 230	THORIUM 232
WG286560PBS	07/28/10 07:48			X	X
WG286560LCSS	07/28/10 07:49			X	
L83049-01	07/28/10 07:50			X	
L83049-02	07/28/10 07:52			X	
L83049-03	07/28/10 07:53			X	
L83049-04	07/28/10 07:55			X	
L83049-05	07/28/10 07:56			X	
L83049-06	07/28/10 07:58			X	
L83049-07	07/28/10 07:59			X	
L83049-08	07/28/10 08:00			X	
L83049-09	07/28/10 08:02			X	
L83049-10	07/28/10 08:03			X	
L83049-11	07/28/10 08:05			X	
L83049-12	07/28/10 08:06			X	
L83049-13	07/28/10 08:08			X	
L83049-14	07/28/10 08:09			X	
L83049-15	07/28/10 08:11			X	
L83049-16	07/28/10 08:12			X	
L83049-17	07/28/10 08:13			X	
L83049-18	07/28/10 08:15			X	
L83049-19	07/28/10 08:16			X	
L83049-20	07/28/10 08:18			X	
L83049-01DUP	07/28/10 08:19		X	X	X
L83049-20DUP	07/28/10 08:21		X	X	X
L83049-10MS	07/28/10 08:22			X	

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83049

Radiochemistry

WG286995 **Pb**

Sample	Date	SCN	LEAD 210
L83049-03	07/28/10 10:12		X
WG286535PBS	07/28/10 10:12		X
WG286535LCSS	07/28/10 10:12		X
L83049-01	07/28/10 10:12		X
L83049-04	07/28/10 10:12		X
L83049-05	07/28/10 10:12		X
L83049-06	07/28/10 10:12		X
L83049-07	07/28/10 10:12		X
L83049-08	07/28/10 10:12		X
L83049-02	07/28/10 10:12		X
L83049-11	07/28/10 11:52		X
L83049-18	07/28/10 11:52		X
L83049-17	07/28/10 11:52		X
L83049-16	07/28/10 11:52		X
L83049-15	07/28/10 11:52		X
L83049-14	07/28/10 11:52		X
L83049-12	07/28/10 11:52		X
L83049-10	07/28/10 11:52		X
L83049-09	07/28/10 11:52		X
L83049-13	07/28/10 11:52		X
L83049-20	07/28/10 14:02		X
L83049-10MS	07/28/10 14:02		X
L83049-20DUP	07/28/10 14:02		X
L83049-19	07/28/10 14:02		X
L83049-01DUP	07/28/10 14:02		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83049

Radiochemistry

WG287011 **U**

Sample	Date	SCN	URANIUM 234	URANIUM 235	URANIUM 238
WG286629PBS	07/27/10 14:00		X	X	X
WG286629LCSS	07/27/10 14:01		X	X	X
L83049-01	07/27/10 14:02		X	X	X
L83049-02	07/27/10 14:04		X	X	X
L83049-03	07/27/10 14:05		X	X	X
L83049-04	07/27/10 14:07		X	X	X
L83049-05	07/27/10 14:08		X	X	X
L83049-06	07/27/10 14:10		X	X	X
L83049-07	07/27/10 14:11		X	X	X
L83049-08	07/27/10 14:12		X	X	X
L83049-09	07/27/10 14:14		X	X	X
L83049-10	07/27/10 14:15		X	X	X
L83049-11	07/27/10 14:17		X	X	X
L83049-12	07/27/10 14:18		X	X	X
L83049-13	07/27/10 14:20		X	X	X
L83049-14	07/27/10 14:21		X	X	X
L83049-15	07/27/10 14:23		X	X	X
L83049-16	07/27/10 14:24		X	X	X
L83049-17	07/27/10 14:25		X	X	X
L83049-18	07/27/10 14:27		X	X	X
L83049-19	07/27/10 14:28		X	X	X
L83049-20	07/27/10 14:30		X	X	X
L83049-01DUP	07/27/10 14:31		X	X	X
L83049-20DUP	07/27/10 14:33		X	X	X
L83049-10MS	07/27/10 14:34		X	X	X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83049

Radiochemistry

WG287058 **Ra226**

Sample	Date	SCN	WITTING RADIUM IS
WG286648PBS	07/30/10 09:42		X
WG286648LCSS	07/30/10 09:43		X
L83049-01	07/30/10 09:44		X
L83049-02	07/30/10 09:46		X
L83049-03	07/30/10 09:47		X
L83049-04	07/30/10 09:49		X
L83049-05	07/30/10 09:50		X
L83049-06	07/30/10 09:52		X
L83049-07	07/30/10 09:53		X
L83049-08	07/30/10 09:54		X
L83049-09	07/30/10 09:56		X
L83049-10	07/30/10 09:57		X
L83049-11	07/30/10 09:59		X
L83049-12	07/30/10 10:00		X
L83049-13	07/30/10 10:02		X
L83049-14	07/30/10 10:03		X
L83049-15	07/30/10 10:05		X
L83049-16	07/30/10 10:06		X
L83049-17	07/30/10 10:07		X
L83049-18	07/30/10 10:09		X
L83049-19	07/30/10 10:10		X
L83049-20	07/30/10 10:12		X
L83049-01DUP	07/30/10 10:13		X
L83049-20DUP	07/30/10 10:15		X
L83049-10MS	07/30/10 10:16		X

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

REVISION 2

December 29, 2010 Analytical Report for Service Request No: K1006676

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Dear Andrea:

Enclosed are the revised pages for the samples submitted to our laboratory on June 29, 2010. For your reference, these analyses have been assigned our service request number K1006676.

The report pages are corrected for the significant figure errors, header errors and transcription errors.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

for Lynda Huckestein
Client Services Manager

LH/rh

REVISED
2:56 pm, Dec 29, 2010

100% Recycled Paper

REVISION 1

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006676
Project:	Rhodia Silver Bow Plant Background	**Date Received:**	6/29/2010
Sample Matrix:	Soil, Water		

CASE NARRATIVE ADDENDUM

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

General Chemistry Parameters

Soluble Fluoride by Method 340.2 Modified

The analysis of DI water soluble fluoride was performed past the recommended holding time specified in the project work plan due to an oversight at the laboratory. The samples were initially analyzed by the Fluoride Belleck Distillation method as is standard protocol for the analysis of total fluoride in soils. Efforts were made to analyze the samples as soon as the error was identified. The EPA methodology does not discuss a holding time for the extraction of a soil sample. The 30 day hold time is in reference to the analysis of water samples only. The analysis of the DI water extract was performed within 30 days of the extraction. The sample results are flagged accordingly.

Approved by _____ **Date** 12/22/10

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

Analytical Report

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	6/27/2010
Sample Matrix:	Soil	**Date Received:**	6/29/2010

Fluoride, Total

Prep Method:	DI Extract	Units:	mg/Kg
Analysis Method:	340.2M	Basis:	Dry
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepped	Date Analyzed	Result	Result Notes
BG-7 0-2 COMP	K1006676-001	0.57	0.03	1	11/18/2010	11/18/2010	0.56	J *
BG-7 2-12 COMP	K1006676-002	0.60	0.03	1	11/18/2010	11/18/2010	1.57	*
BG-7 12-18 COMP	K1006676-003	0.55	0.02	1	11/18/2010	11/18/2010	3.17	*
BG-8 0-2 COMP	K1006676-004	0.58	0.03	1	11/18/2010	11/18/2010	0.48	J *
BG-8 2-12 COMP	K1006676-005	0.57	0.03	1	11/18/2010	11/18/2010	0.31	J *
BG-8 12-18 COMP	K1006676-006	0.53	0.02	1	11/18/2010	11/18/2010	0.36	J *
BG-101 2-12 COMP	K1006676-007	0.55	0.02	1	11/18/2010	11/18/2010	0.30	J *
BG-11 0-2 COMP	K1006676-008	0.54	0.02	1	11/18/2010	11/18/2010	0.39	J *
BG-11 2-12 COMP	K1006676-009	0.58	0.03	1	11/18/2010	11/18/2010	0.19	J *
BG-11 12-18 COMP	K1006676-010	0.54	0.02	1	11/18/2010	11/18/2010	0.32	J *
BG-12 0-2 COMP	K1006676-011	0.58	0.03	1	11/18/2010	11/18/2010	0.36	J *
BG-12 2-12 COMP	K1006676-012	0.57	0.03	1	11/18/2010	11/18/2010	0.21	J *
BG-12 12-18 COMP	K1006676-013	0.56	0.03	1	11/18/2010	11/18/2010	0.37	J *
BG-15 0-2 COMP	K1006676-014	0.59	0.03	1	11/18/2010	11/18/2010	0.27	J *
BG-15 2-12 COMP	K1006676-015	0.57	0.03	1	11/18/2010	11/18/2010	0.22	J *
BG-15 12-18 COMP	K1006676-016	0.57	0.03	1	11/18/2010	11/18/2010	0.27	J *
BG-102 2-12 COMP	K1006676-017	0.57	0.03	1	11/18/2010	11/18/2010	0.28	J *
BG-16 0-2 COMP	K1006676-018	0.56	0.03	1	11/18/2010	11/18/2010	0.28	J *
BG-16 2-12 COMP	K1006676-019	0.55	0.02	1	11/18/2010	11/18/2010	0.19	J *
BG-16 12-18 COMP	K1006676-020	0.53	0.02	1	11/18/2010	11/18/2010	0.17	J *
Method Blank	K1006676-MB	0.53	0.02	1	11/18/2010	11/18/2010	0.18	J *

M Modified for analysis of soil.

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	6/27/2010
Sample Matrix:	Soil	**Date Received:**	6/29/2010
		Date Extracted:	11/18/2010
		Date Analyzed:	11/18/2010

Duplicate Summary
Inorganic Parameters

Sample Name:	BG-7 0-2 COMP	Units:	mg/Kg
Lab Code:	K1006676-001DUP	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	DI Extract	340.2M	0.56	0.52	0.54	9	

M Modified for analysis of soil.

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	6/27/2010
Sample Matrix:	Soil	**Date Received:**	6/29/2010
		Date Extracted:	11/18/2010
		Date Analyzed:	11/18/2010

Matrix Spike/Duplicate Matrix Spike Summary
Inorganic Parameters

Sample Name:	BG-7 0-2 COMP	Units:	mg/Kg
Lab Code:	K1006676-001MS, K1006676-001DMS	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference
Fluoride, Total	DI Extract	340.2M	58.4	116	0.56	68.3	141	116	121	75-125	9

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006676
Project:	Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400	**Date Collected:**	NA
LCS Matrix:	Soil	**Date Received:**	NA
		Date Extracted:	11/18/2010
		Date Analyzed:	11/18/2010

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name:	Lab Control Sample	Units:	mg/Kg
Lab Code:	K1006676-LCS	Basis:	Dry
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	DI Extract	340.2M	11.0	11.1	101	85-115	

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 2

QA/QC Report

Client: Barr Engineering Company
Project: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Service Request: K1006676
Date Collected: NA
Date Received: NA
Date Analyzed: 11/18/2010

Total Fluoride
EPA Method 340.2M
Units: mg/L (ppm)

CONTINUING CALIBRATION VERIFICATION (CCV)

	True Value	Measured Value	Percent Recovery
CCV 1 Result	5.00	5.18	104
CCV 2 Result	5.00	5.07	101
CCV 3 Result	5.00	5.02	100
CCV 4 Result	5.00	4.93	99
CCV 5 Result	5.00	4.93	99

CONTINUING CALIBRATION BLANK (CCB)

	MDL	Blank Value
CCB 1 Result	0.01	0.08 J
CCB 2 Result	0.01	0.06 J
CCB 3 Result	0.01	0.05 J
CCB 4 Result	0.01	0.05 J
CCB 5 Result	0.01	0.04 J

Work Request # Original (K6676) K 6634

REVISION 1

Tier: V V

Date Analyzed: 11-18-10

Analyst: A Chatley

Analysis: Fluoride soil extraction

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

COMMENTS:

Final Approved by: BDK Date: 11/19/10 DQREPORT

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: _____

Analysis: _____

REVISION 1

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol. (g) or (ml)	Final Volume (ml)	mg/L (in solution)	mg/L - mg/kg As Rec'd	% Solids	mg/kg Dry Wt.
11-18-10	MB	50 ml	50	0.074	0.074		
	LCS	↓		11.1	11.1		
	6676-1	20.6476 g		0.199	~~0.199~~ 0.481898	85.4	0.563
	-1d	20.4347		0.181	0.442874131		0.517
	-1ms	20.0021		23.4	58.493858		68.3
	-1msd	20.1987		48.6	120.3047721	↓	141
	-2	20.1914		0.525	1.300058441	82.8	1.57
	-3	20.0347		1.15	2.870020514	90.6	3.17
	-4	20.6766		0.164	0.396583578	83.5	0.475
	-5	20.2545		0.110	0.271544595	87.0	0.312
	-6	20.9475		0.136	0.324621077	90.0	0.361
	-7	20.8218		0.108	0.259343573	87.6	0.296
	-8	20.9238		0.143	0.341716132	88.2	0.387
	-9	20.0992		0.066	0.164185639	85.2	0.193
	-10	20.1194		0.117	0.290764138	91.5	0.318
	-11	20.3087		0.124	0.305287882	84.6	0.361
	-12	20.0527		0.072	0.179526946	87.2	0.206
	-13	20.3426		0.131	0.321984407	87.8	0.367
	-14	20.3389		0.090	0.221250903	83.4	0.265
	-15	20.2878		0.076	0.187304686	86.8	0.216
	-16	20.3967		0.096	0.235332186	86.0	0.274
	-17	20.4953		0.097	0.23663962	86.1	0.275
	-18	20.2964		0.100	0.246349106	88.1	0.280
	-19	20.3940		0.068	0.166715701	88.7	0.188
	-20	20.8890		0.065	0.155584279	89.7	0.173
	MB	50 ml		0.034	0.034		
	LCS	↓		10.9	10.9		
	6636-1	20.2418 g.		0.176	0.434743946	84.3	0.516
	-1d	20.2561		0.149	0.367790443		0.436
	-1ms	20.8872		24.7	59.12712092		① ~~59.1~~ 70.1
	-1msd	20.2836		47.1	116.1036502	↓	138
	-2	20.3169		0.120	0.295320644	84.4	0.350
	-3	20.1090		0.216	0.537072952	83.6	0.642
	-5	20.6428		0.159	0.385122173	87.5	0.440
	-6	20.4094		0.163	0.399364936	87.9	0.454
	-7	20.5163		0.422	1.028450549	85.9	1.20

MS= 6676-1ms = 1.0 ml x 1,000 ppm / 20.0021 g. = 50 / .856 = 58.4

MSD= 6676-1msd = 2.0 ml x 1,000 ppm / 20.1987 g. = 99 / .856 = 116

X = 0.540 RPD = 9 % REC = 116 % REC = 121

X=

RPD= 6636-1ms = 1.0 ml x 1,000 ppm / 20.8872 g. = 47.9 / .843 = 56.8

6636-1msd = 2.0 ml x 1,000 ppm / 20.2836 g. = 98.6 / .843 = 117

STD ID # = X = 0.476 RPD = 17 % REC = ~~103~~ 123 % REC = 118

Comments:

LCS APG # 505 ID # NH3/3-55-T Lot # 123081 TV = 11.0 mg/L % REC = 101, 99

Prepared By:	AZ	Date Prepared:	11-18-10 210
Analyzed By:	AZ	Date Analyzed:	11-18-10
Reviewed By:	BDK	Date Reviewed:	11/19/10

① T.E. AZ 11-19-20

REVISION 1

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.22	1.00	0.220	
CCV1	20	20	5.18	1.00	5.180	**103.6**
CCB1	20	20	0.0818	1.00	0.082	
MB	20	20	0.0735	1.00	0.074	
LCS	20	20	11.1	1.00	11.100	
K1006676-001	20	20	0.199	1.00	0.199	
K1006676-001d	20	20	0.181	1.00	0.181	
K1006676-001ms	20	20	23.4	1.00	23.400	
K1006676-001ms	20	20	48.6	1.00	48.600	
K1006676-002	20	20	0.525	1.00	0.525	
K1006676-003	20	20	1.15	1.00	1.150	
K1006676-004	20	20	0.164	1.00	0.164	
K1006676-005	20	20	0.11	1.00	0.110	
CCV2	20	20	5.07	1.00	5.070	**101.4**
CCB2	20	20	0.063	1.00	0.063	
K1006676-006	20	20	0.136	1.00	0.136	
K1006676-007	20	20	0.108	1.00	0.108	
K1006676-008	20	20	0.143	1.00	0.143	
K1006676-009	20	20	0.0664	1.00	0.066	
K1006676-010	20	20	0.117	1.00	0.117	
K1006676-011	20	20	0.124	1.00	0.124	
K1006676-012	20	20	0.0717	1.00	0.072	
K1006676-013	20	20	0.131	1.00	0.131	
K1006676-014	20	20	0.0904	1.00	0.090	
K1006676-015	20	20	0.0764	1.00	0.076	

Calibration info. 1STD 0.1 mg/L 2 STD 0.4 mg/L 3 STD 1.0mg/L

0.1-1.0ppm Slope:-57.38,-59.08 EFF=97.0,99.9

ID#f/2-84-M TV=11.0mg/L

CCV TV=5ppm ID# F/2-53-T

PROBE ID# F/2/2-99-B

		DATE	TIME
Analyzed By: AC		11/18/2010	2:10:00 PM
Reviewed By:	BDC		11/19/10

REVISION 1

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV3	20	20	5.02	1.00	5.020	100.4
CCB3	20	20	0.0481	1.00	0.048	
K106676-016	20	20	0.0964	1.00	0.096	
K106676-017	20	20	0.0969	1.00	0.097	
K106676-018	20	20	0.1	1.00	0.100	
K106676-019	20	20	0.0681	1.00	0.068	
K106676-020	20	20	0.0647	1.00	0.065	
MB	20	20	0.0337	1.00	0.034	
LCS	20	20	10.9	1.00	10.900	
K106636-001	20	20	0.176	1.00	0.176	
K106636-001d	20	20	0.149	1.00	0.149	
K106636-001ms	20	20	24.7	1.00	24.700	
CCV4	20	20	4.93	1.00	4.930	98.6
CCB4	20	20	0.0543	1.00	0.054	
K106636-001msd	20	20	47.1	1.00	47.100	
K106636-002	20	20	0.12	1.00	0.120	
K106636-003	20	20	0.216	1.00	0.216	
K106636-005	20	20	0.159	1.00	0.159	
K106636-006	20	20	0.163	1.00	0.163	
K106636-007	20	20	0.422	1.00	0.422	
0.2 std	20	20	0.207	1.00	0.207	
CCV5	20	20	4.93	1.00	4.930	
CCB5	20	20	0.0406	1.00		

		DATE	TIME
Analyzed By:	AC	11/18/2010	2:10:00PM
Reviewed By:	BDR		11/19/10

Columbia Analytical Services
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 6, 2010 Analytical Report for Service Request No: K1006777

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow Plant Background/26-46-0006.13-2010-400

Dear Andrea:

Enclosed are the additional pages for the samples submitted to our laboratory on July 01, 2010. For your reference, these analyses have been assigned our service request number K1006777.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/cb

ADDENDUM

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006777
Project:	Rhodia Silver Bow Plant Background	**Date Received:**	7/1/2010
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seventeen samples were received for analysis at Columbia Analytical Services on 7/1/2010. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

Fluoride by EPA Method 340.2 Modified:
The matrix spike recovery of Fluoride for sample BG-2 2-12 COMP was outside control criteria because of suspected matrix interference. A matrix spike duplicate was also analyzed, but produced similar results. The results of the original analysis were reported. No further corrective action was appropriate.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Iron, Manganese, Potassium, and Sodium for sample BG-2 2-12 COMP were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for the replicate analysis of Manganese, Thallium, Uranium, and Vanadium in sample BG-2 2-12 COMP was outside the normal CAS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Radiochemistry

The Radiochemistry analyses were performed at ACZ Labs in Steamboat Springs, Colorado. The report the testing is included in its entirety herein.

Approved by _____ **Date** 8/2/10

Chain of Custody

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-30

SR# K1006777

PAGE 1 OF 2

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature:

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
						Analysis Requested					See Table 1-1, 1-3, 1-5, and 6 for details.
BG-1 0-2 COMP	6/29/10	15:00		Solid	2	X	X	X	X		
BG-1 2-12 COMP	6/29/10	15:05		Solid	2	X	X	X	X		
BG-1 12-18 COMP	6/29/10	15:10		Solid	2	X	X	X	X		
BG-2 0-2 COMP	6/30/10	10:05		Solid	2	X	X	X	X		
BG-2 2-12 COMP	6/30/10	10:15		Solid	6	X	X	X	X		MS/MSD
BG-2 12-18 COMP	6/30/10	10:25		Solid	2	X	X	X	X		
BG-100 0-2 COMP	6/29/10	15:05		Solid	2	X	X	X	X		
BG-120 COMP	6/29/10	11:20		Water	3	X	X		X		
BG-3 0-2 COMP	6/29/10	10:55		Solid	2	X	X	X	X		
BG-3 2-12 COMP	6/29/10	11:00		Solid	2	X	X	X	X		

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

__X__ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date:_____

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn
Method 6020: Sb, As, Se, Tl, U
Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified
Thorium 230: Method ESM4506
Radium 226: Method EPA9315 Modified
Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #: 867092799854

Signature:

Printed Name: Kevin McGilp

Firm: Barr Eng Co.

Date/Time: 6/30/10 15:30

RECEIVED BY:

Signature:

Printed Name:

Firm: CAS

Date/Time: 7/1/10 0900

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

8

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

COC # 2646-31-2 SR# _____

PAGE 2 OF 2

Project Name: **Rhodia Silver Bow Plant Background** Project #: **26-46-0006.13-2010-400**

Project Description: **2010 Soil Background Study**

Project Contact: **Andrea Nord** Company: **Barr Engineering Company**

Company/Address: **4700 West 77th Street** Phone: **952-832-2600**

City, State, Zip: **Minneapolis, MN 55435** FAX: **952-832-2601**

Sampler's Signature: _____

Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals (see list below)	Fluoride EPA 340.2 Mod.	Total Solids 160.3	Radionuclides (see list below)		REMARKS
						Analysis Requested					See Table 1-1, 1-3, 1-5, and 6 for details.
BG-3 12-18 COMP	6/29/10	11:05		Solid	2	X	X	X	X		
BG-4 0-2 COMP	6/28/10	14:25		Solid	2	X	X	X	X		
BG-4 2-12 COMP	6/28/10	14:30		Solid	2	X	X	X	X		
BG-4 12-18 COMP	6/28/10	14:35		Solid	2	X	X	X	X		
[redacted]											
BG-6 0-2 COMP	6/28/10	17:30		Solid	2	X	X	X	X		
BG-6 2-12 COMP	6/28/10	17:35		Solid	2	X	X	X	X		
BG-6 12-18 COMP	6/28/10	17:40		Solid	2	X	X	X	X		

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

_X_ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date: _____

Invoice Information

P.O. # _____

Bill to: Margaret Treanor @ Barr

RELINQUISHED BY:

Shipping Tracking #: 8670 9279 9854

Signature: _____

Printed Name: Kevin McGinty

Firm: Barr Eng. Co.

Date/Time: 6/30/10 15:30

REPORT REQUIREMENTS

____ I. Routine Report: Results, Method Blank, Surrogate, as required

____ II. Report Dup., MS, MSD as required

____ III. Data Validation Report (includes raw data)

____ IV. CLP Deliverable Report

X V. QAPP requirements, lab report & EDD

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: CAS

Date/Time: 7/1/10 0900

Comments/Special Instructions:

Metals: Method 6010: Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Ag, Na, V, Zn

Method 6020: Sb, As, Se, Tl, U

Method 7471/7470: Mercury

Radionuclides: Uranium 234 and Uranium 238: Method EICHROM Modified

Thorium 230: Method ESM4506

Radium 226: Method EPA9315 Modified

Lead 210: Method EICHROM

Report inorganics, general chemistry and organics to the MDL.

RELINQUISHED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

RECEIVED BY:

Signature: _____

Printed Name: _____

Firm: _____

Date/Time: _____

PC LH

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client / Project: Barr Service Request K10 6777

Received: 7/1/10 Opened: 7/1/10 By: AJ

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 f
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.0	4.7	291			X
-0.5	2.2	265			X
-0.1	1.0	274			X
0.6	1.3	289			X

7. Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

Client: Barr Engineering Company
Project: Rhodia Silver Bow Pl/26-46-0006.13-2010-4
Sample Matrix: Soil

Service Request: K1006777

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
BG-1 0-2 COMP	K1006777-001	06/29/2010	07/01/2010	07/03/2010	90.3	
BG-1 2-12 COMP	K1006777-002	06/29/2010	07/01/2010	07/03/2010	90.6	
BG-1 12-18 COMP	K1006777-003	06/29/2010	07/01/2010	07/03/2010	85.6	
BG-2 0-2 COMP	K1006777-004	06/30/2010	07/01/2010	07/03/2010	80.6	
BG-2 2-12 COMP	K1006777-005	06/30/2010	07/01/2010	07/03/2010	77.5	
BG-2 12-18 COMP	K1006777-006	06/30/2010	07/01/2010	07/03/2010	86.4	
BG-100 0-2 COMP	K1006777-007	06/29/2010	07/01/2010	07/03/2010	91.1	
BG-3 0-2 COMP	K1006777-009	06/29/2010	07/01/2010	07/03/2010	91.0	
BG-3 2-12 COMP	K1006777-010	06/29/2010	07/01/2010	07/03/2010	87.0	
BG-3 12-18 COMP	K1006777-011	06/29/2010	07/01/2010	07/03/2010	87.9	
BG-4 0-2 COMP	K1006777-012	06/28/2010	07/01/2010	07/03/2010	85.9	
BG-4 2-12 COMP	K1006777-013	06/28/2010	07/01/2010	07/03/2010	87.6	
BG-4 12-18 COMP	K1006777-014	06/28/2010	07/01/2010	07/03/2010	91.3	
BG-6 0-2 COMP	K1006777-015	06/28/2010	07/01/2010	07/03/2010	88.8	
BG-6 2-12 COMP	K1006777-016	06/28/2010	07/01/2010	07/03/2010	87.0	
BG-6 12-18 COMP	K1006777-017	06/28/2010	07/01/2010	07/03/2010	88.3	

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project:	Rhodia Silver Bow Pl/26-46-0006.13-2010-4	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/01/2010
		Date Analyzed:	07/03/2010

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
BG-2 2-12 COMP	K1006777-005	77.5	82.6	80.1	6	

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project:	Rhodia Silver Bow Pl/26-46-0006.13-2010-4	**Date Collected:**	06/29/2010
Sample Matrix:	Soil	**Date Received:**	07/01/2010
		Date Analyzed:	07/03/2010

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
BG-3 12-18 COMP	K1006777-011	87.9	88.4	88.2	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

207476

Group ID:	KWG1006471				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/8/10
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K1006662-001	EP182	SOIL	1.32g	28.53g	27.69g	96.9		
2	K1006662-002	EP183	SOIL	1.34g	16.36g	15.75g	95.9		
3	K1006662-003	EP184	SOIL	1.32g	14.24g	12.89g	89.6		
4	K1006662-004	EP185	SOIL	1.32g	19.58g	19.28g	98.4		
5	K1006662-005	EP186	SOIL	1.33g	18.66g	18.00g	96.2		
6	K1006662-006	EP187	SOIL	1.32g	18.55g	17.86g	96.0		
7	K1006662-007	EP188	SOIL	1.32g	21.63g	21.36g	98.7		
8	K1006662-008	EP189	SOIL	1.32g	29.53g	28.58g	96.6		
9	K1006662-009	EP190	SOIL	1.33g	17.51g	16.75g	95.3		
10	K1006662-010	EP191	SOIL	1.32g	18.98g	18.31g	96.2		
11	K1006662-011	EP192	SOIL	1.32g	13.56g	12.97g	95.2		
12	K1006662-012	EP193	SOIL	1.32g	14.15g	13.26g	93.1		
13	K1006662-013	EP194	SOIL	1.31g	31.38g	30.61g	97.4		
14	K1006662-014	EP195	SOIL	1.32g	15.60g	14.63g	93.2		
15	K1006662-016	EP197	SOIL	1.32g	13.76g	12.68g	91.3		
16	K1006662-017	EP198	SOIL	1.32g	23.39g	22.71g	96.9		
17	K1006662-018	EP199	SOIL	1.33g	25.69g	23.93g	92.8		
18	K1006662-019	EP200	SOIL	1.33g	17.62g	16.18g	91.2		
19	K1006662-020	EP201	SOIL	1.33g	21.00g	20.40g	96.9		
20	K1006662-021	EP202	SOIL	1.32g	17.22g	16.00g	92.3		
21	K1006663-001	EP203	SOIL	1.32g	14.49g	13.46g	92.2		
22	K1006663-002	EP204	SOIL	1.33g	13.83g	13.57g	97.9		
23	K1006663-003	EP205	SOIL	1.32g	19.40g	18.50g	95.0		
24	K1006663-004	EP206	SOIL	1.32g	14.24g	13.43g	93.7		
25	K1006663-005	EP207	SOIL	1.34g	16.65g	15.83g	94.6		
26	K1006663-006	EP208	SOIL	1.32g	12.99g	12.25g	93.7		

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Group ID:	KWG1006471		
Analyst:	SArwood	**Reviewed By:**	SAR
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	7/8/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
27	K1006663-007	EP209	SOIL	1.33g	14.02g	11.83g	82.7		
28	K1006663-008	EP210	SOIL	1.32g	16.31g	15.94g	97.5		
29	K1006663-009	EP211	SOIL	1.32g	13.37g	12.52g	92.9		
30	K1006663-010	EP212	SOIL	1.32g	11.22g	10.58g	93.5		
31	K1006676-001	BG-7 0-2 COMP	SOIL	1.32g	11.33g	9.89g	85.6		
32	K1006676-002	BG-7 2-12 COMP	SOIL	1.32g	10.09g	8.58g	82.8		
33	K1006676-003	BG-7 12-18 COMP	SOIL	1.31g	16.31g	14.90g	90.6		
34	K1006676-004	BG-8 0-2 COMP	SOIL	1.31g	9.96g	8.53g	83.5		
35	K1006676-005	BG-8 2-12 COMP	SOIL	1.31g	11.96g	10.58g	87.0		
36	K1006676-006	BG-8 12-18 COMP	SOIL	1.31g	11.95g	10.89g	90.0		
37	K1006676-007	BG-101 2-12 COMP	SOIL	1.32g	13.21g	11.73g	87.6		
38	K1006676-008	BG-11 0-2 COMP	SOIL	1.33g	11.60g	10.39g	88.2		
39	K1006676-009	BG-11 2-12 COMP	SOIL	1.34g	15.39g	13.31g	85.2		
40	K1006676-010	BG-11 12-18 COMP	SOIL	1.32g	12.04g	11.13g	91.5		
41	K1006676-011	BG-12 0-2 COMP	SOIL	1.31g	13.09g	11.27g	84.6		
42	K1006676-012	BG-12 2-12 COMP	SOIL	1.34g	10.28g	9.14g	87.2		
43	K1006676-013	BG-12 12-18 COMP	SOIL	1.32g	13.90g	12.36g	87.8		
44	K1006676-014	BG-15 0-2 COMP	SOIL	1.31g	11.87g	10.12g	83.4		
45	K1006676-015	BG-15 2-12 COMP	SOIL	1.33g	18.73g	16.44g	86.8		
46	K1006676-016	BG-15 12-18 COMP	SOIL	1.33g	12.96g	11.33g	86.0		
47	K1006676-017	BG-102 2-12 COMP	SOIL	1.32g	14.02g	12.25g	86.1		
48	K1006676-018	BG-16 0-2 COMP	SOIL	1.31g	10.20g	9.14g	88.1		
49	K1006676-019	BG-16 2-12 COMP	SOIL	1.29g	15.06g	13.50g	88.7		
50	K1006676-020	BG-16 12-18 COMP	SOIL	1.32g	11.77g	10.69g	89.7		
51	K1006702-001	T4 STS	SOIL	1.32g	11.98g	9.92g	80.7		
52	K1006740-001	0610MCT1MS001	SEDIMENT	1.30g	12.33g	12.28g	99.5		
53	K1006771-001	2184	SOIL	1.30g	15.05g	11.96g	77.5		
54	K1006771-002	C094	SOIL	1.30g	10.64g	7.95g	71.2		
55	K1006771-003	C093	SOIL	1.31g	14.01g	10.35g	71.2		
56	K1006771-004	C092	SOIL	1.31g	16.36g	12.09g	71.6		
57	K1006771-005	C091	SOIL	1.29g	10.95g	7.37g	62.9		

16

Group ID:	KWG1006471				
Analyst:	SArwood			**Reviewed By:**	SAN
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/8/10
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
58	K1006771-006	3225	SOIL	1.32g	12.93g	8.82g	64.6		
59	K1006771-007	3224	SOIL	1.31g	10.90g	7.65g	66.1		
60	K1006771-008	3223	SOIL	1.31g	10.52g	7.24g	64.4		
61	K1006771-009	3222	SOIL	1.31g	10.46g	7.32g	65.7		
62	K1006771-010	3221	SOIL	1.33g	10.41g	7.11g	63.7		
63	K1006771-011	3275	SOIL	1.32g	10.11g	5.82g	51.2		
64	K1006771-012	3274	SOIL	1.32g	10.95g	6.31g	51.8		
65	K1006771-013	3273	SOIL	1.32g	11.38g	6.83g	54.8		
66	K1006771-014	3272	SOIL	1.32g	10.23g	5.45g	46.4		
67	K1006771-015	3271	SOIL	1.32g	7.66g	4.46g	49.5		
68	K1006771-016	1161	SOIL	1.32g	11.76g	9.54g	78.7		
69	K1006771-017	1162	SOIL	1.32g	13.19g	10.45g	76.9		
70	K1006771-018	1163	SOIL	1.32g	11.52g	8.67g	72.1		
71	K1006771-019	1164	SOIL	1.32g	10.04g	7.82g	74.5		
72	K1006771-020	1201	SOIL	1.30g	11.47g	9.01g	75.8		
73	K1006771-021	1202	SOIL	1.32g	8.87g	7.23g	78.3		
74	K1006771-022	1203	SOIL	1.31g	10.38g	8.64g	80.8		
75	K1006771-023	1204	SOIL	1.30g	12.95g	10.65g	80.3		
76	K1006771-024	2174	SOIL	1.31g	9.24g	7.53g	78.4		
77	K1006771-025	2173	SOIL	1.31g	10.89g	8.68g	76.9		
78	K1006771-026	2172	SOIL	1.30g	12.54g	10.10g	78.3		
79	K1006771-027	2171	SOIL	1.30g	12.72g	10.27g	78.5		
80	K1006771-028	2181	SOIL	1.32g	9.47g	7.42g	74.8		
81	K1006771-029	2182	SOIL	1.30g	12.01g	9.40g	75.6		
82	K1006771-030	2183	SOIL	1.30g	10.76g	8.33g	74.3		
83	K1006777-001	BG-1 0-2 COMP	SOIL	1.31g	19.80g	18.00g	90.3		
84	K1006777-002	BG-1 2-12 COMP	SOIL	1.32g	11.85g	10.86g	90.6		
85	K1006777-003	BG-1 12-18 COMP	SOIL	1.32g	10.01g	8.76g	85.6		
86	K1006777-004	BG-2 0-2 COMP	SOIL	1.31g	13.78g	11.36g	80.6		
87	K1006777-005	BG-2 2-12 COMP	SOIL	1.31g	10.10g	8.12g	77.5		
88	K1006777-006	BG-2 12-18 COMP	SOIL	1.32g	11.43g	10.05g	86.4		

17

Group ID:	KWG1006471		
Analyst:	SArwood	**Reviewed By:**	SH
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	7/8/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
89	K1006777-007	BG-100 0-2 COMP	SOIL	1.33g	11.38g	10.49g	91.1		
90	K1006777-009	BG-3 0-2 COMP	SOIL	1.31g	12.78g	11.75g	91.0		
91	K1006777-010	BG-3 2-12 COMP	SOIL	1.33g	12.44g	11.00g	87.0		
92	K1006777-011	BG-3 12-18 COMP	SOIL	1.32g	12.10g	10.80g	87.9		
93	K1006777-012	BG-4 0-2 COMP	SOIL	1.32g	13.10g	11.44g	85.9		
94	K1006777-013	BG-4 2-12 COMP	SOIL	1.30g	12.87g	11.43g	87.6		
95	K1006777-014	BG-4 12-18 COMP	SOIL	1.31g	13.54g	12.47g	91.3		
96	K1006777-015	BG-6 0-2 COMP	SOIL	1.32g	10.62g	9.58g	88.8		
97	K1006777-016	BG-6 2-12 COMP	SOIL	1.32g	13.62g	12.02g	87.0		
98	K1006777-017	BG-6 12-18 COMP	SOIL	1.31g	10.80g	9.69g	88.3		
99	K1006804-001	Drillsite 1	SOIL	1.32g	11.36g	6.57g	52.3		
100	K1006804-002	Drillsite 2	SOIL	1.32g	8.38g	5.49g	59.1		
101	K1006804-003	Drillsite 3	SOIL	1.31g	13.97g	9.10g	61.5		
102	K1006816-001	OUTSIDE-CB2-062910	SOIL	1.31g	8.05g	8.01g	99.4		
103	K1006816-002	OUTSIDE-CB3-062910	SOIL	1.31g	9.53g	9.46g	99.1		
104	K1006816-003	OUTSIDE-CB5-062910	SOIL	1.31g	12.60g	12.52g	99.3		
105	K1006816-004	DALLAS AVE-062910	SOIL	1.31g	14.15g	13.91g	98.1		
106	K1006834-002	HC-OC-SD20	SEDIMENT	1.33g	11.10g	9.24g	81.0		
107	K1006834-004	HC-NNC-SD21-BG	SEDIMENT	1.31g	14.19g	11.13g	76.2		
108	K1006834-006	HC-OC-SD22	SEDIMENT	1.32g	10.64g	7.59g	67.3		
109	K1006834-009	HC-KMWW8-DF32-BG	SEDIMENT	1.32g	12.10g	9.76g	78.3		
110	K1006834-010	HC-KMW8-SS33	SOIL	1.33g	9.74g	3.30g	23.4		
111	K1006834-011	HC-KMW8-SS34	SOIL	1.33g	13.12g	9.48g	69.1		
112	K1006834-012	HC-KMW3-SS35	SOIL	1.31g	11.53g	5.95g	45.4		
113	K1006834-013	HC-KMW8-SS36-BG	SOIL	1.32g	9.85g	6.98g	66.4		
114	K1006834-014	HC-KM-SS27-BG	SOIL	1.32g	12.19g	8.84g	69.2		
115	K1006834-016	HC-OC-TRAM-US-SD23	SEDIMENT	1.31g	12.75g	8.38g	61.8		
116	K1006834-018	HC-OC-TRAM-US-SD24	SEDIMENT	1.32g	16.28g	13.84g	83.7		
117	K1006834-020	HC-POLK-US-SD25-BG	SEDIMENT	1.33g	8.46g	5.43g	57.5		
118	K1006834-022	HC-POLK-US-SD40-BG	SEDIMENT	1.32g	16.44g	12.06g	71.0		
119	K1006834-024	HC-OC-TRAM-DS2-SD26	SEDIMENT	1.32g	13.39g	12.25g	90.6		

Group ID:	KWG1006471				
Analyst:	SArwood			**Reviewed By:**	SAH
Date Acquired:	07/03/2010 12:27	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/8/10
Date Completed:	07/07/2010 12:10	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
120	K1006834-026	HC-OC-TRAM-US2-SD27	SEDIMENT	1.31g	13.38g	11.96g	88.2		
121	K1006834-027	HC-TRAM-SS28	SOIL	1.31g	12.10g	9.90g	79.6		
122	K1006834-028	HC-TRAM-SS29	SOIL	1.32g	10.74g	9.04g	82.0		
123	K1006834-029	HC-TRAM-SS30-BG	SOIL	1.31g	7.83g	3.30g	30.5		
124	K1006834-030	HC-SOP-SS38	SOIL	1.34g	9.65g	5.77g	53.3		
125	K1006834-031	HC-LAKE-SS39-BG	SOIL	1.33g	14.41g	9.85g	65.1		
126	K1006834-035	HC-CKESOP-SD41-BG	SEDIMENT	1.33g	10.98g	9.53g	85.0		
127	K1006834-036	HC-SOP-SS42-BG	SOIL	1.32g	10.27g	5.85g	50.6		
128	KWG1006471-1	Duplicate Client Sample	SOIL	1.33g	20.93g	20.15g	96.0	K1006662-002	
129	KWG1006471-10	Duplicate Client Sample	SOIL	1.33g	9.97g	5.80g	51.7	K1006771-011	
130	KWG1006471-11	Duplicate Client Sample	SOIL	1.31g	13.05g	10.37g	77.2	K1006771-021	
131	KWG1006471-12	Duplicate Client Sample	SOIL	1.33g	15.75g	13.24g	82.6	K1006777-005	
132	KWG1006471-13	Duplicate Client Sample	SOIL	1.32g	9.54g	8.59g	88.4	K1006777-011	
133	KWG1006471-14	Duplicate Client Sample	SOIL	1.32g	7.88g	5.11g	57.8	K1006804-001	
134	KWG1006471-15	Duplicate Client Sample	SOIL	1.31g	8.50g	8.45g	99.3	K1006816-001	
135	KWG1006471-18	Duplicate Client Sample	SEDIMENT	1.31g	11.09g	9.57g	84.5	K1006834-002	
136	KWG1006471-19	Duplicate Client Sample	SEDIMENT	1.33g	10.08g	8.15g	77.9	K1006834-018	
137	KWG1006471-2	Duplicate Client Sample	SOIL	1.32g	22.83g	22.00g	96.1	K1006662-006	
138	KWG1006471-20	Duplicate Client Sample	SEDIMENT	1.33g	13.74g	11.75g	84.0	K1006834-035	
139	KWG1006471-3	Duplicate Client Sample	SOIL	1.32g	13.41g	12.57g	93.1	K1006662-012	
140	KWG1006471-4	Duplicate Client Sample	SOIL	1.32g	16.29g	15.01g	91.4	K1006663-001	
141	KWG1006471-5	Duplicate Client Sample	SOIL	1.33g	11.00g	9.69g	86.5	K1006676-001	
142	KWG1006471-6	Duplicate Client Sample	SOIL	1.32g	14.96g	13.23g	87.3	K1006676-018	
143	KWG1006471-7	Duplicate Client Sample	SOIL	1.32g	14.39g	12.28g	83.9	K1006702-001	
144	KWG1006471-8	Duplicate Client Sample	SEDIMENT	1.30g	11.41g	11.37g	99.6	K1006740-001	
145	KWG1006471-9	Duplicate Client Sample	SOIL	1.32g	12.16g	9.78g	78.0	K1006771-001	

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006777
Date Collected : 06/28-30/10
Date Received : 07/01/10

Fluoride, Total

Prep Method : DI Extract
Analysis Method : 340.2 Modified
Test Notes :

Units : mg/Kg
Basis : Dry

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
BG-1 0-2 COMP	K1006777-001	1.1	0.1	1	7/26/2010	07/26/10	1.5	
BG-1 2-12 COMP	K1006777-002	1.1	0.1	1	7/26/2010	07/26/10	5.4	
BG-1 12-18 COMP	K1006777-003	1.2	0.1	1	7/26/2010	07/26/10	3.2	
BG-2 0-2 COMP	K1006777-004	1.2	0.1	1	7/26/2010	07/26/10	1.5	
BG-2 2-12 COMP	K1006777-005	1.3	0.1	1	7/26/2010	07/26/10	1.8	
BG-2 12-18 COMP	K1006777-006	1.2	0.1	1	7/26/2010	07/26/10	5.1	
BG-100 0-2 COMP	K1006777-007	1.1	0.1	1	7/26/2010	07/26/10	1.5	
BG-3 0-2 COMP	K1006777-009	1.1	0.1	1	7/26/2010	07/26/10	1.9	
BG-3 2-12 COMP	K1006777-010	1.1	0.1	1	7/26/2010	07/26/10	2.5	
BG-3 12-18 COMP	K1006777-011	1.1	0.1	1	7/26/2010	07/26/10	4.3	
BG-4 0-2 COMP	K1006777-012	1.2	0.1	1	7/26/2010	07/26/10	1.6	
BG-4 2-12 COMP	K1006777-013	1.1	0.1	1	7/26/2010	07/26/10	1.3	
BG-4 12-18 COMP	K1006777-014	1.1	0.1	1	7/26/2010	07/26/10	ND	
BG-6 0-2 COMP	K1006777-015	1.1	0.1	1	7/26/2010	07/26/10	ND	
BG-6 2-12 COMP	K1006777-016	1.1	0.1	1	7/26/2010	07/26/10	ND	
BG-6 12-18 COMP	K1006777-017	1.1	0.1	1	7/26/2010	07/26/10	ND	
Method Blank	K1006777-MB	1.0	0.1	1	7/26/2010	07/26/10	0.2	J
Method Blank	K1006777-MB	1.0	0.1	1	7/26/2010	07/26/10	0.4	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : SOIL

Service Request : K1006777
Date Collected : 6/30/2010
Date Received : 7/1/2010
Date Prepared : 07/26/10
Date Analyzed : 07/26/10

Duplicate Summary
Inorganic Parameters

Sample Name : BG-2 2-12 COMP
Lab Code : K1006777-005DUP
Test Notes :

Units : mg/Kg
Basis : Dry

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride, Total	DI Extract	340.2 Modified	1.3	1.8	1.6	1.7	12	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006777
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	6/30/2010
Project Number :	26-46-0006.13-2010-400	**Date Received :**	7/1/2010
Sample Matrix :	SOIL	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	BG-2 2-12 COMP		Units :	mg/Kg
Lab Code :	K1006777-005MS	K1006777-005DMS	Basis :	Dry
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Fluoride, Total	DI Extract	340.2 Modified	1.3	117	233	1.8	51.3	116	42	49	75-125	15	*

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006777
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006777-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride, Total	DI Extract	340.2 Modified	11.0	11.3	103	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006777
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/26/2010	5.00	5.16	103
CCV2 Result	7/26/2010	5.00	5.06	101
CCV3 Result	7/26/2010	5.00	4.98	100
CCV4 Result	7/26/2010	5.00	4.92	98
CCV5 Result	7/26/2010	5.00	4.86	97

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006777
Date Collected : NA
Date Received : NA

Fluoride, Total
340.2 Modified
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/26/2010	0.20	0.05 J
CCB2 Result	7/26/2010	0.20	0.05 J
CCB3 Result	7/26/2010	0.20	0.07 J
CCB4 Result	7/26/2010	0.20	0.08 J
CCB5 Result	7/26/2010	0.20	0.08 J

Original
Work Request # (KL0015) KL777

Tier: III III

Date Analyzed: 7-26-10

209947

Analyst: A Greathouse

Analysis: Fluoride - 5402 mod water extraction

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

5e) KL777-5ms/5msd failed suspect matrix interference. KL0015 lcsd failed by 1% RPD between spk + spk dup. Reanalysis

Final Approved by: [signature] Date: 7/28/10

DQREPORT

Analytical Results Summary

nstrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209947 **Method/Testcode:** 340.2 Modified/F Dist

ıb Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
006615-001	Fluoride, Total	N/A		Soil	0.18 mg/L	0.88	1.1 mg/Kg J	1	0.8	1.2			7/26/10 12:25:00	N	V
006615-002	Fluoride, Total	N/A		Soil	0.21 mg/L	1.02	1.2 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006615-003	Fluoride, Total	N/A		Soil	0.24 mg/L	1.19	1.4 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006615-004	Fluoride, Total	N/A		Soil	0.23 mg/L	1.11	1.3 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006615-005	Fluoride, Total	N/A		Soil	0.18 mg/L	0.89	1.1 mg/Kg J	1	0.3	1.3			7/26/10 12:25:00	N	V
006615-006	Fluoride, Total	N/A		Soil	0.76 mg/L	3.52	4.1 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	Y	V
006615-007	Fluoride, Total	N/A		Soil	0.21 mg/L	1.00	1.2 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006615-008	Fluoride, Total	N/A		Soil	0.39 mg/L	1.88	2.1 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006615-009	Fluoride, Total	N/A		Soil	0.44 mg/L	2.05	2.4 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006777-001	Fluoride, Total	N/A		Soil	0.27 mg/L	1.31	1.5 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-002	Fluoride, Total	N/A		Soil	1.02 mg/L	4.90	5.4 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-003	Fluoride, Total	N/A		Soil	0.57 mg/L	2.70	3.2 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006777-004	Fluoride, Total	N/A		Soil	0.24 mg/L	1.20	1.5 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006777-005	Fluoride, Total	N/A		Soil	0.28 mg/L	1.38	1.8 mg/Kg	1	0.3	1.3			7/26/10 12:25:00	Y	V
006777-006	Fluoride, Total	N/A		Soil	0.92 mg/L	4.42	5.1 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006777-007	Fluoride, Total	N/A		Soil	0.29 mg/L	1.39	1.5 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-009	Fluoride, Total	N/A		Soil	0.35 mg/L	1.74	1.9 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-010	Fluoride, Total	N/A		Soil	0.44 mg/L	2.18	2.5 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-011	Fluoride, Total	N/A		Soil	0.77 mg/L	3.82	4.3 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-012	Fluoride, Total	N/A		Soil	0.28 mg/L	1.39	1.6 mg/Kg	1	0.8	1.2			7/26/10 12:25:00	N	V
006777-013	Fluoride, Total	N/A		Soil	0.23 mg/L	1.10	1.3 mg/Kg	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-014	Fluoride, Total	N/A		Soil	0.08 mg/L	0.38	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-015	Fluoride, Total	N/A		Soil	0.07 mg/L	0.31	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-016	Fluoride, Total	N/A		Soil	0.05 mg/L	0.25	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
006777-017	Fluoride, Total	N/A		Soil	0.05 mg/L	0.25	1.1 mg/Kg U	1	0.8	1.1			7/26/10 12:25:00	N	V
1006962-03	Fluoride, Total	LCS		Soil				1					7/26/10 12:25:00	N	V
1006962-04	Fluoride, Total	MB		Soil				1					7/26/10 12:25:00	N	V
1006962-10	Fluoride, Total	DUP	K1006615-006	Soil	0.84 mg/L	4.17	4.9 mg/Kg	1	0.8	1.2		17	7/26/10 12:25:00	N	V
1006962-11	Fluoride, Total	MS	K1006615-006	Soil	17.30 mg/L	85.95	101 mg/Kg	1	0.8	1.2	83		7/26/10 12:25:00	N	V
1006962-12	Fluoride, Total	DMS	K1006615-006	Soil	30.40 mg/L	150.95	177 mg/Kg	1	0.8	1.2	74*	55*	7/26/10 12:25:00	N	V
1007040-01	Fluoride, Total	MS	K1006777-005	Soil	8.08 mg/L	39.75	51.3 mg/Kg	1	0.3	1.3	39*		7/26/10 12:25:00	N	V
1007040-02	Fluoride, Total	DMS	K1006777-005	Soil	18.20 mg/L	90.17	116 mg/Kg	1	0.3	1.3	45*	78*	7/26/10 12:25:00	N	V
1007040-03	Fluoride, Total	LCS		Soil	11.30 mg/L	11.30	11.3 mg/Kg	1	0.2	1.0	103		7/26/10 12:25:00	N	V
1007040-04	Fluoride, Total	MB		Soil	0.05 mg/L	0.05	1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V
1007040-05	Fluoride, Total	DUP	K1006777-005	Soil	0.25 mg/L	1.24	1.6 mg/Kg	1	0.3	1.3		11	7/26/10 12:25:00	N	V
1007395-01	Fluoride, Total	CCB		Soil				1					7/26/10 12:25:00	N	V
1007395-02	Fluoride, Total	CCB		Soil	0.05 mg/L		0.053 mg/Kg	1					7/26/10 12:25:00	N	V
1007395-03	Fluoride, Total	CCB		Soil	0.05 mg/L		0.052 mg/Kg	1					7/26/10 12:25:00	N	V
1007395-04	Fluoride, Total	CCB		Soil	0.07 mg/L		0.066 mg/Kg	1					7/26/10 12:25:00	N	V

Not adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209947 **Method/Testcode:** 340.2 Modified/F Dist

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
Q1007395-05	Fluoride, Total	CCB		Soil	0.08 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V
Q1007395-06	Fluoride, Total	CCB		Soil	0.08 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V
Q1007395-07	Fluoride, Total	CCV		Soil				1					7/26/10 12:25:00	N	V
Q1007395-08	Fluoride, Total	CCV		Soil	5.16 mg/L		5.16 mg/Kg	1	0.2	1.0	105 %		7/26/10 12:25:00	N	V
Q1007395-09	Fluoride, Total	CCV		Soil	5.06 mg/L		5.06 mg/Kg	1	0.2	1.0	101 %		7/26/10 12:25:00	N	V
Q1007395-10	Fluoride, Total	CCV		Soil	4.98 mg/L		4.98 mg/Kg	1	0.2	1.0	100 %		7/26/10 12:25:00	N	V
Q1007395-11	Fluoride, Total	CCV		Soil	4.92 mg/L		4.92 mg/Kg	1	0.2	1.0	98 %		7/26/10 12:25:00	N	V
Q1007395-12	Fluoride, Total	CCV		Soil	4.86 mg/L		4.86 mg/Kg	1	0.2	1.0	97 %		7/26/10 12:25:00	N	V
Q1007411-01	Fluoride, Total	LCS		Soil	10.90 mg/L	10.90	10.9 mg/Kg	1	0.2	1.0	99		7/26/10 12:25:00	N	V
Q1007411-02	Fluoride, Total	MB		Soil	0.07 mg/L	0.07	1.0 mg/Kg U	1	0.2	1.0			7/26/10 12:25:00	N	V

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Not adjusted for changes in units
indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.24	1.00	0.240	
CCV1	20	20	5.16	1.00	5.160	103.2
CCB1	20	20	0.0534	1.00	0.053	
MB	20	20	0.0464	1.00	0.046	
LCS	20	20	11.3	1.00	11.300	
K1006615-001	20	20	0.177	1.00	0.177	
K1006615-002	20	20	0.206	1.00	0.206	
K1006615-003	20	20	0.242	1.00	0.242	
K1006615-004	20	20	0.226	1.00	0.226	
K1006615-005	20	20	0.179	1.00	0.179	
K1006615-006	20	20	0.762	1.00	0.762	
K1006615-006d	20	20	0.844	1.00	0.844	
K1006615-006ms	20	20	17.3	1.00	17.300	
CCV2	20	20	5.06	1.00	5.060	101.2
CCB2	20	20	0.0516	1.00	0.052	
K1006615-006ms	20	20	30.4	1.00	30.400	
K1006615-007	20	20	0.212	1.00	0.212	
K1006615-008	20	20	0.392	1.00	0.392	
K1006615-009	20	20	0.444	1.00	0.444	
K1006777-001	20	20	0.274	1.00	0.274	
K1006777-002	20	20	1.024	1.00	1.024	
K1006777-003	20	20	0.570	1.00	0.570	
K1006777-004	20	20	0.242	1.00	0.242	
K1006777-005	20	20	0.276	1.00	0.276	
K1006777-005d	20	20	0.252	1.00	0.252	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L 3 STD 100 mg/L

1-100ppm SLOPE= -59.19,-57.21 EF%100,96.7

LCS APG4423 ID#F/2-84-L TV=11.0mg/L %REC=103,99

CCV TV=5ppm ID#F/2-53-T

6615-6ms = 1.0mL x 1,000ppm / 10.064 Sa. = 99.4 / .853 = 117

PROBE ID#A 6615-6msd = 2.0mL x 1,000 ppm / 10.069 g = 199 / .853 = 233

	DATE	TIME
Analyzed By: AC	7/26/2010	12:25:00 PM
Reviewed By:	HL	7/28/10

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV3	20	20	4.98	1.00	4.980	100
CCB3	20	20	0.0662	1.00	0.066	
K1006777-05ms	20	20	8.08	1.00	8.080	
K1006777-05msd	20	20	18.2	1.00	18.200	
K1006777-006	20	20	0.922	1.00	0.922	
K1006777-007	20	20	0.294	1.00	0.294	
K1006777-009	20	20	0.354	1.00	0.354	
K1006777-010	20	20	0.442	1.00	0.442	
K1006777-011	20	20	0.768	1.00	0.768	
K1006777-012	20	20	0.282	1.00	0.282	
K1006777-013	20	20	0.226	1.00	0.226	
K1006777-014	20	20	0.240	1.00	0.240	
CCV4	20	20	4.92	1.00	4.920	98
CCB4	20	20	0.0804	1.00	0.080	
K1006777-015	20	20	0.208	1.00	0.208	
K1006777-016	20	20	0.310	1.00	0.310	
K1006777-017	20	20	1.53	1.00	1.530	
MB	20	20	0.07	1.00	0.070	
LCS	20	20	10.9	1.00	10.900	
0.2 STD	20	20	0.216	1.00	0.216	
CCV5	20	20	4.86	1.00	4.860	97
CCB5	20	20	0.076	1.00	0.076	EOP
		20		#DIV/0!	#DIV/0!	

6777-5ms = 1.0mL x 1,000ppm / 10.1646g. = 98.4 / .775 = 127

6777-5msd = 2.0mL x 1,000ppm / 10.0920g. = 198 / .775 = 255

	DATE	TIME
Analyzed By:AC	7/26/2010	12:25:00 PM
Reviewed By:	7/28/10	

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115393
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist SFluor
Prep Method: EPA 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/26/2010 10:30
Due Date: 07/19/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006615-001	BG-5 0-2 COMP	.01	10.0904 g	50 mL			
K1006615-002	BG-5 2-12 COMP	.01	10.0986 g	50 mL			
K1006615-003	BG-5 2-18 COMP	.01	10.1519 g	50 mL			
K1006615-004	BG-9 0-2 COMP	.01	10.1405 g	50 mL			
K1006615-005	BG-9 2-12 COMP	.01	10.0004 g	50 mL			
K1006615-006	BG-9 12-18 COMP	.01	10.8283 g	50 mL			
K1006615-007	BG-13 0-2 COMP	.01	10.5604 g	50 mL			
K1006615-008	BG-13 2-12 COMP	.01	10.4415 g	50 mL			
K1006615-009	BG-13 12-18 COMP	.01	10.8549 g	50 mL			
KQ1006962-03	Lab Control Sample		50 mL	50 mL	50 mL	19431	
KQ1006962-04	Method Blank		50 mL	50 mL			
K1006615-006: KQ1006962-10	Duplicate	.01	10.1198 g	50 mL			
K1006615-006: KQ1006962-11	Matrix Spike	.01	10.0645 g	50 mL	1 mL	19258	
K1006615-006: KQ1006962-12	Duplicate Matrix Spike	.01	10.0694 g	50 mL	2 mL	19258	

14 Total Samples consisting of 9 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2-2-B F/2-84-L

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	26-JUL-10 10:30	26-JUL-10 12:00	ac		N	

Comments

Review

Reviewed by: HS Date: 7/28/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115538
Team: GenChem
Analyst: AC

Prep Workflow: Gen Dist SFluor EPA
Prep Method: 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/26/2010 10:30
Due Date: 07/18/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006777-001	BG-1 0-2 COMP	.01	10.4531 g	50 mL			
K1006777-002	BG-1 2-12 COMP	.01	10.4585 g	50 mL			
K1006777-003	BG-1 12-18 COMP	.01	10.5651 g	50 mL			
K1006777-004	BG-2 0-2 COMP	.01	10.1116 g	50 mL			
K1006777-005	BG-2 2-12 COMP	.01	10.0186 g	50 mL			
K1006777-006	BG-2 12-18 COMP	.01	10.4392 g	50 mL			
K1006777-007	BG-100 0-2 COMP	.01	10.5490 g	50 mL			
K1006777-009	BG-3 0-2 COMP	.01	10.1649 g	50 mL			
K1006777-010	BG-3 2-12 COMP	.01	10.1202 g	50 mL			
K1006777-011	BG-3 12-18 COMP	.01	10.0614 g	50 mL			
K1006777-005: KQ1007040-01	Matrix Spike	.01	10.1646 g	50 mL	1 mL	19258	
K1006777-005: KQ1007040-02	Duplicate Matrix Spike	.01	10.0920 g	50 mL	2 mL	19258	
KQ1007040-03	Lab Control Sample		50 mL	50 mL	50 mL	19431	
KQ1007040-04	Method Blank		50 mL	50 mL			
K1006777-005: KQ1007040-05	Duplicate	.01	10.1844 g	50 mL			

15 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2-2-15 F/2 344-2

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	26-JUL-10 10:30	26-JUL-10 12:00	AC		N	

Comments

Review

Reviewed by: HG Date: 7/28/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 116142
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist SFluor
Prep Method: 340.1 Mod Prep,EPA 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/26/2010 12:25
Due Date: 07/18/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006777-012	BG-4 0-2 COMP	.01	10.1581 g	50 mL			
K1006777-013	BG-4 2-12 COMP	.01	10.3085 g	50 mL			
K1006777-014	BG-4 12-18 COMP	.01	10.5227 g	50 mL			
K1006777-015	BG-6 0-2 COMP	.01	10.6598 g	50 mL			
K1006777-016	BG-6 2-12 COMP	.01	10.5577 g	50 mL			
K1006777-017	BG-6 12-18 COMP	.01	10.7822 g	50 mL			
K1007774-001	1009811-01	.01	10.4531 g	50 mL			
K1007774-002	1009811-02	.01	10.4585 g	50 mL			
K1007774-003	1009811-03	.01	10.5651 g	50 mL			
K1007774-004	1009811-04	.01	10.1116 g	50 mL			
K1007774-005	1009811-05	.01	10.0186 g	50 mL			
K1007774-006	1009811-06	.01	10.4392 g	50 mL			
KQ1007411-01	Lab Control Sample		50 mL	50 mL	50 mL	19431	
KQ1007411-02	Method Blank		50 mL	50 mL			
K1007774-005: KQ1007411-03	Duplicate	.01	10.1844 g	50 mL	1 mL	19258	
K1007774-005: KQ1007411-04	Matrix Spike	.01	10.1646 g	50 mL			
K1007774-005: KQ1007411-05	Duplicate Matrix Spike	.01	10.0920 g	50 mL	2 mL	19258	

17 Total Samples consisting of 12 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2-2-B F/2-8-L

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	26-JUL-10 12:25	26-JUL-10 14:30	ac		N	

Comments

Review

Reviewed by: _____ Date: 7/28/10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	Barr Engineering Company	**Service Request :**	K1006777
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	06/29/10
Project Number :	26-46-0006.13-2010-400	**Date Received :**	07/01/10
Sample Matrix :	WATER		

Fluoride

Analysis Method : 340.2
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Analyzed	Result	Result Notes
BG-120 COMP	K1006777-008	0.20	0.01	1	07/21/10	0.04	J
Method Blank	K1006777-MB	0.20	0.01	1	07/21/10	0.04	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow Plant Background
Project Number : 26-46-0006.13-2010-400
Sample Matrix : WATER

Service Request : K1006777
Date Collected : 6/29/2010
Date Received : 7/1/2010
Date Prepared : NA
Date Analyzed : 07/21/10

Duplicate Summary
Inorganic Parameters

Sample Name : BG-120 COMP
Lab Code : K1006777-008DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride	340.2	0.20	0.04	0.04	0.04	<1	J

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006777
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	6/29/2010
Project Number :	26-46-0006.13-2010-400	**Date Received :**	7/1/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/21/10

Matrix Spike Summary
Inorganic Parameters

Sample Name :	BG-120 COMP	Units :	mg/L
Lab Code :	K1006777-008MS	Basis :	NA
Test Notes :			

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	340.2	0.20	25.0	0.04	26.2	105	74-128	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1006777
Project Name :	Rhodia Silver Bow Plant Background	**Date Collected :**	NA
Project Number :	26-46-0006.13-2010-400	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/21/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1006777-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	NONE	340.2	11.0	11.2	102	87-117	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006777
Date Collected : NA
Date Received : NA

Fluoride
340.2
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/21/2010	5.00	5.28	106
CCV2 Result	7/21/2010	5.00	5.26	105

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow Plant Background

Service Request : K1006777
Date Collected : NA
Date Received : NA

Fluoride
340.2
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/21/2010	0.20	0.06 J
CCB2 Result	7/21/2010	0.20	0.05 J

Work Request # Original (K6777) K7336 K7468 K7470

Tier: V I II I

Date Analyzed: 7-21-10

Analyst: A Chantley

Analysis: Fluoride

209304

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

Final Approved by: HC Date: 7/22/10

DQREPORT

Analytical Results Summary

Instrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209304 **Method/Testcode:** SM 4500-F- C Modified/F

ab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
1006777-008	Fluoride	N/A		Water	0.04 mg/L	mL	0.04 mg/L J	1	0.01	0.20			7/21/10 12:20:00	N	V
1007336-001	Fluoride	N/A		Water	0.36 mg/L	mL	0.36 mg/L B	1	0.01	0.20			7/21/10 12:20:00	N	I
1007468-001	Fluoride	N/A		Water	6.44 mg/L	mL	6.44 mg/L	1	0.01	0.20			7/21/10 12:20:00	N	II
1007470-001	Fluoride	N/A		Water	8.42 mg/L	mL	8.42 mg/L	1	0.01	0.20			7/21/10 12:20:00	N	II
Q1007213-01	Fluoride	MB		Water	0.04 mg/L	mL	0.04 mg/L J	1	0.01	0.20			7/21/10 12:20:00	N	V
Q1007213-02	Fluoride	LCS		Water	11.20 mg/L	mL	11.2 mg/L	1	0.01	0.20			7/21/10 12:20:00	N	V
Q1007213-03	Fluoride	DUP	K1006777-008	Water	0.04 mg/L	mL	0.04 mg/L J	1	0.01	0.20		12	7/21/10 12:20:00	N	V
Q1007213-04	Fluoride	MS	K1006777-008	Water	26.20 mg/L	mL	26.2 mg/L	1	0.01	0.20	105%		7/21/10 12:20:00	N	V
Q1007213-05	Fluoride	CCV		Water	5.28 mg/L	mL	5.28 mg/L	1	106%				7/21/10 12:20:00	N	V
Q1007213-06	Fluoride	CCV		Water	5.26 mg/L	mL	5.26 mg/L	1	105%				7/21/10 12:20:00	N	V
Q1007213-07	Fluoride	CCB		Water	0.06 mg/L	mL	0.06 mg/L J	1	0.01	0.20			7/21/10 12:20:00	N	V
Q1007213-08	Fluoride	CCB		Water	0.05 mg/L	mL	0.05 mg/L J	1	0.01	0.20			7/21/10 12:20:00	N	V

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.244	1.00	0.244	
CCV1	20	20	5.28	1.00	5.280	106
CCB1	20	20	0.059	1.00	0.059	
MB	20	20	0.043	1.00	0.043	
LCS	20	20	11.2	1.00	11.200	
K1006777-008	20	20	0.044	1.00	0.044	
K1006777-008d	20	20	0.039	1.00	0.039	
K1006777-008ms	20	20	26.2	1.00	26.200	
K1007336-001	20	20	0.356	1.00	0.356	
K1007468-001	20	20	6.44	1.00	6.440	
K1007470-001	20	20	8.42	1.00	8.420	
0.2 STD	20	20	0.230	1.00	0.230	
CCB2	20	20	0.053	1.00	0.053	
CCV2	20	20	5.26	1.00	5.260	105
CCB2	20	20		1.00	0.000	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L 3 STD 100 mg/L

1-100ppm Slope:-59.08,-56.88 EF%99.9,96.1

LCS APG:423 Lot#291209 ID#F/2-84-L

TV= 11.0mg/L %REC=102

CCV TV=5ppm ID#F/2-53-T

PROBE ID#A 6777-8ms=0.5mlx1000ppm/20=25 x=ND RPD=NA %REC=105

	DATE	TIME
Analyzed By:ac	7/21/2010	12:20:00 PM
Reviewed By: HD	7/22/10	

Work Request # Original (K6615) K6777

Tier: III III

Date Analyzed: 7-14-10

Analyst: A Chatterjee

Analysis: Fluoride 340.2 Mod.

209242 K6615 1-9
209247 K6777 1-11
209253 K6777 12-17

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
d.	Are results for methods blanks all ND?	yes/no/NA
e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?	yes/no/NA
7.	Are all samples labelled correctly?	yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.	Are detection limits and units reported correctly?	yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

K6615 Ins/Insd failed
K6677-5ms/5msd " Suspect matrix interference.
K6677-12ms/12msd "

Final Approved by: [signature] Date: 7/23/10

DQREPORT

Analytical Results Summary

nstrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209242 **Method/Testcode:** 340.2 Modified/F Dist

ıb Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
.006615-001	Fluoride, Total	N/A		Soil	4.00 mg/L	152.34	183 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	N	V
1006615-002	Fluoride, Total	N/A		Soil	5.92 mg/L	225.74	270 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	N	V
1006615-003	Fluoride, Total	N/A		Soil	6.60 mg/L	230.86	270 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	N	V
1006615-004	Fluoride, Total	N/A		Soil	4.12 mg/L	163.15	188 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
1006615-005	Fluoride, Total	N/A		Soil	5.18 mg/L	195.94	246 mg/Kg	1	0.3	1.3			7/20/10 01:30:00	N	V
1006615-006	Fluoride, Total	N/A		Soil	4.56 mg/L	161.20	189 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	Y	V
1006615-007	Fluoride, Total	N/A		Soil	4.22 mg/L	160.06	191 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	N	V
1006615-008	Fluoride, Total	N/A		Soil	4.40 mg/L	170.17	192 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
1006615-009	Fluoride, Total	N/A		Soil	4.38 mg/L	155.04	180 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	N	V
Q1006962-03	Fluoride, Total	LCS		Soil	10.70 mg/L	10.06	10.1 mg/Kg	1	0.2	1.0	91		7/20/10 01:30:00	N	V
Q1006962-04	Fluoride, Total	MB		Soil	0.11 mg/L	0.10	1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1006962-10	Fluoride, Total	DUP	K1006615-006	Soil	4.76 mg/L	179.64	211 mg/Kg	1	0.8	1.2		11	7/20/10 01:30:00	N	V
Q1006962-11	Fluoride, Total	MS	K1006615-006	Soil	32.00 mg/L	1167.93	1370 mg/Kg	1	0.8	1.2	50*		7/20/10 01:30:00	N	V
Q1006962-12	Fluoride, Total	DMS	K1006615-006	Soil	63.80 mg/L	2429.28	2850 mg/Kg	1	0.8	1.2	58*	70*	7/20/10 01:30:00	N	V
Q1007191-01	Fluoride, Total	CCB		Soil	0.04 mg/L		~~1.0 mg/Kg U~~	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1007191-02	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1007191-03	Fluoride, Total	CCB		Soil	0.07 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1007191-04	Fluoride, Total	CCB		Soil	0.06 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1007191-05	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1007191-06	Fluoride, Total	CCB		Soil	0.04 mg/L		~~1.0 mg/Kg U~~	1	0.2	1.0			7/20/10 01:30:00	N	V
Q1007191-07	Fluoride, Total	CCV		Soil	4.90 mg/L		~~4.90 mg/Kg~~	1	98%				7/20/10 01:30:00	N	V
Q1007191-08	Fluoride, Total	CCV		Soil	4.80 mg/L		4.80 mg/Kg	1	96%				7/20/10 01:30:00	N	V
Q1007191-09	Fluoride, Total	CCV		Soil	4.80 mg/L		4.80 mg/Kg	1	96%				7/20/10 01:30:00	N	V
Q1007191-10	Fluoride, Total	CCV		Soil	4.72 mg/L		4.72 mg/Kg	1	94%				7/20/10 01:30:00	N	V
Q1007191-11	Fluoride, Total	CCV		Soil	4.80 mg/L		4.80 mg/Kg	1	96%				7/20/10 01:30:00	N	V
Q1007191-12	Fluoride, Total	CCV		Soil	4.74 mg/L		~~4.74 mg/Kg~~	1	95%				7/20/10 01:30:00	N	V

BL 7/23/10

BL 7/23/10

Not adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

nstrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209247 **Method/Testcode:** 340.2 Modified/F Dist

b Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
006777-001	Fluoride, Total	N/A		Soil	3.52 mg/L	135.57	150 mg/Kg	1	0.3	1.1			7/20/10 01:30:00	N	V
006777-002	Fluoride, Total	N/A		Soil	3.82 mg/L	142.46	157 mg/Kg	1	0.3	1.1			7/20/10 01:30:00	N	V
006777-003	Fluoride, Total	N/A		Soil	7.52 mg/L	290.84	340 mg/Kg	1	0.3	1.2			7/20/10 01:30:00	N	V
006777-004	Fluoride, Total	N/A		Soil	3.32 mg/L	121.79	151 mg/Kg	1	0.3	1.2			7/20/10 01:30:00	N	V
006777-005	Fluoride, Total	N/A		Soil	3.62 mg/L	143.10	185 mg/Kg	1	0.3	1.3			7/20/10 01:30:00	Y	V
006777-006	Fluoride, Total	N/A		Soil	4.40 mg/L	167.98	194 mg/Kg	1	0.3	1.2			7/20/10 01:30:00	N	V
006777-007	Fluoride, Total	N/A		Soil	4.46 mg/L	164.66	181 mg/Kg	1	0.3	1.1			7/20/10 01:30:00	N	V
006777-009	Fluoride, Total	N/A		Soil	0.85 mg/L	30.77	33.8 mg/Kg	1	0.3	1.1			7/20/10 01:30:00	N	V
006777-010	Fluoride, Total	N/A		Soil	4.60 mg/L	168.77	194 mg/Kg	1	0.3	1.1			7/20/10 01:30:00	N	V
006777-011	Fluoride, Total	N/A		Soil	6.38 mg/L	244.19	278 mg/Kg	1	0.3	1.1			7/20/10 01:30:00	N	V
1007040-01	Fluoride, Total	MS	K1006777-005	Soil	29.80 mg/L	1125.75	1450 mg/Kg	1	0.3	1.3	50*		7/20/10 01:30:00	N	V
1007040-02	Fluoride, Total	DMS	K1006777-005	Soil	55.00 mg/L	2035.48	2630 mg/Kg	1	0.3	1.3	50*	58*	7/20/10 01:30:00	N	V
1007040-03	Fluoride, Total	LCS		Soil	9.92 mg/L	9.42	9.42 mg/Kg	1	0.2	1.0	86*		7/20/10 01:30:00	N	V
1007040-04	Fluoride, Total	MB		Soil	0.47 mg/L	0.45	0.4 mg/Kg J	1	0.2	1.0			7/20/10 01:30:00	N	V
1007040-05	Fluoride, Total	DUP	K1006777-005	Soil	3.56 mg/L	137.87	178 mg/Kg	1	0.3	1.3		4	7/20/10 01:30:00	N	V
1007195-01	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
1007195-02	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
1007195-03	Fluoride, Total	CCB		Soil	0.07 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
1007195-04	Fluoride, Total	CCB		Soil	0.06 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
1007195-05	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
1007195-06	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
1007195-07	Fluoride, Total	CCV		Soil	4.90 mg/L		4.9 mg/Kg 98%		0.2	1.0			7/20/10 01:30:00	N	V
1007195-08	Fluoride, Total	CCV		Soil	4.80 mg/L		4.8 mg/Kg 96%		0.2	1.0			7/20/10 01:30:00	N	V
1007195-09	Fluoride, Total	CCV		Soil	4.80 mg/L		4.8 mg/Kg 96%		0.2	1.0			7/20/10 01:30:00	N	V
1007195-10	Fluoride, Total	CCV		Soil	4.72 mg/L		4.7 mg/Kg 94%		0.2	1.0			7/20/10 01:30:00	N	V
1007195-11	Fluoride, Total	CCV		Soil	4.80 mg/L		4.8 mg/Kg 96%		0.2	1.0			7/20/10 01:30:00	N	V
1007195-12	Fluoride, Total	CCV		Soil	4.74 mg/L		4.7 mg/Kg 95%		0.2	1.0			7/20/10 01:30:00	N	V

7/23/10

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Not adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

nstrument Name: K-ISE-01 **Analyst:** ACHEATLEY **Analysis Lot:** 209253 **Method/Testcode:** 340.2 Modified/F Dist

b Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	As Received*	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
006777-012	Fluoride, Total	N/A		Soil	3.88 mg/L	144.91	169 mg/Kg	1	0.8	1.2			7/20/10 01:30:00	N	V
006777-013	Fluoride, Total	N/A		Soil	3.98 mg/L	150.31	172 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
006777-014	Fluoride, Total	N/A		Soil	5.64 mg/L	202.07	221 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
006777-015	Fluoride, Total	N/A		Soil	2.92 mg/L	109.54	123 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
006777-016	Fluoride, Total	N/A		Soil	4.16 mg/L	149.07	171 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
006777-017	Fluoride, Total	N/A		Soil	6.00 mg/L	227.16	257 mg/Kg	1	0.8	1.1			7/20/10 01:30:00	N	V
)1007186-01	Fluoride, Total	LCS		Soil	10.50 mg/L	10.13	10.1 mg/Kg	1	0.2	1.0	92		7/20/10 01:30:00	N	V
)1007186-02	Fluoride, Total	MB		Soil	0.09 mg/L	0.09	1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007186-03	Fluoride, Total	DUP	K1006777-012	Soil	4.04 mg/L	148.71	173 mg/Kg	1	0.8	1.2		3	7/20/10 01:30:00	N	V
)1007186-04	Fluoride, Total	MS	K1006777-013	Soil	33.40 mg/L	1250.76	1430 mg/Kg	1	0.8	1.1	56*		7/20/10 01:30:00	N	V
)1007186-05	Fluoride, Total	DMS	K1006777-013	Soil	59.40 mg/L	2265.75	2590 mg/Kg	1	0.8	1.1	54*	58*	7/20/10 01:30:00	N	V
)1007200-01	Fluoride, Total	CCB		Soil	0.04 mg/L		~~1.0 mg/Kg U~~	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007200-02	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007200-03	Fluoride, Total	CCB		Soil	0.07 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007200-04	Fluoride, Total	CCB		Soil	0.06 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007200-05	Fluoride, Total	CCB		Soil	0.04 mg/L		1.0 mg/Kg U	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007200-06	Fluoride, Total	CCB		Soil	0.04 mg/L		~~1.0 mg/Kg U~~	1	0.2	1.0			7/20/10 01:30:00	N	V
)1007200-07	Fluoride, Total	CCV		Soil	4.90 mg/L		~~4.90 mg/Kg~~	1	98%				7/20/10 01:30:00	N	V
)1007200-08	Fluoride, Total	CCV		Soil	4.80 mg/L		4.80 mg/Kg	1	96%				7/20/10 01:30:00	N	V
)1007200-09	Fluoride, Total	CCV		Soil	4.80 mg/L		4.80 mg/Kg	1	96%				7/20/10 01:30:00	N	V
)1007200-10	Fluoride, Total	CCV		Soil	4.72 mg/L		4.72 mg/Kg	1	94%				7/20/10 01:30:00	N	V
)1007200-11	Fluoride, Total	CCV		Soil	4.80 mg/L		4.80 mg/Kg	1	96%				7/20/10 01:30:00	N	V
)1007200-12	Fluoride, Total	CCV		Soil	4.74 mg/L		~~4.74 mg/Kg~~	1	95%				7/20/10 01:30:00	N	V

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07/23/10

Not adjusted for changes in units
ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
0.2 STD	20	20	0.220	1.00	0.220	
CCV1	20	20	4.90	1.00	4.900	98
CCB1	20	20	0.043	1.00	0.043	
MB	20	20	0.106	1.00	0.106	
LCS	20	20	10.7	1.00	10.700	
K1006615-001	20	20	4.00	1.00	4.000	
K1006615-002	20	20	5.92	1.00	5.920	
K1006615-003	20	20	6.60	1.00	6.600	
K1006615-004	20	20	4.12	1.00	4.120	
K1006615-005	20	20	5.18	1.00	5.180	
K1006615-006	20	20	4.56	1.00	4.560	
K1006615-006d	20	20	4.76	1.00	4.760	
K1006615-006ms	20	20	32	1.00	32.000	
CCV2	20	20	4.8	1.00	4.800	96
CCB2	20	20	0.041	1.00	0.041	
K1006615-006ms	20	20	63.8	1.00	63.800	
K1006615-007	20	20	4.22	1.00	4.220	
K1006615-008	20	20	4.40	1.00	4.400	
K1006615-009	20	20	4.38	1.00	4.380	
MB	20	20	0.472	1.00	0.472	
LCS	20	20	9.92	1.00	9.920	
K1006777-001	20	20	3.52	1.00	3.520	
K1006777-002	20	20	3.82	1.00	3.820	
K1006777-003	20	20	7.52	1.00	7.520	
K1006777-004	20	20	3.32	1.00	3.320	

Calibration info. 1STD 1.0 mg/L 2 STD 10.0 mg/L3 STD 100 mg/L

1-100ppm Slope:-59.32,-56.98 EF%100.3,96.3

LCS APG:4423 Lot#291209 ID#F/2-84-L

TV=11.0 %REC= 91, 86, 92

CCV TV=5ppm ID#F/2-53-T

PROBE ID#A

	DATE	TIME
Analyzed By:AC	7/20/2010	1:30:00 AM
Reviewed By:	7/23/10	

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV3	20	20	4.80	1.00	4.800	96
CCB3	20	20	0.068	1.00	0.068 J	
K1006777-005	20	20	3.62	1.00	3.620	
K1006777-005d	20	20	3.56	1.00	3.560	
K1006777-005ms	20	20	29.8	1.00	29.800	
K1006777-05msd	20	20	55.0	1.00	55.000	
K1006777-006	20	20	4.40	1.00	4.400	
K1006777-007	20	20	4.46	1.00	4.460	
K1006777-009	20	20	0.85	1.00	0.850	
K1006777-010	20	20	4.6	1.00	4.600	
K1006777-011	20	20	6.38	1.00	6.380	
MB	20	20	0.091	1.00	0.091	
CCV4	20	20	4.72	1.00	4.720	94
CCB4	20	20	0.057	1.00	0.057 J	
LCS	20	20	10.5	1.00	10.500	
K1006777-012	20	20	3.88	1.00	3.880	
K1006777-012d	20	20	4.04	1.00	4.040	
K1006777-012ms	20	20	33.4	1.00	33.400	
K1006777-012msd	20	20	59.4	1.00	59.400	
K1006777-013	20	20	3.98	1.00	3.980	
K1006777-014	20	20	5.64	1.00	5.640	
K1006777-015	20	20	2.92	1.00	2.920	
K1006777-016	20	20	4.16	1.00	4.160	
K1006777-017	20	20	6	1.00	6.000	

	DATE	TIME
Analyzed By:ac	7/20/2010	1:30:00 AM
Reviewed By:	7/23/10	

Work Order #.: Fluoride

Analysis Method 340.2/SM 4500-F C Prep. Method : CAS SOP

Sample Number	Sample Aliquot, mL	Final Vol. mL	Reading mg/L	Dilution	mg/L Sample Reported	%REC
CCV5	20	20	4.8	1.00	4.800	96
CCB5	20	20	0.036	1.00	0.036	
0.2 std.	20	20	0.218	1.00	0.218	
CCV6	20	20	4.74	1.00	4.740	95
CCB6	20	20	0.0436	1.00	0.044	EOD
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
CCV6	20	20		1.00	0.000	0
CCB6	20	20		1.00	0.000	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
		20		#DIV/0!	#DIV/0!	
CCV7	20	20		1.00	0.000	0
CCB7	20	20		1.00	0.000	

	DATE	TIME
Analyzed By:AC	7/20/2010	1:30:00 AM
Reviewed By:		7/23/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 115393
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist SFluor EPA
Prep Method: 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/14/2010 08:00
Due Date: 07/19/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006615-001	BG-5 0-2 COMP	.01	5.015 g	191 mL			
K1006615-002	BG-5 2-12 COMP	.01	5.009 g	191 mL			
K1006615-003	BG-5 2-18 COMP	.01	5.146 g	180 mL			
K1006615-004	BG-9 0-2 COMP	.01	5.000 g	198 mL			
K1006615-005	BG-9 2-12 COMP	.01	5.023 g	190 mL			
K1006615-006	BG-9 12-18 COMP	.01	5.120 g	181 mL			
K1006615-007	BG-13 0-2 COMP	.01	5.062 g	192 mL			
K1006615-008	BG-13 2-12 COMP	.01	5.042 g	195 mL			
K1006615-009	BG-13 12-18 COMP	.01	5.057 g	179 mL			
KQ1006962-03	Lab Control Sample		200 g	188 mL	200 mL	19431	
KQ1006962-04	Method Blank		200 g	189 mL			
K1006615-006: KQ1006962-10	Duplicate	.01	5.008 g	189 mL			
K1006615-006: KQ1006962-11	Matrix Spike	.01	5.014 g	183 mL	10 mL	19258	
K1006615-006: KQ1006962-12	Duplicate Matrix Spike	.01	5.095 g	194 mL	20 mL	19258	

14 Total Samples consisting of 9 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2.2.6 F/2.21.1

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	14-JUL-10 08:00	14-JUL-10 14:15	ac		N	

Comments

Review

Reviewed by: JL Date: 7/23/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115538
Team: GenChem
Analyst: AC

Prep Workflow: Gen Dist SFluor
Prep Method: EPA 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/16/2010 07:40
Due Date: 07/18/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006777-001	BG-1 0-2 COMP	.01	5.037 g	194 mL			
K1006777-002	BG-1 2-12 COMP	.01	5.068 g	189 mL			
K1006777-003	BG-1 12-18 COMP	.01	5.042 g	195 mL			
K1006777-004	BG-2 0-2 COMP	.01	5.152 g	189 mL			
K1006777-005	BG-2 2-12 COMP	.01	5.034 g	199 mL			
K1006777-006	BG-2 12-18 COMP	.01	5.003 g	191 mL			
K1006777-007	BG-100 0-2 COMP	.01	5.065 g	187 mL			
K1006777-009	BG-3 0-2 COMP	.01	5.056 g	183 mL			
K1006777-010	BG-3 2-12 COMP	.01	5.015 g	184 mL			
K1006777-011	BG-3 12-18 COMP	.01	5.121 g	196 mL			
K1006777-005: KQ1007040-01	Matrix Spike	.01	5.056 g	191 mL	10 mL	19258	
K1006777-005: KQ1007040-02	Duplicate Matrix Spike	.01	5.242 g	194 mL	20 mL	19258	
KQ1007040-03	Lab Control Sample		200 g	190 mL	200 mL	19431	
KQ1007040-04	Method Blank		200 g	190 mL			
K1006777-005: KQ1007040-05	Duplicate	.01	5.035 g	195 mL			

15 Total Samples consisting of 10 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F12-2-B F12-34-L

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	16-JUL-10 07:40	16-JUL-10 12:45	AC		N	

Comments

Review

Reviewed by: _____ Date: 7/23/10

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 115792
Team: GenChem
Analyst: ac

Prep Workflow: Gen Dist SFluor
Prep Method: EPA 340.1 Modified
Rush/NPDES: N/A

Status: Prepped
Current Step: Distillation

Prep Date: 07/20/2010 08:20
Due Date: 07/18/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
K1006777-012	BG-4 0-2 COMP	.01	5.007 g	187 mL			
K1006777-013	BG-4 2-12 COMP	.01	5.137 g	194 mL			
K1006777-014	BG-4 12-18 COMP	.01	5.359 g	192 mL			
K1006777-015	BG-6 0-2 COMP	.01	5.118 g	192 mL			
K1006777-016	BG-6 2-12 COMP	.01	5.079 g	182 mL			
K1006777-017	BG-6 12-18 COMP	.01	5.045 g	191 mL			
KQ1007186-01	Lab Control Sample		200 g	193 mL	200 mL	19431	
KQ1007186-02	Method Blank		200 g	189 mL			
K1006777-012: KQ1007186-03	Duplicate	.01	5.216 g	192 mL			
K1006777-013: KQ1007186-04	Matrix Spike	.01	5.047 g	189 mL	10 mL	19258	
K1006777-013: KQ1007186-05	Duplicate Matrix Spike	.01	5.086 g	194 mL	20 mL	19258	

11 Total Samples consisting of 6 Client Samples, 3 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
Fluoride 1000 ppm F	Spike	19258	1/8/2011	Fluoride 11ppm LCS	Spike	19431	1/14/2011

F/2-3-B F/2-84-L

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Distillation	20-JUL-10 08:20	20-JUL-10 14:20	ac		N	

Comments

Review

Reviewed by: [signature] Date: 7/23/10

Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow Plant Background
Project No.: 26-46-0006.13-2010-400

Service Request: K1006777

Sample Name:	Lab Code:
BG-1 0-2 COMP	K1006777-001
BG-1 2-12 COMP	K1006777-002
BG-1 12-18 COMP	K1006777-003
BG-2 0-2 COMP	K1006777-004
BG-2 2-12 COMP	K1006777-005
BG-2 2-12 COMPD	K1006777-005D
BG-2 2-12 COMPS	K1006777-005S
BG-2 12-18 COMP	K1006777-006
BG-100 0-2 COMP	K1006777-007
BG-3 0-2 COMP	K1006777-009
BG-3 2-12 COMP	K1006777-010
BG-3 12-18 COMP	K1006777-011
BG-4 0-2 COMP	K1006777-012
BG-4 2-12 COMP	K1006777-013
BG-4 12-18 COMP	K1006777-014
BG-6 0-2 COMP	K1006777-015
BG-6 2-12 COMP	K1006777-016
BG-6 12-18 COMP	K1006777-017
Method Blank	K1006777-MB

Comments:

Approved By: _____ **Date:** 7/30/10

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-1 0-2 COMP **Lab Code:** K1006777-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.055	0.010	5.0	07/15/10	07/29/10	0.667		
Arsenic	6020	0.55	0.06	5.0	07/15/10	07/27/10	35.5		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	133		
Beryllium	6010B	1.10	0.01	2.0	07/15/10	07/16/10	0.38	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.5	J	
Calcium	6010B	11.0	2.2	2.0	07/15/10	07/16/10	2520		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	11.5		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	5.2		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	47.6		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	24500		
Lead	6010B	21.9	3.3	2.0	07/15/10	07/16/10	31.6		
Magnesium	6010B	4.39	0.04	2.0	07/15/10	07/16/10	2020		
Manganese	6010B	2.19	0.04	2.0	07/15/10	07/16/10	457		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.023		
Nickel	6010B	4.4	0.5	2.0	07/15/10	07/16/10	3.7	J	
Potassium	6010B	219	5.5	2.0	07/15/10	07/16/10	2160		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.9	4.4	2.0	07/15/10	07/16/10	43.6		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.220		*
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	2.140		*
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	54.6		*
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	60.7		

% Solids: 90.3

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-1 2-12 COMP **Lab Code:** K1006777-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.055	0.010	5.0	07/15/10	07/29/10	0.203		
Arsenic	6020	0.54	0.05	5.0	07/15/10	07/27/10	12.0		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	113		
Beryllium	6010B	1.10	0.01	2.0	07/15/10	07/16/10	0.45	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.0	2.2	2.0	07/15/10	07/16/10	2810		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	10.4		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	6.0		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	13.8		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	22300		
Lead	6010B	22.1	3.3	2.0	07/15/10	07/16/10	8.5	J	
Magnesium	6010B	4.42	0.04	2.0	07/15/10	07/16/10	2650		
Manganese	6010B	2.21	0.04	2.0	07/15/10	07/16/10	426		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.011	J	
Nickel	6010B	4.4	0.6	2.0	07/15/10	07/16/10	3.9	J	
Potassium	6010B	221	5.5	2.0	07/15/10	07/16/10	2430		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.1	4.4	2.0	07/15/10	07/16/10	53.9		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.249		*
Uranium	6020	0.022	0.006	5.0	07/15/10	07/27/10	1.890		*
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	49.9		*
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	28.6		

% Solids: 90.6

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-1 12-18 COMP **Lab Code:** K1006777-003

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.011	5.0	07/15/10	07/29/10	0.114		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	4.06		
Barium	6010B	2.3	0.4	2.0	07/15/10	07/16/10	246		
Beryllium	6010B	1.17	0.01	2.0	07/15/10	07/16/10	0.74	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.7	2.3	2.0	07/15/10	07/16/10	6030		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	9.7		
Cobalt	6010B	2.3	0.4	2.0	07/15/10	07/16/10	6.1		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	11.7		
Iron	6010B	4.7	0.4	2.0	07/15/10	07/16/10	24100		
Lead	6010B	23.4	3.5	2.0	07/15/10	07/16/10	10.1	J	
Magnesium	6010B	4.67	0.05	2.0	07/15/10	07/16/10	5740		
Manganese	6010B	2.34	0.05	2.0	07/15/10	07/16/10	481		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.016	J	
Nickel	6010B	4.7	0.6	2.0	07/15/10	07/16/10	5.6		
Potassium	6010B	234	5.8	2.0	07/15/10	07/16/10	4050		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.6	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.4	4.7	2.0	07/15/10	07/16/10	180		
Thallium	6020	0.023	0.004	5.0	07/15/10	07/27/10	0.303		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	2.720		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	46.5		*
Zinc	6010B	2.3	0.4	2.0	07/15/10	07/16/10	34.2		

% Solids: 85.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/30/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-2 0-2 COMP **Lab Code:** K1006777-004

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.061	0.011	5.0	07/15/10	07/29/10	0.597		
Arsenic	6020	0.61	0.06	5.0	07/15/10	07/27/10	40.5		
Barium	6010B	2.5	0.4	2.0	07/15/10	07/16/10	146		
Beryllium	6010B	1.23	0.01	2.0	07/15/10	07/16/10	0.58	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.5	J	
Calcium	6010B	12.3	2.5	2.0	07/15/10	07/16/10	3100		
Chromium	6010B	2.5	0.5	2.0	07/15/10	07/16/10	7.8		
Cobalt	6010B	2.5	0.4	2.0	07/15/10	07/16/10	5.5		
Copper	6010B	2.5	0.7	2.0	07/15/10	07/16/10	37.8		
Iron	6010B	4.9	0.4	2.0	07/15/10	07/16/10	17200		
Lead	6010B	24.6	3.7	2.0	07/15/10	07/16/10	16.7	J	
Magnesium	6010B	4.91	0.05	2.0	07/15/10	07/16/10	3050		
Manganese	6010B	2.46	0.05	2.0	07/15/10	07/16/10	558		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.025		
Nickel	6010B	4.9	0.6	2.0	07/15/10	07/16/10	4.5	J	
Potassium	6010B	246	6.1	2.0	07/15/10	07/16/10	3030		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.5	J	
Silver	6010B	2.5	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	24.6	4.9	2.0	07/15/10	07/16/10	102		
Thallium	6020	0.025	0.004	5.0	07/15/10	07/27/10	0.291		*
Uranium	6020	0.025	0.007	5.0	07/15/10	07/27/10	2.010		*
Vanadium	6010B	2.5	0.5	2.0	07/15/10	07/16/10	32.3		*
Zinc	6010B	2.5	0.4	2.0	07/15/10	07/16/10	63.0		

% Solids: 80.6

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/30/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-2 2-12 COMP **Lab Code:** K1006777-005

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.053	0.010	5.0	07/15/10	07/28/10	0.156		
Arsenic	6020	0.53	0.05	5.0	07/15/10	07/27/10	5.29		
Barium	6010B	2.1	0.3	2.0	07/15/10	07/16/10	197		
Beryllium	6010B	1.07	0.01	2.0	07/15/10	07/16/10	1.33		
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	10.7	2.1	2.0	07/15/10	07/16/10	6790		
Chromium	6010B	2.1	0.4	2.0	07/15/10	07/16/10	4.8		
Cobalt	6010B	2.1	0.3	2.0	07/15/10	07/16/10	4.4		
Copper	6010B	2.1	0.6	2.0	07/15/10	07/16/10	14.2		
Iron	6010B	4.3	0.3	2.0	07/15/10	07/16/10	15000		
Lead	6010B	21.3	3.2	2.0	07/15/10	07/16/10	9.8	J	
Magnesium	6010B	4.27	0.04	2.0	07/15/10	07/16/10	4170		
Manganese	6010B	2.13	0.04	2.0	07/15/10	07/16/10	780		*
Mercury	7471A	0.019	0.002	1.0	07/19/10	07/20/10	0.015	J	
Nickel	6010B	4.3	0.5	2.0	07/15/10	07/16/10	3.2	J	
Potassium	6010B	213	5.3	2.0	07/15/10	07/16/10	2340		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.7	J	
Silver	6010B	2.1	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.3	4.3	2.0	07/15/10	07/16/10	305		
Thallium	6020	0.021	0.003	5.0	07/15/10	07/27/10	0.388		*
Uranium	6020	0.021	0.006	5.0	07/15/10	07/27/10	1.160		*
Vanadium	6010B	2.1	0.4	2.0	07/15/10	07/16/10	20.3		*
Zinc	6010B	2.1	0.3	2.0	07/15/10	07/16/10	37.6		

% Solids: 77.5

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/30/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-2 12-18 COMP **Lab Code:** K1006777-006

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/15/10	07/29/10	0.132		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	3.45		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	220		
Beryllium	6010B	1.16	0.01	2.0	07/15/10	07/16/10	0.71	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.6	2.3	2.0	07/15/10	07/16/10	6070		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	7.2		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.6		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	12.6		
Iron	6010B	4.6	0.3	2.0	07/15/10	07/16/10	19400		
Lead	6010B	23.1	3.5	2.0	07/15/10	07/16/10	6.5	J	
Magnesium	6010B	4.63	0.05	2.0	07/15/10	07/16/10	5090		
Manganese	6010B	2.31	0.05	2.0	07/15/10	07/16/10	376		*
Mercury	7471A	0.019	0.002	1.0	07/19/10	07/20/10	0.014	J	
Nickel	6010B	4.6	0.6	2.0	07/15/10	07/16/10	5.1		
Potassium	6010B	231	5.8	2.0	07/15/10	07/16/10	3700		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.5	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.1	4.6	2.0	07/15/10	07/16/10	292		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.320		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	0.986		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	37.1		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	34.7		

% Solids: 86.4

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-100 0-2 COMP **Lab Code:** K1006777-007

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.054	0.010	5.0	07/15/10	07/29/10	0.551		
Arsenic	6020	0.55	0.06	5.0	07/15/10	07/27/10	40.6		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	101		
Beryllium	6010B	1.09	0.01	2.0	07/15/10	07/16/10	0.32	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.3	J	
Calcium	6010B	10.9	2.2	2.0	07/15/10	07/16/10	1970		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	7.9		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	4.2		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	36.4		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	17900		
Lead	6010B	21.7	3.3	2.0	07/15/10	07/16/10	24.6		
Magnesium	6010B	4.35	0.04	2.0	07/15/10	07/16/10	1550		
Manganese	6010B	2.17	0.04	2.0	07/15/10	07/16/10	369		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.020		
Nickel	6010B	4.4	0.5	2.0	07/15/10	07/16/10	2.6	J	
Potassium	6010B	217	5.4	2.0	07/15/10	07/16/10	1790		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.7	4.4	2.0	07/15/10	07/16/10	33.1		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.232		*
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	2.020		*
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	38.9		*
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	48.7		

% Solids: 91.1

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-3 0-2 COMP **Lab Code:** K1006777-009

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.054	0.010	5.0	07/15/10	07/29/10	0.230		
Arsenic	6020	0.55	0.06	5.0	07/15/10	07/27/10	15.6		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	102		
Beryllium	6010B	1.08	0.01	2.0	07/15/10	07/16/10	0.38	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.3	J	
Calcium	6010B	10.8	2.2	2.0	07/15/10	07/16/10	2560		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	6.9		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	4.0		
Copper	6010B	2.2	0.6	2.0	07/15/10	07/16/10	15.1		
Iron	6010B	4.3	0.3	2.0	07/15/10	07/16/10	15300		
Lead	6010B	21.5	3.2	2.0	07/15/10	07/16/10	5.1	J	
Magnesium	6010B	4.31	0.04	2.0	07/15/10	07/16/10	2500		
Manganese	6010B	2.15	0.04	2.0	07/15/10	07/16/10	336		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.013	J	
Nickel	6010B	4.3	0.5	2.0	07/15/10	07/16/10	2.5	J	
Potassium	6010B	215	5.4	2.0	07/15/10	07/16/10	2430		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.5	4.3	2.0	07/15/10	07/16/10	71.7		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.279		*
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	1.260		*
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	28.1		*
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	39.9		

% Solids: 91.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-3 2-12 COMP **Lab Code:** K1006777-010

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/29/10	0.129		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	5.86		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	141		
Beryllium	6010B	1.13	0.01	2.0	07/15/10	07/16/10	0.55	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/15/10	07/16/10	4480		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	8.2		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.6		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	10.8		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	19700		
Lead	6010B	22.5	3.4	2.0	07/15/10	07/16/10	5.9	J	
Magnesium	6010B	4.51	0.05	2.0	07/15/10	07/16/10	4510		
Manganese	6010B	2.25	0.05	2.0	07/15/10	07/16/10	485		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.009	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	4.8		
Potassium	6010B	225	5.6	2.0	07/15/10	07/16/10	3930		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.5	4.5	2.0	07/15/10	07/16/10	138		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.261		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.170		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	34.9		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	36.2		

% Solids: 87.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-3 12-18 COMP **Lab Code:** K1006777-011

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.057	0.010	5.0	07/15/10	07/29/10	0.096		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	1.83		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	194		
Beryllium	6010B	1.14	0.01	2.0	07/15/10	07/16/10	0.57	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.4	2.3	2.0	07/15/10	07/16/10	5600		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	6.5		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	7.1		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	9.7		
Iron	6010B	4.6	0.3	2.0	07/15/10	07/16/10	18400		
Lead	6010B	22.8	3.4	2.0	07/15/10	07/16/10	5.6	J	
Magnesium	6010B	4.55	0.05	2.0	07/15/10	07/16/10	5290		
Manganese	6010B	2.28	0.05	2.0	07/15/10	07/16/10	449		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.010	J	
Nickel	6010B	4.6	0.6	2.0	07/15/10	07/16/10	4.4	J	
Potassium	6010B	228	5.7	2.0	07/15/10	07/16/10	4440		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.8	4.6	2.0	07/15/10	07/16/10	296		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.363		*
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	1.500		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	32.3		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	34.6		

% Solids: 87.9

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/28/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-4 0-2 COMP **Lab Code:** K1006777-012

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.058	0.010	5.0	07/15/10	07/29/10	0.675		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	42.4		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	124		
Beryllium	6010B	1.15	0.01	2.0	07/15/10	07/16/10	0.32	J	
Cadmium	6010B	1.2	0.2	2.0	07/15/10	07/16/10	0.5	J	
Calcium	6010B	11.5	2.3	2.0	07/15/10	07/16/10	2410		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	7.6		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	4.0		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	42.6		
Iron	6010B	4.6	0.3	2.0	07/15/10	07/16/10	16400		
Lead	6010B	23.1	3.5	2.0	07/15/10	07/16/10	14.4	J	
Magnesium	6010B	4.61	0.05	2.0	07/15/10	07/16/10	2320		
Manganese	6010B	2.31	0.05	2.0	07/15/10	07/16/10	421		*
Mercury	7471A	0.019	0.002	1.0	07/19/10	07/20/10	0.028		
Nickel	6010B	4.6	0.6	2.0	07/15/10	07/16/10	3.0	J	
Potassium	6010B	231	5.8	2.0	07/15/10	07/16/10	2600		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	23.1	4.6	2.0	07/15/10	07/16/10	29.0		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.243		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	3.070		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	35.1		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	53.3		

% Solids: 85.9

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	Service Request:	K1006777
Project No.:	26-46-0006.13-2010-400	Date Collected:	06/28/10
Project Name:	Rhodia Silver Bow Plant Backgrou	Date Received:	07/01/10
Matrix:	SOIL	Units:	mg/Kg
		Basis:	DRY

Sample Name: BG-4 2-12 COMP Lab Code: K1006777-013

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.057	0.010	5.0	07/15/10	07/29/10	0.264		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	15.9		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	152		
Beryllium	6010B	1.13	0.01	2.0	07/15/10	07/16/10	0.42	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/15/10	07/16/10	2970		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	8.7		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.2		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	16.8		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	18400		
Lead	6010B	22.6	3.4	2.0	07/15/10	07/16/10	6.8	J	
Magnesium	6010B	4.52	0.05	2.0	07/15/10	07/16/10	3040		
Manganese	6010B	2.26	0.05	2.0	07/15/10	07/16/10	462		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.016	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	3.8	J	
Potassium	6010B	226	5.7	2.0	07/15/10	07/16/10	3190		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.6	4.5	2.0	07/15/10	07/16/10	40.3		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.266		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	2.570		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	37.8		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	36.5		

% Solids: 87.6

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/28/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-4 12-18 COMP **Lab Code:** K1006777-014

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.054	0.010	5.0	07/15/10	07/29/10	0.072		
Arsenic	6020	0.55	0.06	5.0	07/15/10	07/27/10	3.24		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	140		
Beryllium	6010B	1.07	0.01	2.0	07/15/10	07/16/10	0.35	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	10.7	2.2	2.0	07/15/10	07/16/10	2920		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	7.6		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	5.8		
Copper	6010B	2.2	0.6	2.0	07/15/10	07/16/10	7.1		
Iron	6010B	4.3	0.3	2.0	07/15/10	07/16/10	19200		
Lead	6010B	21.5	3.2	2.0	07/15/10	07/16/10	4.1	J	
Magnesium	6010B	4.30	0.04	2.0	07/15/10	07/16/10	3980		
Manganese	6010B	2.15	0.04	2.0	07/15/10	07/16/10	443		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.011	J	
Nickel	6010B	4.3	0.5	2.0	07/15/10	07/16/10	4.1	J	
Potassium	6010B	215	5.4	2.0	07/15/10	07/16/10	3640		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.2	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	21.5	4.3	2.0	07/15/10	07/16/10	49.4		
Thallium	6020	0.022	0.003	5.0	07/15/10	07/27/10	0.362		*
Uranium	6020	0.022	0.007	5.0	07/15/10	07/27/10	1.810		*
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	37.8		*
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	32.1		

% Solids: 91.3

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/28/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-6 0-2 COMP **Lab Code:** K1006777-015

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/29/10	0.284		
Arsenic	6020	0.56	0.06	5.0	07/15/10	07/27/10	17.5		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	122		
Beryllium	6010B	1.13	0.01	2.0	07/15/10	07/16/10	0.37	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.3	2.3	2.0	07/15/10	07/16/10	2050		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	9.0		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	4.4		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	19.7		
Iron	6010B	4.5	0.3	2.0	07/15/10	07/16/10	19000		
Lead	6010B	22.5	3.4	2.0	07/15/10	07/16/10	8.9	J	
Magnesium	6010B	4.50	0.05	2.0	07/15/10	07/16/10	1720		
Manganese	6010B	2.25	0.05	2.0	07/15/10	07/16/10	497		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.017	J	
Nickel	6010B	4.5	0.6	2.0	07/15/10	07/16/10	3.4	J	
Potassium	6010B	225	5.6	2.0	07/15/10	07/16/10	2040		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.5	4.5	2.0	07/15/10	07/16/10	48.4		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.220		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.060		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	38.9		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	38.3		

% Solids: 88.8

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/28/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-6 2-12 COMP **Lab Code:** K1006777-016

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.057	0.010	5.0	07/15/10	07/29/10	0.124		
Arsenic	6020	0.58	0.06	5.0	07/15/10	07/27/10	5.39		
Barium	6010B	2.3	0.3	2.0	07/15/10	07/16/10	131		
Beryllium	6010B	1.14	0.01	2.0	07/15/10	07/16/10	0.60	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.4	2.3	2.0	07/15/10	07/16/10	3320		
Chromium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	9.3		
Cobalt	6010B	2.3	0.3	2.0	07/15/10	07/16/10	5.7		
Copper	6010B	2.3	0.7	2.0	07/15/10	07/16/10	13.1		
Iron	6010B	4.6	0.3	2.0	07/15/10	07/16/10	20200		
Lead	6010B	22.8	3.4	2.0	07/15/10	07/16/10	8.1	J	
Magnesium	6010B	4.55	0.05	2.0	07/15/10	07/16/10	3250		
Manganese	6010B	2.28	0.05	2.0	07/15/10	07/16/10	456		*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.011	J	
Nickel	6010B	4.6	0.6	2.0	07/15/10	07/16/10	4.8		
Potassium	6010B	228	5.7	2.0	07/15/10	07/16/10	3310		
Selenium	6020	1.2	0.2	5.0	07/15/10	07/27/10	0.3	J	
Silver	6010B	2.3	0.5	2.0	07/15/10	07/16/10	0.5	U	
Sodium	6010B	22.8	4.6	2.0	07/15/10	07/16/10	156		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.220		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.130		*
Vanadium	6010B	2.3	0.5	2.0	07/15/10	07/16/10	40.4		*
Zinc	6010B	2.3	0.3	2.0	07/15/10	07/16/10	32.1		

% Solids: 87.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	06/28/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: BG-6 12-18 COMP **Lab Code:** K1006777-017

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.056	0.010	5.0	07/15/10	07/29/10	0.093		
Arsenic	6020	0.57	0.06	5.0	07/15/10	07/27/10	2.17		
Barium	6010B	2.2	0.3	2.0	07/15/10	07/16/10	172		
Beryllium	6010B	1.11	0.01	2.0	07/15/10	07/16/10	0.48	J	
Cadmium	6010B	1.1	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	11.1	2.2	2.0	07/15/10	07/16/10	11500		
Chromium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	7.6		
Cobalt	6010B	2.2	0.3	2.0	07/15/10	07/16/10	5.7		
Copper	6010B	2.2	0.7	2.0	07/15/10	07/16/10	9.0		
Iron	6010B	4.4	0.3	2.0	07/15/10	07/16/10	16700		
Lead	6010B	22.2	3.3	2.0	07/15/10	07/16/10	4.7	J	
Magnesium	6010B	4.44	0.04	2.0	07/15/10	07/16/10	3470		
Manganese	6010B	2.22	0.04	2.0	07/15/10	07/16/10	359		*
Mercury	7471A	0.019	0.002	1.0	07/19/10	07/20/10	0.019	J	
Nickel	6010B	4.4	0.6	2.0	07/15/10	07/16/10	4.7		
Potassium	6010B	222	5.6	2.0	07/15/10	07/16/10	2990		
Selenium	6020	1.1	0.2	5.0	07/15/10	07/27/10	0.4	J	
Silver	6010B	2.2	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	22.2	4.4	2.0	07/15/10	07/16/10	257		
Thallium	6020	0.023	0.003	5.0	07/15/10	07/27/10	0.230		*
Uranium	6020	0.023	0.007	5.0	07/15/10	07/27/10	1.330		*
Vanadium	6010B	2.2	0.4	2.0	07/15/10	07/16/10	34.6		*
Zinc	6010B	2.2	0.3	2.0	07/15/10	07/16/10	25.6		

% Solids: 88.3

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Date Collected:**	
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	
Matrix:	SOIL	**Units:**	mg/Kg
		Basis:	DRY

Sample Name: Method Blank **Lab Code:** K1006777-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.050	0.009	5.0	07/15/10	07/28/10	0.009	U	
Arsenic	6020	0.50	0.05	5.0	07/15/10	07/27/10	0.05	U	
Barium	6010B	2.0	0.3	2.0	07/15/10	07/16/10	0.3	U	
Beryllium	6010B	1.00	0.01	2.0	07/15/10	07/16/10	0.01	U	
Cadmium	6010B	1.0	0.2	2.0	07/15/10	07/16/10	0.2	U	
Calcium	6010B	10.0	2.0	2.0	07/15/10	07/16/10	2.0	U	
Chromium	6010B	2.0	0.4	2.0	07/15/10	07/16/10	0.4	U	
Cobalt	6010B	2.0	0.3	2.0	07/15/10	07/16/10	0.3	U	
Copper	6010B	2.0	0.6	2.0	07/15/10	07/16/10	0.6	U	
Iron	6010B	4.0	0.3	2.0	07/15/10	07/16/10	1.2	J	
Lead	6010B	20.0	3.0	2.0	07/15/10	07/16/10	3.0	U	
Magnesium	6010B	4.00	0.04	2.0	07/15/10	07/16/10	0.05	J	
Manganese	6010B	2.00	0.04	2.0	07/15/10	07/16/10	0.04	U	*
Mercury	7471A	0.020	0.002	1.0	07/19/10	07/20/10	0.002	U	
Nickel	6010B	4.0	0.5	2.0	07/15/10	07/16/10	0.5	U	
Potassium	6010B	200	5.0	2.0	07/15/10	07/16/10	5.2	J	
Selenium	6020	1.0	0.2	5.0	07/15/10	07/27/10	0.2	U	
Silver	6010B	2.0	0.4	2.0	07/15/10	07/16/10	0.4	U	
Sodium	6010B	20.0	4.0	2.0	07/15/10	07/16/10	4.0	U	
Thallium	6020	0.020	0.003	5.0	07/15/10	07/27/10	0.003	U	*
Uranium	6020	0.020	0.006	5.0	07/15/10	07/27/10	0.006	U	*
Vanadium	6010B	2.0	0.4	2.0	07/15/10	07/16/10	0.4	U	*
Zinc	6010B	2.0	0.3	2.0	07/15/10	07/16/10	0.3	J	

% Solids: 100.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	24.5	98	25.0	25.3	101	25.4	102	6020
Arsenic	25.0	24.2	97	25.0	25.1	100	24.4	98	6020
Barium	5000	5160	103	2500	2487	99	2455	98	6010B
Beryllium	125	126	101	50	51	102	51	102	6010B
Cadmium	1250	1238	99	500	487	97	488	98	6010B
Calcium	5000	5173	103	2500	2490	100	2490	100	6010B
Calcium	12500	12607	101	25000	25202	101	25215	101	6010B
Chromium	500	506	101	500	488	98	489	98	6010B
Cobalt	1250	1241	99	500	489	98	490	98	6010B
Copper	625	624	100	500	495	99	496	99	6010B
Iron	2500	2533	101	500	489	98	506	101	6010B
Iron	10000	9902	99	25000	25446	102	24951	100	6010B
Lead	2500	2470	99	2500	2430	97	2429	97	6010B
Magnesium	5000	4942	99	2000	2051	103	2063	103	6010B
Magnesium	12500	12648	101	25000	25115	100	25464	102	6010B
Manganese	1250	1192	95	1000	950	95	950	95	6010B
Manganese	10000	9984	100	5000	5077	102	4997	100	6010B
Mercury	5.00	5.39	108	5.00	4.93	99	5.02	100	7471A
Nickel	1250	1237	99	500	490	98	490	98	6010B
Potassium	12500	12911	103	10000	10097	101	10057	101	6010B
Selenium	25.0	24.3	97	25.0	25.4	102	24.8	99	6020
Silver	625	629	101	500	495	99	495	99	6010B
Sodium	12500	12535	100	10000	10042	100	9824	98	6010B
Thallium	25.0	25.8	103	25.0	25.1	100	25.6	102	6020
Uranium	25.0	24.2	97	25.0	25.1	100	25.2	101	6020
Vanadium	1250	1247	100	500	492	98	497	99	6010B
Zinc	1250	1244	100	500	488	98	491	98	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.2	101	6020
Arsenic				25.0	24.4	98	24.5	98	6020
Barium				2500	2463	99	2503	100	6010B
Beryllium				50	51	102	50	100	6010B
Cadmium				500	494	99	497	99	6010B
Calcium				2500	2488	100	2453	98	6010B
Calcium				25000	25829	103	26704	107	6010B
Chromium				500	494	99	494	99	6010B
Cobalt				500	494	99	490	98	6010B
Copper				500	502	100	516	103	6010B
Iron				500	517	103	507	101	6010B
Iron				25000	25186	101	25754	103	6010B
Lead				2500	2404	96	2382	95	6010B
Magnesium				2000	2078	104	2071	104	6010B
Magnesium				25000	25454	102	25478	102	6010B
Manganese				1000	954	95	953	95	6010B
Manganese				5000	5005	100	4957	99	6010B
Mercury				5.00	5.00	100	5.02	100	7471A
Nickel				500	493	99	490	98	6010B
Potassium				10000	10060	101	9904	99	6010B
Selenium				25.0	24.6	98	25.2	101	6020
Silver				500	502	100	502	100	6010B
Sodium				10000	9873	99	9809	98	6010B
Thallium				25.0	25.6	102	25.7	103	6020
Uranium				25.0	25.2	101	25.5	102	6020
Vanadium				500	495	99	481	96	6010B
Zinc				500	489	98	493	99	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.4	102	25.1	100	6020
Arsenic				25.0	24.5	98	24.4	98	6020
Barium				2500	2498	100	2481	99	6010B
Beryllium				50	50	100	50	100	6010B
Cadmium				500	495	99	502	100	6010B
Calcium				2500	2444	98	2451	98	6010B
Calcium				25000	26604	106	26730	107	6010B
Chromium				500	491	98	501	100	6010B
Cobalt				500	488	98	497	99	6010B
Copper				500	516	103	522	104	6010B
Iron				500	513	103	528	106	6010B
Iron				25000	25742	103	25842	103	6010B
Lead				2500	2377	95	2416	97	6010B
Magnesium				2000	2071	104	2066	103	6010B
Magnesium				25000	25326	101	25381	102	6010B
Manganese				1000	953	95	976	98	6010B
Manganese				5000	4979	100	4956	99	6010B
Nickel				500	485	97	496	99	6010B
Potassium				10000	9900	99	9867	99	6010B
Selenium				25.0	25.1	100	25.2	101	6020
Silver				500	495	99	493	99	6010B
Sodium				10000	9761	98	9755	98	6010B
Thallium				25.0	26.5	106	26.4	106	6020
Uranium				25.0	25.4	102	25.5	102	6020
Vanadium				500	479	96	491	98	6010B
Zinc				500	487	97	497	99	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.6	102	25.5	102	6020
Arsenic				25.0	24.4	98	24.1	96	6020
Barium				2500	2507	100	2451	98	6010B
Beryllium				50	50	100	49	98	6010B
Cadmium				500	491	98	489	98	6010B
Calcium				2500	2464	99	2423	97	6010B
Calcium				25000	26913	108	27298	109	6010B
Chromium				500	488	98	488	98	6010B
Cobalt				500	486	97	480	96	6010B
Copper				500	515	103	525	105	6010B
Iron				500	521	104	519	104	6010B
Iron				25000	26157	105	25805	103	6010B
Lead				2500	2355	94	2312	92	6010B
Magnesium				2000	2071	104	2056	103	6010B
Magnesium				25000	25269	101	25330	101	6010B
Manganese				1000	952	95	944	94	6010B
Manganese				5000	4982	100	4846	97	6010B
Nickel				500	485	97	480	96	6010B
Potassium				10000	9854	99	9839	98	6010B
Selenium				25.0	25.3	101	25.0	100	6020
Silver				500	494	99	498	100	6010B
Sodium				10000	9835	98	9644	96	6010B
Thallium				25.0	26.2	105	26.5	106	6020
Uranium				25.0	25.3	101	25.5	102	6020
Vanadium				500	478	96	476	95	6010B
Zinc				500	485	97	480	96	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.5	102	25.1	100	6020
Arsenic				25.0	24.0	96			6020
Barium				2500	2452	98			6010B
Beryllium				50	48	96			6010B
Cadmium				500	493	99			6010B
Calcium				2500	2411	96			6010B
Calcium				25000	27156	109			6010B
Chromium				500	487	97			6010B
Cobalt				500	481	96			6010B
Copper				500	522	104			6010B
Iron				500	520	104			6010B
Iron				25000	25629	103			6010B
Lead				2500	2322	93			6010B
Magnesium				2000	1941	97			6010B
Magnesium				25000	25357	101			6010B
Manganese				1000	955	96			6010B
Manganese				5000	4810	96			6010B
Nickel				500	480	96			6010B
Potassium				10000	9859	99			6010B
Selenium				25.0	24.9	100			6020
Silver				500	488	98			6010B
Sodium				10000	9638	96			6010B
Thallium				25.0	26.4	106			6020
Uranium				25.0	25.0	100			6020
Vanadium				500	467	93			6010B
Zinc				500	486	97			6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.5	102	25.8	103	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Antimony				25.0	25.7	103	25.8	103	6020

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.10	0.09	90		
Arsenic				1.00	1.06	106		
Barium				5.0	5.0	100		
Beryllium				5.0	4.8	96		
Cadmium				5.0	4.5	90		
Calcium				50.0	51.7	103		
Chromium				5.0	5.7	114		
Cobalt				10.0	8.6	86		
Copper				10.0	10.6	106		
Iron				20.0	24.4	122		
Lead				50.0	43.2	86		
Magnesium				20.0	19.3	96		
Manganese				5.0	4.8	96		
Mercury	0.20	0.17	85					
Nickel				20.0	19.6	98		
Potassium				400.0	418.0	104		
Selenium				2.0	2.11	106		
Silver				10.0	7.5	75		
Sodium				200.0	217.0	108		
Thallium				0.04	0.042	105		
Uranium				0.04	0.04	100		
Vanadium				10.0	10.6	106		
Zinc				10.0	10.9	109		

Metals

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BLANKS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.018	U	0.018	U	-0.036	J	-0.036	J	6020
Arsenic	0.1	U	0.1	U	0.1	U	0.1	U	6020
Barium	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Beryllium	0.06	J	0.07	J	0.07	J	0.06	J	6010B
Cadmium	1.0	U	1.0	U	1.0	U	1.0	U	6010B
Calcium	10.0	U	10.0	U	10.0	U	10.0	U	6010B
Chromium	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Cobalt	1.5	U	1.5	U	1.5	U	1.5	U	6010B
Copper	3.0	U	3.0	U	3.0	U	3.0	U	6010B
Iron	3.6	J	1.5	U	2.8	J	4.0	J	6010B
Lead	15	U	15	U	15	U	15	U	6010B
Magnesium	0.2	U	0.2	U	0.4	J	1.4	J	6010B
Manganese	0.8	J	0.5	J	0.8	J	1.0	J	6010B
Mercury	-0.020	J	-0.030	J	-0.030	J	-0.020	J	7471A
Nickel	2.5	U	2.5	U	2.5	U	2.5	U	6010B
Potassium	25.0	U	25.0	U	25.0	U	25.0	U	6010B
Selenium	0.4	U	0.4	U	0.4	U	0.4	U	6020
Silver	2.0	U	2.0	U	2.0	U	-3.3	J	6010B
Sodium	20	J	20	U	20	U	20	U	6010B
Thallium	0.006	U	0.006	U	0.006	U	0.006	U	6020
Uranium	0.012	U	0.012	U	0.012	U	0.012	U	6020
Vanadium	4	J	3	J	2	J	3	J	6010B
Zinc	1.5	J	2.0	J	1.5	U	1.5	U	6010B

Metals

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BLANKS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.028	J	-0.043	J	6020
Arsenic			0.1	U	0.1	U	0.1	U	6020
Barium			1.5	U	1.5	U	1.5	U	6010B
Beryllium			0.13	J	0.07	J	0.12	J	6010B
Cadmium			1.0	U	1.0	U	1.0	U	6010B
Calcium			10.0	U	10.0	U	10.0	U	6010B
Chromium			2.0	U	2.0	U	2.0	U	6010B
Cobalt			1.5	U	1.5	U	1.5	U	6010B
Copper			3.5	J	3.0	U	3.0	U	6010B
Iron			4.8	J	6.1	J	7.1	J	6010B
Lead			15	U	15	U	15	U	6010B
Magnesium			2.5	J	2.7	J	3.1	J	6010B
Manganese			1.2	J	1.3	J	1.5	J	6010B
Mercury			-0.020	J					7471A
Nickel			2.5	U	2.5	U	2.5	U	6010B
Potassium			25.0	U	25.0	U	25.0	U	6010B
Selenium			0.4	U	0.4	U	0.4	U	6020
Silver			2.0	U	2.0	U	2.0	U	6010B
Sodium			20	U	20	U	20	U	6010B
Thallium			0.006	U	0.006	U	0.006	U	6020
Uranium			0.012	U	0.012	U	0.012	U	6020
Vanadium			2	U	2	U	2	U	6010B
Zinc			1.5	U	2.1	J	1.5	U	6010B

Metals

- 3 -

BLANKS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.041	J	-0.044	J	-0.054	J	6020
Arsenic			0.1	U	0.1	U	0.1	U	6020
Barium			1.5	U	1.5	U	1.5	U	6010B
Beryllium			0.19	J	0.23	J	0.28	J	6010B
Cadmium			1.0	U	1.0	U	1.0	U	6010B
Calcium			10.0	U	10.0	U	10.0	U	6010B
Chromium			2.0	U	2.0	U	2.0	U	6010B
Cobalt			1.5	U	1.5	U	1.5	U	6010B
Copper			3.0	U	3.0	U	3.0	U	6010B
Iron			7.1	J	8.7	J	9.1	J	6010B
Lead			15	U	15	U	15	U	6010B
Magnesium			3.5	J	3.8	J	4.2	J	6010B
Manganese			1.5	J	1.5	J	1.8	J	6010B
Nickel			2.5	U	2.5	U	2.5	U	6010B
Potassium			25.0	U	25.0	U	25.0	U	6010B
Selenium			0.4	U	0.4	U	0.4	U	6020
Silver			2.0	U	2.7	J	2.2	J	6010B
Sodium			20	U	20	U	20	U	6010B
Thallium			0.006	J	0.007	J	0.007	J	6020
Uranium			0.012	U	0.012	U	0.012	U	6020
Vanadium			2	U	2	U	2	U	6010B
Zinc			1.5	U	1.5	U	1.5	U	6010B

Metals

- 3 -

BLANKS

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.054	J	-0.054	J	-0.055	J	6020

Metals

- 3 -

BLANKS

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			-0.055	J	-0.054	J			6020

Metals

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.0		0.1	0.1				
Arsenic	0.0	25.0	0.0	26.3	105			
Selenium	0.0	25.0	0.1	25.9	104			
Thallium	0.0		0.0	0.0				
Uranium	0.0		0.0	0.0				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	0	451.7	90.3			
Beryllium		500	0	527.6	105.5			
Cadmium		1000	9	929.8	93.0			
Calcium	500000	500000	495616	494832.6	99.0			
Chromium		500	0	471.2	94.2			
Cobalt		500	-1	464.8	93.0			
Copper		500	1	460.3	92.1			
Iron	200000	200000	197807	192916.5	96.5			
Lead		1000	0	947.7	94.8			
Magnesium	500000	500000	516515	515041.8	103.0			
Manganese		500	14	476.6	95.3			
Nickel		1000	-3	908.6	90.9			
Potassium			-36	-74.0				
Silver		1000	1	955.6	95.6			
Sodium			61	21.9				
Vanadium		500	3	488.6	97.7			
Zinc		1000	8	902.1	90.2			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company
Service Request: K1006777
Project No.: 26-46-0006.13-2010-400
Units: MG/KG
Project Name: Rhodia Silver Bow Plant Backgrou
Basis: DRY
Matrix: SOIL
% Solids: 77.5

Sample Name: BG-2 2-12 COMPS
Lab Code: K1006777-005S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	10 - 103	45.0		0.156		107.53	41.7		6020
Arsenic	57 - 133	115		5.29		106.64	102.9		6020
Barium	60 - 139	580		197		430.11	89.0		6010B
Beryllium	78 - 115	11.5		1.33		10.75	94.6		6010B
Cadmium	78 - 118	10.9		0.2	U	10.75	101.4		6010B
Chromium	32 - 170	53.8		4.8		43.01	113.9		6010B
Cobalt	67 - 129	113		4.4		107.53	101.0		6010B
Copper	24 - 173	71.3		14.2		53.76	106.2		6010B
Iron		18700		15000		215.05	1720.5		6010B
Lead	46 - 151	113		9.8	J	107.53	96.0		6010B
Manganese		514		782		107.53	-249.2		6010B
Mercury	60 - 135	0.464		0.015	J	0.48	93.5		7471A
Nickel	77 - 121	111		3.2	J	107.53	100.3		6010B
Potassium		4120		2340		0.00	0.0		6010B
Selenium	65 - 125	115		0.7	J	106.64	107.2		6020
Silver	52 - 148	9.9		0.4	U	10.75	92.1		6010B
Sodium		1210		305		0.00	0.0		6010B
Thallium	70 - 128	114		0.388		106.64	106.5		6020
Uranium	75 - 125	23.9		1.160		21.33	106.6		6020
Vanadium	64 - 132	137		20.3		107.53	108.5		6010B
Zinc	13 - 172	144		37.6		107.53	98.9		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	26-46-0006.13-2010-400	**Units:**	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	**Basis:**	DRY
Matrix:	WATER		

Sample Name: Batch QC1A **Lab Code:** K1006702-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	85 - 115	5.260		0.570		5.0	94		7471A

Metals

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POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company

Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Basis: DRY

Matrix: WATER

Sample Name: BG-2 2-12 COMPA

Lab Code: K1006777-005A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	50.24		0.29		50.0	100		6020
Arsenic	75 - 125	57.8		9.9		50.0	96		6020
Selenium	75 - 125	49.1		1.3	J	50.0	96		6020
Thallium	75 - 125	51.140		0.728		50.0	101		6020
Uranium	75 - 125	53.96		2.18		50.0	104		6020

Metals

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DUPLICATES

Client: Barr Engineering Company

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Matrix: SOIL

Service Request: K1006777

Units: MG/KG

Basis: DRY

% Solids: 77.5

Sample Name: BG-2 2-12 COMPD

Lab Code: K1006777-005D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.156		0.152		2.6		6020
Arsenic	20	5.29		6.07		13.7		6020
Barium	30	197		161		20.1		6010B
Beryllium		1.33		1.02	J	26.4		6010B
Cadmium		0.2	U	0.2	U			6010B
Calcium	30	6790		5290		24.8		6010B
Chromium		4.8		6.8		34.5		6010B
Cobalt		4.4		5.2		16.7		6010B
Copper	30	14.2		15.6		9.4		6010B
Iron	30	15000		17800		17.1		6010B
Lead		9.8	J	11.0	J	11.5		6010B
Magnesium	30	4170		4120		1.2		6010B
Manganese	30	782		546		35.5	*	6010B
Mercury		0.015	J	0.015	J	0.0		7471A
Nickel		3.2	J	4.2	J	27.0		6010B
Potassium	30	2340		2920		22.1		6010B
Selenium		0.7	J	0.7	J	0.0		6020
Silver		0.4	U	0.4	U			6010B
Sodium	30	305		235		25.9		6010B
Thallium	20	0.388		0.491		23.4	*	6020
Uranium	20	1.160		1.480		24.2	*	6020
Vanadium	30	20.3		28.3		32.9	*	6010B
Zinc	30	37.6		39.8		5.7		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Aqueous LCS Source: CAS MIXED **Solid LCS Source:** ERA D065540

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony				105	81.8	50	150	77.9
Arsenic				88.3	83.6	78	122	94.7
Barium				432	447	81	119	103.5
Beryllium				58.2	68.0	83	117	116.8
Cadmium				91	95.6	81	119	105.1
Calcium				9630	10200	79	121	105.9
Chromium				144	155	80	119	107.6
Cobalt				190	206	82	118	108.4
Copper				237	260	83	116	109.7
Iron				18900	17200	50	149	91.0
Lead				104	100	79	121	96.2
Magnesium				4040	4000	73	127	99.0
Manganese				497	508	81	119	102.2
Mercury				6.8	6.990	71	128	102.8
Nickel				200	213	81	118	106.5
Potassium				4340	4170	73	126	96.1
Selenium				192	190	80	120	99.0
Silver				76.4	81.5	66	134	106.7
Sodium				735	680	74	126	92.5
Thallium				247	274	79	120	110.9
Uranium	200	193	96.5					
Vanadium				180	184	79	121	102.2
Zinc				292	289	73	121	99.0

Metals

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400 Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Sample Name: BG-2 2-12 COMPL Lab Code: K1006777-005L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.292		0.090	U	100.0		MS
Arsenic	9.9		11.9		20		MS
Barium	925.08		943.50		2.0		P
Beryllium	6.24		5.40	J	13.5	E	P
Cadmium	1.00	U	5.00	U			P
Calcium	30326.25		29309.60		3.4		P
Chromium	22.71		31.25	J	37.6		P
Cobalt	20.68		19.65	J	5.0		P
Copper	66.67		72.70		9.0		P
Iron	70558.01		70662.85		0.1		P
Lead	46.01	J	75.00	U	100.0		P
Magnesium	19550.47		18389.60		5.9		P
Manganese	3657.56		3677.00		0.5		P
Nickel	15.01	J	12.50	U	100.0		P
Potassium	10977.03		10860.10		1.1		P
Selenium	1.3	J	2.0	U	100.0		MS
Silver	2.00	U	10.00	U			P
Sodium	1430.23		1455.35		1.8		P
Thallium	0.728		0.816		12		MS
Uranium	2.179		2.469		13		MS
Vanadium	95.38		88.45		7.3		P
Zinc	176.38		186.40		5.7		P

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Barium	233.5		10.0	1.5	P
Beryllium	313.04		5.00	0.05	P
Cadmium	226.50		5.0	1.0	P
Calcium	211.2		50	10.0	P
Chromium	267.72		10.0	2.0	P
Cobalt	228.62		10.0	1.5	P
Copper	324.75		10.0	3.0	P
Iron	259.90		20.0	1.5	P
Lead	220.35		100	15.0	P
Magnesium	202.5		20	0.2	P
Manganese	257.61		10.00	0.20	P
Nickel	231.60		20.0	2.5	P
Potassium	766.49		1000	25.0	P
Silver	328.07		10.0	2.0	P
Sodium	330.23		100	20.0	P
Vanadium	310.2		10.0	2.0	P
Zinc	206.2		10.0	1.5	P

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.100	0.018	MS
Arsenic	75		1.0	0.1	MS
Selenium	82		2.0	0.4	MS
Thallium	205		0.040	0.006	MS
Uranium	238		0.04	0.012	MS

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #:

GFAA ID #: AA ID #: K-CVAA-01

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.70		0.20	0.020	CV

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Barium	5.000	45000	6010B
Beryllium	5.000	9000	6010B
Cadmium	5.000	90000	6010B
Calcium	5.000	1800000	6010B
Chromium	5.000	90000	6010B
Cobalt	5.000	90000	6010B
Copper	5.000	90000	6010B
Iron	5.000	900000	6010B
Lead	5.000	90000	6010B
Magnesium	5.000	900000	6010B
Manganese	5.000	180000	6010B
Nickel	5.000	90000	6010B
Potassium	5.000	450000	6010B
Silver	5.000	9000	6010B
Sodium	5.000	180000	6010B
Vanadium	5.000	90000	6010B
Zinc	5.000	90000	6010B

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	900	6020
Arsenic	15.000	900	6020
Selenium	15.000	900	6020
Thallium	15.000	450	6020
Uranium	15.000	450	6020

Comments:

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006777-001	07/15/10	1.01	100.0
K1006777-002	07/15/10	1.02	100.0
K1006777-003	07/15/10	1.00	100.0
K1006777-004	07/15/10	1.01	100.0
K1006777-005	07/15/10	1.21	100.0
K1006777-005D	07/15/10	1.20	100.0
K1006777-005S	07/15/10	1.21	100.0
K1006777-006	07/15/10	1.00	100.0
K1006777-007	07/15/10	1.00	100.0
K1006777-009	07/15/10	1.00	100.0
K1006777-010	07/15/10	1.00	100.0
K1006777-011	07/15/10	1.02	100.0
K1006777-012	07/15/10	1.00	100.0
K1006777-013	07/15/10	1.00	100.0
K1006777-014	07/15/10	1.00	100.0
K1006777-015	07/15/10	1.00	100.0
K1006777-016	07/15/10	1.00	100.0
K1006777-017	07/15/10	1.00	100.0
K1006777-MB	07/15/10	1.00	100.0
LCSS	07/15/10	1.00	100.0
LCSW	07/15/10	100.0	100.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: MS

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K1006777-001	07/15/10	1.01	100.0
K1006777-002	07/15/10	1.00	100.0
K1006777-003	07/15/10	1.00	100.0
K1006777-004	07/15/10	1.01	100.0
K1006777-005	07/15/10	1.21	100.0
K1006777-005D	07/15/10	1.20	100.0
K1006777-005S	07/15/10	1.20	100.0
K1006777-006	07/15/10	1.00	100.0
K1006777-007	07/15/10	1.01	100.0
K1006777-009	07/15/10	1.02	100.0
K1006777-010	07/15/10	1.02	100.0
K1006777-011	07/15/10	1.00	100.0
K1006777-012	07/15/10	1.01	100.0
K1006777-013	07/15/10	1.01	100.0
K1006777-014	07/15/10	1.02	100.0
K1006777-015	07/15/10	1.00	100.0
K1006777-016	07/15/10	1.01	100.0
K1006777-017	07/15/10	1.02	100.0
K1006777-MB	07/15/10	1.00	100.0
LCSS	07/15/10	1.00	100.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: CV

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006777-001	07/19/10	0.56	50.0
K1006777-002	07/19/10	0.56	50.0
K1006777-003	07/19/10	0.59	50.0
K1006777-004	07/19/10	0.62	50.0
K1006777-005	07/19/10	0.67	50.0
K1006777-005D	07/19/10	0.67	50.0
K1006777-005S	07/19/10	0.68	50.0
K1006777-006	07/19/10	0.60	50.0
K1006777-007	07/19/10	0.55	50.0
K1006777-009	07/19/10	0.56	50.0
K1006777-010	07/19/10	0.58	50.0
K1006777-011	07/19/10	0.58	50.0
K1006777-012	07/19/10	0.61	50.0
K1006777-013	07/19/10	0.58	50.0
K1006777-014	07/19/10	0.56	50.0
K1006777-015	07/19/10	0.57	50.0
K1006777-016	07/19/10	0.58	50.0
K1006777-017	07/19/10	0.58	50.0
K1006777-MB	07/19/10	0.50	50.0
LCSS	07/19/10	0.28	50.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Blank	1	09:20					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
STDB	1	09:23					X	X		X				X		X	X			X			X							
STDA	1	09:26							X	X	X	X	X	X	X	X	X		X			X			X	X				
ICV1	1	09:29					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ICV1	1	09:32								X				X		X	X													
ICB1	1	09:35					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
CCV1	1	09:39					X	X		X				X		X	X			X			X							
CCV1	1	09:49							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB1	1	09:56					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
CRA1	1	09:59					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ICS-A1	1	10:02					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ICS-AB1	1	10:05					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	10:08																												
CCV2	1	10:11					X	X		X				X		X	X			X			X							
CCV2	1	10:14							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB2	1	10:17					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	10:20																												
ZZZZZZ	1	10:23																												
ZZZZZZ	1	10:26																												
ZZZZZZ	1	10:29																												
ZZZZZZ	5	10:32																												
ZZZZZZ	1	10:35																												
ZZZZZZ	1	10:38																												
ZZZZZZ	1	10:41																												
ZZZZZZ	1	10:44																												
ZZZZZZ	1	10:47																												
CCV3	1	10:50					X	X		X				X		X	X			X			X							
CCV3	1	10:53							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB3	1	10:56					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	10:59																												
ZZZZZZ	1	11:02																												
ZZZZZZ	1	11:05																												

*** - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14**

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	11:08																												
ZZZZZZ	1	11:10																												
ZZZZZZ	1	11:13																												
ZZZZZZ	1	11:16																												
ZZZZZZ	1	11:19																												
ZZZZZZ	1	11:22																												
ZZZZZZ	1	11:25																												
CCV4	1	11:28					X	X		X				X		X	X			X			X							
CCV4	1	11:31							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB4	1	11:34					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	11:37																												
ZZZZZZ	2	11:40																												
ZZZZZZ	2	11:43																												
ZZZZZZ	2	11:46																												
ZZZZZZ	2	11:49																												
ZZZZZZ	10	11:52																												
ZZZZZZ	2	11:55																												
ZZZZZZ	2	11:58																												
ZZZZZZ	2	12:01																												
ZZZZZZ	2	12:04																												
CCV5	1	12:07					X	X		X				X		X	X			X			X							
CCV5	1	12:09							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB5	1	12:12					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	2	12:15																												
ZZZZZZ	2	12:18																												
ZZZZZZ	2	12:21																												
ZZZZZZ	2	12:24																												
ZZZZZZ	2	12:27																												
ZZZZZZ	2	12:30																												
ZZZZZZ	2	12:33																												
ZZZZZZ	2	12:36																												
ZZZZZZ	2	12:39																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	2	12:42																										
CCV6	1	12:45					X	X		X				X		X	X			X			X					
CCV6	1	12:48							X	X	X	X	X	X	X	X	X		X			X			X	X		
CCB6	1	12:51					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
ZZZZZZ	2	13:07																										
ZZZZZZ	2	13:10																										
ZZZZZZ	2	13:13																										
ZZZZZZ	2	13:16																										
ZZZZZZ	2	13:19																										
ZZZZZZ	2	13:22																										
ZZZZZZ	1	13:25																										
K1006777-MB	2	13:28					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
LCSS	2	13:31					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-005	2	13:34					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
CCV7	1	13:37					X	X		X				X		X	X			X			X					
CCV7	1	13:40							X	X	X	X	X	X	X	X	X		X			X			X	X		
CCB7	1	13:42					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-005D	2	13:46					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-005L	10	13:48					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-005S	2	13:51					X	X	X		X	X	X	X	X		X		X	X		X	X		X	X		
K1006777-001	2	13:54					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-002	2	13:57					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-003	2	14:00					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-004	2	14:03					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-006	2	14:06					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-007	2	14:09					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-009	2	14:12					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
CCV8	1	14:15					X	X		X				X		X	X			X			X					
CCV8	1	14:18							X	X	X	X	X	X	X	X	X		X			X			X	X		
CCB8	1	14:21					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-010	2	14:24					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		
K1006777-011	2	14:27					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X		

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/16/10 **End Date:** 07/16/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
K1006777-012	2	14:30					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-013	2	14:33					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-014	2	14:36					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-015	2	14:39					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-016	2	14:42					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-017	2	14:45					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	14:47																												
ZZZZZZ	1	14:51																												
CCV9	1	14:54					X	X		X				X		X	X			X			X							
CCV9	1	14:57							X	X	X	X	X	X	X	X	X		X			X			X	X				
ZZZZZZ	1	14:59																												
CCB9	1	15:02					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	17:16				X															X			X				*
Cal. Blk	1	17:26				X															X			X				*
ICV1	1	17:28				X															X			X				*
CCV1	1	17:31				X															X			X				*
ICB1	1	17:36				X															X			X				*
CCB1	1	17:38				X															X			X				*
CRA1	1	17:44				X															X			X				*
ICS-A1	1	17:47				X															X			X				*
ICS-AB1	1	17:50				X															X			X				*
ZZZZZZ	1	17:53																												
ZZZZZZ	1	17:56																												
ZZZZZZ	1	18:00																												
ZZZZZZ	1	18:02																												
ZZZZZZ	1	18:06																												
ZZZZZZ	5	18:09																												
ZZZZZZ	1	18:12																												
ZZZZZZ	1	18:16																												
ZZZZZZ	1	18:20																												
ZZZZZZ	1	18:24																												
CCV2	1	18:27				X															X			X				*
CCB2	1	18:32				X															X			X				*
ZZZZZZ	1	18:34																												
ZZZZZZ	1	18:38																												
ZZZZZZ	1	18:41																												
ZZZZZZ	1	18:45																												
ZZZZZZ	1	18:49																												
ZZZZZZ	1	18:52																												
ZZZZZZ	1	18:56																												
ZZZZZZ	1	18:59																												
ZZZZZZ	1	19:03																												
ZZZZZZ	1	19:06																												
CCV3	1	19:10				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB3	1	19:14				X															X			X				*
ZZZZZZ	1	19:17																										
ZZZZZZ	1	19:20																										
ZZZZZZ	5	19:24																										
ZZZZZZ	100	19:26																										
ZZZZZZ	5	19:30																										
ZZZZZZ	5	19:33																										
ZZZZZZ	5	19:36																										
ZZZZZZ	25	19:40																										
ZZZZZZ	5	19:43																										
ZZZZZZ	25	19:47																										
CCV4	1	19:51				X															X			X				*
CCB4	1	19:55				X															X			X				*
ZZZZZZ	5	19:58																										
ZZZZZZ	5	20:01																										
ZZZZZZ	5	20:05																										
ZZZZZZ	5	20:08																										
ZZZZZZ	5	20:12																										
ZZZZZZ	5	20:16																										
ZZZZZZ	5	20:19																										
ZZZZZZ	5	20:23																										
ZZZZZZ	5	20:26																										
ZZZZZZ	5	20:30																										
CCV5	1	20:33				X															X			X				*
CCB5	1	20:38				X															X			X				*
ZZZZZZ	5	20:40																										
ZZZZZZ	5	20:44																										
ZZZZZZ	5	20:47																										
ZZZZZZ	5	20:51																										
ZZZZZZ	5	20:54																										
ZZZZZZ	5	20:58																										
ZZZZZZ	5	21:01																										

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
ZZZZZZ	5	21:05																											
ZZZZZZ	5	21:09																											
CCV6	1	21:12				X															X			X				*
CCB6	1	21:16				X															X			X				*
K1006777-MB	5	21:19				X															X			X				*
LCSS	100	21:22				X															X			X				
LCSW	5	21:25																										*
K1006777-005	5	21:28				X															X			X				*
K1006777-005D	5	21:32				X															X			X				*
K1006777-005L	25	21:35				X															X			X				*
K1006777-005A	5	21:39				X															X			X				*
K1006777-005S	25	21:42				X															X			X				*
K1006777-001	5	21:46				X															X			X				*
K1006777-002	5	21:50				X															X			X				*
CCV7	1	21:53				X															X			X				*
CCB7	1	22:02				X															X			X				*
K1006777-003	5	22:05				X															X			X				*
K1006777-004	5	22:08				X															X			X				*
K1006777-006	5	22:12				X															X			X				*
K1006777-007	5	22:15				X															X			X				*
K1006777-009	5	22:19				X															X			X				*
K1006777-010	5	22:22				X															X			X				*
K1006777-011	5	22:26				X															X			X				*
K1006777-012	5	22:29				X															X			X				*
K1006777-013	5	22:33				X															X			X				*
K1006777-014	5	22:37				X															X			X				*
CCV8	1	22:40				X															X			X				*
CCB8	1	22:49				X															X			X				*
K1006777-015	5	22:51				X															X			X				*
K1006777-016	5	22:55				X															X			X				*
K1006777-017	5	22:58				X															X			X				*
CCV9	1	23:02				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB9	1	23:10				X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals

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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
Cal. Blk	1.00	17:16															X										
Cal. Blk	1.00	17:26															X										
ICV1	1.00	17:28															X										
CCV1	1.00	17:31															X										
ICB1	1.00	17:36															X										
CCB1	1.00	17:38															X										
CRA1	1.00	17:44															X										
ICS-A1	1.00	17:47															X										
ICS-AB1	1.00	17:50															X										
ZZZZZZ	1.00	17:53																									
ZZZZZZ	1.00	17:56																									
ZZZZZZ	1.00	18:00																									
ZZZZZZ	1.00	18:02																									
ZZZZZZ	1.00	18:06																									
ZZZZZZ	5.00	18:09																									
ZZZZZZ	1.00	18:12																									
ZZZZZZ	1.00	18:16																									
ZZZZZZ	1.00	18:20																									
ZZZZZZ	1.00	18:24																									
CCV2	1.00	18:27															X										
CCB2	1.00	18:32															X										
ZZZZZZ	1.00	18:34																									
ZZZZZZ	1.00	18:38																									
ZZZZZZ	1.00	18:41																									
ZZZZZZ	1.00	18:45																									
ZZZZZZ	1.00	18:49																									
ZZZZZZ	1.00	18:52																									
ZZZZZZ	1.00	18:56																									
ZZZZZZ	1.00	18:59																									
ZZZZZZ	1.00	19:03																									
ZZZZZZ	1.00	19:06																									
CCV3	1.00	19:10															X										
CCB3	1.00	19:14															X										
ZZZZZZ	1.00	19:17																									

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 Method: MS
Start Date: 07/27/10 End Date: 07/27/10

Sample No.	D/F	Time	% R	B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U
ZZZZZZ	1.00	19:20															
ZZZZZZ	5.00	19:24															
ZZZZZZ	00.00	19:26															
ZZZZZZ	5.00	19:30															
ZZZZZZ	5.00	19:33															
ZZZZZZ	5.00	19:36															
ZZZZZZ	25.00	19:40															
ZZZZZZ	5.00	19:43															
ZZZZZZ	25.00	19:47															
CCV4	1.00	19:51															X
CCB4	1.00	19:55															X
ZZZZZZ	5.00	19:58															
ZZZZZZ	5.00	20:01															
ZZZZZZ	5.00	20:05															
ZZZZZZ	5.00	20:08															
ZZZZZZ	5.00	20:12															
ZZZZZZ	5.00	20:16															
ZZZZZZ	5.00	20:19															
ZZZZZZ	5.00	20:23															
ZZZZZZ	5.00	20:26															
ZZZZZZ	5.00	20:30															
CCV5	1.00	20:33															X
CCB5	1.00	20:38															X
ZZZZZZ	5.00	20:40															
ZZZZZZ	5.00	20:44															
ZZZZZZ	5.00	20:47															
ZZZZZZ	5.00	20:51															
ZZZZZZ	5.00	20:54															
ZZZZZZ	5.00	20:58															
ZZZZZZ	5.00	21:01															
ZZZZZZ	5.00	21:05															
ZZZZZZ	5.00	21:09															
CCV6	1.00	21:12															X
CCB6	1.00	21:16															X

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/27/10 **End Date:** 07/27/10

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
K1006777-MB	5.00	21:19															X										
LCSS	00.00	21:22																									
LCSW	5.00	21:25															X										
K1006777-005	5.00	21:28															X										
K1006777-005D	5.00	21:32															X										
K1006777-005L	25.00	21:35															X										
K1006777-005A	5.00	21:39															X										
K1006777-005S	25.00	21:42															X										
K1006777-001	5.00	21:46															X										
K1006777-002	5.00	21:50															X										
CCV7	1.00	21:53															X										
CCB7	1.00	22:02															X										
K1006777-003	5.00	22:05															X										
K1006777-004	5.00	22:08															X										
K1006777-006	5.00	22:12															X										
K1006777-007	5.00	22:15															X										
K1006777-009	5.00	22:19															X										
K1006777-010	5.00	22:22															X										
K1006777-011	5.00	22:26															X										
K1006777-012	5.00	22:29															X										
K1006777-013	5.00	22:33															X										
K1006777-014	5.00	22:37															X										
CCV8	1.00	22:40															X										
CCB8	1.00	22:49															X										
K1006777-015	5.00	22:51															X										
K1006777-016	5.00	22:55															X										
K1006777-017	5.00	22:58															X										
CCV9	1.00	23:02															X										
CCB9	1.00	23:10															X										

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/29/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Cal. Blk	1	15:50			X																									
Cal. Stn	1	15:52			X																									
ICV1	1	15:54			X																									
CCV1	1	15:56			X																									
ICB1	1	16:03			X																									
CCB1	1	16:06			X																									
CRA1	1	16:08			X																									
ICS-A1	1	16:10			X																									
ICS-AB1	1	16:12			X																									
ZZZZZZ	1	16:16																												
ZZZZZZ	1	16:19																												
ZZZZZZ	1	16:25																												
ZZZZZZ	1	16:29																												
ZZZZZZ	5	16:32																												
ZZZZZZ	1	16:35																												
ZZZZZZ	1	16:39																												
ZZZZZZ	1	16:45																												
ZZZZZZ	1	16:48																												
ZZZZZZ	1	16:51																												
CCV2	1	16:54			X																									
CCB2	1	17:00			X																									
ZZZZZZ	1	17:02																												
ZZZZZZ	1	17:05																												
ZZZZZZ	1	17:08																												
ZZZZZZ	1	17:12																												
ZZZZZZ	1	17:17																												
ZZZZZZ	1	17:20																												
ZZZZZZ	1	17:23																												
ZZZZZZ	1	17:26																												
ZZZZZZ	1	17:29																												
ZZZZZZ	1	17:32																												
CCV3	1	17:35			X																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/29/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB3	1	17:41			X																								
ZZZZZZ	1	17:43																											
ZZZZZZ	1	17:46																											
ZZZZZZ	1	17:50																											
ZZZZZZ	1	17:53																											
ZZZZZZ	1	17:56																											
ZZZZZZ	1	17:59																											
ZZZZZZ	1	18:02																											
ZZZZZZ	1	18:05																											
CCV4	1	18:08			X																								
CCB4	1	18:14			X																								
ZZZZZZ	1	18:16																											
ZZZZZZ	1	18:18																											
ZZZZZZ	1	18:23																											
ZZZZZZ	1	18:26																											
ZZZZZZ	1	18:29																											
ZZZZZZ	1	18:33																											
ZZZZZZ	1	18:36																											
ZZZZZZ	1	18:41																											
ZZZZZZ	1	18:44																											
ZZZZZZ	5	18:47																											
CCV5	1	18:51			X																								
CCB5	1	18:57			X																								
ZZZZZZ	1	18:59																											
ZZZZZZ	1	19:03																											
ZZZZZZ	1	19:08																											
ZZZZZZ	1	19:11																											
ZZZZZZ	1	19:14																											
ZZZZZZ	1	19:18																											
ZZZZZZ	1	19:21																											
ZZZZZZ	1	19:24																											
ZZZZZZ	1	19:27																											

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/29/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	19:31																												
CCV6	1	19:34			X																									
CCB6	1	19:40			X																									
ZZZZZZ	1	19:42																												
ZZZZZZ	1	19:45																												
ZZZZZZ	1	19:48																												
ZZZZZZ	1	19:52																												
ZZZZZZ	1	19:55																												
ZZZZZZ	1	19:58																												
ZZZZZZ	1	20:01																												
ZZZZZZ	1	20:04																												
ZZZZZZ	1	20:07																												
CCV7	1	20:10			X																									
CCB7	1	20:16			X																									
ZZZZZZ	1	20:18																												
ZZZZZZ	1	20:20																												
ZZZZZZ	1	20:27																												
ZZZZZZ	1	20:30																												
ZZZZZZ	5	20:33																												
ZZZZZZ	1	20:36																												
ZZZZZZ	1	20:39																												
ZZZZZZ	1	20:44																												
ZZZZZZ	1	20:48																												
ZZZZZZ	1	20:51																												
CCV8	1	20:54			X																									
CCB8	1	21:00			X																									
ZZZZZZ	1	21:02																												
ZZZZZZ	1	21:05																												
ZZZZZZ	1	21:09																												
ZZZZZZ	1	21:12																												
ZZZZZZ	1	21:15																												
ZZZZZZ	1	21:18																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/29/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	21:21																												
ZZZZZZ	1	21:24																												
ZZZZZZ	1	21:27																												
ZZZZZZ	1	21:31																												
CCV9	1	21:34			X																									
CCB9	1	21:39			X																									
ZZZZZZ	1	21:42																												
ZZZZZZ	5	21:45																												
ZZZZZZ	100	21:47																												
ZZZZZZ	5	21:53																												
ZZZZZZ	5	21:56																												
ZZZZZZ	25	22:00																												
ZZZZZZ	5	22:03																												
ZZZZZZ	25	22:06																												
ZZZZZZ	5	22:11																												
ZZZZZZ	5	22:14																												
CCV10	1	22:17			X																									
CCB10	1	22:23			X																									
ZZZZZZ	5	22:25																												
ZZZZZZ	5	22:28																												
ZZZZZZ	5	22:31																												
ZZZZZZ	5	22:35																												
ZZZZZZ	5	22:38																												
ZZZZZZ	5	22:41																												
ZZZZZZ	5	22:44																												
ZZZZZZ	5	22:47																												
ZZZZZZ	5	22:50																												
ZZZZZZ	5	22:54																												
CCV11	1	22:57			X																									
CCB11	1	23:02			X																									
ZZZZZZ	5	23:05																												
ZZZZZZ	5	23:08																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/29/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	5	23:11																												
ZZZZZZ	5	23:14																												
ZZZZZZ	5	23:17																												
ZZZZZZ	5	23:20																												
ZZZZZZ	5	23:23																												
K1006777-MB	5	23:27			X																									
LCSS	100	23:29			X																									
CCV12	1	23:35			X																									
CCB12	1	23:41			X																									
K1006777-005	5	23:43			X																									
K1006777-005D	5	23:46			X																									
K1006777-005L	25	23:50			X																									
K1006777-005A	5	23:53			X																									
K1006777-005S	25	23:57			X																									
K1006777-001	5	12:01			X																									
K1006777-002	5	12:04			X																									
K1006777-003	5	12:08			X																									
K1006777-004	5	12:11			X																									
K1006777-006	5	12:14			X																									
CCV13	1	12:17			X																									
CCB13	1	12:23			X																									
K1006777-007	5	12:25			X																									
K1006777-009	5	12:28			X																									
K1006777-010	5	12:31			X																									
K1006777-011	5	12:35			X																									
K1006777-012	5	12:38			X																									
K1006777-013	5	12:41			X																									
K1006777-014	5	12:44			X																									
K1006777-015	5	12:47			X																									
K1006777-016	5	12:50			X																									
K1006777-017	5	12:53			X																									
CCV14	1	12:57			X																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/28/10 **End Date:** 07/29/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB14	1	13:02			X																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 07/20/10 **End Date:** 07/20/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Standard #1	1	13:21																X									
Standard #2	1	13:23																X									
Standard #3	1	13:25																X									
Standard #4	1	13:26																X									
Standard #5	1	13:28																X									
ICV1	1	13:30																X									
ICB1	1	13:32																X									
CCV1	1	13:33																X									
CCB1	1	13:35																X									
CRA1	1	13:37																X									
K1006777-MB	1	13:39																X									
LCSS	10	13:40																X									
ZZZZZZ	1	13:42																									
K1006702-001A	1	13:57																X									
ZZZZZZ	1	13:59																									
ZZZZZZ	1	14:02																									
K1006777-001	1	14:04																X									
K1006777-002	1	14:06																X									
K1006777-003	1	14:07																X									
CCV2	1	14:09																X									
CCB2	1	14:11																X									
K1006777-004	1	14:13																X									
K1006777-005	1	14:14																X									
K1006777-005D	1	14:16																X									
K1006777-005S	1	14:18																X									
K1006777-006	1	14:20																X									
K1006777-007	1	14:21																X									
K1006777-009	1	14:23																X									
K1006777-010	1	14:25																X									
K1006777-011	1	14:27																X									
K1006777-012	1	14:29																X									
CCV3	1	14:30																X									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 07/20/10 **End Date:** 07/20/10

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCB3	1	14:32																X									
K1006777-013	1	14:34																X									
K1006777-014	1	14:36																X									
K1006777-015	1	14:37																X									
K1006777-016	1	14:39																X									
K1006777-017	1	14:41																X									
ZZZZZZ	1	14:43																									
ZZZZZZ	1	14:45																									
ZZZZZZ	1	14:46																									
ZZZZZZ	1	14:48																									
ZZZZZZ	1	14:51																									
CCV4	1	14:53																X									
CCB4	1	14:55																X									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115457 **Prep Workflow**: MetDigSICP **Status**: Prepped **Prep Date**: 07/15/2010 14:08
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion **Due Date**: 07/18/2010
Analyst: WSchumann **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006993-03	Method Blank		g	As Received	100 mL			10% HNO3 10% HCL
KQ1006993-04	Lab Control Sample		1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-001	BG-1 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-002	BG-1 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-003	BG-1 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-004	BG-2 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-005	BG-2 2-12 COMP	.01	1.21 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-005: KQ1006993-01	Duplicate	.01	1.20 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-005: KQ1006993-02	Matrix Spike	.01	1.20 g	As Received	100 mL	2 mL 1 mL 1 mL 1 mL	17544 18003 18837 18980	10% HNO3 10% HCL
K1006777-006	BG-2 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-007	BG-100 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-009	BG-3 0-2 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-010	BG-3 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-011	BG-3 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-012	BG-4 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-013	BG-4 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-014	BG-4 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-015	BG-6 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-016	BG-6 2-12 COMP	.01	1.01 g	As Received	100 mL			10% HNO3 10% HCL
K1006777-017	BG-6 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3 10% HCL

20 Total Samples consisting of 16 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011	K-MET SS4	Spike	18980	12/16/2010
K-MET SS1	Spike	17544	9/11/2010	K-MET SS5	Spike	18003	11/20/2010

K-MET SS3	Spike	18837	12/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HCL	18676

Step	Name	ID
Digestion	K-MET HNO3	18888
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/15/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-07	Temperature	96	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	15-JUL-10 14:08	15-JUL-10 15:31	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min HCL Reflux: 15min

Review

Reviewed by: _____ Date: 7/15/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

FCP

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	1.00
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 26-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K1006777-001	07/15/10	1.01	100.0
K1006777-002	07/15/10	1.00	100.0
K1006777-003	07/15/10	1.00	100.0
K1006777-004	07/15/10	1.01	100.0
K1006777-005	07/15/10	1.21	100.0
K1006777-005D	07/15/10	1.20	100.0
K1006777-005S	07/15/10	1.20	100.0
K1006777-006	07/15/10	1.00	100.0
K1006777-007	07/15/10	1.01	100.0
K1006777-009	07/15/10	1.02	100.0
K1006777-010	07/15/10	1.02	100.0
K1006777-011	07/15/10	1.00	100.0
K1006777-012	07/15/10	1.01	100.0
K1006777-013	07/15/10	1.01	100.0
K1006777-014	07/15/10	1.02	100.0
K1006777-015	07/15/10	1.00	100.0
K1006777-016	07/15/10	1.01	100.0
K1006777-017	07/15/10	1.02	100.0
K1006777-MB	07/15/10	1.00	100.0
LCSS	07/15/10	1.00	100.0

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115458 **Prep Workflow**: MetDigSMS **Status**: Prepped **Prep Date**: 07/15/2010 14:08
Team: Metals **Prep Method**: EPA 3050B **Current Step**: Digestion **Due Date**: 07/18/2010
Analyst: WSchumann **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1006994-01	Method Blank		g	As Received	100 mL			10% HNO3
KQ1006994-02	Lab Control Sample		1.00 g	As Received	100 mL			10% HNO3
KQ1006994-03	Lab Control Sample		g	As Received	100 mL			10% HNO3
K1006777-001	BG-1 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006777-002	BG-1 2-12 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006777-003	BG-1 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-004	BG-2 0-2 COMP	.01	1.01 g	As Received	100 mL			10% HNO3
K1006777-005	BG-2 2-12 COMP	.01	1.21 g	As Received	100 mL			10% HNO3
K1006777-005: KQ1006994-04	Duplicate	.01	1.20 g	As Received	100 mL			10% HNO3
K1006777-005: KQ1006994-05	Matrix Spike	.01	1.21 g	As Received	100 mL	2 mL 1 mL 1 mL	17544 18837 18980	10% HNO3
K1006777-006	BG-2 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-007	BG-100 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-009	BG-3 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-010	BG-3 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-011	BG-3 12-18 COMP	.01	1.02 g	As Received	100 mL			10% HNO3
K1006777-012	BG-4 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-013	BG-4 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-014	BG-4 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-015	BG-6 0-2 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-016	BG-6 2-12 COMP	.01	1.00 g	As Received	100 mL			10% HNO3
K1006777-017	BG-6 12-18 COMP	.01	1.00 g	As Received	100 mL			10% HNO3

21 Total Samples consisting of 16 Client Samples, 2 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET SOIL CRM	SRM	14875	12/21/2011	K-MET SS3	Spike	18837	12/1/2010

K-MET SS1	Spike	17544	9/11/2010	K-MET SS4	Spike	18980	12/16/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 100ml Centrifuge Tube	16760
Digestion	K-MET HNO3	18888

Step	Name	ID
Digestion	K-MET H2O2	18955

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-02	Date Checked	7/15/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-01	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	15-JUL-10 14:08	15-JUL-10 15:10	WSchumann		N	

Comments

Initial Reflux: 15min Secondary Relfux: 30min

Review

Reviewed by: _____ Date: 7/15/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

MS

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	2.00
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	1.00
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	1.00
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	~~1.00~~ WS7/15110
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date
U	1.00	10	MS13-67-C	11/12/10

CVAA Mercury Data Review Form

K-CVAA-01

Element: Hg Soils

Analysis Lot #: 209160

Cal. STD/CCV Source: HG1-93-V

Service Request Numbers:

K1006702, K1006777, K1006895, K1007084, K1007325, K1006639

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: MS (initials)

Primary Reviewed By: MW Date: 7/20/10

Secondary Reviewed By: JDB Date: 7/21/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K1006702, K1006777, K1006895, K1007084, K1007325, K1006639
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.39		108%
2	ICB1	~	~	~	-0.02		< 0.2
3	CCV1	~	~	~	4.93		99%
4	CCB1	~	~	~	-0.03		< 0.2
5	CRA1	~	~	~	0.17		85%
6	K1006702-MB	0.562	50	~	-0.01	-0.001	
7	LCSS K1006702 1/10	0.276	50	10	3.86	6.993	103%
8	K1006702-001	0.512	50	~	0.57	0.056	
9	K1006702-001A		50	~	5.26		94%
10	K1006702-001D	0.518	50	~	0.56	0.054	
11	K1006702-001S	0.520	50	~	6.27	0.603	114%
12	K1006777-001	0.507	50	~	0.23	0.023	
13	K1006777-002	0.511	50	~	0.11	0.011	
14	K1006777-003	0.507	50	~	0.16	0.016	
15	CCV2	~	~	~	5.02		100%
16	CCB2	~	~	~	-0.03		< 0.2
17	K1006777-004	0.503	50	~	0.25	0.025	
18	K1006777-005	0.519	50	~	0.16	0.015	
19	K1006777-005D	0.522	50	~	0.16	0.015	
20	K1006777-005S	0.524	50	~	4.86	0.464	94%
21	K1006777-006	0.518	50	~	0.15	0.014	
22	K1006777-007	0.505	50	~	0.20	0.020	
23	K1006777-009	0.512	50	~	0.13	0.013	
24	K1006777-010	0.501	50	~	0.09	0.009	
25	K1006777-011	0.511	50	~	0.10	0.010	

Comments: Reporting Levels:

Soil/Tissue Spike Level:	**K1006702-001S=0.481mg/kg, K1006777-005S=0.477mg/kg**				
Post Spike Level:	**x @ 5 µg/L**				
Method	**Spike Level**	**MRL**	**LCS Limit**	**MS Limit**	**RPD**
7470A Water	**1.0 µg/L**	**0.2 µg/L**	**83-117%**	**76-126%**	**20%**
245.1 Water	**1.0 µg/L**	**0.2 µg/L**	**85-115%**	**70-130%**	**20%**
7470A TCLP	**5.0 µg/L**	**1.0 µg/L**	**85-115%**	**75-125%**	**20%**
7471A Soil LCSS	**6.80 mg/kg**	**0.02 mg/kg**	**72-128%**	**60-135%**	**30%**
7471A Tissue Tort	**0.27 mg/kg**	**0.02 mg/kg**	**63-130%**	**60-130%**	**30%**

Analyst:	Date:	Page Number:
Melissa Goh	7/20/10	1

[Controlled - HgSoilRunForm 2-18-10] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)	
26	K1006777-012	0.521	50	~	0.29	0.028		
27	CCV3	~	~	~	5.00		100%	
28	CCB3	~	~	~	-0.02		< 0.2	
29	K1006777-013	0.507	50	~	0.16	0.016		
30	K1006777-014	0.512	50	~	0.11	0.011		
31	K1006777-015	0.511	50	~	0.17	0.017		
32	K1006777-016	0.504	50	~	0.11	0.011		
33	K1006777-017	0.513	50	~	0.19	0.019		
34	~~K1006895-005 1/2~~	~~0.500~~	~~50~~	~~2~~	~~0.12~~	rerun w/ new dilution MS 7/20/10		
35	K1007084-001 1/2	0.503	50	2	3.54	0.704		
36	~~K1007325-001~~	~~0.501~~	~~50~~	~~-~~	~~4.05~~	rerun dilution		
37	~~K1007325-001D~~	~~0.503~~	~~50~~	~~-~~	~~7.53~~	MS		
38	~~K1007325-001S~~	~~0.500~~	~~50~~	~~-~~	~~10.20~~	7/20/10		
39	CCV4	~	~	~	5.02		100%	
40	CCB4	~	~	~	-0.02		< 0.2	
41	K1006895-001	0.500	50	~	0.15	0.015		
42	K1007325-001 1/2	0.501	50	2	2.38	0.475		
43	K1007325-001L 1/2+1/5		50	10	0.42		12%	
44	K1007325-001D 1/2	0.503	50	2	3.47	0.690	37%	
45	K1007325-001S1/2	0.500	50	2	5.17	1.034	112%	
46	~~K1007325-001D 1/2~~	~~0.503~~	~~50~~	~~2~~	~~3.47~~	checking original analysis		
47	~~K1007325-001L 1/2+1/5~~		~~50~~	~~10~~	~~0.40~~	MS 7/20/10		
48	K1007325-001A 1/2		50	~	6.78		88%	
49	K1006639-MB	0.514	50	~	-0.01	-0.001		
50	LCSW K1006639	0.511	50	~	5.07		101%	

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1007325-001S=0.500mg/kg

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa A	7/7/7/22/10	2

[Controlled - HgSoilRunForm 2-18-10] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A (7471A) 245.1	Service Request # :
Analysis For: ~~Hg~~	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	(µg/L) Measured	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	CCV5	~	~	~	5.10		102%
52	CCB5	~	~	~	-0.02		< 0.2
53	K1006639-001	0.502	50	~	3.20	0.319	
54	K1006639-001A		50	~	8.25		101%
55	K1006639-001S	0.501	50	~	8.16	0.814	99%
56	K1006639-001SD	0.500	50	~	7.48	0.748	86%
57	K1006639-002	0.508	50	~	1.94	0.191	
58	K1006639-003	0.514	50	~	1.40	0.136	
59	K1006639-005	0.518	50	~	1.88	0.181	
60	K1006639-006	0.522	50	~	1.46	0.140	
61	K1006639-007	0.511	50	~	3.16	0.309	
62	K1006639-009	0.523	50	~	4.22	0.403	
63	~~CCV6~~	~	~	~	~~3.87~~	wrong file MS7120b	
64	CCV6	~	~	~	4.92		98%
65	CCB6	~	~	~	-0.02		< 0.2
66	K1006639-010	0.506	50	~	3.90	0.385	
67	K1006639-011	0.504	50	~	1.68	0.167	
68	K1006639-013	0.509	50	~	0.81	0.080	
69	K1006639-014	0.529	50	~	2.49	0.235	
70	K1006639-015	0.522	50	~	5.92	0.567	
71	K1006639-017	0.511	50	~	1.53	0.150	
72	K1006639-001L 1/5		50	~	0.59		8%
73	CCV7	~	~	~	4.62		92%
74	CCB7	~	~	~	-0.02		< 0.2
75							

MS7120b

Comments: Reporting Levels:

Soil/Tissue Spike Level: K1006639-001S=0.499mg/kg, K1006639-001SD=0.500mg/kg

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-135%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa Arell	7/20/10	3

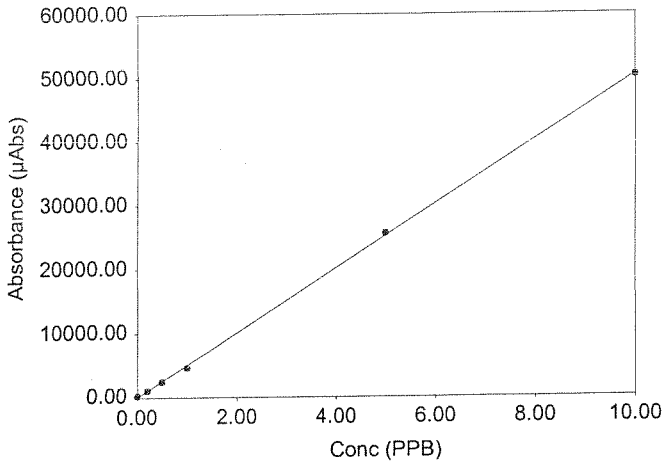
[Controlled - HgSoilRunForm 2-18-10] HG3.XLS

CETAC Hg Analysis Report - 10072000.DB - Tuesday, July 20, 2010, 4:18:31 PM

Analyst	M SMITH
Date Started	Tuesday, July 20, 2010, 13:19:46
Worksheet	Hg 072010A
Comment	K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	20-Jul-2010, 13:19	0.00	0.73	204.00	203	203	206	204	
Standard #1	20-Jul-2010, 13:21	0.20	1.93	1050.00	1039	1069	1057	1022	
Standard #2	20-Jul-2010, 13:23	0.50	0.75	2420.00	2440	2422	2408	2399	
Standard #3	20-Jul-2010, 13:25	1.00	0.14	4640.00	4634	4643	4650	4645	
Standard #4	20-Jul-2010, 13:26	5.00	0.98	25600.00	25266	25520	25763	25811	
Standard #5	20-Jul-2010, 13:28	10.00	0.47	50200.00	50061	49958	50433	50384	

Calibration Data



Int.	0.000
Slope	5036.818
Correlation	0.99990

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICV1	20-Jul-2010, 13:30	5.39	0.39	27100.00	27087	27196	27222	26990	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICB1	20-Jul-2010, 13:32	-0.02	4.20	-85.80	-85	-84	-84	-91	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV1	20-Jul-2010, 13:33	4.93	1.02	24800.00	25139	24945	24702	24570	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB1	20-Jul-2010, 13:35	-0.03	0.76	-126.00	-127	-125	-127	-126	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CRA1	20-Jul-2010, 13:37	0.17	2.13	858.00	839	846	866	879	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006702-MB	20-Jul-2010, 13:39	-0.01	7.68	-66.10	-71	-60	-64	-70	
LCSS K1006702 1/10	20-Jul-2010, 13:40	3.86	1.05	19500.00	19276	19332	19500	19731	
K1006702-001	20-Jul-2010, 13:42	0.57	0.45	2880.00	2857	2876	2883	2884	
K1006702-001A	20-Jul-2010, 13:57	5.26	0.26	26500.00	26416	26459	26571	26526	
K1006702-001D	20-Jul-2010, 13:59	0.56	1.26	2800.00	2765	2801	2851	2801	
K1006702-001S	20-Jul-2010, 14:02	6.27	5.57	31600.00	29080	31610	33075	32471	
K1006777-001	20-Jul-2010, 14:04	0.23	1.00	1140.00	1130	1152	1140	1127	
K1006777-002	20-Jul-2010, 14:06	0.11	1.76	531.00	521	528	533	543	
K1006777-003	20-Jul-2010, 14:07	0.16	1.07	799.00	788	799	800	809	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV2	20-Jul-2010, 14:09	5.02	0.55	25300.00	25244	25284	25173	25498	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB2	20-Jul-2010, 14:11	-0.03	1.00	-133.00	-134	-133	-131	-132	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006777-004	20-Jul-2010, 14:13	0.25	0.34	1250.00	1255	1248	1245	1246	
K1006777-005	20-Jul-2010, 14:14	0.16	0.59	809.00	802	812	813	810	
K1006777-005D	20-Jul-2010, 14:16	0.16	0.34	782.00	782	786	781	780	
K1006777-005S	20-Jul-2010, 14:18	4.86	0.40	24500.00	24355	24393	24519	24561	
K1006777-006	20-Jul-2010, 14:20	0.15	1.03	734.00	725	732	743	737	

Analyst M SMITH
Date Started Tuesday, July 20, 2010, 14:21:57
Worksheet Hg 072010A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006777-007	20-Jul-2010, 14:21	0.20	0.66	1030.00	1017	1031	1030	1031	
K1006777-009	20-Jul-2010, 14:23	0.13	4.78	654.00	621	637	669	690	
K1006777-010	20-Jul-2010, 14:25	0.09	2.66	477.00	458	485	483	483	
K1006777-011	20-Jul-2010, 14:27	0.10	0.67	489.00	489	493	489	485	
K1006777-012	20-Jul-2010, 14:29	0.29	0.33	1480.00	1472	1479	1484	1477	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV3	20-Jul-2010, 14:30	5.00	0.25	25200.00	25123	25191	25272	25222	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB3	20-Jul-2010, 14:32	-0.02	1.57	-78.10	-79	-78	-79	-76	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006777-013	20-Jul-2010, 14:34	0.16	5.85	792.00	732	781	821	835	
K1006777-014	20-Jul-2010, 14:36	0.11	1.47	529.00	520	525	535	536	
K1006777-015	20-Jul-2010, 14:37	0.17	0.18	844.00	842	845	844	844	
K1006777-016	20-Jul-2010, 14:39	0.11	0.86	539.00	540	544	540	533	
K1006777-017	20-Jul-2010, 14:41	0.19	0.90	946.00	937	949	956	943	
~~K1006895-005 1/2~~	~~20-Jul-2010, 14:43~~	~~0.12~~	~~2.26~~	~~584.00~~	~~564~~	~~587~~	~~592~~	~~592~~ MS 7/20/10	
K1007084-001 1/2	20-Jul-2010, 14:45	3.54	7.64	17800.00	15820	18153	18662	18681	
~~K1007325-001~~	20-Jul-2010, 14:46	4.05	0.30	20400.00	20309	20368	20456	20399	
K1007325-001D	~~20-Jul-2010, 14:48~~	~~7.53~~	~~0.59~~	37900.00	38051	38094	37875	37603	
K1007325-001S	20-Jul-2010, 14:51	10.20	0.95	~~51300.00~~	~~50664~~	51312	51850	51253	O

MS 7/20/10

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV4	20-Jul-2010, 14:53	5.02	1.40	25300.00	25664	25440	25193	24840	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB4	20-Jul-2010, 14:55	-0.02	2.73	-80.90	-80	-78	-83	-82	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006895-001	20-Jul-2010, 14:57	0.15	17.50	760.00	656	674	762	946	
K1007325-001 1/2	20-Jul-2010, 14:59	2.38	1.39	12000.00	12035	12188	12034	11783	
K1007325-001L 1/2+1/5	20-Jul-2010, 15:01	0.42	1.67	2120.00	2163	2127	2104	2080	
K1007325-001D 1/2	20-Jul-2010, 15:03	3.47	0.27	17500.00	17408	17447	17519	17482	
K1007325-001S1/2	20-Jul-2010, 15:05	5.17	0.44	26000.00	26169	26055	26032	25893	
~~K1007325-001D 1/2~~	~~20-Jul-2010, 15:08~~	~~3.47~~	~~0.32~~	~~17500.00~~	~~17391~~	~~17442~~	~~17510~~	~~17501~~	
K1007325-001L 1/2+1/5	20-Jul-2010, 15:20	0.40	0.71	2010.00	1987	2010	2019	2014 MS 7/20/10	
K1007325-001A 1/2	20-Jul-2010, 15:24	6.78	1.62	34200.00	33446	34152	34797	34231	
K1006639-MB	20-Jul-2010, 15:29	-0.01	15.80	-42.10	-43	-51	-40	-35	
LCSW K1006639	20-Jul-2010, 15:31	5.07	0.64	25500.00	25689	25668	25476	25349	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV5	20-Jul-2010, 15:33	5.10	1.52	25700.00	25247	25535	26051	26018	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB5	20-Jul-2010, 15:34	-0.02	7.07	-84.50	-77	-83	-91	-88	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006639-001	20-Jul-2010, 15:36	3.20	1.42	16100.00	15812	16134	16265	16324	
K1006639-001A	20-Jul-2010, 15:38	8.25	0.56	41500.00	41227	41497	41612	41782	
K1006639-001S	20-Jul-2010, 15:40	8.16	0.16	41100.00	41039	41147	41113	41197	
K1006639-001SD	20-Jul-2010, 15:43	7.48	2.63	37700.00	36873	37125	37522	39082	
K1006639-002	20-Jul-2010, 15:45	1.94	0.66	9750.00	9656	9747	9802	9782	
K1006639-003	20-Jul-2010, 15:47	1.40	0.68	7060.00	6989	7060	7079	7100	
K1006639-005	20-Jul-2010, 15:49	1.88	1.03	9470.00	9513	9437	9358	9584	
K1006639-006	20-Jul-2010, 15:51	1.46	0.60	7350.00	7285	7343	7384	7374	
K1006639-007	20-Jul-2010, 15:52	3.16	1.33	15900.00	15590	16050	15975	15999	
K1006639-009	20-Jul-2010, 15:54	4.22	0.18	21300.00	21216	21231	21288	21287	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV6	20-Jul-2010, 15:56	3.87	0.62	19500.00	19404	19439	19526	19675	Q
CCV6	20-Jul-2010, 15:58	4.92	0.28	24800.00	24833	24795	24733	24678	

CETAC Hg Analysis Report - 10072000.DB - Tuesday, July 20, 2010, 4:18:33 PM

Analyst M SMITH
Date Started Tuesday, July 20, 2010, 16:00:28
Worksheet Hg 072010A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB6	20-Jul-2010, 16:00	-0.02	2.82	-90.00	-91	-86	-92	-91	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K1006639-010	20-Jul-2010, 16:02	3.90	0.31	19700.00	19751	19651	19630	19618	
K1006639-011	20-Jul-2010, 16:04	1.68	0.25	8460.00	8438	8462	8485	8445	
K1006639-013	20-Jul-2010, 16:05	0.81	2.38	4070.00	4159	4155	4003	3976	
K1006639-014	20-Jul-2010, 16:07	2.49	0.24	12600.00	12520	12559	12593	12550	
K1006639-015	20-Jul-2010, 16:09	5.92	0.43	29800.00	29856	29900	29938	29652	
K1006639-017	20-Jul-2010, 16:11	1.53	0.50	7730.00	7673	7726	7751	7758	
K1006639-001L 1/5	20-Jul-2010, 16:13	0.59	0.99	2990.00	2950	2998	3015	3009	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV7	20-Jul-2010, 16:15	4.62	2.14	23300.00	23297	22849	22980	23963	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB7	20-Jul-2010, 16:17	-0.02	6.24	-78.80	-85	-81	-76	-74	

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115594
Team: Metals
Analyst: S. Patterson
Prep Workflow: HgDigS
Prep Method: Method
Rush/NPDES: NPDES
Status: Prepped
Current Step: Digestion
Prep Date: 07/19/2010 12:03
Due Date: 07/16/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1007079-03	Method Blank		0.562 g	Wet Weight	50 mL			Dry Weight
KQ1007079-04	Lab Control Sample		0.276 g	Wet Weight	50 mL			0.276
K1006702-001	T4 STS	.02	0.634 g	Wet Weight	50 mL			0.512
K1006702-001: KQ1007079-05	Duplicate	.02	0.642 g	Wet Weight	50 mL			0.518
K1006702-001: KQ1007079-06	Matrix Spike	.02	0.644 g	Wet Weight	50 mL	0.25 mL	19170	0.520
K1006777-001	BG-1 0-2 COMP	.01	0.561 g	Wet Weight	50 mL			0.507
K1006777-002	BG-1 2-12 COMP	.01	0.564 g	Wet Weight	50 mL			0.511
K1006777-003	BG-1 12-18 COMP	.01	0.592 g	Wet Weight	50 mL			0.507
K1006777-004	BG-2 0-2 COMP	.01	0.624 g	Wet Weight	50 mL			0.503
K1006777-005	BG-2 2-12 COMP	.04	0.670 g	Wet Weight	50 mL			0.519
K1006777-005: KQ1007079-07	Duplicate	.04	0.674 g	Wet Weight	50 mL			0.522
K1006777-005: KQ1007079-08	Matrix Spike	.04	0.676 g	Wet Weight	50 mL	0.25 mL	19170	0.524
K1006777-006	BG-2 12-18 COMP	.01	0.599 g	Wet Weight	50 mL			0.518
K1006777-007	BG-100 0-2 COMP	.01	0.554 g	Wet Weight	50 mL			0.505
K1006777-009	BG-3 0-2 COMP	.01	0.563 g	Wet Weight	50 mL			0.512
K1006777-010	BG-3 2-12 COMP	.01	0.576 g	Wet Weight	50 mL			0.501
K1006777-011	BG-3 12-18 COMP	.01	0.581 g	Wet Weight	50 mL			0.511
K1006777-012	BG-4 0-2 COMP	.01	0.606 g	Wet Weight	50 mL			0.521
K1006777-013	BG-4 2-12 COMP	.01	0.579 g	Wet Weight	50 mL			0.507
K1006777-014	BG-4 12-18 COMP	.01	0.561 g	Wet Weight	50 mL			0.512
K1006777-015	BG-6 0-2 COMP	.01	0.575 g	Wet Weight	50 mL			0.511
K1006777-016	BG-6 2-12 COMP	.01	0.579 g	Wet Weight	50 mL			0.504

K1006777-017	BG-6 12-18 COMP	.01	0.581 g	Wet Weight	50 mL			0.513
K1006895-005	Somat	.02	5.468 g	Wet Weight	50 mL			0.500
K1007084-001	114-1c-070810/126-1c-070810	.01	3.124 g	Wet Weight	50 mL			0.503
K1007325-001	MVC-DU1-Comp	.01	1.252 g	Wet Weight	50 mL			0.501
K1007325-001: KQ1007079-09	Duplicate	.01	1.258 g	Wet Weight	50 mL			0.503
K1007325-001: KQ1007079-01	Matrix Spike	.01	1.251 g	Wet Weight	50 mL	0.25 mL	19170	0.500

28 Total Samples consisting of 20 Client Samples, 6 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET HNO3	15193
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-01	Date Checked	07/19/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	19-JUL-10 12:03	19-JUL-10 12:50	S. Patterson		N	

Comments

Cal STD/CCV Source: HG1-93-V Cal STD/ICV Source: HG1-93-K Soil Spike 1000 ppb HG1-93-L ERA CLP Soil: D065540

Review

Reviewed by: JDB Date: 7/21/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115594 **Prep Workflow**: HgDigS **Status**: Draft **Prep Date**: 07/19/2010 09:40
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 07/16/2010
Analyst: MSMITH **Rush/NPDES**: NPDES

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1007079-03	Method Blank		0.5 g	0.502					Dry Weights
KQ1007079-04	Lab Control Sample		0.5 g	0.276					
K1006702-001	T4 STS	.02	0.62 g	0.634					0.512
K1006702-001: KQ1007079-05	Duplicate	.02	0.5 g	0.642					0.518
K1006702-001: KQ1007079-06	Matrix Spike	.02	0.5 g	0.644			0.25 mL	19170	0.520
K1006777-001	BG-1 0-2 COMP	.01	0.55 g	0.561					0.507
K1006777-002	BG-1 2-12 COMP	.01	0.55 g	0.564					0.511
K1006777-003	BG-1 12-18 COMP	.01	0.58 g	0.592					0.507
K1006777-004	BG-2 0-2 COMP	.01	0.62 g	0.624					0.503
K1006777-005	BG-2 2-12 COMP	.04	0.65 g	0.670					0.519
K1006777-005: KQ1007079-07	Duplicate	.04	0.5 g	0.674					0.522
K1006777-005: KQ1007079-08	Matrix Spike	.04	0.5 g	0.676			0.25 mL	19170	0.524
K1006777-006	BG-2 12-18 COMP	.01	0.58 g	0.599					0.518
K1006777-007	BG-100 0-2 COMP	.01	0.55 g	0.554					0.505
K1006777-009	BG-3 0-2 COMP	.01	0.55 g	0.563					0.512
K1006777-010	BG-3 2-12 COMP	.01	0.57 g	0.576					0.501
K1006777-011	BG-3 12-18 COMP	.01	0.57 g	0.581					0.511
K1006777-012	BG-4 0-2 COMP	.01	0.58 g	0.606					0.521
K1006777-013	BG-4 2-12 COMP	.01	0.57 g	0.579					0.507
K1006777-014	BG-4 12-18 COMP	.01	0.55 g	0.561					0.512
K1006777-015	BG-6 0-2 COMP	.01	0.56 g	0.575					0.511
K1006777-016	BG-6 2-12 COMP	.01	0.57 g	0.579					0.504
K1006777-017	BG-6 12-18 COMP	.01	0.57 g	0.581					0.513

K1006895-005	Somat	.02	5.46 g	5.468					0.500
K1007084-001	114-1c-070810/126-1c-070810	.01	3.11 g	3.124					0.503
K1007325-001	MVC-DU1-Comp	.01	1.25 g	1.252					0.501
K1007325-001: KQ1007079-09	Duplicate	.01	0.5 g	1.258					0.503
K1007325-001: KQ1007079-01	Matrix Spike	.01	0.5 g	1.25			0.25 mL	19170	0.500

28 Total Samples consisting of 20 Client Samples, 6 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET HNO3	15193
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value
Digestion	K-Balance-01	Date Checked	

Step	Name	Property	Value
Digestion	K-BlockDigester-03	Temperature	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	12:03pm 7-19-10	12:50pm	SPatterson			

Comments

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115593
Team: Metals
Analyst: S. Patterson
Prep Workflow: HgDigS
Prep Method: Method
Rush/NPDES: NPDES
Status: Prepped
Current Step: Digestion
Prep Date: 07/19/2010 14:24
Due Date: 07/24/2010

Lab Code	Client ID	Bottle #	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1007078-01	Method Blank		0.514 g	wet weight	50 mL			Dry Weight
KQ1007078-02	Lab Control Sample		0.511 g	wet weight	50 mL	0.25 mL	19170	
K1006639-001	C1-1	.01	1.143 g	wet weight	50 mL			0.502
K1006639-001: KQ1007078-03	Matrix Spike	.01	1.141 g	wet weight	50 mL	0.25 mL	19172	0.501
K1006639-001: KQ1007078-04	Duplicate Matrix Spike	.01	1.140 g	wet weight	50 mL	0.25 mL	19172	0.500
K1006639-002	C1-2	.01	1.212 g	wet weight	50 mL			0.508
K1006639-003	C1-3	.02	1.168 g	wet weight	50 mL			0.514
K1006639-005	C2-1	.01	1.331 g	wet weight	50 mL			0.518
K1006639-006	C2-2	.02	1.353 g	wet weight	50 mL			0.522
K1006639-007	C2-3	.01	1.194 g	wet weight	50 mL			0.511
K1006639-009	C3-1	.01	1.284 g	wet weight	50 mL			0.523
K1006639-010	C3-2	.01	1.203 g	wet weight	50 mL			0.506
K1006639-011	C3-3	.02	1.236 g	wet weight	50 mL			0.504
K1006639-013	C4-1	.02	1.105 g	wet weight	50 mL			0.509
K1006639-014	C4-2	.02	1.162 g	wet weight	50 mL			0.529
K1006639-015	C4-3	.01	1.171 g	wet weight	50 mL			0.522
K1006639-017	C-Dup1	.01	1.284 g	wet weight	50 mL			0.511

17 Total Samples consisting of 13 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Soil/TCLP 1000 ug/L	Spike	19172	8/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID

Digestion	K-MET HNO3	15193
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760

Digestion	K-MET SnCl Hg	18000
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-Balance-01	Date Checked	07/19/10	

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	19-JUL-10 14:24	19-JUL-10 15:00	S. Patterson		N	

Comments

Cal STD/CCV Source: HG1-93-V

Review

Reviewed by: JDB Date: 7/21/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115593 **Prep Workflow:** HgDigS **Status:** Draft **Prep Date:** 07/19/2010 09:23
Team: Metals **Prep Method:** Method **Current Step:** Digestion **Due Date:** 07/25/2010
Analyst: MSMITH **Rush/NPDES:** NPDES

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Initial Basis	Final Volume	Spike Amt	Spike ID	Comments
KQ1007078-01	Method Blank		0.5 g	0.514	Wet	50mL			Dry weights
KQ1007078-02	Lab Control Sample		0.5 g	0.511			0.25 mL	19170	
K1006639-001	C1-1	.01	0.5 g	1.143					0.502
K1006639-001: KQ1007078-03	Matrix Spike	.01	0.5 g	1.141			0.25 mL	19172	0.501
K1006639-001: KQ1007078-04	Duplicate Matrix Spike	.01	0.5 g	1.140			0.25 mL	19172	0.500
K1006639-002	C1-2	.01	0.5 g	1.212					0.508
K1006639-003	C1-3	.02	0.5 g	1.168					0.514
K1006639-005	C2-1	.01	0.5 g	1.331					0.518
K1006639-006	C2-2	.02	0.5 g	1.353					0.522
K1006639-007	C2-3	.01	0.5 g	1.194					0.511
K1006639-009	C3-1	.01	0.5 g	1.284					0.523
K1006639-010	C3-2	.01	0.5 g	1.203					0.506
K1006639-011	C3-3	.02	0.5 g	1.236					0.504
K1006639-013	C4-1	.02	0.5 g	1.105					0.509
K1006639-014	C4-2	.02	0.5 g	1.162					0.529
K1006639-015	C4-3	.01	0.5 g	1.171					0.522
K1006639-017	C-Dup1	.01	0.5 g	1.284					0.511

17 Total Samples consisting of 13 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Soil/TCLP 1000 ug/L	Spike	19172	8/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET HNO3	15193
Digestion	K-MET NACl Hg	15559
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET HCl Hg	19087

Preparation Hardware / Equipment

Step	Name	Property	Value
Digestion	K-Balance-01	Date Checked	

Step	Name	Property	Value
Digestion	K-BlockDigester-03	Temperature	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	7/9/10 ~~12:03~~ 2:24pm	3:08pm	Patterson			

Comments

Service Request # K1006777 (Soil)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits		✓
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 071610BICP02
Star Lims: 208725
Don't report Sn
QC SPIKE: 163% K
Mn, 36% RPD; V 30% RPD

Primary Review by 3C Date 7/16/10

Secondary Review by [signature] Date 7/16/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/16/10 09:20 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1511	.0097	.0069	.00005
Stddev	.0177	.0137	.0137	.00002
%RSD	11.73	141.4	198.0	46.512
#1	.1636	.0194	-.0028	.00006
#2	.1385	.0000	.0166	.00003

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00284	.3548	.0002	.3818
Stddev	.00024	.0159	.0000	.0223
%RSD	8.6038	4.476	2.434	5.847
#1	-.00266	.3660	.0002	.3660
#2	-.00301	.3435	.0002	.3976

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.0663	-.0002	.0006	.0235
Stddev	.0587	.0001	.0002	.0020
%RSD	88.40	28.96	33.19	8.303
#1	-.1078	-.0001	.0007	.0221
#2	-.0249	-.0002	.0004	.0249

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0015	.0008	.0002	.0055
Stddev	.0000	.0007	.0000	.0157
%RSD	2.213	88.40	3.718	282.7
#1	.0015	.0013	.0002	.0166
#2	.0015	.0003	.0002	-.0055

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.01935	.00108	.0000	.0003
Stddev	.01564	.00029	.0000	.0001
%RSD	80.822	27.189	46.47	41.95
#1	.03041	.00129	.0000	.0004
#2	.00829	.00087	.0000	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.1770	-.0374	.0249
Stddev	.0002	.2307	.0098	.0039
%RSD	141.4	130.4	26.13	15.70
#1	-.0003	.3401	-.0305	.0221
#2	.0000	.0138	-.0443	.0276

Sample Name: Blank Run Time: 07/16/10 09:20

Elem	Na5895	Sn1899	V 3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0047	.0004	.0082	.0003
Stddev	.0005	.0000	.0001	.0001
%RSD	11.59	5.901	1.020	40.81
#1	.0051	.0004	.0082	.0002
#2	.0043	.0004	.0083	.0004

Elem	P 2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0347	.1912	.00414	.0001
Stddev	.0373	.0040	.00026	.0000
%RSD	107.5	2.106	6.2425	16.41
#1	.0610	.1941	.00432	.0001
#2	.0083	.1884	.00396	.0002

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.06773	-.00171
Stddev	.05279	.00011
%RSD	77.939	6.6134
#1	.10506	-.00163
#2	.03040	-.00179

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	175.50
Stddev	1.34
%RSD	.76562
#1	176.45
#2	174.55

7/16/10

7/16/10

Method: 2010A Sample Name: STDB ICPM-411-B Operator:
Comment:
Run Time: 07/16/10 09:23 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.36	3.4423	.53175	40.47
Stddev	.06	.0324	.00177	.34
%RSD	.3186	.94075	.33377	.8315
#1	20.31	3.4194	.53300	40.23
#2	20.40	3.4652	.53049	40.70

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.8630	58.83	.7825	196.3
Stddev	.0043	.33	.0016	.0
%RSD	.4992	.5605	.2027	.0028
#1	.8599	58.60	.7814	196.3
#2	.8660	59.07	.7836	196.3

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.407	47.23	99.12	361.54
Stddev	.011	.18	.51	.94
%RSD	.2443	.3827	.5110	.25986
#1	4.414	47.10	98.77	362.20
#2	4.399	47.36	99.48	360.87

Elem	Sr4077
Line	407.771 { 82}
Avg	9.1932
Stddev	.0046
%RSD	.04960
#1	9.1900
#2	9.1964

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	173.17
Stddev	.15
%RSD	.08918
#1	173.06
#2	173.28

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/16/10 09:26 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	17.16	11.73	48.00	.3449
Stddev	.10	.07	.14	.0003
%RSD	.5706	.5591	.3017	.0980
#1	17.09	11.69	47.90	.3446
#2	17.23	11.78	48.10	.3451

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	35.08	.1378	.2247	18.00
Stddev	.21	.0000	.0004	.04
%RSD	.5968	.0092	.1613	.2058
#1	34.93	.1378	.2249	18.03
#2	35.23	.1378	.2244	17.97

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4871	.1101	1522.7	3.6195
Stddev	.0058	.0002	1.5	.0094
%RSD	1.182	.1960	.10129	.26031
#1	.4912	.1102	1521.6	3.6261
#2	.4830	.1099	1523.8	3.6128

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1790	.2055	11.14	19.23
Stddev	.0022	.0006	.02	.02
%RSD	1.211	.3147	.1580	.1225
#1	.1775	.2050	11.12	19.22
#2	.1805	.2059	11.15	19.25

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.1079	.1742	.1846	.19654
Stddev	.0002	.0005	.0013	.00100
%RSD	.2141	.2982	.6873	.50932
#1	.1081	.1745	.1855	.19725
#2	.1078	.1738	.1837	.19584

Elem	Tl1908
Line	190.864 {176}
Avg	.0916
Stddev	.0002
%RSD	.1731
#1	.0915
#2	.0918

Sample Name: STDA Run Time: 07/16/10 09:26

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	176.14
Stddev	.12
%RSD	.06932
#1	176.06
#2	176.23

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 07/16/10 09:29 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.135	2.480	2.513	5.1596	.12581	.0047
Stddev	.001	.007	.023	.0186	.00016	.0003
%RSD	.0235	.2828	.9182	.36050	.12861	6.611
#1	5.134	2.485	2.496	5.1464	.12570	.0044
#2	5.136	2.475	2.529	5.1727	.12593	.0049
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	5.000%	5.000%	5.000%	5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.238	12.61	.5062	1.241	.6242	2.533
Stddev	.006	.08	.0059	.004	.0074	.066
%RSD	.4546	.6250	1.173	.2810	1.186	2.619
#1	1.234	12.55	.5020	1.238	.6294	2.580
#2	1.242	12.66	.5104	1.243	.6189	2.486
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	12.65	1.1923	1.992	1.237	12.91
Stddev	.008	.02	.0026	.017	.007	.06
%RSD	.3106	.1228	.21554	.8494	.5418	.4969
#1	2.465	12.66	1.1905	1.980	1.232	12.96
#2	2.476	12.64	1.1942	2.004	1.242	12.87
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	5.000%	5.000%	5.0000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.487	.6290	12.53	.0094	1.247	1.244
Stddev	.006	.0140	.05	.0018	.002	.008
%RSD	.2512	2.232	.4008	19.45	.1795	.6704
#1	2.483	.6190	12.57	.0107	1.246	1.238
#2	2.492	.6389	12.50	.0081	1.249	1.250
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 07/16/10 09:29

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0402	-.1370	2.0084	2.510	.00054	.00671
Stddev	.0043	.0007	.0036	.006	.00022	.00005
%RSD	10.81	.5186	.17811	.2578	41.414	.75505
#1	-.0433	-.1365	2.0059	2.505	.00069	.00675
#2	-.0371	-.1375	2.0109	2.514	.00038	.00668
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	175.91
Stddev	.15
%RSD	.08428
#1	175.80
#2	176.01

Method: 2010A Sample Name: ICVB1 ICP7-56-C Operator:
Comment:
Run Time: 07/16/10 09:32 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.027	.0158	-.0005	.00501	.00018	1.987
Stddev	.008	.0217	.0021	.00074	.00002	.005
%RSD	.7583	137.7	389.0	14.824	8.4887	.2635
#1	1.021	.0311	-.0020	.00554	.00017	1.984
#2	1.032	.0004	.0009	.00449	.00019	1.991
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	5.173	.0037	.0012	.0023	9.902
Stddev	.0003	.037	.0001	.0006	.0002	.138
%RSD	20.47	.7185	3.044	54.06	9.768	1.394
#1	.0018	5.147	.0038	.0016	.0021	9.804
#2	.0014	5.199	.0036	.0007	.0024	10.000
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	4.9422	9.984	.0131	.0021	.0551
Stddev	.0015	.0016	.029	.0066	.0000	.0193
%RSD	155.1	.03300	.2878	50.84	.5569	35.08
#1	.0020	4.9433	9.964	.0178	.0021	.0414
#2	-.0001	4.9410	10.00	.0084	.0021	.0688
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		5.0000%	5.000%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	-.0001	.0781	4.867	.0043	.0054
Stddev	.0061	.0004	.0022	.041	.0003	.0005
%RSD	51.87	292.9	2.779	.8423	6.415	9.726
#1	.0161	.0002	.0766	4.838	.0041	.0051
#2	.0075	-.0004	.0797	4.896	.0045	.0058
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVB1 Run Time: 07/16/10 09:32

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.051	5.153	.00503	.0167	2.0736	2.0163
Stddev	.029	.017	.00019	.0156	.0051	.0056
%RSD	.5643	.3324	3.6840	93.48	.24384	.27883
#1	5.031	5.141	.00490	.0278	2.0701	2.0123
#2	5.071	5.165	.00516	.0057	2.0772	2.0202
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	176.97
Stddev	.47
%RSD	.26700
#1	177.30
#2	176.63

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/16/10 09:35 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	.0004	-.0012	.00010	.00006	.0020
Stddev	.0000	.0057	.0075	.00037	.00002	.0004
%RSD	.0539	1398.	637.2	372.55	36.659	21.83
#1	.0103	-.0036	-.0065	.00036	.00007	.0017
#2	.0103	.0044	.0041	-.00016	.00004	.0023
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0014	.0013	-.0006	.0017	.0036
Stddev	.0002	.0019	.0017	.0005	.0025	.0046
%RSD	173.9	141.6	133.3	79.47	147.7	127.4
#1	.0003	.0028	.0001	-.0009	-.0001	.0068
#2	.0000	.0000	.0025	-.0003	.0035	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.00016	.00079	.0008	.0004	.0168
Stddev	.0010	.00010	.00100	.0001	.0012	.0070
%RSD	76.96	59.756	126.96	9.517	288.5	41.56
#1	.0021	.00023	.00149	.0008	.0012	.0119
#2	.0006	.00009	.00008	.0007	-.0004	.0217
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0001	.0203	.0054	.0041	.0015
Stddev	.0044	.0004	.0029	.0077	.0036	.0011
%RSD	29.47	280.7	14.19	141.7	86.06	73.20
#1	.0118	-.0004	.0183	.0108	.0016	.0023
#2	.0180	.0001	.0223	.0000	.0066	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: ICB Run Time: 07/16/10 09:35

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0087	-.0009	.00253	-.0121	.00012	.00014
Stddev	.0039	.0006	.00063	.0074	.00053	.00002
%RSD	45.50	61.65	24.949	61.25	447.03	17.016
#1	-.0059	-.0005	.00298	-.0173	-.00026	.00015
#2	-.0115	-.0013	.00209	-.0068	.00049	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.84
Stddev	.32
%RSD	.18360
#1	173.61
#2	174.06

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 09:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.067	.0158	.0076	2.4872	.05101	.0087
Stddev	.029	.0079	.0094	.0076	.00046	.0005
%RSD	.5775	49.77	124.1	.30630	.90586	6.172
#1	5.045	.0148	.0198	2.4782	.05077	.0089
#2	5.041	.0132	-.0014	2.4836	.05063	.0094
#3	5.100	.0084	.0021	2.4927	.05099	.0083
#4	5.084	.0269	.0098	2.4943	.05167	.0083
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	5.000%			5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.20	.0027	-.0016	-.0006	25.45
Stddev	.0001	.25	.0012	.0006	.0017	.13
%RSD	8.541	.9869	46.03	34.43	288.3	.4943
#1	.0012	24.85	.0028	-.0014	.0015	25.29
#2	.0012	25.20	.0038	-.0019	-.0020	25.42
#3	.0010	25.42	.0031	-.0023	.0001	25.49
#4	.0010	25.33	.0009	-.0010	-.0020	25.59
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	25.11	5.077	-.0003	-.0017	10.10
Stddev	.0108	.19	.022	.0004	.0003	.02
%RSD	141.2	.7702	.4338	124.3	18.96	.1859
#1	-.0027	24.85	5.050	.0002	-.0019	10.10
#2	-.0045	25.25	5.071	-.0003	-.0020	10.11
#3	.0002	25.26	5.087	-.0005	-.0017	10.07
#4	-.0236	25.10	5.102	-.0007	-.0013	10.11
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		5.000%	5.000%			5.000%

Sample Name: CCVB Run Time: 07/16/10 09:39

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0099	.0001	10.04	.0041	.0045	.0024
Stddev	.0060	.0025	.04	.0047	.0016	.0015
%RSD	60.57	3689.	.3869	113.2	35.36	61.63
#1	.0148	-.0022	10.05	.0019	.0028	.0026
#2	.0012	.0001	10.08	-.0007	.0035	.0028
#3	.0124	-.0013	9.991	.0102	.0055	.0004
#4	.0111	.0036	10.04	.0050	.0061	.0040
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			5.000%			

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.979	2.511	.00427	.0276	.50464	.51185
Stddev	.030	.006	.00029	.0105	.00224	.00113
%RSD	.2967	.2362	6.7612	37.88	.44363	.22114
#1	9.975	2.502	.00400	.0249	.50466	.51095
#2	10.02	2.513	.00415	.0425	.50701	.51236
#3	9.947	2.514	.00467	.0180	.50163	.51088
#4	9.977	2.515	.00427	.0251	.50525	.51320
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	172.13
Stddev	.36
%RSD	.21149
#1	172.29
#2	172.41
#3	172.23
#4	171.60

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 09:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4741	2.453	2.408	.45815	.53409	.4977
Stddev	.0173	.013	.004	.00162	.00140	.0006
%RSD	3.654	.5456	.1713	.35265	.26130	.1129
#1	.4594	2.469	2.413	.45701	.53395	.4978
#2	.4923	2.446	2.409	.46014	.53510	.4982
#3	.4592	2.438	2.406	.45668	.53216	.4978
#4	.4856	2.459	2.404	.45879	.53514	.4969
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		5.000%	5.000%			5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4872	2.490	.4876	.4888	.4948	.4891
Stddev	.0023	.012	.0026	.0047	.0029	.0021
%RSD	.4751	.4943	.5434	.9527	.5767	.4199
#1	.4864	2.490	.4844	.4870	.4925	.4894
#2	.4906	2.491	.4909	.4958	.4990	.4915
#3	.4856	2.475	.4873	.4864	.4939	.4865
#4	.4861	2.505	.4879	.4861	.4939	.4892
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.430	2.0513	.95032	.9808	.4900	5.134
Stddev	.016	.0053	.00418	.0045	.0037	.027
%RSD	.6489	.25797	.43974	.4601	.7573	.5314
#1	2.427	2.0448	.94853	.9819	.4871	5.174
#2	2.445	2.0502	.95588	.9864	.4929	5.117
#3	2.439	2.0527	.94608	.9758	.4866	5.132
#4	2.409	2.0575	.95079	.9791	.4936	5.115
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	5.000%	5.0000%	5.0000%	5.000%	5.000%	

Sample Name: CCVA Run Time: 07/16/10 09:49

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4905	2.414	.4917	.4883
Stddev	.012	.0032	.0055	.022	.0044	.0013
%RSD	.4936	.6470	1.128	.9186	.8950	.2692
#1	2.423	.4956	.4935	2.416	.4867	.4867
#2	2.433	.4970	.4851	2.441	.4969	.4898
#3	2.418	.4907	.4968	2.387	.4899	.4887
#4	2.404	.4979	.4867	2.409	.4932	.4878
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	5.000%	5.000%		5.000%	5.000%	5.000%

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0381	.2905	.48907	4.850	.51560	.50227
Stddev	.0082	.0025	.00483	.012	.00227	.00103
%RSD	21.44	.8483	.98725	.2533	.43937	.20557
#1	-.0439	.2876	.48241	4.865	.51604	.50204
#2	-.0399	.2913	.48879	4.838	.51353	.50181
#3	-.0261	.2934	.49167	4.843	.51860	.50377
#4	-.0426	.2896	.49339	4.854	.51422	.50144
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.36
Stddev	.44
%RSD	.24721
#1	178.39
#2	177.79
#3	178.87
#4	178.37

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 09:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0075	.0093	-.0006	.00015	.00007
Stddev	.0117	.0057	.0084	.00002	.00001
%RSD	154.8	61.80	1417.	16.005	12.520
#1	.0007	.0133	-.0065	.00017	.00008
#2	-.0158	.0052	.0053	.00013	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0002	-.0055	.0008	-.0006
Stddev	.0003	.0001	.0011	.0002	.0010
%RSD	24.74	79.39	20.30	32.21	162.0
#1	.0014	-.0003	-.0063	.0009	.0001
#2	.0010	-.0001	-.0047	.0006	-.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0004	.0013	.00015	.00052
Stddev	.0008	.0001	.0013	.00002	.00000
%RSD	49.45	28.61	100.8	13.514	.45673
#1	.0010	.0005	.0004	.00017	.00053
#2	.0021	.0004	.0022	.00014	.00052
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0015	.0008	.0028	.0068	.0003
Stddev	.0024	.0011	.0040	.0140	.0006
%RSD	155.9	127.7	141.1	205.9	211.9
#1	.0032	.0001	.0000	.0167	-.0001
#2	-.0002	.0016	.0056	-.0031	.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 09:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.0052	.0027	.0020	.0078
Stddev	.0009	.0061	.0008	.0013	.0026
%RSD	13.86	116.9	30.98	63.80	33.02
#1	.0059	.0096	.0021	.0029	.0059
#2	.0072	.0009	.0033	.0011	.0096
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.00175	-.0120	.00022	.00013
Stddev	.0012	.00041	.0000	.00003	.00011
%RSD	50.39	23.571	.0070	12.117	81.533
#1	-.0016	.00204	-.0120	.00020	.00021
#2	-.0033	.00145	-.0120	.00024	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	172.29
Stddev	.36
%RSD	.20910
#1	172.03
#2	172.54

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/16/10 09:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0454	.0475	.0766	.00502	.00475	.0503
Stddev	.0088	.0017	.0029	.00012	.00008	.0003
%RSD	19.29	3.616	3.804	2.3534	1.6790	.6351
#1	.0516	.0487	.0745	.00510	.00469	.0500
#2	.0392	.0463	.0786	.00494	.00481	.0505
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0517	.0057	.0086	.0106	.0244
Stddev	.0009	.0053	.0002	.0003	.0021	.0002
%RSD	19.56	10.25	3.523	3.841	19.51	.6377
#1	.0051	.0480	.0058	.0084	.0091	.0243
#2	.0038	.0555	.0055	.0088	.0121	.0245
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0432	.01931	.00484	.0092	.0196	.4180
Stddev	.0089	.00006	.00004	.0004	.0015	.0151
%RSD	20.68	.30475	.82107	4.002	7.572	3.619
#1	.0369	.01935	.00487	.0094	.0185	.4073
#2	.0495	.01926	.00482	.0089	.0206	.4287
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0788	.0075	.2170	.0387	.0106	.0108
Stddev	.0053	.0010	.0012	.0075	.0003	.0017
%RSD	6.693	13.64	.5425	19.40	3.229	15.99
#1	.0825	.0068	.2178	.0440	.0104	.0096
#2	.0750	.0082	.2161	.0334	.0109	.0121
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/16/10 09:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1826	.4003	.01126	.1461	.01011	.00955
Stddev	.0003	.0045	.00097	.0013	.00005	.00001
%RSD	.1540	1.128	8.5901	.9074	.49316	.10288
#1	.1828	.3971	.01058	.1452	.01015	.00956
#2	.1824	.4035	.01195	.1471	.01008	.00954
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.27
Stddev	.14
%RSD	.08174
#1	175.37
#2	175.17

Method: 2010A Sample Name: ICSA ICP764-B Operator:
Comment:
Run Time: 07/16/10 10:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	.0458	-.0015	-.00032	.00012	.0233
Stddev	1.5	.0006	.0232	.00020	.00008	.0019
%RSD	.2919	1.207	1553.	63.196	65.547	8.378
#1	503.2	.0455	.0149	-.00047	.00017	.0219
#2	505.2	.0462	-.0179	-.00018	.00006	.0246
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091	495.6	-.0003	-.0011	.0013	197.8
Stddev	.0007	3.6	.0002	.0002	.0014	.0
%RSD	7.723	.7265	50.36	20.40	105.1	.0020
#1	.0086	493.1	-.0002	-.0009	.0003	197.8
#2	.0096	498.2	-.0005	-.0013	.0023	197.8
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	516.5	.00334	.0029	-.0032	-.0361
Stddev	.0125	2.3	.00009	.0008	.0023	.0108
%RSD	6417.	.4440	2.6661	29.47	71.64	29.81
#1	.0091	514.9	.00328	.0035	-.0048	-.0437
#2	-.0087	518.1	.00341	.0023	-.0016	-.0285
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0254	.0007	.0611	-.0159	.0029	.0084
Stddev	.0124	.0004	.0011	.0156	.0008	.0011
%RSD	48.72	57.00	1.855	98.24	27.16	13.11
#1	.0166	.0010	.0619	-.0049	.0035	.0076
#2	.0341	.0004	.0603	-.0270	.0023	.0092
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/16/10 10:02

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	-.0186	.01410	.1130	.01358	.01489
Stddev	.0017	.0039	.00118	.0172	.00001	.00086
%RSD	6.897	20.79	8.3447	15.26	.11044	5.7891
#1	.0254	-.0159	.01493	.1252	.01359	.01550
#2	.0230	-.0213	.01327	.1008	.01357	.01428
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.23
Stddev	.23
%RSD	.14471
#1	160.07
#2	160.40

Method: 2010A Sample Name: ICSAB ICP7618 Operator:
Comment:
Run Time: 07/16/10 10:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	500.7	1.028	-.0059	.45165	.52762	.0269
Stddev	3.4	.015	.0088	.00281	.00080	.0017
%RSD	.6784	1.491	149.4	.62165	.15243	6.467
#1	498.3	1.018	.0003	.44966	.52706	.0281
#2	503.1	1.039	-.0121	.45364	.52819	.0256
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9298	494.8	.4712	.4648	.4603	192.9
Stddev	.0066	1.2	.0013	.0034	.0058	1.8
%RSD	.7068	.2526	.2859	.7259	1.252	.9585
#1	.9252	493.9	.4702	.4624	.4644	191.6
#2	.9345	495.7	.4721	.4672	.4562	194.2
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9477	515.0	.43614	.0013	.9086	-.0740
Stddev	.0230	2.0	.00328	.0015	.0058	.0273
%RSD	2.427	.3901	.75319	115.3	.6356	36.89
#1	.9314	513.6	.43382	.0002	.9045	-.0933
#2	.9640	516.5	.43846	.0023	.9127	-.0547
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0325	.9556	.0219	-.0112	.4886	.9021
Stddev	.0187	.0070	.0030	.0013	.0068	.0000
%RSD	57.59	.7362	13.56	11.81	1.388	.0034
#1	.0193	.9606	.0198	-.0103	.4838	.9021
#2	.0458	.9506	.0240	-.0121	.4934	.9021
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	-.0196	.01449	.1134	.01330	.01509
Stddev	.0015	.0015	.00139	.0349	.00030	.00009
%RSD	120.0	7.646	9.6152	30.80	2.2760	.57856
#1	-.0023	-.0185	.01351	.1381	.01309	.01503
#2	-.0002	-.0206	.01548	.0887	.01352	.01515
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	162.65
Stddev	.48
%RSD	.29211
#1	162.98
#2	162.31

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/16/10 10:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.2	1.040	-.0113	.46135	.53582	.0233
Stddev	.3	.005	.0102	.00058	.00183	.0031
%RSD	.0628	.4386	90.77	.12540	.34084	13.29
#1	504.0	1.043	-.0040	.46094	.53712	.0255
#2	504.5	1.037	-.0185	.46176	.53453	.0211
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9469	497.0	.4814	.4713	.4693	197.3
Stddev	.0046	3.1	.0001	.0045	.0014	1.5
%RSD	.4908	.6307	.0202	.9557	.3029	.7546
#1	.9436	494.8	.4815	.4681	.4703	196.2
#2	.9502	499.2	.4814	.4745	.4683	198.3
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9623	515.9	.44586	-.0022	.9284	-.0468
Stddev	.0146	3.9	.00050	.0005	.0006	.0000
%RSD	1.518	.7597	.11256	21.26	.0667	.0112
#1	.9520	518.6	.44551	-.0019	.9279	-.0468
#2	.9727	513.1	.44622	-.0025	.9288	-.0468
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0361	.9571	.0192	-.0090	.4968	.9173
Stddev	.0019	.0028	.0002	.0020	.0082	.0088
%RSD	5.173	.2929	1.218	22.74	1.654	.9541
#1	.0348	.9551	.0191	-.0104	.5026	.9111
#2	.0374	.9591	.0194	-.0076	.4910	.9234
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/16/10 10:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	-.0170	.01303	.1197	.01304	.01584
Stddev	.0271	.0060	.00397	.0109	.00022	.00045
%RSD	1182.	35.52	30.453	9.123	1.6844	2.8688
#1	-.0215	-.0213	.01023	.1274	.01319	.01616
#2	.0169	-.0127	.01584	.1120	.01288	.01552
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	160.52
Stddev	.41
%RSD	.25788
#1	160.23
#2	160.81

EC 7/16/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.082	.0087	.0044	2.4549	.05063	.0100
Stddev	.071	.0017	.0067	.0118	.00004	.0004
%RSD	1.392	19.11	150.4	.48018	.07161	3.560
#1	5.132	.0099	.0092	2.4465	.05066	.0103
#2	5.032	.0075	-.0003	2.4632	.05060	.0098
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	25.21	.0028	-.0015	-.0003	24.95
Stddev	.0008	.06	.0014	.0003	.0021	.12
%RSD	70.55	.2424	50.83	19.08	781.6	.4828
#1	.0017	25.17	.0038	-.0013	.0012	24.87
#2	.0006	25.26	.0018	-.0017	-.0017	25.04
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0030	25.46	4.997	-.0028	-.0014	10.06
Stddev	.0018	.19	.045	.0012	.0003	.01
%RSD	58.58	.7583	.9019	42.65	24.75	.1187
#1	-.0018	25.60	4.965	-.0036	-.0016	10.07
#2	-.0042	25.33	5.028	-.0019	-.0011	10.05
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0001	9.824	.0047	.0053	.0031
Stddev	.0018	.0004	.048	.0025	.0001	.0011
%RSD	15.77	293.1	.4901	53.24	1.115	34.16
#1	.0123	-.0001	9.790	.0029	.0053	.0039
#2	.0099	.0004	9.858	.0064	.0052	.0024
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.08	2.532	.00450	.0147	.50632	.50398
Stddev	.00	.010	.00016	.0157	.00026	.00350
%RSD	.0183	.3991	3.6208	106.5	.05213	.69421
#1	10.08	2.539	.00438	.0259	.50613	.50150
#2	10.08	2.525	.00461	.0036	.50650	.50645
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	175.61
Stddev	1.11
%RSD	.63334
#1	176.40
#2	174.82

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4894	2.406	2.426	.46016	.53833	.4951
Stddev	.0154	.002	.014	.00200	.00027	.0020
%RSD	3.148	.0969	.5713	.43467	.04999	.3964
#1	.5003	2.404	2.416	.45874	.53852	.4937
#2	.4785	2.408	2.435	.46157	.53814	.4965
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4883	2.490	.4889	.4904	.4958	.5058
Stddev	.0002	.014	.0029	.0013	.0009	.0089
%RSD	.0425	.5480	.5986	.2608	.1743	1.769
#1	.4881	2.499	.4868	.4913	.4952	.5121
#2	.4884	2.480	.4910	.4895	.4964	.4995
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.429	2.0626	.94991	.9708	.4898	5.067
Stddev	.001	.0034	.00680	.0091	.0010	.032
%RSD	.0451	.16291	.71607	.9346	.1972	.6366
#1	2.429	2.0602	.94510	.9644	.4892	5.045
#2	2.430	2.0650	.95472	.9773	.4905	5.090
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	.4953	.4809	2.429	.4971	.4911
Stddev	.015	.0041	.0061	.001	.0004	.0030
%RSD	.6359	.8217	1.260	.0549	.0904	.6157
#1	2.409	.4924	.4766	2.430	.4968	.4889
#2	2.431	.4982	.4852	2.428	.4975	.4932
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0327	.2902	.49291	4.788	.51238	.50477
Stddev	.0153	.0004	.00209	.015	.00070	.00076
%RSD	46.90	.1525	.42322	.3187	.13758	.15093
#1	-.0219	.2899	.49144	4.777	.51188	.50531
#2	-.0436	.2905	.49439	4.799	.51288	.50423
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	177.72
Stddev	.54
%RSD	.30510
#1	177.33
#2	178.10

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	.0165	.0041	.00005	.00007	.0015
Stddev	.0019	.0046	.0067	.00031	.00006	.0003
%RSD	24.97	27.76	161.6	610.78	84.271	21.68
#1	.0062	.0197	-.0006	.00027	.00011	.0018
#2	.0089	.0132	.0089	-.00017	.00003	.0013
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0002	.0010	-.0006	-.0008	.0027
Stddev	.0003	.0025	.0016	.0003	.0011	.0015
%RSD	453.6	1259.	155.8	51.53	129.1	53.07
#1	.0003	.0020	.0021	-.0004	-.0001	.0038
#2	-.0001	-.0016	-.0001	-.0008	-.0016	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.00044	.00079	.0009	.0007	.0128
Stddev	.0023	.00004	.00012	.0017	.0004	.0038
%RSD	474.4	9.3437	15.468	182.0	57.59	29.70
#1	-.0011	.00041	.00087	.0021	.0004	.0155
#2	.0021	.00046	.00070	-.0003	.0009	.0101
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0009	-.0038	.0063	.0024	.0000
Stddev	.0000	.0006	.0043	.0077	.0013	.003
%RSD	.1319	70.37	114.0	123.0	54.92	6057.
#1	.0056	-.0013	-.0068	.0117	.0034	-.0019
#2	.0056	-.0004	-.0007	.0008	.0015	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 10:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	-.0012	.00189	.0063	.00050	.00025
Stddev	.0041	.0026	.00136	.0061	.00010	.00001
%RSD	52.74	214.9	71.771	96.95	20.766	3.4199
#1	-.0106	-.0030	.00093	.0020	.00057	.00025
#2	-.0048	.0006	.00285	.0107	.00042	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.02
Stddev	.26
%RSD	.15301
#1	172.83
#2	173.21

Method: 2010A Sample Name: K1006615-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	-.0053	.0044	-.00013	.00010	.0014
#1	-.0007	-.0037	-.0030	-.00020	.00016	.0011
#2	.0089	-.0068	.0118	-.00007	.00003	.0017

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0059	.0002	-.0013	.0012	.0064
#1	.0001	.0031	.0011	-.0016	.0005	.0069
#2	.0006	.0087	-.0007	-.0011	.0019	.0060

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.00045	.00009	-.0015	.0000	.0240
#1	.0024	.00021	.00000	-.0021	.0004	.0240
#2	.0143	.00069	.00018	-.0010	-.0004	.0240

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0010	-.0019	.0107	-.0001	.0026
#1	.0093	-.0007	-.0023	.0130	-.0003	.0009
#2	.0217	-.0013	-.0015	.0084	.0001	.0043

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	.0047	.00165	-.0016	.00018	.00012
#1	.0159	.0042	.00082	.0002	.00029	.00017
#2	.0190	.0053	.00248	-.0034	.00006	.00008

Int. Std.	Sc3572
Units	Cts/S
Avg	174.26
#1	173.70
#2	174.81

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 K1006615 (208725) (071610B)
Run Time: 07/16/10 10:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.48	.5328	.4510	2.2625	.33853	.5651
#1	46.36	.5320	.4554	2.2615	.33827	.5632
#2	46.60	.5336	.4465	2.2636	.33878	.5669

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4587	50.72	.7589	.9958	1.218	97.83
#1	.4583	50.36	.7562	.9908	1.219	97.35
#2	.4591	51.07	.7617	1.001	1.218	98.31

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029	20.39	2.5512	.3146	1.010	21.57
#1	1.021	20.35	2.5422	.3133	1.006	21.55
#2	1.037	20.42	2.5603	.3160	1.013	21.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9892	.3948	3.444	.7082	.9429	1.466
#1	.9837	.3959	3.440	.7080	.9427	1.459
#2	.9947	.3936	3.448	.7085	.9432	1.473

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.389	10.62	2.4679	1.288	.04772	.76087
#1	4.361	10.59	2.4659	1.274	.04752	.76102
#2	4.417	10.66	2.4699	1.303	.04793	.76072

Int. Std.	Sc3572
Units	Cts/S
Avg	175.92
#1	176.03
#2	175.82

Method: 2010A Sample Name: K1006615-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.34	.0277	.0066	.50064	.00202	.0312
#1	44.23	.0221	-.0023	.49852	.00203	.0314
#2	44.44	.0334	.0154	.50276	.00202	.0309

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029 *	23.18	.0299	.0215	.0456	73.67
#1	.0028	23.03	.0298	.0220	.0443	73.48
#2	.0031	23.32	.0300	.0211	.0469	73.86

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	15.77	1.6685	.0015	.0124	11.82
#1	.0141	15.75	1.6808	.0009	.0128	11.85
#2	.0200	15.80	1.6561	.0022	.0120	11.80

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0003	1.052	.0234	.1718	.1196
#1	.0076	.0009	1.057	.0262	.1714	.1184
#2	-.0085	-.0014	1.046	.0205	.1722	.1207

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.608	9.924	2.5512	.0317	.04235	.24879
#1	2.599	9.872	2.5538	.0429	.04267	.24961
#2	2.617	9.975	2.5487	.0206	.04203	.24797

Int. Std.	Sc3572
Units	Cts/S
Avg	178.07
#1	177.57
#2	178.57

* $0.0029\ Cd - 73.67\ Fe \left(\frac{0.0041\ Cd}{197.8\ Fe} \right) = -0.0005\ Cd$

Method: 2010A Sample Name: K1006615-006D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:29 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.59	.0198	-.0021	.71640	.00209	.0314
#1	43.50	.0270	-.0001	.71378	.00209	.0309
#2	43.68	.0126	-.0042	.71901	.00208	.0320

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035 *	20.98	.0351	.0226	.0483	72.15
#1	.0033	20.81	.0354	.0233	.0501	72.23
#2	.0037	21.15	.0348	.0219	.0465	72.07

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0238	16.21	2.5676	.0011	.0121	12.06
#1	.0178	16.09	2.5667	.0021	.0118	12.07
#2	.0297	16.33	2.5685	.0001	.0125	12.05

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	-.0018	.9550	.0112	.1637	.1230
#1	.0261	-.0017	.9583	.0068	.1613	.1215
#2	.0112	-.0020	.9518	.0157	.1661	.1245

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.491	8.715	2.5083	.0262	.04372	.21948
#1	2.483	9.102	2.5160	.0169	.04392	.22062
#2	2.499	8.328	2.5007	.0355	.04352	.21833

Int. Std.	Sc3572
Units	Cts/S
Avg	178.39
#1	178.06
#2	178.72

* 0.00018 Cd

Method: 2010A Sample Name: K1006615-006L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 10:32 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.675	-.0049	-.0011	.09959	.00041	.0081
#1	8.635	.0020	-.0053	.09771	.00040	.0090
#2	8.716	-.0117	.0030	.10147	.00043	.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005 *	4.548	.0070	.0035	.0081	14.07
#1	.0001	4.521	.0062	.0041	.0084	13.85
#2	.0008	4.574	.0077	.0029	.0078	14.28

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	3.0786	.31221	-.0019	.0012	2.325
#1	.0054	3.0705	.30675	-.0017	.0014	2.318
#2	-.0042	3.0868	.31767	-.0022	.0010	2.332

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082	.0021	.2157	-.0016	.0345	.0231
#1	.0094	.0027	.2090	-.0048	.0348	.0235
#2	.0069	.0015	.2224	.0016	.0342	.0227

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4848	1.784	.49346	.0007	.00850	.04709
#1	.4961	1.784	.48412	.0131	.00840	.04631
#2	.4735	1.784	.50280	-.0118	.00860	.04788

Int. Std.	Sc3572
Units	Cts/S
Avg	178.54
#1	181.47
#2	175.61

* -0.00015 Cd

Method: 2010A Sample Name: K1006615-006S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.16	.3127	.4871	2.6718	.05402	.5021
#1	58.95	.3094	.4877	2.6800	.05397	.5010
#2	59.37	.3160	.4865	2.6635	.05407	.5033

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0526	33.16	.2350	.5280	.3002	80.28
#1	.0524	33.05	.2357	.5260	.3021	80.25
#2	.0529	33.27	.2343	.5300	.2982	80.32

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5262	25.66	2.8918	.4704	.5112	19.99
#1	.5217	25.57	2.8811	.4663	.5109	20.03
#2	.5307	25.75	2.9025	.4744	.5116	19.94

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4879	.0476	6.335	.0128	.6815	.6627
#1	.4718	.0491	6.360	.0143	.6794	.6629
#2	.5040	.0460	6.309	.0113	.6835	.6626

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.837	5.300	2.5991	.4861	.05335	.26066
#1	2.815	5.289	2.6026	.4758	.05369	.26175
#2	2.860	5.311	2.5956	.4963	.05302	.25956

Int. Std.	Sc3572
Units	Cts/S
Avg	178.13
#1	177.84
#2	178.42

* 0.0489 Cd

Method: 2010A Sample Name: K1006615-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.98	.0246	.0849	.70489	.00197	.0312
#1	53.67	.0262	.0922	.69840	.00195	.0312
#2	54.29	.0229	.0776	.71139	.00198	.0312

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044 *	15.08	.0365	.0246	.0976	70.88
#1	.0048	15.06	.0358	.0243	.0969	70.25
#2	.0040	15.11	.0372	.0249	.0982	71.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0431	13.26	2.3859	.0013	.0167	13.38
#1	.0397	13.19	2.3756	.0027	.0172	13.39
#2	.0464	13.33	2.3963	.0000	.0161	13.37

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	-.0001	.3834	.0148	.1522	.1834
#1	.0105	-.0019	.3805	.0170	.1512	.1819
#2	.0180	.0016	.3864	.0126	.1532	.1850

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.566	10.48	3.5491	.0356	.04815	.22587
#1	2.556	10.48	3.5395	.0430	.04814	.22479
#2	2.576	10.49	3.5586	.0282	.04816	.22696

Int. Std.	Sc3572
Units	Cts/S
Avg	179.47
#1	180.04
#2	178.90

* 0.0011 Cd

Method: 2010A Sample Name: K1006615-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.73	.0254	.0182	.72261	.00243	.0345
#1	63.52	.0189	.0172	.71925	.00243	.0351
#2	63.94	.0318	.0191	.72597	.00242	.0338

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	20.59	.0341	.0300	.0495	87.11
#1	.0032	20.53	.0347	.0295	.0502	86.71
#2	.0035	20.66	.0334	.0305	.0489	87.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0215	20.03	2.1571	.0011	.0203	16.46
#1	.0220	19.95	2.1487	.0011	.0214	16.48
#2	.0210	20.11	2.1655	.0012	.0191	16.43

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183	-.0020	.4148	.0163	.1729	.1582
#1	.0046	-.0016	.4177	.0177	.1719	.1579
#2	.0320	-.0025	.4118	.0149	.1739	.1584

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.134	10.94	4.3713	.0468	.05614	.26015
#1	3.145	10.89	4.3646	.0492	.05668	.26068
#2	3.123	11.00	4.3780	.0444	.05560	.25962

Int. Std.	Sc3572
Units	Cts/S
Avg	181.86
#1	181.87
#2	181.86

* -0.00071 Cd

Method: 2010A Sample Name: K1006615-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.12	.0314	.0112	.72832	.00242	.0346
#1	59.95	.0374	.0153	.72724	.00243	.0350
#2	60.28	.0254	.0071	.72940	.00241	.0343

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	21.52	.0384	.0415	.0553	94.24
#1	.0050	21.38	.0391	.0413	.0570	94.01
#2	.0047	21.66	.0376	.0418	.0536	94.48

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188	22.66	2.5092	.0013	.0228	14.61
#1	.0167	22.62	2.5232	.0008	.0225	14.61
#2	.0208	22.70	2.4952	.0018	.0232	14.62

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	-.0005	.3390	.0184	.2064	.1452
#1	.0135	-.0017	.3412	.0212	.2085	.1447
#2	.0086	.0006	.3369	.0155	.2042	.1458

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.415	10.10	4.4449	.0367	.05498	.27201
#1	2.406	10.08	4.4562	.0325	.05515	.27321
#2	2.424	10.11	4.4336	.0408	.05480	.27081

Int. Std.	Sc3572
Units	Cts/S
Avg	182.47
#1	182.10
#2	182.84

* 0.0005Cd

Method: 2010A Sample Name: K1006615-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.91	.0259	.1046	.42565	.00154	.0366
#1	43.88	.0339	.1034	.42618	.00154	.0363
#2	43.94	.0179	.1058	.42512	.00154	.0368

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061 *	14.82	.0554	.0407	.1017	119.1
#1	.0052	14.80	.0554	.0405	.1057	118.8
#2	.0069	14.84	.0554	.0409	.0976	119.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0470	12.22	1.7540	-.0007	.0136	10.85
#1	.0439	12.22	1.7571	-.0014	.0139	10.86
#2	.0502	12.21	1.7510	.0000	.0134	10.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0020	.3354	.0217	.3004	.1660
#1	.0190	-.0020	.3370	.0221	.2986	.1658
#2	.0016	-.0020	.3338	.0213	.3022	.1663

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.461	9.635	2.6020	.0576	.03453	.17458
#1	2.462	9.596	2.6043	.0576	.03461	.17481
#2	2.459	9.674	2.5996	.0576	.03446	.17435

Int. Std.	Sc3572
Units	Cts/S
Avg	178.84
#1	178.67
#2	179.00

* 0.0006 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 10:50 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.142	.0087	-.0029	2.4625	.05066	.0086
Stddev	.006	.0040	.0121	.0017	.00063	.0008
%RSD	.1205	45.38	415.0	.06865	1.2357	9.607
#1	5.138	.0115	.0056	2.4614	.05022	.0080
#2	5.146	.0059	-.0115	2.4637	.05110	.0092
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	25.83	.0037	-.0026	-.0006	25.19
Stddev	.0007	.19	.0002	.0004	.0004	.12
%RSD	57.69	.7492	6.526	15.93	67.02	.4738
#1	.0007	25.69	.0035	-.0023	-.0003	25.10
#2	.0018	25.97	.0039	-.0029	-.0010	25.27
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	25.45	5.005	-.0013	-.0027	10.06
Stddev	.0018	.11	.029	.0008	.0006	.01
%RSD	52.66	.4407	.5857	62.75	21.41	.0757
#1	-.0046	25.37	4.984	-.0019	-.0022	10.05
#2	-.0021	25.53	5.026	-.0007	-.0031	10.07
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	-.0004	9.873	.0032	.0039	.0024
Stddev	.0210	.0037	.001	.0025	.0003	.0005
%RSD	154.6	840.8	.0078	78.62	6.517	20.75
#1	.0285	.0022	9.873	.0050	.0037	.0028
#2	-.0013	-.0030	9.874	.0014	.0041	.0021
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 10:50

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.23	2.549	.00461	.0361	.51205	.50473
Stddev	.09	.001	.00006	.0026	.00050	.00449
%RSD	.8688	.0223	1.2888	7.075	.09754	.88984
#1	10.17	2.549	.00457	.0343	.51170	.50155
#2	10.30	2.549	.00466	.0379	.51241	.50790
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.00
Stddev	.43
%RSD	.24299
#1	177.31
#2	176.70

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 10:53 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4732	2.421	2.446	.46430	.54039	.5017
Stddev	.0117	.016	.011	.00498	.00224	.0032
%RSD	2.483	.6779	.4680	1.0722	.41436	.6326
#1	.4649	2.410	2.454	.46078	.53881	.4994
#2	.4815	2.433	2.438	.46782	.54197	.5039
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4938	2.488	.4937	.4939	.5015	.5168
Stddev	.0058	.015	.0059	.0050	.0010	.0071
%RSD	1.183	.6226	1.197	1.006	.1988	1.383
#1	.4897	2.477	.4895	.4904	.5022	.5219
#2	.4979	2.499	.4979	.4975	.5008	.5118
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.404	2.0776	.95446	.9784	.4931	5.132
Stddev	.021	.0024	.00929	.0151	.0032	.011
%RSD	.8521	.11432	.97381	1.544	.6450	.2220
#1	2.390	2.0759	.94789	.9677	.4908	5.124
#2	2.419	2.0792	.96103	.9891	.4953	5.140
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.463	.5018	.4909	2.394	.4954	.4894
Stddev	.021	.0038	.0013	.011	.0028	.0044
%RSD	.8304	.7670	.2734	.4382	.5566	.8947
#1	2.449	.4991	.4918	2.387	.4934	.4863
#2	2.478	.5045	.4899	2.401	.4973	.4925
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 10:53

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0379	.2992	.49569	4.867	.52430	.50700
Stddev	.0032	.0008	.01203	.039	.00079	.00073
%RSD	8.402	.2608	2.4265	.7950	.14985	.14431
#1	-.0401	.2997	.48719	4.840	.52486	.50648
#2	-.0356	.2986	.50420	4.895	.52374	.50752
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.35
Stddev	.74
%RSD	.41224
#1	178.87
#2	177.83

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 10:56 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0121	.0044	.00027	.00006
Stddev	.0087	.0074	.0021	.00021	.00002
%RSD	638.3	61.30	47.04	78.411	32.353
#1	.0048	.0174	.0059	.00042	.00007
#2	-.0075	.0069	.0030	.00012	.00004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0001	.0033	-.0003	-.0005
Stddev	.0002	.0006	.0053	.0005	.0004
%RSD	10.00	420.1	158.1	189.8	82.09
#1	.0021	.0006	-.0004	-.0006	-.0002
#2	.0019	-.0003	.0071	.0001	-.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0040	.0025	.00141	.00097
Stddev	.0032	.0012	.0113	.00006	.00006
%RSD	128.1	29.84	460.5	4.3494	6.2405
#1	.0002	.0048	.0105	.00137	.00101
#2	.0047	.0031	-.0056	.00145	.00092
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0029	-.0004	.0175	.0025	-.0033
Stddev	.0021	.0001	.0032	.0131	.0004
%RSD	70.90	16.14	18.20	530.9	12.32
#1	.0044	-.0003	.0152	-.0068	-.0036
#2	.0015	-.0004	.0197	.0118	-.0030
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 10:56

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0080	.0031	.0007	.0099
Stddev	.0018	.0035	.0005	.0007	.0068
%RSD	66.94	43.56	14.63	99.84	68.71
#1	.0014	.0056	.0034	.0011	.0147
#2	.0039	.0105	.0028	.0002	.0051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0006	.00207	-.0009	.00000	.00032
Stddev	.0017	.00187	.0109	.00017	.00009
%RSD	290.2	90.164	1177.	794400.	28.371
#1	.0018	.00339	.0068	.00012	.00039
#2	-.0006	.00075	-.0086	-.00012	.00026
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	175.96
Stddev	.77
%RSD	.43509
#1	176.50
#2	175.42

Method: 2010A Sample Name: K1006615-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 10:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.48	.0214	.0154	.52349	.00332	.0300
#1	73.44	.0198	.0109	.52276	.00334	.0300
#2	73.53	.0230	.0199	.52422	.00330	.0301

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	22.92	.0322	.0259	.0594	88.25
#1	.0041	22.86	.0314	.0255	.0584	87.57
#2	.0042	22.99	.0331	.0263	.0604	88.92

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	20.85	2.3946	.0023	.0157	14.78
#1	.0264	20.82	2.3918	.0035	.0151	14.78
#2	.0266	20.89	2.3973	.0011	.0163	14.78

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0171	-.0015	.8786	.0126	.1558	.1743
#1	.0152	-.0012	.8762	.0211	.1578	.1747
#2	.0190	-.0018	.8811	.0042	.1538	.1738

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	9.780	3.0236	.0109	.05177	.19679
#1	2.389	9.805	3.0279	.0141	.05199	.19771
#2	2.381	9.755	3.0194	.0077	.05155	.19587

Int. Std.	Sc3572
Units	Cts/S
Avg	183.07
#1	182.82
#2	183.32

* 0.00014 Cd

Method: 2010A Sample Name: K1006615-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.25	.0193	.0672	.61612	.00205	.0286
#1	49.06	.0214	.0648	.61333	.00207	.0282
#2	49.43	.0173	.0696	.61891	.00204	.0290

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037 *	12.74	.0471	.0228	.0831	80.16
#1	.0037	12.71	.0457	.0221	.0821	79.74
#2	.0037	12.78	.0484	.0234	.0840	80.58

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0316	11.44	2.5266	.0022	.0205	9.252
#1	.0285	11.41	2.5174	.0033	.0203	9.302
#2	.0348	11.47	2.5358	.0011	.0208	9.202

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0032	.3416	.0114	.1769	.1654
#1	.0021	.0024	.3451	.0084	.1733	.1644
#2	-.0115	.0041	.3380	.0145	.1806	.1664

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.145	6.396	2.4644	.0469	.04187	.14439
#1	2.137	6.416	2.4650	.0493	.04225	.14469
#2	2.154	6.376	2.4637	.0445	.04150	.14409

Int. Std.	Sc3572
Units	Cts/S
Avg	181.52
#1	181.59
#2	181.44

* 0.000001 Cd

Method: 2010A Sample Name: K1006615-008 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.27	.0268	.0106	.44051	.00196	.0267
#1	47.40	.0220	.0062	.44253	.00193	.0273
#2	47.15	.0317	.0150	.43850	.00199	.0260

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	15.88	.0534	.0233	.0502	91.62
#1	.0031	15.98	.0539	.0238	.0512	91.55
#2	.0035	15.79	.0529	.0229	.0492	91.70

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0169	15.84	1.9717	.0023	.0233	9.267
#1	.0171	15.92	1.9739	.0008	.0238	9.315
#2	.0167	15.76	1.9695	.0037	.0228	9.219

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	-.0006	.9084	.0191	.2115	.1349
#1	.0015	-.0015	.9125	.0175	.2140	.1348
#2	.0039	.0003	.9043	.0207	.2089	.1349

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.521	8.127	2.5770	.0206	.04091	.14681
#1	2.549	8.155	2.5939	.0189	.04165	.14792
#2	2.493	8.100	2.5601	.0223	.04018	.14571

Int. Std.	Sc3572
Units	Cts/S
Avg	179.71
#1	179.84
#2	179.58

* -0.00094 Cd

Method: 2010A Sample Name: K1006615-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:08 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.37	.0263	.0200	.79884	.00207	.0308
#1	47.36	.0190	.0206	.79507	.00199	.0309
#2	47.39	.0335	.0194	.80261	.00215	.0308

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032 *	61.45	.0438	.0193	.0585	75.27
#1	.0032	61.38	.0437	.0197	.0568	75.13
#2	.0031	61.52	.0438	.0190	.0603	75.41

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158	18.75	3.262	.0012	.0285	9.083
#1	.0109	18.79	3.245	.0009	.0279	9.156
#2	.0207	18.71	3.279	.0016	.0290	9.009

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0309	-.0002	1.553	.0127	.1699	.1260
#1	.0240	.0014	1.559	.0080	.1718	.1262
#2	.0377	-.0018	1.547	.0175	.1679	.1258

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.569	9.341	2.2714	.0307	.04697	.23280
#1	2.540	9.335	2.2650	.0340	.04694	.23349
#2	2.598	9.346	2.2779	.0274	.04699	.23211

Int. Std.	Sc3572
Units	Cts/S
Avg	180.20
#1	180.69
#2	179.70

* -0.000026 Cd

Method: 2010A Sample Name: K1006636-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.14	.0113	.1450	.59000	.00202	.0409
#1	50.08	.0069	.1429	.59034	.00202	.0400
#2	50.20	.0157	.1470	.58965	.00202	.0418

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	9.371	.0506	.0259	.1373	112.7
#1	.0064	9.339	.0508	.0263	.1391	112.9
#2	.0070	9.403	.0505	.0254	.1356	112.5

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0512	12.09	2.8142	.0008	.0190	12.30
#1	.0494	12.04	2.8216	.0015	.0196	12.32
#2	.0530	12.13	2.8068	.0001	.0185	12.27

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023	-.0013	.1904	.0090	.2364	.2302
#1	-.0021	-.0028	.1908	.0079	.2386	.2299
#2	.0066	.0001	.1899	.0102	.2342	.2305

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.388	6.956	3.1709	.0529	.05027	.09025
#1	2.377	6.941	3.1827	.0539	.05010	.09047
#2	2.398	6.971	3.1590	.0519	.05043	.09003

Int. Std.	Sc3572
Units	Cts/S
Avg	179.97
#1	179.51
#2	180.44

$0.0067\,Cd - 112.7\,Fe\left(\frac{0.0091\,Cd}{197.8\,Fe}\right) = 0.0015\,Cd$

Method: 2010A Sample Name: K1006636-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	57.22	.0213	.0186	.61476	.00255	.0414
#1	57.36	.0294	.0142	.61371	.00255	.0415
#2	57.07	.0133	.0230	.61581	.00255	.0413

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042 *	11.42	.0418	.0256	.0523	101.1
#1	.0042	11.37	.0425	.0262	.0489	101.2
#2	.0043	11.47	.0410	.0251	.0557	101.1

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0313	14.07	2.3335	.0017	.0207	13.36
#1	.0249	14.14	2.3356	.0020	.0210	13.41
#2	.0378	14.01	2.3314	.0014	.0204	13.31

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	.0001	.2498	.0073	.2061	.1631
#1	.0101	.0011	.2500	.0076	.2063	.1649
#2	.0138	-.0009	.2497	.0069	.2060	.1612

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.188	8.077	3.4186	.0343	.05075	.10967
#1	2.181	8.052	3.4305	.0285	.05068	.11008
#2	2.194	8.103	3.4067	.0401	.05082	.10925

Int. Std.	Sc3572
Units	Cts/S
Avg	180.99
#1	181.01
#2	180.98

* -0.00045Cd

Method: 2010A Sample Name: K1006636-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	59.37	.0206	.0114	.65393	.00318	.0422
#1	58.96	.0174	.0137	.64798	.00312	.0423
#2	59.78	.0238	.0092	.65987	.00324	.0420

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	14.94	.0356	.0316	.0537	97.01
#1	.0042	14.85	.0348	.0318	.0523	96.13
#2	.0040	15.03	.0364	.0314	.0551	97.89

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0405	21.68	2.6445	-.0009	.0236	17.59
#1	.0365	21.63	2.6351	-.0005	.0236	17.58
#2	.0445	21.74	2.6540	-.0013	.0236	17.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124	-.0013	.3395	.0134	.1839	.1819
#1	.0049	-.0012	.3384	.0107	.1849	.1814
#2	.0200	-.0015	.3406	.0160	.1828	.1824

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.185	5.844	3.7983	.0602	.05993	.13642
#1	2.174	5.801	3.7947	.0517	.05996	.13623
#2	2.196	5.887	3.8018	.0687	.05989	.13662

Int. Std.	Sc3572
Units	Cts/S
Avg	182.66
#1	182.66
#2	182.67

x 0.00036Cd

Method: 2010A Sample Name: K1006636-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.68	.0229	.1221	.53458	.00201	.0375
#1	44.88	.0253	.1275	.53702	.00200	.0365
#2	44.48	.0205	.1167	.53214	.00202	.0385

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	10.26	.0413	.0223	.1707	90.21
#1	.0069	10.27	.0411	.0214	.1755	90.81
#2	.0064	10.25	.0415	.0232	.1660	89.61

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0965	11.88	2.0542	.0013	.0173	10.92
#1	.1033	11.99	2.0494	.0019	.0171	11.02
#2	.0897	11.77	2.0589	.0007	.0175	10.82

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0016	.2366	.0131	.1881	.2743
#1	.0248	-.0009	.2407	.0161	.1891	.2770
#2	.0061	-.0023	.2324	.0101	.1871	.2716

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.323	9.318	3.0358	.0450	.04505	.09704
#1	2.320	9.358	3.0671	.0394	.04583	.09808
#2	2.325	9.278	3.0046	.0506	.04427	.09600

Int. Std.	Sc3572
Units	Cts/S
Avg	180.23
#1	179.74
#2	180.71

* 0.0026 Cd

Method: 2010A Sample Name: K1006636-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.36	.0132	.0218	.43378	.00203	.0344
#1	46.52	.0092	.0230	.43467	.00203	.0337
#2	46.21	.0173	.0206	.43288	.00203	.0352

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	9.646	.0376	.0235	.0581	83.12
#1	.0044	9.647	.0388	.0248	.0578	83.45
#2	.0036	9.645	.0364	.0222	.0584	82.80

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0228	15.63	1.8617	.0011	.0195	12.91
#1	.0301	15.55	1.8660	.0001	.0204	12.97
#2	.0154	15.70	1.8573	.0021	.0185	12.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189	-.0011	.4816	.0117	.1576	.1568
#1	.0183	.0004	.4822	.0077	.1589	.1602
#2	.0195	-.0025	.4810	.0157	.1562	.1535

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.911	8.124	3.2195	.0357	.05250	.09920
#1	1.900	8.141	3.2394	.0417	.05320	.09991
#2	1.921	8.106	3.1995	.0297	.05180	.09849

Int. Std.	Sc3572
Units	Cts/S
Avg	181.35
#1	180.95
#2	181.74

x 0.0002 Cd

Method: 2010A Sample Name: K1006636-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.24	.0197	-.0075	.99659	.00256	.0454
#1	52.14	.0149	-.0152	.99145	.00252	.0447
#2	52.35	.0245	.0003	1.0017	.00259	.0460

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	16.63	.0341	.0218	.0544	92.51
#1	.0032	16.49	.0334	.0206	.0557	92.05
#2	.0036	16.76	.0348	.0229	.0531	92.96

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0202	20.87	2.0106	.0012	.0231	16.26
#1	.0168	20.87	2.0046	.0022	.0227	16.34
#2	.0236	20.86	2.0166	.0002	.0234	16.19

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0223	-.0015	1.028	.0181	.1707	.1575
#1	.0167	-.0038	1.030	.0179	.1700	.1543
#2	.0279	.0008	1.025	.0182	.1713	.1607

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.535	9.274	4.1630	.0398	.05509	.21326
#1	2.524	9.277	4.1677	.0463	.05475	.21403
#2	2.547	9.272	4.1582	.0332	.05543	.21249

Int. Std.	Sc3572
Units	Cts/S
Avg	184.37
#1	183.99
#2	184.76

x -0.0009 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 11:28 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.076	.0023	-.0023	2.5026	.05011	.0079
Stddev	.004	.0063	.0071	.0093	.00020	.0012
%RSD	.0787	275.7	313.2	.37032	.40191	15.10
#1	5.074	-.0022	.0027	2.4961	.04997	.0070
#2	5.079	.0067	-.0073	2.5092	.05025	.0087
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	26.70	.0036	-.0016	-.0013	25.75
Stddev	.0002	.08	.0011	.0004	.0000	.16
%RSD	23.61	.2939	30.52	27.24	.2374	.6401
#1	.0012	26.65	.0044	-.0019	-.0013	25.64
#2	.0009	26.76	.0029	-.0013	-.0012	25.87
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0032	25.48	4.957	-.0027	-.0015	9.904
Stddev	.0015	.08	.027	.0001	.0004	.009
%RSD	47.33	.3077	.5402	2.113	27.04	.0917
#1	-.0043	25.42	4.938	-.0027	-.0012	9.911
#2	-.0021	25.53	4.976	-.0027	-.0018	9.898
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0019	9.809	.0070	.0010	.0032
Stddev	.0035	.0008	.010	.0007	.0004	.0028
%RSD	94.81	43.62	.0988	9.689	36.01	86.46
#1	.0012	.0013	9.816	.0075	.0013	.0052
#2	.0062	.0024	9.802	.0065	.0008	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 11:28

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.530	.00558	.0190	.50014	.49379
Stddev	.02	.006	.00066	.0074	.00461	.00076
%RSD	.2186	.2446	11.860	38.84	.92110	.15478
#1	10.26	2.525	.00511	.0138	.50340	.49434
#2	10.29	2.534	.00605	.0242	.49688	.49325
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.61
Stddev	.60
%RSD	.33538
#1	178.03
#2	177.19

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 11:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4955	2.436	2.483	.46375	.52631	.4971
Stddev	.0263	.027	.000	.00207	.00127	.0033
%RSD	5.308	1.091	.0009	.44536	.24137	.6677
#1	.4769	2.417	2.483	.46229	.52542	.4947
#2	.5141	2.454	2.483	.46521	.52721	.4994
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4966	2.453	.4943	.4904	.5160	.5074
Stddev	.0017	.012	.0065	.0003	.0004	.0058
%RSD	.3350	.4850	1.312	.0701	.0815	1.136
#1	.4954	2.461	.4897	.4902	.5163	.5115
#2	.4978	2.444	.4989	.4907	.5157	.5033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.382	2.0714	.95313	.9671	.4903	5.050
Stddev	.032	.0056	.00223	.0048	.0009	.025
%RSD	1.334	.26935	.23431	.4972	.1840	.4998
#1	2.359	2.0753	.95155	.9637	.4909	5.033
#2	2.404	2.0674	.95471	.9705	.4896	5.068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.419	.5019	.4815	2.313	.4808	.4928
Stddev	.016	.0008	.0019	.011	.0034	.0009
%RSD	.6685	.1595	.4001	.4716	.7108	.1814
#1	2.408	.5025	.4829	2.305	.4784	.4922
#2	2.430	.5013	.4802	2.321	.4832	.4935
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 11:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0249	.2982	.49099	4.796	.50906	.49060
Stddev	.0232	.0021	.00180	.039	.00139	.00020
%RSD	93.11	.6918	.36717	.8097	.27337	.04114
#1	-.0413	.2967	.48972	4.769	.50808	.49046
#2	-.0085	.2996	.49227	4.824	.51005	.49074
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.23
Stddev	.08
%RSD	.04453
#1	181.17
#2	181.29

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 11:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144	.0097	-.0047	.00052	.00013	.0007
Stddev	.0078	.0086	.0017	.00004	.00008	.0003
%RSD	53.87	88.70	35.35	7.2979	60.118	41.17
#1	.0199	.0158	-.0035	.00049	.00007	.0005
#2	.0089	.0036	-.0059	.00055	.00018	.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0041	-.0003	-.0011	.0035	.0048
Stddev	.0004	.0058	.0012	.0003	.0024	.0002
%RSD	183.8	141.6	400.3	24.00	69.03	3.910
#1	.0005	.0000	-.0011	-.0009	.0018	.0047
#2	-.0001	.0083	.0005	-.0013	.0052	.0050
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.00248	.00123	.0018	.0008	-.0023
Stddev	.0018	.00010	.00010	.0028	.0010	.0128
%RSD	176.8	3.9162	7.9132	152.6	118.3	566.6
#1	-.0003	.00241	.00129	.0038	.0015	-.0113
#2	.0023	.00255	.00116	-.0001	.0001	.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	-.0014	-.0038	.0046	.0020	.0012
Stddev	.0009	.0006	.0027	.0017	.0030	.0015
%RSD	70.86	42.33	71.23	37.18	150.7	124.6
#1	.0019	-.0019	-.0057	.0058	.0041	.0022
#2	.0006	-.0010	-.0019	.0034	-.0001	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 11:34

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0021	.00123	-.0087	-.00007	.00039
Stddev	.0093	.0012	.00009	.0218	.00035	.00001
%RSD	1077.	56.78	7.1726	249.8	477.00	3.4821
#1	-.0057	-.0012	.00117	.0067	.00017	.00038
#2	.0075	-.0029	.00129	-.0241	-.00032	.00040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	176.85
Stddev	.72
%RSD	.40503
#1	177.36
#2	176.34

Method: 2010A Sample Name: RB Operator: JC
Comment: (208725) (071610B)
Run Time: 07/16/10 11:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0045	.0038	.00048	-.00002
#1	-.0034	.0044	.0041	.00062	-.00001
#2	.0007	-.0133	.0035	.00034	-.00002

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0010	.0004	-.0061	.0002	-.0007
#1	.0006	.0003	-.0039	-.0008	-.0002
#2	.0013	.0006	-.0083	.0011	-.0012

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0007	.0001	.0067	.00014	-.00012
#1	.0005	-.0001	.0092	.00015	-.00019
#2	.0009	.0002	.0041	.00012	-.00005

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	.0006	-.0142	-.0037	.0009
#1	-.0020	.0002	-.0175	-.0044	.0013
#2	-.0026	.0009	-.0110	-.0031	.0004

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0124	.0056	.0024	-.0006	.0039
#1	-.0119	.0017	.0010	-.0032	.0048
#2	-.0129	.0094	.0038	.0019	.0030

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0026	.00177	-.0008	.00024	.00011
#1	-.0021	.00212	.0000	.00017	.00008
#2	-.0032	.00142	-.0017	.00032	.00013

Int. Std.	Sc3572
Units	Cts/S
Avg	175.22
#1	175.03
#2	175.41

Method: 2010A Sample Name: K1006676-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0020	.0053	.00022	.00002	.0022
#1	-.0007	.0028	.0166	.00006	.00004	.0024
#2	.0048	.0012	-.0059	.00038	-.00001	.0019

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0026	-.0003	-.0010	.0014	.0063
#1	-.0002	.0075	-.0002	-.0009	.0005	.0066
#2	.0002	-.0024	-.0003	-.0011	.0022	.0060

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	.00024	.00010	-.0023	.0009	.0055
#1	.0011	.00018	-.00003	-.0016	.0008	-.0161
#2	-.0067	.00031	.00022	-.0030	.0010	.0271

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	-.0023	-.0074	.0151	-.0002	-.0006
#1	.0031	-.0013	-.0045	.0143	-.0020	.0003
#2	.0056	-.0033	-.0103	.0159	.0016	-.0014

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195	.0068	.00089	-.0138	.00060	.00006
#1	.0159	.0069	.00104	-.0020	.00095	.00006
#2	.0231	.0066	.00074	-.0257	.00026	.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	178.95
#1	178.41
#2	179.48

Method: 2010A Sample Name: LCSS Operator: JC
Comment: K1006676 1/2 (208725) (071610B)
Run Time: 07/16/10 11:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.01	.4733	.4363	2.2441	.33424	.5417
#1	41.04	.4708	.4306	2.2392	.33554	.5424
#2	40.97	.4758	.4419	2.2490	.33295	.5410

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4688	51.02	.7519	.9911	1.242	89.10
#1	.4682	50.78	.7476	.9900	1.247	88.85
#2	.4694	51.26	.7563	.9921	1.237	89.34

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5101	19.28	2.5044	.3092	1.014	20.17
#1	.5128	19.27	2.5038	.3048	1.012	20.31
#2	.5074	19.28	2.5049	.3136	1.016	20.04

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9795	.3885	3.291	.6797	.8940	1.480
#1	.9739	.3857	3.320	.6741	.9005	1.474
#2	.9851	.3913	3.262	.6853	.8875	1.485

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.377	7.390	2.2408	1.284	.04314	.68082
#1	4.395	7.396	2.2485	1.248	.04385	.68500
#2	4.358	7.384	2.2331	1.319	.04244	.67664

Int. Std.	Sc3572
Units	Cts/S
Avg	178.47
#1	178.32
#2	178.62

Method: 2010A Sample Name: K1006676-018 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.07	.0259	.1419	.53728	.00157	.0275
#1	43.41	.0392	.1402	.54081	.00157	.0288
#2	42.73	.0126	.1436	.53374	.00156	.0262

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056 *	12.62	.0345	.0230	.2462	93.22
#1	.0058	12.67	.0357	.0220	.2516	93.63
#2	.0053	12.57	.0334	.0240	.2408	92.82

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0736	18.34	2.7159	.0024	.0145	16.28
#1	.0752	18.46	2.7361	.0049	.0149	16.40
#2	.0720	18.21	2.6956	.0000	.0140	16.17

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0007	.1565	.0187	.1617	.2742
#1	.0113	.0018	.1559	.0162	.1608	.2755
#2	.0236	-.0031	.1571	.0213	.1625	.2730

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.944	5.996	3.6717	.0531	.08663	.09691
#1	2.972	6.032	3.7053	.0466	.08727	.09784
#2	2.916	5.961	3.6381	.0596	.08599	.09598

Int. Std.	Sc3572
Units	Cts/S
Avg	179.85
#1	179.56
#2	180.14

$* 0.0056\text{Cd} - 93.22\text{Fe}\left(\frac{0.0091\text{Cd}}{197.8\text{Fe}}\right) = 0.0013\text{Cd}$

Method: 2010A Sample Name: K1006676-018D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.61	.0282	.1498	.49847	.00163	.0249
#1	42.85	.0286	.1516	.50135	.00161	.0242
#2	42.37	.0279	.1480	.49558	.00165	.0255

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	12.56	.0332	.0209	.2198	91.20
#1	.0050	12.66	.0348	.0214	.2215	91.52
#2	.0055	12.47	.0316	.0204	.2181	90.88

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0551	16.77	2.4901	.0017	.0149	15.12
#1	.0557	16.86	2.5062	.0000	.0133	15.29
#2	.0545	16.67	2.4739	.0035	.0165	14.96

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0185	-.0042	.1560	.0200	.1616	.2592
#1	.0309	-.0060	.1601	.0173	.1637	.2613
#2	.0061	-.0025	.1519	.0228	.1595	.2571

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.862	6.543	3.2468	.0457	.07962	.09584
#1	2.883	6.605	3.2869	.0534	.08046	.09707
#2	2.840	6.481	3.2066	.0380	.07878	.09462

Int. Std.	Sc3572
Units	Cts/S
Avg	181.41
#1	181.22
#2	181.60

* 0.0011Cd

Method: 2010A Sample Name: K1006676-018L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 11:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.447	.0048	.0371	.10530	.00026	.0070
#1	8.471	.0036	.0301	.10512	.00026	.0075
#2	8.423	.0060	.0442	.10548	.00026	.0065

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	2.265	.0072	.0044	.0495	17.88
#1	.0017	2.278	.0069	.0047	.0491	17.89
#2	.0013	2.252	.0076	.0041	.0498	17.88

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129	3.4361	.49224	-.0013	.0019	3.263
#1	.0126	3.4411	.49573	-.0002	.0029	3.279
#2	.0132	3.4312	.48876	-.0024	.0009	3.247

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047	-.0007	.0452	.0163	.0315	.0515
#1	.0109	-.0001	.0442	.0151	.0317	.0513
#2	-.0015	-.0012	.0462	.0175	.0313	.0517

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5589	1.165	.71155	.0001	.01723	.01915
#1	.5674	1.177	.71765	.0060	.01740	.01906
#2	.5504	1.152	.70545	-.0058	.01706	.01924

Int. Std.	Sc3572
Units	Cts/S
Avg	180.57
#1	180.37
#2	180.77

* 0.00068 Cd

Method: 2010A Sample Name: K1006676-018S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	56.89	.2660	.6712	2.7987	.05439	.5207
#1	56.61	.2619	.6760	2.7850	.05427	.5194
#2	57.17	.2700	.6665	2.8124	.05450	.5220

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0586 *	19.22	.2533	.5495	.5216	98.95
#1	.0584	19.14	.2536	.5489	.5187	98.75
#2	.0588	19.29	.2531	.5501	.5245	99.15

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5919	26.40	3.470	.5086	.5387	24.58
#1	.5895	26.50	3.470	.5065	.5367	24.73
#2	.5943	26.31	3.471	.5108	.5406	24.42

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5087	.0456	5.361	.0114	.6971	.8195
#1	.5025	.0438	5.396	.0130	.6987	.8159
#2	.5150	.0473	5.327	.0097	.6956	.8232

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.356	7.264	4.3879	.5380	.10749	.11220
#1	3.378	7.261	4.4030	.5540	.10764	.11246
#2	3.335	7.268	4.3729	.5221	.10734	.11195

Int. Std.	Sc3572
Units	Cts/S
Avg	179.07
#1	178.83
#2	179.32

* 0.0540 Cd

Method: 2010A Sample Name: K1006676-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 11:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.60	.0231	.0949	.58809	.00168	.0423
#1	37.48	.0308	.0949	.58562	.00164	.0404
#2	37.73	.0154	.0949	.59056	.00172	.0441

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	9.863	.0700	.0240	.0720	151.1
#1	.0060	9.786	.0698	.0243	.0716	151.1
#2	.0071	9.940	.0703	.0237	.0724	151.0

Elem	Pb2203	Mg2025	Mg2795	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0404	9.886	8.9152	2.4540	.0011	.0178
#1	.0471	9.774	8.8980	2.4552	.0035	.0178
#2	.0337	9.998	8.9324	2.4528	-.0013	.0178

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.98	.0242	.0009	.5419	.0227	.3566
#1	11.01	.0180	.0008	.5484	.0279	.3573
#2	10.96	.0304	.0011	.5353	.0174	.3558

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1596	2.869	7.128	2.6998	.0281	.04123
#1	.1602	2.848	7.111	2.7010	.0399	.04131
#2	.1589	2.889	7.144	2.6986	.0163	.04115

Elem	Sr4077
Units	ppm
Avg	.08553
#1	.08571
#2	.08534

Int. Std.	Sc3572
Units	Cts/S
Avg	180.37
#1	180.01
#2	180.72

$y = 0.00045Cd$

Method: 2010A Sample Name: K1006676-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.85	.0212	.0254	.74434	.00295	.0546
#1	51.76	.0164	.0248	.74385	.00298	.0542
#2	51.94	.0260	.0261	.74482	.00293	.0551

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	16.99	.0503	.0258	.0539	120.4
#1	.0055	16.91	.0501	.0255	.0551	119.8
#2	.0051	17.06	.0506	.0260	.0527	121.0

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0331	17.65	2.0902	.0012	.0195	17.43
#1	.0360	17.68	2.1013	.0004	.0191	17.45
#2	.0303	17.61	2.0790	.0021	.0199	17.41

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	-.0020	2.593	.0244	.2694	.1455
#1	.0183	.0008	2.610	.0243	.2686	.1446
#2	-.0015	-.0049	2.576	.0244	.2703	.1463

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.523	6.119	2.9944	.0258	.05196	.20235
#1	2.512	6.104	3.0044	.0282	.05244	.20337
#2	2.535	6.134	2.9845	.0234	.05147	.20133

Int. Std.	Sc3572
Units	Cts/S
Avg	182.39
#1	181.91
#2	182.88

x -0.00024 Cd

Method: 2010A Sample Name: K1006676-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.97	.0311	.0115	.57447	.00178	.0557
#1	33.89	.0243	.0080	.57400	.00175	.0549
#2	34.04	.0380	.0150	.57495	.00180	.0565

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052 *	27.51	.0582	.0221	.0331	137.0
#1	.0051	27.43	.0569	.0209	.0331	137.2
#2	.0053	27.59	.0594	.0233	.0331	136.8

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236	13.02	1.9834	-.0008	.0164	11.98
#1	.0342	13.01	1.9747	-.0010	.0161	12.06
#2	.0131	13.03	1.9921	-.0006	.0168	11.90

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	-.0009	2.199	.0148	.3507	.1089
#1	.0108	-.0010	2.216	.0186	.3532	.1107
#2	.0058	-.0007	2.183	.0110	.3483	.1071

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.469	7.024	2.4021	.0311	.03865	.17395
#1	2.453	7.002	2.4129	.0237	.03872	.17476
#2	2.485	7.046	2.3913	.0385	.03859	.17314

Int. Std.	Sc3572
Units	Cts/S
Avg	180.68
#1	180.26
#2	181.09

* -0.0011 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 12:07 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.077	.0148	.0143	2.4978	.05011	.0075
Stddev	.024	.0057	.0046	.0075	.00027	.0002
%RSD	.4788	38.31	32.28	.29957	.53095	2.738
#1	5.094	.0188	.0175	2.4925	.04992	.0073
#2	5.060	.0108	.0110	2.5031	.05030	.0076
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	26.60	.0015	-.0022	-.0032	25.74
Stddev	.0000	.03	.0008	.0009	.0001	.04
%RSD	1.440	.1092	51.42	42.11	3.403	.1684
#1	.0014	26.58	.0010	-.0029	-.0031	25.77
#2	.0014	26.62	.0021	-.0016	-.0032	25.71
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0144	25.33	4.979	-.0002	-.0026	9.900
Stddev	.0063	.04	.006	.0013	.0009	.057
%RSD	43.51	.1732	.1176	519.2	33.36	.5783
#1	-.0100	25.36	4.983	-.0012	-.0032	9.860
#2	-.0188	25.30	4.975	.0007	-.0020	9.941
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	.0053	9.761	.0078	.0009	.0014
Stddev	.0158	.0020	.005	.0004	.0019	.0013
%RSD	255.1	38.27	.0524	4.594	205.5	94.06
#1	-.0050	.0068	9.765	.0080	-.0004	.0024
#2	.0173	.0039	9.758	.0075	.0023	.0005
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 12:07

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.31	2.544	.00523	.0258	.49556	.49459
Stddev	.06	.000	.00150	.0047	.00249	.00011
%RSD	.5990	.0013	28.687	18.15	.50216	.02205
#1	10.27	2.544	.00417	.0225	.49380	.49467
#2	10.35	2.544	.00630	.0292	.49732	.49451
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	177.19
Stddev	.67
%RSD	.37978
#1	176.71
#2	177.66

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 12:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4917	2.434	2.472	.46233	.52270	.4969
Stddev	.0012	.025	.000	.00018	.00064	.0015
%RSD	.2432	1.040	.0093	.03919	.12175	.2955
#1	.4925	2.417	2.472	.46245	.52225	.4959
#2	.4909	2.452	2.473	.46220	.52315	.4980
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4951	2.444	.4910	.4881	.5163	.5128
Stddev	.0010	.010	.0013	.0009	.0017	.0082
%RSD	.2057	.4228	.2598	.1786	.3269	1.605
#1	.4944	2.436	.4901	.4875	.5175	.5186
#2	.4959	2.451	.4919	.4887	.5151	.5069
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.377	2.0712	.95325	.9649	.4854	5.041
Stddev	.000	.0015	.00548	.0103	.0001	.041
%RSD	.0089	.07208	.57474	1.071	.0177	.8046
#1	2.377	2.0702	.95712	.9576	.4854	5.070
#2	2.376	2.0723	.94938	.9722	.4855	5.012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.419	.4954	.4754	2.320	.4789	.4872
Stddev	.036	.0006	.0049	.013	.0049	.0016
%RSD	1.491	.1147	1.030	.5568	1.020	.3330
#1	2.445	.4950	.4789	2.310	.4824	.4860
#2	2.394	.4958	.4720	2.329	.4754	.4883
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 12:09

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0167	.2928	.49015	4.818	.50998	.48756
Stddev	.0043	.0054	.00036	.004	.00426	.00091
%RSD	25.89	1.836	.07255	.0744	.83481	.18698
#1	-.0136	.2967	.49040	4.821	.51299	.48820
#2	-.0198	.2890	.48990	4.816	.50697	.48691
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.95
Stddev	.15
%RSD	.08161
#1	181.85
#2	182.06

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 12:12 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0192	.0157	.0095	.00044	.00007	.0013
Stddev	.0010	.0103	.0125	.00010	.00003	.0009
%RSD	5.071	65.53	132.6	23.438	39.944	67.09
#1	.0185	.0230	.0006	.00052	.00009	.0007
#2	.0199	.0084	.0183	.00037	.00005	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0028	.0011	-.0011	.0008	.0061
Stddev	.0000	.0050	.0002	.0001	.0030	.0007
%RSD	17.14	181.9	14.11	12.48	360.3	11.12
#1	.0001	-.0008	.0012	-.0010	-.0013	.0066
#2	.0001	.0063	.0010	-.0012	.0030	.0057
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.00271	.00129	.0037	.0002	-.0103
Stddev	.0039	.00008	.00009	.0044	.0005	.0169
%RSD	112.7	2.7739	7.0568	119.3	191.0	164.4
#1	.0062	.00266	.00122	.0068	.0006	-.0223
#2	.0007	.00276	.00135	.0006	-.0001	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0016	-.0012	.0052	.0010	.0021
Stddev	.0035	.0041	.0012	.0051	.0016	.0026
%RSD	62.90	257.0	98.50	98.89	157.3	125.5
#1	.0031	-.0045	-.0004	.0088	.0021	.0039
#2	.0081	.0013	-.0021	.0016	-.0001	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 12:12

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0023	-.00009	-.0147	.00024	.00036
Stddev	.0002	.0004	.00114	.0060	.00024	.00003
%RSD	1.481	15.51	1242.8	40.82	99.537	8.2825
#1	.0104	-.0025	-.00090	-.0190	.00042	.00038
#2	.0102	-.0020	.00071	-.0105	.00007	.00034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	178.21
Stddev	1.79
%RSD	1.0031
#1	176.95
#2	179.47

Method: 2010A Sample Name: K1006676-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:15 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.33	.0217	.1774	.78376	.00151	.0283
#1	41.36	.0238	.1706	.78583	.00149	.0292
#2	41.30	.0197	.1841	.78169	.00153	.0274

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049	13.66	.0406	.0287	.1749	84.32
#1	.0053	13.64	.0405	.0288	.1755	84.59
#2	.0045	13.69	.0407	.0287	.1743	84.05

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0607	12.69	2.4131	.0016	.0177	13.77
#1	.0605	12.70	2.4166	.0036	.0183	13.84
#2	.0609	12.68	2.4096	-.0003	.0171	13.71

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0006	.1898	.0164	.1818	.2287
#1	.0007	-.0009	.1914	.0141	.1843	.2282
#2	.0292	-.0003	.1881	.0186	.1792	.2293

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.140	5.756	3.4194	.0389	.05025	.11200
#1	3.145	5.792	3.4501	.0459	.05008	.11270
#2	3.135	5.720	3.3887	.0319	.05043	.11129

Int. Std.	Sc3572
Units	Cts/S
Avg	178.66
#1	178.22
#2	179.09

x 0.0010 Cd

Method: 2010A Sample Name: K1006676-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.99	.0333	.0620	.74436	.00157	.0329
#1	47.15	.0269	.0673	.73785	.00156	.0323
#2	46.83	.0397	.0567	.75088	.00157	.0335

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	14.35	.0488	.0286	.0457	104.3
#1	.0033	14.22	.0487	.0279	.0455	104.1
#2	.0046	14.47	.0488	.0294	.0459	104.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	16.21	2.3017	.0012	.0199	16.28
#1	.0127	16.21	2.2677	.0022	.0203	16.38
#2	.0213	16.20	2.3357	.0001	.0194	16.19

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096	-.0032	.2173	.0132	.2342	.1581
#1	.0158	-.0038	.2203	.0125	.2323	.1552
#2	.0034	-.0027	.2142	.0140	.2360	.1609

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.207	5.564	4.2439	.0456	.06116	.10923
#1	3.193	5.576	4.2191	.0503	.06194	.10876
#2	3.221	5.552	4.2687	.0409	.06038	.10970

Int. Std.	Sc3572
Units	Cts/S
Avg	180.37
#1	181.77
#2	178.98

* -0.00080 Cd

Method: 2010A Sample Name: K1006676-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:21 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	45.61	.0169	.0008	.70495	.00162	.0305
#1	45.77	.0213	-.0009	.70404	.00164	.0303
#2	45.45	.0124	.0025	.70586	.00160	.0306

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040 *	13.15	.0467	.0304	.0374	100.1
#1	.0041	13.19	.0466	.0315	.0371	100.7
#2	.0039	13.11	.0468	.0293	.0378	99.50

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	17.77	2.4905	.0002	.0202	15.96
#1	.0177	17.83	2.4912	.0017	.0211	16.08
#2	.0240	17.70	2.4898	-.0013	.0194	15.83

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0015	.2333	.0138	.2259	.1473
#1	.0155	-.0022	.2345	.0082	.2237	.1466
#2	-.0044	-.0008	.2322	.0193	.2281	.1480

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.895	6.243	4.3951	.0319	.05702	.09264
#1	2.895	6.259	4.3973	.0337	.05752	.09320
#2	2.896	6.226	4.3928	.0301	.05653	.09207

Int. Std.	Sc3572
Units	Cts/S
Avg	179.44
#1	179.64
#2	179.25

* -0.00006 Cd

Method: 2010A Sample Name: K1006676-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:24 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.06	.0181	.0634	.72457	.00159	.0296
#1	44.00	.0181	.0704	.72376	.00156	.0309
#2	44.12	.0181	.0563	.72539	.00161	.0283

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036 *	14.27	.0432	.0244	.0474	91.47
#1	.0036	14.27	.0427	.0245	.0483	91.19
#2	.0036	14.27	.0436	.0242	.0466	91.76

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154	14.63	2.2477	-.0002	.0176	14.83
#1	.0142	14.59	2.2485	-.0002	.0165	14.81
#2	.0166	14.67	2.2469	-.0002	.0187	14.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	-.0029	.2115	.0163	.1932	.1525
#1	.0099	-.0033	.2106	.0148	.1918	.1522
#2	.0211	-.0024	.2124	.0178	.1947	.1529

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.087	7.623	3.9090	.0457	.05465	.10693
#1	3.079	7.599	3.9145	.0491	.05468	.10707
#2	3.095	7.648	3.9035	.0424	.05462	.10679

Int. Std.	Sc3572
Units	Cts/S
Avg	181.47
#1	181.08
#2	181.85

* -0.0006 Cd

Method: 2010A Sample Name: K1006676-008 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.54	.0170	.1642	.54037	.00185	.0196
#1	35.52	.0150	.1631	.54331	.00188	.0200
#2	35.57	.0190	.1654	.53742	.00181	.0191

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	9.184	8.558	.0287	.0222	.1247
#1	.0037	9.097	8.493	.0296	.0219	.1272
#2	.0044	9.271	8.622	.0279	.0224	.1221

Elem	Fe2714	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	70.62	.0399	11.51	2.4145	.0009	.0123
#1	70.78	.0448	11.54	2.4297	.0010	.0128
#2	70.45	.0351	11.48	2.3993	.0008	.0118

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.26	.0057	-.0022	.1592	.0116	.1347
#1	11.32	-.0042	-.0010	.1635	.0135	.1342
#2	11.20	.0156	-.0033	.1548	.0097	.1353

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2028	1.966	5.554	2.7760	.0279	.03765
#1	.2032	1.955	5.575	2.7892	.0264	.03777
#2	.2024	1.977	5.534	2.7629	.0294	.03754

Elem	Sr4077
Units	ppm
Avg	.07349
#1	.07398
#2	.07300

Int. Std.	Sc3572
Units	Cts/S
Avg	182.30
#1	181.55
#2	183.05

mmk 7/19/10

× 0.0009 Cd

Method: 2010A Sample Name: K1006676-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.87	.0302	.0296	.65865	.00247	.0204
#1	48.07	.0311	.0246	.67875	.00260	.0166
#2	47.67	.0294	.0346	.63856	.00234	.0241

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	11.73	.0348	.0253	.0440	90.88
#1	.0032	11.74	.0360	.0259	.0442	93.81
#2	.0041	11.73	.0335	.0247	.0438	87.95

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0325	14.45	2.6369	.0009	.0173	13.02
#1	.0332	14.47	2.7199	.0009	.0180	12.98
#2	.0318	14.44	2.5540	.0008	.0165	13.06

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139	-.0018	.1918	.0143	.1709	.1437
#1	.0202	-.0013	.2011	.0137	.1777	.1473
#2	.0075	-.0023	.1825	.0150	.1642	.1402

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.827	3.615	3.0440	.0379	.04459	.09739
#1	1.819	3.626	3.1413	.0293	.04495	.10016
#2	1.835	3.604	2.9466	.0466	.04423	.09461

Int. Std.	Sc3572
Units	Cts/S
Avg	177.74
#1	172.72
#2	182.76

x -0.0006 Cd

Method: 2010A Sample Name: K1006676-010 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.14	.0242	-.0012	1.3666	.00171	.0215
#1	34.29	.0355	.0000	1.4311	.00173	.0220
#2	33.99	.0130	-.0024	1.3021	.00169	.0210

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	9.675	.0267	.0276	.0360	75.00
#1	.0032	9.725	.0265	.0279	.0376	75.27
#2	.0032	9.625	.0269	.0274	.0344	74.74

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0419	13.22	4.915	.0006	.0139	11.18
#1	.0418	13.23	4.936	.0007	.0133	11.21
#2	.0421	13.21	4.894	.0006	.0145	11.14

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	-.0002	.2013	.0129	.1708	.1118
#1	-.0040	-.0015	.2022	.0067	.1710	.1099
#2	.0145	.0011	.2004	.0191	.1707	.1136

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.609	5.457	3.0196	.0186	.03775	.07710
#1	1.621	5.476	3.0542	.0128	.03788	.07753
#2	1.597	5.439	2.9850	.0243	.03761	.07668

Int. Std.	Sc3572
Units	Cts/S
Avg	180.84
#1	180.77
#2	180.90

* -0.000252 Cd

Method: 2010A Sample Name: K1006676-011 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.18	.0238	.1476	.72641	.00176	.0277
#1	46.15	.0262	.1506	.72603	.00174	.0280
#2	46.21	.0214	.1446	.72680	.00178	.0275

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	11.92	.0348	.0224	.0906	74.96
#1	.0038	11.87	.0339	.0234	.0926	75.25
#2	.0039	11.97	.0356	.0214	.0886	74.68

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0320	11.99	2.3543	.0018	.0160	13.39
#1	.0365	11.88	2.3559	.0031	.0153	13.37
#2	.0274	12.11	2.3527	.0005	.0166	13.41

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	.0004	.1930	.0128	.1385	.1900
#1	.0141	.0023	.1944	.0148	.1392	.1910
#2	.0078	-.0015	.1917	.0108	.1378	.1890

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.901	7.822	3.3835	.0342	.04780	.10272
#1	2.889	7.837	3.3867	.0351	.04794	.10262
#2	2.914	7.807	3.3803	.0333	.04766	.10283

Int. Std.	Sc3572
Units	Cts/S
Avg	180.66
#1	180.53
#2	180.78

x 0.00045 Cd

Method: 2010A Sample Name: K1006676-012 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.33	.0241	.0298	.83214	.00191	.0317
#1	47.64	.0225	.0243	.81542	.00190	.0337
#2	47.03	.0257	.0353	.84886	.00192	.0298

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	11.35	.2098	.0296	.0525	83.96
#1	.0035	11.38	.2062	.0284	.0516	82.11
#2	.0034	11.31	.2133	.0308	.0534	85.81

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0347	13.08	3.364	.0012	.0944	13.16
#1	.0240	13.12	3.266	.0006	.0927	13.18
#2	.0453	13.03	3.463	.0018	.0961	13.15

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	-.0012	.1913	.0134	.1734	.1444
#1	.0134	-.0009	.1846	.0111	.1678	.1409
#2	.0136	-.0016	.1981	.0156	.1789	.1479

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.482	5.346	3.4661	.0331	.04601	.09372
#1	2.490	5.388	3.3675	.0286	.04610	.09121
#2	2.474	5.305	3.5647	.0375	.04591	.09622

Int. Std.	Sc3572
Units	Cts/S
Avg	184.45
#1	189.04
#2	179.86

x 0.000036 Cd

Method: 2010A Sample Name: K1006676-013 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 12:42 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	53.99	.0267	.0047	.82084	.00277	.0289
#1	54.06	.0263	-.0006	.82126	.00278	.0291
#2	53.91	.0271	.0099	.82042	.00276	.0288

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	16.77	.0344	.0335	.0505	91.73
#1	.0038	16.71	.0344	.0333	.0522	92.27
#2	.0042	16.83	.0345	.0336	.0488	91.18

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0336	18.53	3.319	-.0015	.0259	14.22
#1	.0334	18.56	3.340	-.0023	.0263	14.33
#2	.0339	18.50	3.298	-.0007	.0255	14.11

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0005	.2528	.0119	.1822	.1441
#1	.0094	-.0014	.2547	.0130	.1814	.1455
#2	.0254	.0004	.2509	.0107	.1830	.1428

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.987	3.137	2.8473	.0351	.04764	.12711
#1	1.978	3.144	2.8626	.0328	.04811	.12810
#2	1.996	3.130	2.8319	.0374	.04718	.12611

Int. Std.	Sc3572
Units	Cts/S
Avg	182.37
#1	182.08
#2	182.66

$x - 0.00022$ Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 12:45 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.103	.0196	.0143	2.4808	.04968	.0060
Stddev	.032	.0068	.0171	.0062	.00026	.0000
%RSD	.6242	34.70	119.8	.25105	.51474	.5854
#1	5.126	.0243	.0264	2.4852	.04949	.0060
#2	5.081	.0148	.0022	2.4764	.04986	.0061
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	26.73	.0031	-.0022	-.0004	25.84
Stddev	.0000	.05	.0004	.0002	.0014	.10
%RSD	4.195	.1851	14.32	11.27	351.2	.3755
#1	.0011	26.69	.0028	-.0020	-.0014	25.77
#2	.0012	26.76	.0034	-.0023	.0006	25.91
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0061	25.38	4.956	-.0023	-.0018	9.867
Stddev	.0040	.07	.002	.0019	.0007	.011
%RSD	66.14	.2846	.0407	81.42	39.46	.1165
#1	-.0089	25.33	4.954	-.0037	-.0023	9.875
#2	-.0032	25.43	4.957	-.0010	-.0013	9.859
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0036	9.755	.0018	.0019	.0018
Stddev	.0105	.0041	.035	.0029	.0013	.0015
%RSD	212.3	113.3	.3604	155.2	67.99	84.93
#1	.0124	.0007	9.730	-.0002	.0010	.0007
#2	-.0025	.0065	9.780	.0039	.0028	.0029
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 12:45

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.25	2.523	.00453	.0214	.49403	.49006
Stddev	.05	.001	.00144	.0085	.00274	.00151
%RSD	.5291	.0294	31.709	39.65	.55436	.30772
#1	10.22	2.523	.00554	.0154	.49209	.48900
#2	10.29	2.522	.00351	.0275	.49596	.49113
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	178.14
Stddev	.34
%RSD	.19160
#1	178.39
#2	177.90

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 12:48 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4924	2.445	2.478	.46953	.53253	.4979
Stddev	.0271	.032	.029	.00220	.00066	.0034
%RSD	5.512	1.294	1.154	.46764	.12414	.6878
#1	.5116	2.423	2.458	.46798	.53300	.4955
#2	.4733	2.468	2.499	.47109	.53207	.5003
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5016	2.451	.5011	.4967	.5217	.5281
Stddev	.0008	.021	.0003	.0011	.0044	.0115
%RSD	.1688	.8421	.0674	.2284	.8444	2.175
#1	.5022	2.437	.5008	.4975	.5185	.5362
#2	.5010	2.466	.5013	.4959	.5248	.5200
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.416	2.0665	.97563	.9816	.4959	5.079
Stddev	.011	.0027	.00267	.0121	.0035	.029
%RSD	.4732	.13129	.27366	1.228	.6967	.5642
#1	2.408	2.0684	.97375	.9731	.4935	5.059
#2	2.424	2.0646	.97752	.9901	.4984	5.099
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.410	.4933	.4859	2.360	.4914	.4970
Stddev	.022	.0029	.0052	.013	.0029	.0020
%RSD	.9173	.5856	1.079	.5322	.6000	.4047
#1	2.394	.4953	.4822	2.351	.4935	.4956
#2	2.425	.4912	.4896	2.369	.4893	.4985
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 12:48

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0131	.2992	.50349	4.851	.51372	.49834
Stddev	.0043	.0005	.00340	.036	.00319	.00020
%RSD	32.63	.1773	.67549	.7496	.62176	.04033
#1	-.0101	.2995	.50108	4.825	.51146	.49820
#2	-.0161	.2988	.50589	4.876	.51598	.49848
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	178.89
Stddev	.22
%RSD	.12227
#1	178.74
#2	179.05

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 12:51 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137	.0121	-.0030	.00087	.00012	.0015
Stddev	.0126	.0005	.0042	.00005	.00006	.0003
%RSD	91.66	4.194	141.4	5.8535	47.470	21.55
#1	.0048	.0117	-.0059	.00083	.00016	.0013
#2	.0226	.0125	.0000	.00091	.00008	.0017
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0014	.0008	-.0005	.0025	.0071
Stddev	.0001	.0047	.0008	.0003	.0010	.0008
%RSD	53.35	345.3	94.89	53.94	39.78	11.45
#1	.0002	.0047	.0003	-.0007	.0032	.0076
#2	.0001	-.0020	.0013	-.0003	.0018	.0065
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.00309	.00151	.0031	.0006	-.0048
Stddev	.0074	.00008	.00002	.0024	.0004	.0012
%RSD	79.95	2.4878	1.5724	77.79	62.20	25.01
#1	.0144	.00315	.00149	.0049	.0004	-.0039
#2	.0040	.00304	.00153	.0014	.0009	-.0056
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	.0000	-.0035	.0062	.0003	.0001
Stddev	.0070	.0026	.0029	.0016	.0015	.0021
%RSD	59.47	98920.	82.93	26.17	468.5	1953.
#1	.0167	-.0019	-.0056	.0074	.0013	-.0014
#2	.0068	.0019	-.0015	.0051	-.0007	.0016
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 12:51

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	-.0017	.00026	.0024	.00069	.00040
Stddev	.0074	.0003	.00040	.0036	.00009	.00006
%RSD	188.1	18.75	155.21	146.8	13.349	15.704
#1	-.0092	-.0014	-.00003	-.0001	.00075	.00045
#2	.0013	-.0019	.00055	.0050	.00062	.00036
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	176.89
Stddev	.46
%RSD	.26236
#1	176.56
#2	177.22

Method: 2010A Sample Name: K1006676-014 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:07 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.79	.0183	.1214	.62709	.00175	.0219
#1	38.67	.0199	.1158	.62618	.00175	.0212
#2	38.92	.0167	.1270	.62800	.00176	.0226

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	13.75	.0325	.0195	.1079	71.54
#1	.0037	13.71	.0324	.0199	.1085	71.61
#2	.0045	13.80	.0327	.0190	.1073	71.48

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0334	10.87	2.7156	.0034	.0158	10.96
#1	.0374	10.89	2.7091	.0021	.0158	11.00
#2	.0294	10.84	2.7220	.0047	.0159	10.92

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035	-.0002	.1513	.0107	.1228	.1851
#1	.0047	.0000	.1517	.0053	.1214	.1851
#2	.0023	-.0003	.1510	.0160	.1241	.1850

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.390	5.871	2.2305	.0493	.04767	.12801
#1	2.379	5.870	2.2340	.0460	.04818	.12814
#2	2.401	5.872	2.2270	.0527	.04715	.12788

Int. Std.	Sc3572
Units	Cts/S
Avg	180.52
#1	180.50
#2	180.53

x 0.000810

Method: 2010A Sample Name: K1006676-015 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.69	.0161	.0259	.43530	.00181	.0254
#1	42.56	.0157	.0351	.43727	.00181	.0242
#2	42.83	.0165	.0167	.43334	.00182	.0265

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032 *	12.98	.0379	.0200	.0497	76.48
#1	.0035	12.95	.0389	.0207	.0521	76.76
#2	.0030	13.01	.0368	.0194	.0473	76.20

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0231	13.76	1.8191	.0019	.0182	11.83
#1	.0251	13.73	1.8323	.0023	.0182	11.86
#2	.0210	13.79	1.8059	.0014	.0183	11.80

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0288	-.0023	.1978	.0177	.1340	.1364
#1	.0276	-.0008	.2049	.0149	.1348	.1375
#2	.0300	-.0037	.1908	.0205	.1333	.1354

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.248	7.431	2.4911	.0290	.04944	.11670
#1	2.244	7.444	2.5158	.0309	.04939	.11740
#2	2.251	7.418	2.4664	.0271	.04950	.11601

Int. Std.	Sc3572
Units	Cts/S
Avg	181.32
#1	180.20
#2	182.44

* -0.00032 Cd

Method: 2010A Sample Name: K1006676-016 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.86	.0128	.0131	.39204	.00226	.0262
#1	44.07	.0156	.0136	.39208	.00226	.0261
#2	43.64	.0100	.0125	.39200	.00226	.0264

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028 *	14.94	.0305	.0182	.0502	79.09
#1	.0033	14.94	.0304	.0187	.0501	78.88
#2	.0023	14.94	.0306	.0177	.0503	79.29

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	15.75	1.4507	.0000	.0187	12.74
#1	.0075	15.87	1.4593	-.0004	.0187	12.85
#2	.0265	15.63	1.4420	.0005	.0188	12.62

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247	-.0013	.2873	.0107	.1409	.1350
#1	.0204	-.0035	.2880	.0097	.1431	.1352
#2	.0290	.0009	.2866	.0117	.1387	.1347

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.070	5.732	2.5500	.0382	.05692	.13477
#1	2.081	5.750	2.5654	.0383	.05752	.13601
#2	2.060	5.713	2.5345	.0382	.05633	.13353

Int. Std.	Sc3572
Units	Cts/S
Avg	180.67
#1	180.30
#2	181.05

* -0.000847

Method: 2010A Sample Name: K1006676-017 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.16	.0225	.0141	.43773	.00232	.0257
#1	47.27	.0141	.0145	.43913	.00231	.0248
#2	47.06	.0309	.0137	.43633	.00233	.0267

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	15.23	.0320	.0205	.0549	79.59
#1	.0032	15.12	.0324	.0205	.0536	80.31
#2	.0033	15.34	.0315	.0206	.0563	78.86

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197	16.53	1.6319	.0017	.0189	13.39
#1	.0168	16.60	1.6441	.0016	.0187	13.42
#2	.0225	16.45	1.6197	.0018	.0192	13.36

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	.0004	.2999	.0188	.1388	.1457
#1	.0157	-.0008	.3031	.0217	.1404	.1477
#2	.0119	.0015	.2967	.0160	.1372	.1437

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.229	5.235	2.8305	.0287	.06002	.13933
#1	2.227	5.247	2.8443	.0290	.06011	.14014
#2	2.230	5.224	2.8167	.0284	.05994	.13853

Int. Std.	Sc3572
Units	Cts/S
Avg	180.89
#1	179.95
#2	181.83

x - 0.00046 Cd

Method: 2010A Sample Name: K1006676-019 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.28	.0090	.0351	.58404	.00183	.0265
#1	50.34	.0086	.0295	.58588	.00181	.0255
#2	50.22	.0094	.0407	.58219	.00185	.0275

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	13.27	.0345	.0239	.1633	91.43
#1	.0041	13.19	.0352	.0238	.1636	91.61
#2	.0040	13.36	.0338	.0241	.1629	91.26

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0265	19.01	2.5813	.0010	.0185	16.42
#1	.0281	19.02	2.5894	.0010	.0196	16.51
#2	.0248	18.99	2.5733	.0009	.0174	16.33

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	-.0023	.1946	.0103	.1549	.1961
#1	.0004	-.0021	.1971	.0118	.1551	.1973
#2	.0227	-.0024	.1921	.0089	.1546	.1949

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.984	6.730	3.8740	.0518	.09022	.10210
#1	3.000	6.748	3.8737	.0394	.09100	.10245
#2	2.968	6.713	3.8742	.0641	.08944	.10175

Int. Std.	Sc3572
Units	Cts/S
Avg	181.86
#1	181.30
#2	182.43

x - 0.00021 Cd

Method: 2010A Sample Name: K1006676-020 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.15	.0226	.0069	.48287	.00192	.0228
#1	46.99	.0238	.0019	.48256	.00187	.0227
#2	47.31	.0214	.0120	.48319	.00196	.0228

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035 *	12.81	.0354	.0226	.1547	78.77
#1	.0042	12.71	.0355	.0226	.1540	78.55
#2	.0028	12.91	.0354	.0225	.1555	79.00

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0249	16.73	1.9954	.0033	.0143	14.76
#1	.0265	16.69	1.9993	.0026	.0144	14.79
#2	.0233	16.76	1.9914	.0039	.0142	14.73

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0112	.0012	.2456	.0092	.1257	.1627
#1	.0094	-.0012	.2472	.0128	.1233	.1610
#2	.0131	.0035	.2439	.0057	.1282	.1643

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.632	5.698	3.3566	.0539	.07304	.09599
#1	2.627	5.701	3.3591	.0507	.07339	.09606
#2	2.637	5.695	3.3541	.0571	.07268	.09592

Int. Std.	Sc3572
Units	Cts/S
Avg	183.16
#1	182.67
#2	183.65

* -0.00012 cd

Method: 2010A Sample Name: RB Operator: JC
Comment: (208725) (071610B)
Run Time: 07/16/10 13:25 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	.0036	-.0015	.00006	.00002	.0008
#1	-.0020	.0060	.0030	.00034	-.00002	.0005
#2	.0076	.0012	-.0059	-.00022	.00005	.0011

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0004	.0000	-.0005	.0020	.0269
#1	.0003	.0000	-.0002	-.0004	.0033	.0457
#2	.0005	.0008	.0003	-.0007	.0007	.0080

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	.00031	.00022	-.0018	.0001	.0336
#1	.0057	.00049	.00042	-.0015	-.0003	.0361
#2	.0079	.00014	.00003	-.0021	.0005	.0310

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0136	.0000	-.0101	.0008	.0015	.0017
#1	-.0118	.0016	-.0107	.0035	-.0001	.0029
#2	-.0155	-.0016	-.0095	-.0019	.0030	.0005

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0146	.0005	.00294	.0023	.00017	.00007
#1	.0114	.0000	.00381	.0083	-.00014	.00010
#2	.0177	.0010	.00206	-.0036	.00049	.00004

Int. Std.	Sc3572
Units	Cts/S
Avg	177.98
#1	178.15
#2	177.80

Method: 2010A Sample Name: K1006777-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:28 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	-.0016	-.0006	.00018	.00002
#1	.0034	-.0068	.0018	.00014	.00003
#2	-.0061	.0036	-.0030	.00022	.00001

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0003	.0002	.0005	-.0015
#1	.0017	.0006	.0035	-.0003	-.0013
#2	.0014	.0001	-.0031	.0013	-.0017

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	.0061	.0039	.00023	.00013
#1	-.0002	.0070	.0028	.00017	.00024
#2	-.0021	.0052	.0049	.00028	.00001

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0005	.0261	.0198	.0012
#1	.0008	.0003	.0330	.0167	-.0004
#2	-.0006	.0007	.0192	.0229	.0027

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0042	.0097	.0015	.0016	.0069
#1	-.0023	.0099	.0033	.0022	.0064
#2	-.0060	.0095	-.0002	.0009	.0075

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0060	.00094	.0065	.00001	.00009
#1	.0069	.00146	.0082	.00025	.00011
#2	.0052	.00042	.0047	-.00023	.00007

Int. Std.	Sc3572
Units	Cts/S
Avg	179.06
#1	178.74
#2	179.38

Method: 2010A Sample Name: LCSS Operator: JC
Comment: 1/2 K1006777 (208725) (071610B)
Run Time: 07/16/10 13:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.32	.4148	.4525	2.2329	.34005	.5611
#1	41.37	.4060	.4639	2.2183	.33812	.5619
#2	41.26	.4237	.4411	2.2475	.34198	.5603

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4781	50.76	.7739	1.028	1.302	85.91
#1	.4724	50.36	.7667	1.017	1.306	84.87
#2	.4838	51.16	.7811	1.039	1.298	86.94

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5018	19.99	2.5400	.3265	1.066	20.85
#1	.4976	19.93	2.5264	.3211	1.057	20.87
#2	.5059	20.05	2.5535	.3319	1.074	20.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.005	.4076	3.398	.6906	.9186	1.444
#1	1.006	.4064	3.382	.6776	.9114	1.425
#2	1.005	.4088	3.414	.7037	.9258	1.463

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.008	7.763	2.2215	1.277	.04395	.67849
#1	4.002	7.764	2.2087	1.272	.04378	.67636
#2	4.014	7.763	2.2342	1.283	.04411	.68063

Int. Std.	Sc3572
Units	Cts/S
Avg	179.26
#1	180.37
#2	178.16

Method: 2010A Sample Name: K1006777-005 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	64.92	.0209	.0264	.92508	.00624	.0292
#1	64.86	.0153	.0290	.92583	.00622	.0295
#2	64.99	.0265	.0237	.92432	.00625	.0290

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	31.82	.0227	.0207	.0667	70.56
#1	.0032	31.68	.0225	.0197	.0660	70.72
#2	.0033	31.96	.0229	.0217	.0674	70.40

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0460	19.55	3.658	.0021	.0150	10.98
#1	.0477	19.46	3.672	.0036	.0150	10.99
#2	.0443	19.64	3.643	.0006	.0150	10.96

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118	-.0028	1.430	.0140	.0954	.1764
#1	.0013	-.0076	1.440	.0147	.0958	.1747
#2	.0224	.0019	1.421	.0134	.0950	.1781

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.782	3.345	2.3099	.0266	.05164	.29849
#1	1.783	3.342	2.3117	.0227	.05200	.29959
#2	1.780	3.348	2.3081	.0306	.05128	.29739

Int. Std.	Sc3572
Units	Cts/S
Avg	185.99
#1	185.16
#2	186.82

X -0.00005 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 13:37 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.096	.0156	.0069	2.5068	.05018	.0062
Stddev	.036	.0068	.0083	.0181	.00006	.0016
%RSD	.7057	43.72	120.5	.72044	.11608	25.52
#1	5.122	.0204	.0128	2.4940	.05022	.0051
#2	5.071	.0108	.0010	2.5196	.05014	.0073
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	26.91	.0027	-.0027	-.0010	26.16
Stddev	.0000	.07	.0017	.0011	.0010	.12
%RSD	.6192	.2518	62.39	40.75	96.80	.4400
#1	.0015	26.86	.0015	-.0019	-.0017	26.08
#2	.0014	26.96	.0039	-.0035	-.0003	26.24
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0044	25.27	4.982	-.0009	-.0026	9.854
Stddev	.0139	.00	.028	.0011	.0004	.030
%RSD	312.6	.0011	.5594	113.1	14.21	.3084
#1	.0054	25.27	4.962	-.0017	-.0024	9.876
#2	-.0142	25.27	5.002	-.0002	-.0029	9.833
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	.0000	9.835	-.0002	.0012	.0024
Stddev	.0017	.007	.066	.0064	.0004	.0022
%RSD	20.11	161600.	.6666	3841.	31.79	92.14
#1	.0099	.0047	9.882	.0044	.0015	.0039
#2	.0075	-.0048	9.789	-.0047	.0009	.0008
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 13:37

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.524	.00499	.0097	.49392	.49413
Stddev	.01	.007	.00070	.0012	.00443	.00115
%RSD	.1155	.2608	14.032	12.08	.89699	.23198
#1	10.28	2.520	.00450	.0106	.49705	.49332
#2	10.27	2.529	.00549	.0089	.49079	.49494
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	176.66
Stddev	.06
%RSD	.03665
#1	176.70
#2	176.61

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 13:40 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5055	2.439	2.452	.46004	.52390	.4985
Stddev	.0126	.021	.020	.00237	.00040	.0021
%RSD	2.494	.8712	.8149	.51426	.07685	.4233
#1	.4965	2.424	2.437	.45837	.52361	.4970
#2	.5144	2.454	2.466	.46172	.52418	.5000
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4914	2.464	.4884	.4857	.5151	.5210
Stddev	.0036	.037	.0004	.0019	.0035	.0070
%RSD	.7276	1.509	.0877	.3962	.6710	1.347
#1	.4889	2.438	.4881	.4843	.5127	.5259
#2	.4940	2.490	.4887	.4871	.5176	.5160
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.355	2.0708	.95231	.9611	.4852	5.059
Stddev	.001	.0001	.00312	.0167	.0036	.014
%RSD	.0309	.00727	.32732	1.735	.7416	.2725
#1	2.355	2.0707	.95451	.9494	.4827	5.049
#2	2.354	2.0710	.95011	.9729	.4877	5.069
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.385	.4940	.4781	2.298	.4781	.4855
Stddev	.028	.0051	.0017	.016	.0007	.0063
%RSD	1.174	1.031	.3537	.7159	.1372	1.287
#1	2.365	.4976	.4792	2.286	.4786	.4811
#2	2.404	.4904	.4769	2.309	.4776	.4899
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 13:40

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0121	.2947	.49272	4.789	.51073	.48849
Stddev	.0127	.0001	.00030	.008	.00112	.00198
%RSD	105.1	.0170	.06089	.1743	.22013	.40607
#1	-.0210	.2946	.49293	4.795	.50993	.48709
#2	-.0031	.2947	.49250	4.783	.51152	.48990
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.92
Stddev	.14
%RSD	.07533
#1	182.02
#2	181.82

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 13:42 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179	.0141	.0030	.00050	.00019	.0011
Stddev	.0029	.0137	.0100	.00035	.00004	.0005
%RSD	16.29	96.87	339.3	71.081	20.793	44.85
#1	.0199	.0238	-.0041	.00025	.00017	.0015
#2	.0158	.0044	.0101	.00075	.00022	.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003	.0045	.0008	-.0013	.0025	.0071
Stddev	.0001	.0003	.0010	.0001	.0001	.0004
%RSD	29.05	6.196	133.6	7.167	4.305	5.550
#1	.0003	.0047	.0015	-.0013	.0025	.0074
#2	.0004	.0043	.0000	-.0012	.0024	.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081	.00346	.00154	.0036	.0013	.0016
Stddev	.0047	.00016	.00014	.0029	.0015	.0190
%RSD	58.32	4.6334	9.1214	79.42	118.0	1215.
#1	.0048	.00335	.00164	.0056	.0002	-.0118
#2	.0115	.00358	.00144	.0016	.0023	.0150
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174	-.0007	-.0028	.0069	-.0016	.0006
Stddev	.0044	.0028	.0023	.0032	.0011	.0009
%RSD	25.26	396.9	83.55	45.55	69.12	151.0
#1	.0205	-.0027	-.0044	.0092	-.0023	.0013
#2	.0143	.0013	-.0011	.0047	-.0008	.0000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 13:42

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0004	.00095	.0007	.00026	.00049
Stddev	.0025	.0000	.00167	.0036	.00002	.00002
%RSD	23.11	.0579	174.74	500.4	6.2916	4.0166
#1	.0125	.0004	-.00022	-.0018	.00025	.00048
#2	.0090	.0004	.00213	.0033	.00027	.00051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	177.11
Stddev	.50
%RSD	.28064
#1	176.76
#2	177.46

Method: 2010A Sample Name: K1006777-005D Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	68.95	.0231	.0351	.74801	.00474	.0353
#1	68.69	.0279	.0345	.74656	.00477	.0351
#2	69.20	.0183	.0356	.74945	.00471	.0356

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	24.58	.0316	.0242	.0723	82.80
#1	.0037	24.41	.0323	.0237	.0725	83.05
#2	.0037	24.75	.0309	.0248	.0722	82.54

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0513	19.17	2.5411	.0026	.0195	13.57
#1	.0472	19.05	2.5345	.0025	.0191	13.56
#2	.0553	19.29	2.5478	.0027	.0200	13.58

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	-.0005	1.094	.0139	.1315	.1849
#1	.0159	.0012	1.100	.0175	.1326	.1841
#2	-.0015	-.0022	1.089	.0102	.1303	.1858

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.026	4.512	3.2518	.0304	.05577	.23508
#1	1.998	4.510	3.2562	.0265	.05534	.23600
#2	2.054	4.515	3.2473	.0343	.05620	.23416

Int. Std.	Sc3572
Units	Cts/S
Avg	185.40
#1	184.44
#2	186.36

± 0.00011 Cd

Method: 2010A Sample Name: K1006777-005L Operator: JC
Comment: 1/10 (208725) (071610B)
Run Time: 07/16/10 13:48 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.79	.0057	.0149	.18870	.00108	.0070
#1	12.79	.0109	.0202	.18763	.00101	.0068
#2	12.80	.0005	.0096	.18976	.00116	.0072

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007 *	5.862	.0062	.0039	.0145	14.13
#1	.0013	5.885	.0075	.0035	.0130	14.05
#2	.0001	5.839	.0050	.0043	.0161	14.22

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	3.6779	.73540	-.0009	.0013	2.172
#1	-.0011	3.6861	.73889	-.0013	.0011	2.143
#2	.0056	3.6697	.73190	-.0005	.0014	2.201

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0000	.2911	.0118	.0177	.0373
#1	-.0015	-.0013	.2845	.0111	.0166	.0362
#2	.0047	.0013	.2977	.0126	.0188	.0384

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3440	.6553	.45478	.0174	.01024	.05822
#1	.3439	.6518	.45121	.0065	.01022	.05807
#2	.3441	.6588	.45835	.0283	.01025	.05837

Int. Std.	Sc3572
Units	Cts/S
Avg	181.39
#1	181.76
#2	181.02

* 0.00005Cd

Method: 2010A Sample Name: K1006777-005S Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	67.37	.2631	.5199	2.6965	.05354	.4782
#1	67.10	.2573	.5055	2.7048	.05370	.4763
#2	67.64	.2690	.5344	2.6883	.05338	.4800

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm *	ppm	ppm	ppm	ppm	ppm
Avg	.0548	25.69	.2504	.5236	.3314	86.82
#1	.0543	25.60	.2495	.5234	.3251	86.69
#2	.0554	25.77	.2513	.5238	.3376	86.94

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5264	23.57	2.3883	.4598	.5181	19.16
#1	.5279	23.44	2.3871	.4593	.5176	19.18
#2	.5248	23.71	2.3895	.4602	.5186	19.13

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4904	.0462	5.624	.0077	.6353	.6715
#1	.4845	.0422	5.637	.0061	.6347	.6697
#2	.4963	.0502	5.610	.0094	.6358	.6734

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.315	5.358	3.5112	.4838	.05561	.17250
#1	2.307	5.335	3.5109	.4798	.05549	.17283
#2	2.322	5.380	3.5115	.4877	.05573	.17217

Int. Std.	Sc3572
Units	Cts/S
Avg	183.85
#1	183.25
#2	184.44

* 0.0508 Cd

Method: 2010A Sample Name: K1006777-001 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:54 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	36.97	.0221	.1779	.60457	.00172	.0272
#1	37.09	.0221	.1755	.60501	.00176	.0292
#2	36.85	.0220	.1803	.60413	.00167	.0251

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	11.48	.0524	.0236	.2173	111.7
#1	.0073	11.51	.0524	.0235	.2197	111.2
#2	.0071	11.46	.0525	.0238	.2148	112.1

Elem	Pb2203	Mg2025	Mg2795	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1442	9.222	8.4202	2.0845	.0044	.0167
#1	.1385	9.233	8.4726	2.0866	.0053	.0167
#2	.1499	9.211	8.3678	2.0824	.0036	.0167

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.869	.0057	-.0005	.1986	.0148	.2492
#1	10.01	.0057	-.0022	.1994	.0185	.2502
#2	9.725	.0058	.0012	.1978	.0111	.2482

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2769	2.936	6.715	2.8521	.0446	.03309
#1	.2785	2.960	6.775	2.8751	.0321	.03266
#2	.2752	2.912	6.654	2.8292	.0571	.03352

Elem	Sr4077
Units	ppm
Avg	.09864
#1	.09944
#2	.09783

Int. Std.	Sc3572
Units	Cts/S
Avg	183.31
#1	183.60
#2	183.03

7/24/10

* 0.0021 Cd

Method: 2010A Sample Name: K1006777-002 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 13:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.73	.0244	.0536	.51369	.00202	.0242
#1	38.66	.0268	.0505	.51327	.00202	.0246
#2	38.80	.0220	.0566	.51411	.00202	.0238

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034 *	12.74	.0473	.0270	.0625	101.1
#1	.0031	12.73	.0485	.0267	.0629	100.4
#2	.0036	12.76	.0461	.0273	.0621	101.8

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0384	12.02	1.9281	.0012	.0179	11.01
#1	.0390	12.00	1.9294	.0011	.0167	11.07
#2	.0377	12.05	1.9268	.0013	.0190	10.95

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0102	-.0010	.2444	.0123	.2261	.1295
#1	.0163	-.0028	.2460	.0117	.2228	.1291
#2	.0040	.0007	.2428	.0128	.2294	.1298

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.540	6.451	3.1885	.0258	.03732	.10578
#1	2.541	6.450	3.1974	.0208	.03754	.10594
#2	2.540	6.451	3.1796	.0309	.03709	.10563

Int. Std.	Sc3572
Units	Cts/S
Avg	185.02
#1	185.20
#2	184.84

* -0.00125 Cd

Method: 2010A Sample Name: K1006777-003 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	58.92	.0217	.0062	1.0522	.00315	.0463
#1	59.05	.0124	.0118	1.0516	.00312	.0463
#2	58.79	.0310	.0006	1.0529	.00317	.0463

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	25.79	.0414	.0262	.0502	103.3
#1	.0044	25.65	.0419	.0267	.0498	103.3
#2	.0042	25.92	.0409	.0258	.0506	103.3

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0431	24.56	2.0597	.0025	.0239	17.34
#1	.0448	24.57	2.0624	.0017	.0235	17.42
#2	.0413	24.54	2.0571	.0034	.0243	17.26

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0283	-.0022	.7713	.0160	.1990	.1465
#1	.0450	.0011	.7734	.0171	.1989	.1474
#2	.0115	-.0055	.7691	.0149	.1992	.1455

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.164	7.132	4.2010	.0304	.05460	.25085
#1	5.166	7.133	4.2314	.0175	.05486	.25191
#2	5.163	7.131	4.1706	.0433	.05433	.24980

Int. Std.	Sc3572
Units	Cts/S
Avg	186.72
#1	186.53
#2	186.91

x -0.000452 Cd

Method: 2010A Sample Name: K1006777-004 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.89	.0194	.1867	.59374	.00234	.0262
#1	46.80	.0206	.1849	.59369	.00232	.0250
#2	46.98	.0182	.1884	.59379	.00236	.0274

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051	12.63	.0319	.0224	.1537	69.91
#1	.0054	12.57	.0316	.0222	.1530	70.17
#2	.0049	12.68	.0322	.0225	.1544	69.65

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0680	12.42	2.2728	.0022	.0182	12.33
#1	.0684	12.41	2.2523	.0026	.0186	12.34
#2	.0676	12.42	2.2933	.0019	.0179	12.32

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163	-.0015	.4156	.0141	.1317	.2565
#1	.0002	-.0018	.4142	.0109	.1313	.2571
#2	.0324	-.0012	.4170	.0174	.1320	.2559

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.398	6.244	3.4335	.0412	.04775	.11404
#1	2.403	6.225	3.4360	.0356	.04808	.11445
#2	2.394	6.264	3.4311	.0469	.04741	.11363

Int. Std.	Sc3572
Units	Cts/S
Avg	182.88
#1	182.29
#2	183.47

x 0.00190d

Method: 2010A Sample Name: K1006777-006 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:06 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	52.58	.0229	.0206	.95110	.00306	.0320
#1	52.36	.0245	.0182	.95191	.00312	.0317
#2	52.79	.0213	.0230	.95028	.00301	.0322

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028	26.22	.0312	.0243	.0545	83.78
#1	.0031	26.07	.0312	.0246	.0546	83.40
#2	.0026	26.37	.0311	.0240	.0543	84.16

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0282	21.98	1.6263	.0004	.0221	15.98
#1	.0256	22.03	1.6317	.0008	.0211	16.05
#2	.0308	21.92	1.6210	.0001	.0230	15.90

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	-.0016	1.259	.0153	.1604	.1501
#1	.0062	-.0021	1.269	.0161	.1607	.1504
#2	.0175	-.0010	1.250	.0145	.1602	.1498

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.328	5.907	4.2913	.0384	.06265	.22726
#1	2.310	5.900	4.3077	.0467	.06334	.22893
#2	2.346	5.913	4.2748	.0301	.06196	.22559

Int. Std.	Sc3572
Units	Cts/S
Avg	184.40
#1	183.62
#2	185.18

$\bar{x}$ 0.0011 Cd

Method: 2010A Sample Name: K1006777-007 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:09 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	29.79	.0144	.1424	.46641	.00146	.0259
#1	29.84	.0084	.1380	.46642	.00147	.0267
#2	29.73	.0205	.1468	.46639	.00146	.0250

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0051 X	9.072	8.751	.0365	.0194	.1673
#1	.0057	9.067	8.759	.0359	.0205	.1691
#2	.0045	9.077	8.743	.0372	.0182	.1655

MJMR 7/19/10

Elem	Fe2714	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	82.45	.1133	7.1402	1.6956	.0013	.0121
#1	82.29	.1129	7.1374	1.6963	.0000	.0122
#2	82.60	.1137	7.1430	1.6950	.0025	.0121

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.242	.0203	-.0026	.1521	.0184	.1789
#1	8.251	.0110	-.0048	.1533	.0178	.1768
#2	8.234	.0296	-.0004	.1510	.0191	.1810

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2241	2.461	5.457	2.3727	.0346	.02705
#1	.2251	2.448	5.465	2.3723	.0436	.02693
#2	.2232	2.473	5.449	2.3730	.0256	.02717

Elem	Sr4077
Units	ppm
Avg	.07838
#1	.07854
#2	.07823

X 0.0013 Cd

Int. Std.	Sc3572
Units	Cts/S
Avg	184.98
#1	184.85
#2	185.11

Method: 2010A Sample Name: K1006777-009 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:12 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.19	.0273	.0591	.47175	.00175	.0217
#1	38.13	.0253	.0619	.46891	.00169	.0219
#2	38.25	.0293	.0562	.47459	.00181	.0215

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045 *	11.90	.0318	.0187	.0699	70.90
#1	.0041	11.85	.0325	.0193	.0715	70.02
#2	.0049	11.95	.0311	.0181	.0684	71.78

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0238	11.61	1.5608	.0000	.0116	11.27
#1	.0253	11.55	1.5443	-.0004	.0117	11.31
#2	.0223	11.67	1.5774	.0005	.0116	11.24

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0152	-.0012	.3330	.0151	.1306	.1853
#1	.0331	-.0015	.3307	.0152	.1296	.1831
#2	-.0027	-.0010	.3353	.0150	.1316	.1874

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.237	6.925	2.6556	.0233	.03613	.10172
#1	2.255	6.962	2.6232	.0124	.03630	.10068
#2	2.219	6.888	2.6879	.0343	.03596	.10277

Int. Std.	Sc3572
Units	Cts/S
Avg	186.10
#1	187.23
#2	184.96

* 0.0012 Cd

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 14:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.070	.0159	.0048	2.4508	.04888	.0067
Stddev	.019	.0142	.0029	.0171	.00023	.0007
%RSD	.3688	89.01	61.10	.69866	.46781	9.906
#1	5.057	.0260	.0027	2.4387	.04872	.0072
#2	5.083	.0059	.0069	2.4629	.04904	.0063
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	27.30	.0003	-.0017	-.0016	25.81
Stddev	.0002	.00	.0005	.0003	.0001	.05
%RSD	9.624	.0094	198.3	15.87	6.892	.2124
#1	.0015	27.30	-.0001	-.0015	-.0017	25.77
#2	.0018	27.30	.0006	-.0019	-.0016	25.84
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	25.33	4.846	-.0024	-.0028	9.839
Stddev	.0010	.19	.002	.0007	.0009	.112
%RSD	82.04	.7679	.0396	28.32	32.68	1.136
#1	-.0019	25.19	4.845	-.0028	-.0022	9.760
#2	-.0005	25.47	4.848	-.0019	-.0035	9.918
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0242	-.0004	9.644	-.0003	.0001	.0028
Stddev	.0096	.0020	.114	.0048	.0015	.0033
%RSD	39.89	471.9	1.181	1716.	1267.	121.6
#1	.0310	.0010	9.564	.0031	-.0010	.0004
#2	.0173	-.0019	9.725	-.0036	.0012	.0051
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 14:15

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.27	2.521	.00367	.0067	.49300	.48012
Stddev	.02	.004	.00077	.0023	.00420	.00133
%RSD	.1705	.1782	21.041	34.47	.85241	.27627
#1	10.26	2.524	.00312	.0083	.49003	.47918
#2	10.28	2.518	.00422	.0051	.49597	.48106
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	181.04
Stddev	.26
%RSD	.14158
#1	181.23
#2	180.86

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 14:18 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5033	2.409	2.483	.45672	.51556	.4969
Stddev	.0157	.028	.007	.00002	.00015	.0013
%RSD	3.110	1.159	.2860	.00530	.02852	.2636
#1	.4923	2.389	2.488	.45673	.51546	.4960
#2	.5144	2.428	2.478	.45670	.51567	.4978
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4894	2.423	.4883	.4802	.5251	.5189
Stddev	.0020	.035	.0029	.0037	.0061	.0067
%RSD	.4114	1.452	.5984	.7617	1.165	1.293
#1	.4880	2.398	.4862	.4776	.5295	.5237
#2	.4909	2.448	.4904	.4828	.5208	.5142
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.312	2.0555	.94422	.9585	.4804	5.069
Stddev	.012	.0006	.00428	.0131	.0017	.013
%RSD	.5029	.03153	.45286	1.368	.3587	.2564
#1	2.303	2.0550	.94120	.9492	.4791	5.078
#2	2.320	2.0560	.94724	.9677	.4816	5.060
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.407	.4979	.4813	2.259	.4760	.4804
Stddev	.013	.0045	.0047	.043	.0004	.0046
%RSD	.5290	.9041	.9800	1.884	.0823	.9540
#1	2.416	.5011	.4846	2.229	.4762	.4772
#2	2.398	.4947	.4780	2.289	.4757	.4836
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 14:18

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0268	.2974	.48734	4.745	.50822	.48100
Stddev	.0032	.0016	.00423	.042	.00580	.00004
%RSD	11.88	.5414	.86760	.8766	1.1420	.00917
#1	-.0291	.2985	.49033	4.716	.51232	.48103
#2	-.0246	.2962	.48435	4.774	.50411	.48097
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	183.10
Stddev	.31
%RSD	.16810
#1	183.32
#2	182.88

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 14:21 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0192	.0117	-.0035	.00077	.00023	.0013
Stddev	.0146	.0069	.0017	.00025	.00004	.0001
%RSD	75.97	58.84	47.10	32.616	17.136	10.86
#1	.0295	.0165	-.0024	.00095	.00026	.0014
#2	.0089	.0068	-.0047	.00060	.00020	.0012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0030	.0018	-.0009	.0009	.0087
Stddev	.0001	.0003	.0001	.0001	.0005	.0013
%RSD	105.7	9.357	4.262	15.10	58.61	14.66
#1	.0000	.0028	.0018	-.0010	.0013	.0096
#2	.0002	.0031	.0019	-.0008	.0005	.0078
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.00378	.00151	.0028	.0011	.0025
Stddev	.0045	.00006	.00021	.0029	.0004	.0239
%RSD	1263.	1.6547	13.778	103.6	36.28	942.6
#1	-.0028	.00374	.00166	.0048	.0014	-.0144
#2	.0035	.00383	.00137	.0007	.0008	.0195
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	.0027	-.0015	.0115	.0004	.0000
Stddev	.0070	.0016	.0051	.0033	.0021	.000
%RSD	125.5	59.54	349.8	29.24	580.8	1190.
#1	.0105	.0039	-.0051	.0138	-.0011	.0001
#2	.0006	.0016	.0021	.0091	.0018	-.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/16/10 14:21

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0008	.00068	-.0037	.00052	.00047
Stddev	.0054	.0017	.00036	.0143	.00004	.00001
%RSD	1552.	205.1	52.927	385.3	7.3183	2.2309
#1	.0042	-.0021	.00093	-.0138	.00049	.00046
#2	-.0035	.0004	.00042	.0064	.00055	.00048
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	179.25
Stddev	.20
%RSD	.11029
#1	179.11
#2	179.39

Method: 2010A Sample Name: K1006777-010 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:24 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	51.31	.0290	.0291	.62604	.00246	.0236
#1	51.27	.0294	.0363	.63411	.00247	.0219
#2	51.34	.0286	.0219	.61796	.00246	.0252

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036 X	19.89	.0362	.0250	.0478	87.27
#1	.0039	19.83	.0370	.0260	.0483	88.25
#2	.0032	19.96	.0355	.0241	.0472	86.28

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0262	20.00	2.1509	.0015	.0211	17.43
#1	.0297	19.95	2.1985	.0021	.0215	17.55
#2	.0226	20.05	2.1032	.0008	.0206	17.30

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139	-.0014	.6105	.0133	.1548	.1608
#1	.0127	.0022	.6272	.0138	.1568	.1631
#2	.0150	-.0049	.5937	.0129	.1527	.1585

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.656	6.092	3.4791	.0301	.05286	.16999
#1	2.659	6.072	3.5537	.0342	.05363	.17361
#2	2.652	6.112	3.4045	.0260	.05209	.16637

Int. Std.	Sc3572
Units	Cts/S
Avg	178.90
#1	175.34
#2	182.46

X 0.0004 Cd

Method: 2010A Sample Name: K1006777-011 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.59	.0238	.0045	.85277	.00249	.0271
#1	49.84	.0238	.0087	.85681	.00252	.0270
#2	49.35	.0238	.0003	.84872	.00247	.0271

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031 X	24.62	.0286	.0311	.0424	80.80
#1	.0031	24.57	.0285	.0318	.0435	81.12
#2	.0032	24.66	.0287	.0304	.0414	80.49

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0244	23.24	1.9743	.0004	.0193	19.54
#1	.0260	23.42	1.9798	.0002	.0194	19.66
#2	.0227	23.06	1.9689	.0006	.0191	19.41

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	-.0008	1.300	.0115	.1422	.1519
#1	-.0002	-.0030	1.312	.0154	.1448	.1528
#2	-.0065	.0014	1.287	.0075	.1395	.1510

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.905	4.645	3.5042	.0415	.05871	.25727
#1	2.905	4.660	3.5326	.0335	.05913	.25930
#2	2.906	4.630	3.4758	.0495	.05829	.25524

Int. Std.	Sc3572
Units	Cts/S
Avg	184.76
#1	184.24
#2	185.28

X - 0.00062 Cd

Method: 2010A Sample Name: K1006777-012 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:30 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	34.72	.0112	.1786	.53980	.00138	.0227
#1	34.67	.0068	.1795	.53894	.00139	.0225
#2	34.77	.0157	.1778	.54067	.00137	.0228

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055	10.47	.0328	.0172	.1847	71.14
#1	.0058	10.49	.0339	.0170	.1855	71.01
#2	.0051	10.45	.0318	.0175	.1840	71.27

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0626	10.05	1.8280	-.0002	.0132	11.26
#1	.0581	9.953	1.8294	-.0010	.0142	11.28
#2	.0671	10.15	1.8267	.0005	.0122	11.24

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0013	.1256	.0090	.1522	.2312
#1	-.0005	-.0004	.1238	.0063	.1516	.2309
#2	.0218	.0030	.1274	.0118	.1527	.2316

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.795	5.972	2.7823	.0394	.03783	.08170
#1	2.791	5.961	2.7783	.0494	.03815	.08171
#2	2.798	5.982	2.7864	.0295	.03751	.08169

Int. Std.	Sc3572
Units	Cts/S
Avg	183.30
#1	182.88
#2	183.72

* 0.0022 Cd

Method: 2010A Sample Name: K1006777-013 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	45.73	.0153	.0855	.67342	.00186	.0247
#1	45.67	.0222	.0923	.67156	.00181	.0253
#2	45.79	.0084	.0787	.67527	.00190	.0241

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033 *	13.13	.0384	.0229	.0745	81.55
#1	.0035	13.07	.0377	.0228	.0705	81.50
#2	.0031	13.20	.0390	.0230	.0785	81.61

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0301	13.44	2.0455	.0022	.0166	14.11
#1	.0233	13.49	2.0501	.0037	.0166	14.18
#2	.0368	13.39	2.0409	.0007	.0166	14.04

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101	-.0022	.1781	.0126	.1671	.1616
#1	.0008	-.0029	.1799	.0157	.1637	.1603
#2	.0194	-.0014	.1763	.0094	.1706	.1628

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.017	6.290	3.7346	.0346	.04960	.09889
#1	3.001	6.289	3.7365	.0265	.05013	.09924
#2	3.032	6.291	3.7328	.0428	.04907	.09853

Int. Std.	Sc3572
Units	Cts/S
Avg	184.66
#1	184.37
#2	184.95

* - 0.00045 Cd

Method: 2010A Sample Name: K1006777-014 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	46.26	.0169	.0079	.65174	.00164	.0235
#1	46.08	.0141	.0162	.65009	.00159	.0232
#2	46.44	.0197	-.0003	.65340	.00170	.0238

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028 X	13.60	.0355	.0271	.0330	89.47
#1	.0033	13.53	.0348	.0274	.0342	89.17
#2	.0023	13.67	.0362	.0269	.0319	89.78

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0190	18.51	2.0634	.0013	.0192	16.95
#1	.0219	18.43	2.0589	.0009	.0192	16.92
#2	.0161	18.59	2.0679	.0017	.0191	16.99

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0199	-.0034	.2302	.0098	.1761	.1493
#1	.0198	-.0029	.2324	.0077	.1761	.1498
#2	.0199	-.0040	.2279	.0118	.1760	.1488

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.708	6.753	4.8973	.0317	.06653	.09075
#1	2.713	6.738	4.9062	.0186	.06570	.09106
#2	2.704	6.768	4.8884	.0448	.06736	.09043

Int. Std.	Sc3572
Units	Cts/S
Avg	185.08
#1	184.77
#2	185.39

X -0.00130d

Method: 2010A Sample Name: K1006777-015 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.75	.0153	.0756	.54120	.00163	.0215
#1	35.61	.0165	.0862	.54163	.00162	.0207
#2	35.89	.0141	.0649	.54076	.00163	.0222

Elem	Cd2265	Ca2112	Ca3179	Cr2677	Co2286	Cu3247
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	9.093	8.602	.0401	.0196	.0876
#1	.0039	9.120	8.604	.0396	.0196	.0885
#2	.0052	9.066	8.600	.0406	.0195	.0867

MMR 7/29/10

Elem	Fe2714	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	84.43	.0394	7.6157	2.2046	.0013	.0149
#1	84.37	.0416	7.5656	2.2029	.0006	.0149
#2	84.50	.0371	7.6657	2.2062	.0019	.0149

Elem	K_7664	Se1960	Ag3280	Na5895	Sn1899	V_3102
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.070	.0090	-.0030	.2149	.0152	.1726
#1	9.066	.0028	-.0030	.2162	.0136	.1725
#2	9.073	.0152	-.0030	.2136	.0168	.1728

Elem	Zn2062	P_2149	Si2516	Ti3234	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1702	2.202	6.078	2.2977	.0321	.03427
#1	.1717	2.202	6.068	2.2949	.0279	.03409
#2	.1687	2.201	6.089	2.3004	.0363	.03445

Elem	Sr4077
Units	ppm
Avg	.09035
#1	.09035
#2	.09035

x = 0.00072 Cd

Int. Std.	Sc3572
Units	Cts/S
Avg	181.81
#1	181.82
#2	181.79

Method: 2010A Sample Name: K1006777-016 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:42 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	55.64	.0249	.0294	.57719	.00264	.0328
#1	55.58	.0285	.0312	.57744	.00268	.0327
#2	55.70	.0213	.0276	.57694	.00259	.0329

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	14.56	.0407	.0248	.0576	88.83
#1	.0036	14.64	.0404	.0257	.0577	88.96
#2	.0043	14.49	.0409	.0239	.0574	88.70

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0357	14.28	2.0034	.0005	.0210	14.54
#1	.0350	14.30	2.0068	.0004	.0201	14.63
#2	.0364	14.26	1.9999	.0006	.0218	14.45

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111	.0010	.6852	.0172	.1776	.1410
#1	.0068	.0022	.6910	.0141	.1774	.1414
#2	.0154	-.0001	.6795	.0203	.1777	.1407

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.812	6.580	3.1387	.0319	.04922	.13928
#1	2.805	6.589	3.1515	.0352	.05035	.13993
#2	2.819	6.572	3.1259	.0286	.04809	.13862

Int. Std.	Sc3572
Units	Cts/S
Avg	184.23
#1	184.34
#2	184.13

x -0.000190d

Method: 2010A Sample Name: K1006777-017 Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	44.26	.0269	.0138	.77663	.00217	.0400
#1	44.41	.0269	.0156	.77799	.00217	.0402
#2	44.11	.0269	.0120	.77527	.00216	.0399

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	51.88	.0342	.0256	.0403	75.12
#1	.0025	51.80	.0345	.0260	.0405	74.89
#2	.0029	51.96	.0339	.0251	.0401	75.34

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210	15.62	1.6176	.0011	.0213	13.48
#1	.0169	15.75	1.6210	.0012	.0210	13.66
#2	.0252	15.50	1.6141	.0011	.0216	13.29

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158	-.0015	1.157	.0104	.1557	.1155
#1	.0065	-.0005	1.174	.0097	.1597	.1165
#2	.0251	-.0024	1.140	.0111	.1517	.1144

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.823	6.921	2.7815	.0250	.04228	.25390
#1	2.825	6.936	2.8040	.0159	.04250	.25646
#2	2.821	6.906	2.7591	.0341	.04206	.25134

Int. Std.	Sc3572
Units	Cts/S
Avg	182.41
#1	182.27
#2	182.54

x 0.00076 Cd

Method: 2010A Sample Name: RB Operator: JC
Comment: (208725) (071610B)
Run Time: 07/16/10 14:47 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0089	-.0009	.0059	.00031	-.00004	.0008
#1	.0090	-.0085	.0107	.00050	-.00009	.0011
#2	.0089	.0068	.0012	.00012	.00002	.0006

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	.0029	.0005	-.0009	.0017	.0217
#1	-.0001	.0028	.0007	-.0002	.0018	.0367
#2	-.0001	.0031	.0003	-.0017	.0016	.0067

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053	.00042	.00001	-.0024	.0012	.0056
#1	.0078	.00062	.00010	-.0026	.0010	-.0003
#2	.0028	.00023	-.00008	-.0021	.0013	.0116

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0019	.0000	-.0070	-.0011	.0002	.0019
#1	.0043	.0001	-.0064	-.0034	-.0007	.0029
#2	-.0081	-.0001	-.0076	.0012	.0011	.0010

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	-.0014	.00165	-.0130	.00020	.00007
#1	.0060	-.0017	.00303	-.0155	.00056	.00005
#2	-.0110	-.0010	.00026	-.0105	-.00017	.00008

Int. Std.	Sc3572
Units	Cts/S
Avg	179.19
#1	179.01
#2	179.36

Method: 2010A Sample Name: K1006453-MB Operator: JC
Comment: 1/2 (208725) (071610B)
Run Time: 07/16/10 14:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0171	-.0029	-.0024	.00005	-.00005	.0018
#1	.0089	.0068	.0024	-.00001	-.00004	.0026
#2	.0254	-.0125	-.0071	.00012	-.00007	.0010

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.0041	.0013	-.0004	.0011	.0061
#1	.0003	.0024	.0009	.0003	.0015	.0066
#2	.0002	.0059	.0018	-.0011	.0007	.0056

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0011	.00032	.00016	-.0020	.0001	.0090
#1	.0000	.00027	.00013	-.0012	.0002	.0251
#2	-.0022	.00036	.00020	-.0027	.0001	-.0070

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0019	-.0002	.0190	-.0008	.0019
#1	-.0031	-.0013	-.0022	.0205	-.0010	-.0007
#2	.0031	-.0024	.0017	.0175	-.0006	.0045

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0221	.0075	.00169	-.0181	.00023	.00010
#1	.0183	.0085	.00104	-.0139	.00002	.00012
#2	.0259	.0064	.00235	-.0223	.00045	.00008

Int. Std.	Sc3572
Units	Cts/S
Avg	180.12
#1	179.64
#2	180.60

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/16/10 14:54 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.070	.0099	-.0035	2.4524	.04838	.0060
Stddev	.065	.0046	.0029	.0062	.00024	.0009
%RSD	1.281	46.06	84.26	.25438	.49358	14.16
#1	5.116	.0067	-.0055	2.4480	.04821	.0066
#2	5.024	.0131	-.0014	2.4568	.04855	.0054
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	27.16	.0031	-.0012	.0004	25.63
Stddev	.0007	.19	.0008	.0010	.0011	.10
%RSD	43.82	.6971	25.00	80.47	249.6	.3890
#1	.0022	27.02	.0037	-.0019	-.0003	25.56
#2	.0011	27.29	.0026	-.0005	.0012	25.70
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0117	25.36	4.810	-.0027	-.0027	9.859
Stddev	.0054	.17	.032	.0001	.0007	.002
%RSD	46.48	.6848	.6598	4.461	24.80	.0189
#1	-.0078	25.48	4.787	-.0026	-.0032	9.861
#2	-.0155	25.23	4.832	-.0028	-.0022	9.858
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	.0011	9.638	.0027	-.0004	.0023
Stddev	.0035	.0010	.015	.0031	.0011	.0008
%RSD	23.59	88.92	.1579	116.1	281.8	35.45
#1	.0173	.0019	9.628	.0005	-.0012	.0017
#2	.0124	.0004	9.649	.0049	.0004	.0028
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/16/10 14:54

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.28	2.515	.00356	.0192	.49246	.47576
Stddev	.03	.009	.00267	.0320	.00228	.00045
%RSD	.3108	.3713	74.935	166.4	.46371	.09382
#1	10.26	2.522	.00167	-.0034	.49408	.47608
#2	10.31	2.509	.00544	.0418	.49085	.47545
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	181.71
Stddev	.75
%RSD	.41320
#1	182.24
#2	181.18

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 14:57 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4962	2.401	2.491	.45774	.50829	.4907
Stddev	.0293	.038	.009	.00087	.00215	.0006
%RSD	5.908	1.601	.3733	.18909	.42359	.1194
#1	.5170	2.374	2.497	.45835	.50676	.4903
#2	.4755	2.428	2.484	.45712	.50981	.4911
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4928	2.411	.4873	.4813	.5217	.5203
Stddev	.0008	.007	.0003	.0002	.0047	.0111
%RSD	.1579	.2720	.0544	.0394	.9009	2.133
#1	.4934	2.415	.4871	.4812	.5184	.5281
#2	.4922	2.406	.4875	.4814	.5250	.5124
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.322	1.9408	.95531	.9539	.4802	4.968
Stddev	.019	.0005	.00200	.0069	.0004	.049
%RSD	.8321	.02390	.20925	.7233	.0813	.9760
#1	2.336	1.9405	.95390	.9490	.4805	4.934
#2	2.308	1.9412	.95673	.9587	.4800	5.003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.368	.4880	.4720	Q 2.241	.4666	.4862
Stddev	.016	.0063	.0071	.020	.0024	.0044
%RSD	.6664	1.298	1.505	.9050	.5119	.9129
#1	2.357	.4835	.4670	2.255	.4649	.4894
#2	2.379	.4925	.4770	2.227	.4683	.4831
Check ?	QC Pass	QC Pass	None	QC Fail	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/16/10 14:57

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0065	.2921	.48179	4.737	.49880	.47184
Stddev	.0041	.0003	.00531	.011	.00450	.00513
%RSD	62.88	.0987	1.1024	.2206	.90270	1.0874
#1	-.0094	.2923	.47803	4.744	.49561	.46821
#2	-.0036	.2919	.48555	4.729	.50198	.47547
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	183.71
Stddev	.48
%RSD	.25911
#1	184.05
#2	183.37

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/16/10 14:59 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4929	2.448	2.481	.45435	.51043	.4964
Stddev	.0008	.004	.001	.00131	.00154	.0004
%RSD	.1699	.1568	.0423	.28826	.30167	.0734
#1	.4923	2.450	2.482	.45343	.50934	.4962
#2	.4935	2.445	2.481	.45528	.51151	.4967
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4880	2.411	.4868	.4778	.5262	.5087
Stddev	.0006	.004	.0009	.0022	.0049	.0027
%RSD	.1195	.1825	.1802	.4605	.9405	.5243
#1	.4876	2.408	.4875	.4762	.5227	.5068
#2	.4885	2.414	.4862	.4793	.5297	.5106
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.298	1.9362	.95065	.9518	.4796	5.034
Stddev	.038	.0049	.00368	.0098	.0033	.015
%RSD	1.654	.25082	.38705	1.034	.6889	.2899
#1	2.271	1.9327	.94805	.9448	.4773	5.044
#2	2.325	1.9396	.95325	.9587	.4820	5.024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.383	.4922	.4817	Q 2.245	.4691	.4806
Stddev	.002	.0031	.0047	.020	.0005	.0052
%RSD	.0855	.6315	.9688	.9061	.0995	1.082
#1	2.382	.4900	.4784	2.231	.4688	.4769
#2	2.385	.4944	.4850	2.260	.4694	.4843
Check ?	QC Pass	QC Pass	None	QC Fail	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

BC 7/16/10

Sample Name: CCVA Run Time: 07/16/10 14:59

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0197	.2927	.48558	4.743	.50560	.47570
Stddev	.0009	.0008	.00635	.073	.00016	.00026
%RSD	4.426	.2879	1.3078	1.539	.03106	.05398
#1	-.0191	.2933	.48109	4.692	.50572	.47552
#2	-.0203	.2921	.49007	4.795	.50549	.47588
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	183.74
Stddev	.39
%RSD	.21114
#1	184.01
#2	183.46

SC 7/16/10
AHZ 7/16/10

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/16/10 15:02 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0034	.0157	.0000	.00061	.00028
Stddev	.0097	.0080	.0050	.00000	.00008
%RSD	284.7	50.75	347700.	.51026	27.997
#1	.0035	.0214	.0035	.00060	.00022
#2	-.0103	.0101	-.0035	.00061	.00033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	.0007	.0047	.0003	-.0007
Stddev	.0002	.0005	.0022	.0002	.0000
%RSD	35.85	77.94	47.15	86.76	.1940
#1	.0003	.0010	.0031	.0001	-.0007
#2	.0006	.0003	.0063	.0004	-.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0091	.0094	.00420	.00179
Stddev	.0001	.0007	.0002	.00008	.00003
%RSD	4.245	7.829	2.465	1.9437	1.4551
#1	.0025	.0096	.0092	.00414	.00181
#2	.0027	.0086	.0095	.00426	.00177
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0045	.0001	.0185	.0087	.0022
Stddev	.0019	.0005	.0122	.0079	.0024
%RSD	42.83	380.4	65.83	90.98	113.1
#1	.0058	-.0002	.0099	.0143	.0039
#2	.0031	.0005	.0271	.0031	.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/16/10 15:02

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0025	.0026	-.0012	.0012	.0040
Stddev	.0018	.0049	.0026	.0011	.0054
%RSD	72.99	190.4	225.5	91.90	135.3
#1	-.0012	.0060	-.0030	.0019	.0002
#2	-.0037	-.0009	.0007	.0004	.0078
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0016	.00212	-.0121	.00010	.00055
Stddev	.0019	.00093	.0048	.00011	.00000
%RSD	117.3	43.781	39.55	104.76	.56014
#1	-.0029	.00278	-.0087	.00018	.00054
#2	-.0003	.00146	-.0155	.00003	.00055
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	178.65
Stddev	.12
%RSD	.06651
#1	178.57
#2	178.74

Service Request # K1006777 (HNO3)_____
Calibration _____072710D_____
QC in calibration__072710D_____
QC Service Request K1006777_____
STARLIMS Batch # 210137_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments:

Primary Review by _____ Date 7/27/10
Secondary Review by JDB Date 7/28/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Blk	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	7	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	LCSW K1006615 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006615-006 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	LCSW K1006676 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	K1006676-018 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	3	5	145
43	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	1	3	6	145
44	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
45	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
46	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	3	145
55	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	1	4	4	145
56	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
57	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
58	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
67	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
68	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
69	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	LCSW K1006777 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006777-005 1/5 +50A	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
78	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	11	145
79	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
80	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
81	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	K1006777-013 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
90	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
91	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
92	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
93	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	CCV9	Unknown	0 kg	0 ml	1.00	0	1	2	145
97	CCB9	Unknown	0 kg	0 ml	1.00	0	1	1	145

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:39:50 7/27/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-550.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80

ExCell Mass Calibration

Date: 7/27/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1297	0.715	-0.001	TRUE	
7.016	1550	0.766	0.005	TRUE	Li-7
9.012	2051	0.715	0.032	TRUE	Be-9
23.985	5871	0.715	-0.012	TRUE	Mg-24
24.986	6131	0.715	-0.033	TRUE	Co-59
25.983	6378	0.715	-0.007	TRUE	In-115
26.982	6638	0.715	-0.03	TRUE	Ce-140
43.956	10953	0.766	-0.013	TRUE	Pb-208
45.953	11460	0.766	-0.008	TRUE	Bi-209
51.94	12981	0.766	0.004	TRUE	U-238
53.949	13488	0.766	0.02	TRUE	
55.935	13950	0.409	0.191	FALSE	
56.935	14255	0.766	-0.007	TRUE	
57.934	14502	0.766	0.022	TRUE	
58.933	14762	0.766	-0.001	TRUE	
59.931	15009	0.766	0.027	TRUE	
65.926	16537	0.817	0.019	TRUE	
69.925	17557	0.766	0.012	TRUE	
75.92	19091	0.766	-0.018	TRUE	
112.904	28504	0.765	0.006	TRUE	
114.904	29011	0.765	0.015	TRUE	
118.903	30064	0.765	-0.119	FALSE	
139.905	35388	0.714	-0.011	TRUE	
141.908	35901	0.765	-0.021	TRUE	
155.923	39470	0.714	-0.008	TRUE	
205.974	52229	0.663	0.007	TRUE	
206.976	52489	0.663	-0.01	TRUE	
207.977	52743	0.713	-0.005	TRUE	
208.98	52996	0.663	0.007	TRUE	
238.051	60413	0.611	0.009	TRUE	

Excluded In Calib | Excluded In Results | Test Has Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	58Ni	7Li	9Be	59Co	115In	208Pb
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)0.833	(P)39327.559	(P)9811.035	(P)67039.274	(P)76502.298	(P)33178.985
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)0.167	(P)39103.111	(P)9514.667	(P)66322.439	(P)76624.967	(P)33653.428
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)0.667	(P)38334.197	(P)9542.019	(P)65835.204	(P)76336.600	(P)33757.674
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)0.500	(P)37799.945	(P)9229.314	(P)65155.255	(P)76773.425	(P)34351.085
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)0.167	(P)38073.342	(P)9374.242	(P)64549.011	(P)76572.176	(P)33980.700
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)0.467	(P)38527.631	(P)9494.255	(P)65780.237	(P)76561.893	(P)33784.374
	SD of Stability 07-27-20		(P)0.298	(P)660.376	(P)216.590	(P)973.229	(P)160.576	(P)431.295
	%RSD of Stability 07		(P)63.888	(P)1.714	(P)2.281	(P)1.480	(P)0.210	(P)1.277

Run	Label	TimeStamp	209Bi	232Th	238U
1	Stability 07-27-2010	7/27/2010 8:51:48 A	(P)51754.918	(P)0.000	(P)56579.869
2	Stability 07-27-2010	7/27/2010 8:53:03 A	(P)51684.833	(P)0.167	(P)57396.617
3	Stability 07-27-2010	7/27/2010 8:54:18 A	(P)52516.523	(P)0.167	(P)58113.671
4	Stability 07-27-2010	7/27/2010 8:55:33 A	(P)52575.914	(P)0.167	(P)58425.955
5	Stability 07-27-2010	7/27/2010 8:56:48 A	(P)52335.358	(P)0.333	(P)58743.726
	Mean of Stability 07-27	7/27/2010 8:51:48 A	(P)52173.509	(P)0.167	(P)57851.968
	SD of Stability 07-27-20		(P)424.207	(P)0.118	(P)868.729
	%RSD of Stability 07		(P)0.813	(P)70.711	(P)1.502

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		Cal. Blk 7/27/10 17:16			Mean	SD	%RSD
Arsenic	75	0.0043	0.0083	-0.0126	**0**	0.0111	0
Selenium	77	-0.0264	-0.0253	0.0517	**0**	0.0447	0
Selenium	78	-0.0267	-0.0503	0.077	**0**	0.0677	0
Selenium	82	-0.0399	0.0576	-0.0177	**0**	0.0511	0
Thallium	203	-0.0003	-0.0036	0.0038	**0**	0.0037	0
Thallium	205	-0.0003	-0.0011	0.0014	**0**	0.0013	0
Uranium	238	-0.0021	-0.0015	0.0036	**0**	0.0031	0

Internal Standard Factors:

Rhodium	103	1.016	0.992	0.992	**1.016**	n/a	n/a
Lutetium	175	1.017	0.99	0.994	**1.017**	n/a	n/a
Gold	197	1.011	1.007	0.982	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/27/10 17:26					
Arsenic	75	24.94	25.17	24.89	**25**	0.1484	0.5935
Selenium	77	24.6	25	25.39	**25**	0.3967	1.587
Selenium	78	24.9	25.09	25.02	**25**	0.0968	0.387
Selenium	82	25.34	25.15	24.51	**25**	0.4382	1.753
Thallium	203	24.81	24.75	25.45	**25**	0.3889	1.556
Thallium	205	24.79	24.84	25.37	**25**	0.3243	1.297
Uranium	238	25.09	24.67	25.24	**25**	0.2963	1.185

Internal Standard Factors:

Rhodium	103	0.966	0.964	0.957	**0.966**	n/a	n/a
Lutetium	175	0.976	0.963	0.972	**0.976**	n/a	n/a
Gold	197	0.973	0.97	0.968	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:28					
Arsenic	75	24.32	23.95	24.32	**24.2**	0.2139	0.884
Selenium	77	24.77	24.51	24.46	**24.58**	0.165	0.6714
Selenium	78	24.51	24.14	24.6	**24.41**	0.2432	0.9963
Selenium	82	24.21	24.21	24.55	**24.32**	0.194	0.7977
Thallium	203	25.82	25.7	25.53	**25.68**	0.1463	0.5695
Thallium	205	25.95	25.99	25.47	**25.8**	0.29	1.124
Uranium	238	24.27	24.17	24.28	**24.24**	0.0611	0.2519

Internal Standard Factors:

Rhodium	103	0.995	0.972	0.981	**0.995**	n/a	n/a
Lutetium	175	0.986	0.981	0.981	**0.986**	n/a	n/a
Gold	197	0.964	0.976	0.969	**0.964**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/27/10 17:31					
Arsenic	75	25.14	25.06	24.96	**25.06**	0.0902	0.3599
Selenium	77	25.34	25.44	25.59	**25.46**	0.1279	0.5023
Selenium	78	25.76	25.06	25.15	**25.32**	0.38	1.501
Selenium	82	25.62	25.42	25.07	**25.37**	0.2761	1.088
Thallium	203	24.37	24.86	26	**25.08**	0.8399	3.349
Thallium	205	24.45	24.67	26.12	**25.08**	0.9071	3.617
Uranium	238	25.75	24.63	25.03	**25.14**	0.5679	2.259

Internal Standard Factors:

Rhodium	103	0.976	0.964	0.961	**0.976**	n/a	n/a
Lutetium	175	1.001	0.97	0.969	**1.001**	n/a	n/a
Gold	197	0.976	0.966	0.975	**0.976**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:36					
Arsenic	75	0.0572	0.0112	0.0028	**0.0238**	0.0293	123.2
Selenium	77	-0.0437	-0.0148	-0.0973	**-0.0519**	0.0419	80.68
Selenium	78	0.0599	0.0219	0.1312	**0.071**	0.0555	78.15
Selenium	82	0.101	0.0188	-0.0547	**0.0217**	0.0779	358.9
Thallium	203	0.0023	0.001	-0.0007	**0.0009**	0.0015	175.1
Thallium	205	0.0032	0.0018	0.0007	**0.0019**	0.0012	65.54
Uranium	238	0.0009	-0.0006	-0.0011	**-0.0002**	0.0011	436.2

Internal Standard Factors:

Rhodium	103	0.989	0.973	0.97	**0.989**	n/a	n/a
Lutetium	175	1.004	1.007	0.994	**1.004**	n/a	n/a
Gold	197	1.01	0.986	0.987	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/27/10 17:38					
Arsenic	75	0.0584	0.0304	-0.0052	**0.0279**	0.0319	114.3
Selenium	77	-0.2539	-0.1072	-0.0985	**-0.1532**	0.0874	57.01
Selenium	78	0.2177	0.2093	0.1286	**0.1852**	0.0492	26.57
Selenium	82	0.03	0.0576	-0.0661	**0.0072**	0.0649	902.5
Thallium	203	-0.0019	-0.0023	-0.0036	**-0.0026**	0.0009	33.62
Thallium	205	-0.0026	-0.0003	-0.0011	**-0.0014**	0.0012	84.61
Uranium	238	-0.0024	-0.0004	-0.0008	**-0.0012**	0.0011	90.58

Internal Standard Factors:

Rhodium	103	0.986	0.965	0.969	**0.986**	n/a	n/a
Lutetium	175	1.004	0.98	0.973	**1.004**	n/a	n/a
Gold	197	0.998	0.993	0.979	**0.998**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/27/10 17:44					
Arsenic	75	1.105	1.082	1.005	**1.064**	0.0522	4.905
Selenium	77	1.952	2.043	1.832	**1.942**	0.1057	5.441
Selenium	78	2.48	2.082	2.146	**2.236**	0.2136	9.552
Selenium	82	2.081	2.123	2.114	**2.106**	0.0224	1.064
Thallium	203	0.0394	0.042	0.0427	**0.0413**	0.0018	4.246
Thallium	205	0.0435	0.041	0.0406	**0.0417**	0.0016	3.763
Uranium	238	0.0397	0.0397	0.0405	**0.04**	0.0005	1.171

Internal Standard Factors:

Rhodium	103	0.974	0.954	0.94	**0.974**	n/a	n/a
Lutetium	175	0.993	0.965	0.972	**0.993**	n/a	n/a
Gold	197	0.983	0.98	0.971	**0.983**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/27/10 17:47					
Arsenic	75	-0.0246	0.0604	0.071	**0.0356**	0.0524	147
Selenium	77	2.831	2.798	2.591	**2.74**	0.13	4.744
Selenium	78	1.416	1.3	1.13	**1.282**	0.1438	11.22
Selenium	82	-0.0735	0.179	0.0907	**0.0654**	0.1281	195.9
Thallium	203	0.0215	0.0242	0.0192	**0.0216**	0.0025	11.69
Thallium	205	0.0232	0.0217	0.0208	**0.0219**	0.0012	5.537
Uranium	238	-0.0065	-0.0037	-0.0065	**-0.0056**	0.0016	29.29

Internal Standard Factors:

Rhodium	103	1.171	1.174	1.189	**1.171**	n/a	n/a
Lutetium	175	1.093	1.108	1.113	**1.093**	n/a	n/a
Gold	197	1.117	1.111	1.146	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/27/10 17:50					
Arsenic	75	26.33	26.08	26.48	**26.3**	0.1986	0.7554
Selenium	77	28.83	28.11	28.6	**28.52**	0.3672	1.288
Selenium	78	26.7	26.2	27.37	**26.76**	0.5914	2.21
Selenium	82	25.72	25.35	26.71	**25.93**	0.7072	2.728
Thallium	203	0.0259	0.031	0.0305	**0.0291**	0.0028	9.631
Thallium	205	0.0322	0.0312	0.0305	**0.0313**	0.0009	2.756
Uranium	238	0.0247	0.0245	0.0237	**0.0243**	0.0005	2.181

Internal Standard Factors:

Rhodium	103	1.194	1.202	1.22	**1.194**	n/a	n/a
Lutetium	175	1.11	1.135	1.138	**1.11**	n/a	n/a
Gold	197	1.141	1.156	1.167	**1.141**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 17:53					
Arsenic	75	0.0073	-0.0133	0.0059	**0**	0.0115	38330
Selenium	77	-0.196	-0.1605	-0.0747	**-0.1437**	0.0623	43.38
Selenium	78	0.6472	0.5157	0.6149	**0.5926**	0.0685	11.57
Selenium	82	0.0027	-0.0084	0.1441	**0.0462**	0.085	184.2
Thallium	203	-0.0092	-0.0091	-0.0094	**-0.0092**	0.0001	1.375
Thallium	205	-0.008	-0.0084	-0.0085	**-0.0083**	0.0003	3.122
Uranium	238	-0.008	-0.0075	-0.0079	**-0.0078**	0.0003	3.324

Internal Standard Factors:

Rhodium	103	1.06	1.037	1.032	**1.06**	n/a	n/a
Lutetium	175	1.04	1.024	1.027	**1.04**	n/a	n/a
Gold	197	1.16	1.128	1.107	**1.16**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSS K1006615 1/100			Mean	SD	%RSD
TimeStamp		7/27/10 17:56					
Arsenic	75	8.659	8.519	8.529	**8.569**	0.0778	0.9078
Selenium	77	19.58	19.12	19.35	**19.35**	0.2309	1.193
Selenium	78	18.81	19.19	19	**19**	0.1872	0.9853
Selenium	82	19.42	18.72	19.09	**19.08**	0.3482	1.825
Thallium	203	27.26	26.8	27.42	**27.16**	0.3243	1.194
Thallium	205	27.06	26.91	27.69	**27.22**	0.4172	1.533
Uranium	238	0.1566	0.1592	0.1626	**0.1595**	0.003	1.888

Internal Standard Factors:

Rhodium	103	1.023	0.999	1.001	**1.023**	n/a	n/a
Lutetium	175	0.996	0.997	1.008	**0.996**	n/a	n/a
Gold	197	1.08	1.061	1.053	**1.08**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSW K1006615 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:00					
Arsenic	75	0.021	0.0095	0.0578	**0.0294**	0.0252	85.72
Selenium	77	-0.1221	-0.1885	-0.2303	**-0.1803**	0.0546	30.27
Selenium	78	0.4252	0.3059	0.2807	**0.3373**	0.0772	22.89
Selenium	82	0.1606	0.0461	0.2282	**0.145**	0.0921	63.53
Thallium	203	0.0111	0.0041	0.0058	**0.007**	0.0036	51.88
Thallium	205	0.01	0.0109	0.0086	**0.0098**	0.0011	11.7
Uranium	238	41.46	40.14	40.6	**40.73**	0.6724	1.651

Internal Standard Factors:

Rhodium	103	0.992	0.974	0.971	**0.992**	n/a	n/a
Lutetium	175	1.018	0.987	0.995	**1.018**	n/a	n/a
Gold	197	1.089	1.08	1.067	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:02					
Arsenic	75	2.577	2.609	2.409	**2.532**	0.1078	4.256
Selenium	77	3.104	2.889	3.349	**3.114**	0.2301	7.389
Selenium	78	1.13	1.381	1.204	**1.238**	0.1291	10.43
Selenium	82	0.9723	1.096	0.9064	**0.9917**	0.0964	9.722
Thallium	203	0.4696	0.4714	0.4609	**0.4673**	0.0056	1.2
Thallium	205	0.4649	0.4748	0.4654	**0.4684**	0.0056	1.187
Uranium	238	1.593	1.602	1.536	**1.577**	0.0355	2.25

Internal Standard Factors:

Rhodium	103	1.073	1.073	1.071	**1.073**	n/a	n/a
Lutetium	175	1.017	1.016	1.019	**1.017**	n/a	n/a
Gold	197	1.139	1.139	1.123	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/27/10 18:06					
Arsenic	75	2.141	2.183	2.179	**2.167**	0.023	1.062
Selenium	77	2.67	2.54	2.451	**2.553**	0.11	4.309
Selenium	78	1.295	0.8338	0.7712	**0.9667**	0.2862	29.61
Selenium	82	0.5902	0.655	0.6242	**0.6231**	0.0324	5.204
Thallium	203	0.42	0.4203	0.4029	**0.4144**	0.01	2.404
Thallium	205	0.4129	0.4219	0.415	**0.4166**	0.0047	1.124
Uranium	238	2.273	2.265	2.178	**2.239**	0.0525	2.344

Internal Standard Factors:

Rhodium	103	1.088	1.064	1.062	**1.088**	n/a	n/a
Lutetium	175	1.038	1.031	1.015	**1.038**	n/a	n/a
Gold	197	1.135	1.139	1.132	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25L			Mean	SD	%RSD
TimeStamp		7/27/10 18:09					
Arsenic	75	0.4774	0.5267	0.4786	**0.4943**	0.0281	5.692
Selenium	77	0.5106	0.6208	0.5786	**0.57**	0.0556	9.753
Selenium	78	0.0168	0.3718	0.2728	**0.2205**	0.1832	83.08
Selenium	82	0.1112	0.2545	0.1516	**0.1724**	0.0739	42.85
Thallium	203	0.0854	0.0854	0.0842	**0.085**	0.0007	0.8289
Thallium	205	0.0876	0.0902	0.0864	**0.088**	0.002	2.227
Uranium	238	0.3152	0.2998	0.3025	**0.3059**	0.0082	2.685

Internal Standard Factors:

Rhodium	103	1.037	1.029	1.026	**1.037**	n/a	n/a
Lutetium	175	1.023	1.006	1.007	**1.023**	n/a	n/a
Gold	197	1.028	0.998	1.012	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 18:12					
Arsenic	75	51.84	52.65	51.63	**52.04**	0.5426	1.043
Selenium	77	51.97	51.45	51.09	**51.5**	0.4429	0.86
Selenium	78	49.29	49.65	49.45	**49.46**	0.1826	0.3692
Selenium	82	49.92	50.03	50.16	**50.04**	0.1196	0.2391
Thallium	203	53.5	51.95	52.09	**52.51**	0.8559	1.63
Thallium	205	53.4	53.3	52.64	**53.11**	0.412	0.7757
Uranium	238	56.53	54.38	54.64	**55.18**	1.171	2.122

Internal Standard Factors:

Rhodium	103	1.045	1.06	1.058	**1.045**	n/a	n/a
Lutetium	175	1.01	0.988	0.997	**1.01**	n/a	n/a
Gold	197	1.087	1.099	1.076	**1.087**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 18:16					
Arsenic	75	41.95	41.82	42.27	**42.01**	0.2318	0.5518
Selenium	77	43.14	44.87	45.02	**44.34**	1.047	2.36
Selenium	78	43.59	43.52	44.57	**43.89**	0.5882	1.34
Selenium	82	43.1	44.66	44.67	**44.14**	0.9064	2.053
Thallium	203	42.94	42.15	42.82	**42.64**	0.4269	1.001
Thallium	205	43.37	42.96	42.95	**43.09**	0.2386	0.5536
Uranium	238	8.654	8.497	8.438	**8.53**	0.1113	1.305

Internal Standard Factors:

Rhodium	103	1.036	1.03	1.034	**1.036**	n/a	n/a
Lutetium	175	1.013	0.998	1.007	**1.013**	n/a	n/a
Gold	197	1.015	1.018	1.004	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-001 1/5 7/27/10 18:20			Mean	SD	%RSD
Arsenic	75	31.79	31.82	31.23	**31.61**	0.3333	1.054
Selenium	77	2.595	2.472	2.572	**2.546**	0.0652	2.56
Selenium	78	0.7473	0.4873	0.437	**0.5572**	0.1665	29.89
Selenium	82	0.3766	0.8106	0.9342	**0.7071**	0.2929	41.42
Thallium	203	0.4155	0.4468	0.4107	**0.4243**	0.0196	4.619
Thallium	205	0.4293	0.4269	0.415	**0.4237**	0.0077	1.813
Uranium	238	2.215	2.288	2.226	**2.243**	0.0394	1.758

Internal Standard Factors:

Rhodium	103	1.099	1.093	1.084	**1.099**	n/a	n/a
Lutetium	175	1.034	1.058	1.036	**1.034**	n/a	n/a
Gold	197	1.215	1.159	1.187	**1.215**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-002 1/5 7/27/10 18:24			Mean	SD	%RSD
Arsenic	75	7.383	7.314	7.252	**7.316**	0.0653	0.8922
Selenium	77	2.906	2.752	2.717	**2.792**	0.1006	3.605
Selenium	78	0.6212	0.5264	0.5861	**0.5779**	0.0479	8.294
Selenium	82	0.6507	0.83	0.6773	**0.7193**	0.0967	13.45
Thallium	203	0.5732	0.5344	0.5414	**0.5497**	0.0207	3.762
Thallium	205	0.5552	0.5586	0.5357	**0.5498**	0.0124	2.254
Uranium	238	2.074	2.058	2.018	**2.05**	0.0288	1.404

Internal Standard Factors:

Rhodium	103	1.129	1.121	1.136	**1.129**	n/a	n/a
Lutetium	175	1.073	1.061	1.046	**1.073**	n/a	n/a
Gold	197	1.24	1.216	1.222	**1.24**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/27/10 18:27					
Arsenic	75	24.5	24.57	24.11	**24.39**	0.2479	1.016
Selenium	77	24.63	24.72	24.62	**24.66**	0.054	0.2191
Selenium	78	24.7	24.66	23.9	**24.42**	0.449	1.838
Selenium	82	25.05	24.89	24.32	**24.76**	0.3823	1.544
Thallium	203	25.06	25.51	26.04	**25.54**	0.4903	1.92
Thallium	205	24.91	25.85	25.89	**25.55**	0.5579	2.184
Uranium	238	25.46	25.29	24.92	**25.22**	0.2766	1.097

Internal Standard Factors:

Rhodium	103	1.065	1.055	1.041	**1.065**	n/a	n/a
Lutetium	175	1.051	1.04	1.031	**1.051**	n/a	n/a
Gold	197	1.066	1.049	1.051	**1.066**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/27/10 18:32					
Arsenic	75	0.0601	-0.04	0.0313	**0.0171**	0.0515	300.4
Selenium	77	-0.1632	-0.0593	-0.0527	**-0.0917**	0.062	67.56
Selenium	78	-0.1479	-0.0872	0.0936	**-0.0471**	0.1256	266.5
Selenium	82	0.1605	-0.1221	0.1332	**0.0572**	0.1559	272.7
Thallium	203	0.0018	-0.001	-0.0019	**-0.0004**	0.0019	543.7
Thallium	205	0.001	-0.0002	-0.0001	**0.0002**	0.0007	303.4
Uranium	238	-0.0001	0.0002	-0.0012	**-0.0004**	0.0007	204.9

Internal Standard Factors:

Rhodium	103	1.073	1.049	1.05	**1.073**	n/a	n/a
Lutetium	175	1.046	1.043	1.038	**1.046**	n/a	n/a
Gold	197	1.096	1.051	1.062	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-003 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:34					
Arsenic	75	2.583	2.497	2.582	**2.554**	0.0493	1.931
Selenium	77	2.448	2.542	2.177	**2.389**	0.1896	7.935
Selenium	78	0.5322	0.5897	0.2585	**0.4601**	0.177	38.46
Selenium	82	0.5444	0.5114	0.4028	**0.4862**	0.0741	15.23
Thallium	203	0.5607	0.5648	0.5726	**0.566**	0.0061	1.072
Thallium	205	0.5508	0.5513	0.5623	**0.5548**	0.0065	1.176
Uranium	238	1.74	1.728	1.749	**1.739**	0.0103	0.5908

Internal Standard Factors:

Rhodium	103	1.132	1.129	1.127	**1.132**	n/a	n/a
Lutetium	175	1.066	1.063	1.075	**1.066**	n/a	n/a
Gold	197	1.185	1.202	1.188	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-004 1/5 7/27/10 18:38			Mean	SD	%RSD
Arsenic	75	48.8	49.17	48.47	**48.81**	0.3508	0.7187
Selenium	77	2.075	1.914	2.048	**2.012**	0.0866	4.302
Selenium	78	0.5384	0.2598	0.4247	**0.4076**	0.1401	34.37
Selenium	82	0.2159	0.6316	0.3395	**0.3957**	0.2135	53.96
Thallium	203	0.3922	0.3881	0.3822	**0.3875**	0.005	1.3
Thallium	205	0.4046	0.3995	0.3963	**0.4001**	0.0042	1.042
Uranium	238	1.871	1.849	1.881	**1.867**	0.0164	0.8759

Internal Standard Factors:

Rhodium	103	1.138	1.126	1.124	**1.138**	n/a	n/a
Lutetium	175	1.082	1.068	1.063	**1.082**	n/a	n/a
Gold	197	1.25	1.219	1.225	**1.25**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-005 1/5 7/27/10 18:41			Mean	SD	%RSD
Arsenic	75	5.626	5.502	5.724	**5.617**	0.1114	1.983
Selenium	77	3.275	3.054	2.813	**3.047**	0.2313	7.589
Selenium	78	0.733	0.7773	0.4452	**0.6518**	0.1803	27.66
Selenium	82	0.5661	0.5243	0.6969	**0.5957**	0.09	15.11
Thallium	203	0.5497	0.535	0.5524	**0.5457**	0.0093	1.71
Thallium	205	0.5391	0.5243	0.5518	**0.5384**	0.0137	2.551
Uranium	238	2.042	2.014	2.023	**2.026**	0.0144	0.7103

Internal Standard Factors:

Rhodium	103	1.151	1.139	1.139	**1.151**	n/a	n/a
Lutetium	175	1.08	1.064	1.089	**1.08**	n/a	n/a
Gold	197	1.244	1.217	1.212	**1.244**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-007 1/5 7/27/10 18:45			Mean	SD	%RSD
Arsenic	75	32.72	32.74	32.41	**32.62**	0.1852	0.5679
Selenium	77	2.415	2.246	2.158	**2.273**	0.131	5.763
Selenium	78	0.4436	0.3429	0.3665	**0.3843**	0.0526	13.69
Selenium	82	0.557	0.8241	0.6935	**0.6915**	0.1336	19.31
Thallium	203	0.3939	0.3783	0.3833	**0.3852**	0.008	2.071
Thallium	205	0.3811	0.3727	0.3795	**0.3777**	0.0044	1.176
Uranium	238	2.12	2.105	2.092	**2.106**	0.0143	0.6804

Internal Standard Factors:

Rhodium	103	1.15	1.139	1.132	**1.15**	n/a	n/a
Lutetium	175	1.081	1.06	1.068	**1.081**	n/a	n/a
Gold	197	1.317	1.304	1.288	**1.317**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006615-008 1/5 7/27/10 18:49			Mean	SD	%RSD
Arsenic	75	6.639	6.585	6.633	**6.619**	0.0297	0.4483
Selenium	77	2.792	2.541	2.599	**2.644**	0.1317	4.981
Selenium	78	0.4443	0.415	0.3836	**0.4143**	0.0303	7.32
Selenium	82	0.8092	0.6889	0.6666	**0.7216**	0.0767	10.63
Thallium	203	0.5657	0.5765	0.5554	**0.5658**	0.0106	1.866
Thallium	205	0.5692	0.5728	0.5564	**0.5661**	0.0086	1.522
Uranium	238	2.605	2.525	2.536	**2.555**	0.0435	1.703

Internal Standard Factors:

Rhodium	103	1.179	1.157	1.168	**1.179**	n/a	n/a
Lutetium	175	1.101	1.098	1.08	**1.101**	n/a	n/a
Gold	197	1.247	1.257	1.249	**1.247**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006615-009 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 18:52					
Arsenic	75	4.769	4.618	4.649	**4.679**	0.0801	1.712
Selenium	77	2.315	2.434	2.25	**2.333**	0.0932	3.995
Selenium	78	0.4477	0.3993	0.3088	**0.3853**	0.0705	18.29
Selenium	82	0.7473	0.6611	0.7572	**0.7219**	0.0528	7.316
Thallium	203	0.3484	0.3537	0.3441	**0.3488**	0.0048	1.383
Thallium	205	0.3593	0.3558	0.3556	**0.3569**	0.002	0.5739
Uranium	238	1.445	1.434	1.454	**1.444**	0.0101	0.7021

Internal Standard Factors:

Rhodium	103	1.177	1.157	1.163	**1.177**	n/a	n/a
Lutetium	175	1.097	1.084	1.086	**1.097**	n/a	n/a
Gold	197	1.227	1.205	1.191	**1.227**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-001 1/5 7/27/10 18:56			Mean	SD	%RSD
Arsenic	75	64.73	65.03	63.48	**64.41**	0.8236	1.279
Selenium	77	2.781	2.405	2.634	**2.607**	0.1893	7.261
Selenium	78	0.4298	0.3365	0.0915	**0.2859**	0.1747	61.1
Selenium	82	0.9812	0.7909	0.7042	**0.8254**	0.1417	17.16
Thallium	203	0.4726	0.4735	0.4635	**0.4698**	0.0055	1.179
Thallium	205	0.4557	0.474	0.4618	**0.4638**	0.0093	2.004
Uranium	238	4.464	4.59	4.465	**4.507**	0.0725	1.608

Internal Standard Factors:

Rhodium	103	1.165	1.165	1.143	**1.165**	n/a	n/a
Lutetium	175	1.076	1.093	1.063	**1.076**	n/a	n/a
Gold	197	1.379	1.329	1.314	**1.379**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-002 1/5 7/27/10 18:59			Mean	SD	%RSD
Arsenic	75	8.674	8.896	8.453	**8.674**	0.2215	2.554
Selenium	77	3.138	2.703	3.346	**3.063**	0.3283	10.72
Selenium	78	0.3035	0.4251	0.461	**0.3966**	0.0825	20.81
Selenium	82	0.7923	1.063	0.6151	**0.8234**	0.2254	27.38
Thallium	203	0.4945	0.5021	0.503	**0.4999**	0.0047	0.9381
Thallium	205	0.4934	0.4845	0.4986	**0.4922**	0.0072	1.453
Uranium	238	3.847	3.841	3.823	**3.837**	0.0126	0.3287

Internal Standard Factors:

Rhodium	103	1.168	1.168	1.177	**1.168**	n/a	n/a
Lutetium	175	1.073	1.075	1.073	**1.073**	n/a	n/a
Gold	197	1.316	1.288	1.268	**1.316**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-003 1/5 7/27/10 19:03			Mean	SD	%RSD
Arsenic	75	4.122	3.907	3.791	**3.94**	0.1678	4.26
Selenium	77	3.433	3.203	3.723	**3.453**	0.2607	7.549
Selenium	78	0.685	0.458	0.6241	**0.589**	0.1175	19.95
Selenium	82	0.8465	0.6373	0.8426	**0.7755**	0.1197	15.44
Thallium	203	0.591	0.5791	0.5841	**0.5847**	0.006	1.02
Thallium	205	0.6005	0.5803	0.5825	**0.5878**	0.0111	1.888
Uranium	238	5.989	5.647	5.712	**5.783**	0.1817	3.142

Internal Standard Factors:

Rhodium	103	1.194	1.184	1.18	**1.194**	n/a	n/a
Lutetium	175	1.12	1.079	1.085	**1.12**	n/a	n/a
Gold	197	1.311	1.286	1.303	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-005 1/5 7/27/10 19:06			Mean	SD	%RSD
Arsenic	75	45.11	43.82	44.35	**44.43**	0.6496	1.462
Selenium	77	2.549	2.401	2.397	**2.449**	0.0865	3.532
Selenium	78	0.4661	0.261	0.2849	**0.3373**	0.1121	33.23
Selenium	82	0.534	0.5841	0.5871	**0.5684**	0.0299	5.251
Thallium	203	0.4829	0.477	0.4729	**0.4776**	0.005	1.056
Thallium	205	0.4675	0.4815	0.489	**0.4793**	0.0109	2.269
Uranium	238	2.73	2.8	2.71	**2.747**	0.0473	1.721

Internal Standard Factors:

Rhodium	103	1.185	1.16	1.166	**1.185**	n/a	n/a
Lutetium	175	1.081	1.1	1.085	**1.081**	n/a	n/a
Gold	197	1.422	1.387	1.366	**1.422**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/27/10 19:10					
Arsenic	75	24.48	24.32	24.32	**24.38**	0.0914	0.375
Selenium	77	24.52	24.65	24.61	**24.59**	0.0701	0.2852
Selenium	78	24.5	23.74	24.63	**24.29**	0.4799	1.975
Selenium	82	24.6	24.19	24.92	**24.57**	0.3667	1.492
Thallium	203	25.05	25.67	25.92	**25.55**	0.446	1.746
Thallium	205	25.12	25.91	25.74	**25.59**	0.4143	1.619
Uranium	238	24.85	25.84	24.86	**25.18**	0.5716	2.27

Internal Standard Factors:

Rhodium	103	1.125	1.096	1.1	**1.125**	n/a	n/a
Lutetium	175	1.069	1.059	1.048	**1.069**	n/a	n/a
Gold	197	1.117	1.083	1.085	**1.117**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/27/10 19:14					
Arsenic	75	0.0328	0.0294	0.0126	**0.0249**	0.0108	43.48
Selenium	77	-0.1703	-0.2089	-0.1632	**-0.1808**	0.0246	13.62
Selenium	78	-0.3883	-0.146	-0.1547	**-0.2296**	0.1375	59.85
Selenium	82	0.0351	-0.0037	0.0093	**0.0135**	0.0197	145.7
Thallium	203	-0.001	0.0024	0.0006	**0.0007**	0.0017	251.3
Thallium	205	0.0011	0.002	0.0003	**0.0011**	0.0008	72.54
Uranium	238	-0.001	-0.0004	0.0021	**0.0002**	0.0017	730.2

Internal Standard Factors:

Rhodium	103	1.129	1.101	1.101	**1.129**	n/a	n/a
Lutetium	175	1.082	1.057	1.066	**1.082**	n/a	n/a
Gold	197	1.126	1.113	1.086	**1.126**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-006 1/5 7/27/10 19:17			Mean	SD	%RSD
Arsenic	75	11.62	11.41	11.45	**11.49**	0.1099	0.956
Selenium	77	2.342	2.269	2.366	**2.326**	0.0504	2.165
Selenium	78	0.5077	0.2358	0.2603	**0.3346**	0.1504	44.96
Selenium	82	0.8499	0.7231	0.9417	**0.8382**	0.1098	13.1
Thallium	203	0.4764	0.4729	0.4619	**0.4704**	0.0076	1.607
Thallium	205	0.4497	0.4641	0.461	**0.4582**	0.0076	1.651
Uranium	238	2.594	2.66	2.604	**2.619**	0.0353	1.349

Internal Standard Factors:

Rhodium	103	1.15	1.137	1.144	**1.15**	n/a	n/a
Lutetium	175	1.06	1.087	1.067	**1.06**	n/a	n/a
Gold	197	1.212	1.214	1.219	**1.212**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006636-007 1/5 7/27/10 19:20			Mean	SD	%RSD
Arsenic	75	4.529	4.392	4.539	**4.486**	0.0822	1.832
Selenium	77	3.822	3.707	3.793	**3.774**	0.0596	1.579
Selenium	78	0.6496	0.4499	0.4143	**0.5046**	0.1268	25.14
Selenium	82	1.244	1.047	1.085	**1.125**	0.1047	9.306
Thallium	203	0.7227	0.7432	0.7212	**0.7291**	0.0123	1.687
Thallium	205	0.7467	0.7138	0.7342	**0.7316**	0.0166	2.268
Uranium	238	3.543	3.54	3.501	**3.528**	0.0236	0.6693

Internal Standard Factors:

Rhodium	103	1.182	1.166	1.195	**1.182**	n/a	n/a
Lutetium	175	1.077	1.074	1.071	**1.077**	n/a	n/a
Gold	197	1.256	1.252	1.233	**1.256**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:24					
Arsenic	75	0.0294	-0.0131	-0.0013	**0.005**	0.022	440.9
Selenium	77	-0.2038	-0.2605	-0.2584	**-0.2409**	0.0322	13.35
Selenium	78	-0.2079	-0.1046	-0.2302	**-0.1809**	0.067	37.03
Selenium	82	0.1315	-0.0597	0.0623	**0.0447**	0.0968	216.7
Thallium	203	-0.01	-0.0102	-0.0102	**-0.0101**	0.0001	1.354
Thallium	205	-0.0097	-0.0097	-0.0098	**-0.0097**	0.0001	0.6004
Uranium	238	-0.0075	-0.008	-0.008	**-0.0078**	0.0003	3.734

Internal Standard Factors:

Rhodium	103	1.155	1.133	1.119	**1.155**	n/a	n/a
Lutetium	175	1.11	1.075	1.09	**1.11**	n/a	n/a
Gold	197	1.248	1.227	1.253	**1.248**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		LCSS K1006676 1/100 7/27/10 19:26			Mean	SD	%RSD
Arsenic	75	8.219	8.339	8.217	**8.258**	0.07	0.8475
Selenium	77	19.25	19.14	19.23	**19.21**	0.0603	0.314
Selenium	78	18.18	18.11	18.58	**18.29**	0.2504	1.369
Selenium	82	18.56	18.45	18.5	**18.5**	0.0524	0.283
Thallium	203	27.15	27.58	27.31	**27.34**	0.2197	0.8034
Thallium	205	27.87	27.78	27.7	**27.78**	0.083	0.2989
Uranium	238	0.1785	0.1806	0.1763	**0.1785**	0.0021	1.202

Internal Standard Factors:

Rhodium	103	1.104	1.101	1.095	**1.104**	n/a	n/a
Lutetium	175	1.07	1.073	1.061	**1.07**	n/a	n/a
Gold	197	1.195	1.148	1.145	**1.195**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		LCSW K1006676 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 19:30					
Arsenic	75	0.0264	-0.0122	-0.0076	**0.0022**	0.0211	963.2
Selenium	77	-0.1986	-0.1581	-0.208	**-0.1882**	0.0265	14.09
Selenium	78	-0.1173	-0.0441	-0.3058	**-0.1557**	0.1351	86.74
Selenium	82	0.1294	0.0097	0.0404	**0.0598**	0.0622	103.9
Thallium	203	0.0101	0.0124	0.0098	**0.0108**	0.0014	13.08
Thallium	205	0.0118	0.0108	0.0103	**0.011**	0.0008	7.078
Uranium	238	40.58	41.17	39.13	**40.29**	1.046	2.597

Internal Standard Factors:

Rhodium	103	1.122	1.094	1.087	**1.122**	n/a	n/a
Lutetium	175	1.072	1.05	1.039	**1.072**	n/a	n/a
Gold	197	1.193	1.185	1.169	**1.193**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-018 1/5 7/27/10 19:33			Mean	SD	%RSD
Arsenic	75	57.88	57.14	56.65	**57.22**	0.617	1.078
Selenium	77	1.76	1.633	1.543	**1.645**	0.1093	6.644
Selenium	78	0.2098	0.234	0.3229	**0.2556**	0.0595	23.29
Selenium	82	0.3346	0.4906	0.6277	**0.4843**	0.1466	30.28
Thallium	203	0.5704	0.5822	0.5606	**0.5711**	0.0108	1.891
Thallium	205	0.5753	0.5612	0.5818	**0.5727**	0.0106	1.842
Uranium	238	3.701	3.549	3.603	**3.618**	0.0769	2.125

Internal Standard Factors:

Rhodium	103	1.16	1.144	1.154	**1.16**	n/a	n/a
Lutetium	175	1.088	1.079	1.085	**1.088**	n/a	n/a
Gold	197	1.296	1.286	1.283	**1.296**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-018 1/5D 7/27/10 19:36			Mean	SD	%RSD
Arsenic	75	53.04	53.46	52.94	**53.15**	0.2764	0.5201
Selenium	77	1.953	1.572	1.475	**1.666**	0.2525	15.15
Selenium	78	-0.0406	0.3299	0.0962	**0.1285**	0.1874	145.8
Selenium	82	0.2974	0.3736	0.5011	**0.3907**	0.1029	26.34
Thallium	203	0.5611	0.5548	0.5544	**0.5568**	0.0037	0.6691
Thallium	205	0.5737	0.5621	0.5661	**0.5673**	0.0059	1.037
Uranium	238	3.477	3.454	3.454	**3.462**	0.013	0.3754

Internal Standard Factors:

Rhodium	103	1.159	1.167	1.172	**1.159**	n/a	n/a
Lutetium	175	1.095	1.077	1.077	**1.095**	n/a	n/a
Gold	197	1.348	1.324	1.302	**1.348**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006676-018 1/25L 7/27/10 19:40			Mean	SD	%RSD
Arsenic	75	12.61	12.54	12.7	**12.62**	0.0766	0.607
Selenium	77	0.1891	0.1574	0.1816	**0.1761**	0.0166	9.42
Selenium	78	-0.1291	-0.1567	-0.1194	**-0.1351**	0.0194	14.35
Selenium	82	0.2312	0.0487	0.1114	**0.1304**	0.0927	71.12
Thallium	203	0.108	0.108	0.1198	**0.1119**	0.0068	6.081
Thallium	205	0.1137	0.1181	0.1174	**0.1164**	0.0023	2.012
Uranium	238	0.7463	0.7443	0.7481	**0.7463**	0.0019	0.2568

Internal Standard Factors:

Rhodium	103	1.146	1.127	1.122	**1.146**	n/a	n/a
Lutetium	175	1.083	1.072	1.097	**1.083**	n/a	n/a
Gold	197	1.238	1.239	1.208	**1.238**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 19:43					
Arsenic	75	103	103.1	100.9	**102.3**	1.247	1.219
Selenium	77	50	50.54	50.49	**50.34**	0.3015	0.5988
Selenium	78	49.26	48.42	49.34	**49.01**	0.5127	1.046
Selenium	82	50.01	49.76	49.31	**49.69**	0.3556	0.7157
Thallium	203	54.21	54.02	53.22	**53.82**	0.5283	0.9817
Thallium	205	54.47	53.76	52.76	**53.66**	0.8635	1.609
Uranium	238	59.16	58.42	57.67	**58.42**	0.7448	1.275

Internal Standard Factors:

Rhodium	103	1.125	1.127	1.123	**1.125**	n/a	n/a
Lutetium	175	1.059	1.05	1.037	**1.059**	n/a	n/a
Gold	197	1.237	1.189	1.221	**1.237**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-018 1/25S			Mean	SD	%RSD
TimeStamp		7/27/10 19:47					
Arsenic	75	51.51	51.66	51.38	**51.51**	0.1394	0.2707
Selenium	77	44.59	43.49	44.44	**44.18**	0.5938	1.344
Selenium	78	43.98	43.92	44.17	**44.02**	0.1306	0.2966
Selenium	82	44.75	44.62	44.24	**44.54**	0.2666	0.5987
Thallium	203	43.25	44.98	44.01	**44.08**	0.868	1.969
Thallium	205	44.15	43.95	44.22	**44.11**	0.1359	0.3082
Uranium	238	9.474	9.745	9.404	**9.541**	0.1801	1.888

Internal Standard Factors:

Rhodium	103	1.127	1.108	1.105	**1.127**	n/a	n/a
Lutetium	175	1.056	1.064	1.052	**1.056**	n/a	n/a
Gold	197	1.211	1.192	1.204	**1.211**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/27/10 19:51					
Arsenic	75	24.49	24.17	24.76	**24.47**	0.2967	1.212
Selenium	77	24.84	24.69	24.42	**24.65**	0.2119	0.8597
Selenium	78	24.88	24.9	25.11	**24.96**	0.1297	0.5194
Selenium	82	25.14	25.27	25.12	**25.17**	0.0819	0.3252
Thallium	203	25.58	25.73	26.2	**25.84**	0.3229	1.25
Thallium	205	25.13	26.04	26.02	**25.73**	0.5179	2.013
Uranium	238	25.52	25.36	25.47	**25.45**	0.0863	0.3392

Internal Standard Factors:

Rhodium	103	1.106	1.088	1.083	**1.106**	n/a	n/a
Lutetium	175	1.054	1.049	1.039	**1.054**	n/a	n/a
Gold	197	1.116	1.099	1.091	**1.116**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/27/10 19:55					
Arsenic	75	0.0993	-0.0207	-0.0497	**0.0097**	0.079	817.7
Selenium	77	-0.3474	-0.0417	-0.2408	**-0.2099**	0.1552	73.91
Selenium	78	-0.2831	-0.2504	-0.2039	**-0.2458**	0.0398	16.2
Selenium	82	0.1339	0.0223	-0.2351	**-0.0263**	0.1892	719.9
Thallium	203	0.003	-0.0005	0.0027	**0.0017**	0.0019	111.7
Thallium	205	0.0042	0.0029	0.0002	**0.0025**	0.002	82.8
Uranium	238	0.001	0.0013	0.0015	**0.0013**	0.0003	19.96

Internal Standard Factors:

Rhodium	103	1.124	1.104	1.112	**1.124**	n/a	n/a
Lutetium	175	1.08	1.068	1.064	**1.08**	n/a	n/a
Gold	197	1.125	1.102	1.086	**1.125**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-001 1/5 7/27/10 19:58			Mean	SD	%RSD
Arsenic	75	34.92	34.73	34.86	**34.84**	0.0967	0.2774
Selenium	77	2.787	2.704	2.49	**2.66**	0.1535	5.768
Selenium	78	0.3306	0.172	0.2419	**0.2482**	0.0795	32.02
Selenium	82	0.7157	0.5813	0.5091	**0.602**	0.1049	17.42
Thallium	203	0.4438	0.4387	0.4259	**0.4361**	0.0093	2.124
Thallium	205	0.4369	0.4393	0.4354	**0.4372**	0.0019	0.4405
Uranium	238	3.39	3.343	3.423	**3.385**	0.0399	1.178

Internal Standard Factors:

Rhodium	103	1.14	1.134	1.146	**1.14**	n/a	n/a
Lutetium	175	1.078	1.059	1.071	**1.078**	n/a	n/a
Gold	197	1.271	1.273	1.254	**1.271**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-002 1/5 7/27/10 20:01			Mean	SD	%RSD
Arsenic	75	7.665	7.738	7.642	**7.681**	0.05	0.6506
Selenium	77	3.354	3.485	3.563	**3.468**	0.1056	3.046
Selenium	78	0.8745	0.596	0.5937	**0.6881**	0.1614	23.46
Selenium	82	0.8616	1.102	0.9913	**0.9849**	0.1202	12.21
Thallium	203	1.405	1.372	1.355	**1.377**	0.0252	1.828
Thallium	205	1.39	1.388	1.363	**1.38**	0.0151	1.092
Uranium	238	3.555	3.571	3.485	**3.537**	0.0457	1.291

Internal Standard Factors:

Rhodium	103	1.174	1.17	1.178	**1.174**	n/a	n/a
Lutetium	175	1.071	1.053	1.058	**1.071**	n/a	n/a
Gold	197	1.284	1.3	1.26	**1.284**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-003 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:05					
Arsenic	75	3.114	2.952	2.944	**3.003**	0.0958	3.19
Selenium	77	2.628	2.249	2.324	**2.4**	0.2008	8.364
Selenium	78	0.6166	0.3512	0.3741	**0.4473**	0.147	32.87
Selenium	82	1.011	0.5694	0.5372	**0.706**	0.2649	37.52
Thallium	203	0.3625	0.3432	0.3587	**0.3548**	0.0102	2.879
Thallium	205	0.3518	0.3531	0.3492	**0.3513**	0.002	0.5665
Uranium	238	3.653	3.603	3.646	**3.634**	0.0268	0.7371

Internal Standard Factors:

Rhodium	103	1.191	1.148	1.147	**1.191**	n/a	n/a
Lutetium	175	1.086	1.067	1.06	**1.086**	n/a	n/a
Gold	197	1.281	1.235	1.238	**1.281**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-004 1/5 7/27/10 20:08			Mean	SD	%RSD
Arsenic	75	76.3	75.54	75.57	**75.8**	0.4313	0.569
Selenium	77	2.208	2.171	1.828	**2.069**	0.2092	10.11
Selenium	78	0.5126	0.4251	0.4242	**0.4539**	0.0508	11.19
Selenium	82	0.7039	0.7465	0.5397	**0.6633**	0.1092	16.46
Thallium	203	0.5093	0.5035	0.5165	**0.5098**	0.0065	1.275
Thallium	205	0.499	0.5025	0.5057	**0.5024**	0.0034	0.6702
Uranium	238	3.199	3.217	3.257	**3.225**	0.0299	0.9282

Internal Standard Factors:

Rhodium	103	1.167	1.16	1.164	**1.167**	n/a	n/a
Lutetium	175	1.077	1.069	1.087	**1.077**	n/a	n/a
Gold	197	1.336	1.308	1.306	**1.336**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:12					
Arsenic	75	21.35	21.22	21.46	**21.34**	0.1211	0.5672
Selenium	77	2.127	2.054	2.225	**2.135**	0.0859	4.024
Selenium	78	0.2819	0.3035	0.4552	**0.3468**	0.0944	27.22
Selenium	82	0.4995	0.3771	0.4185	**0.4317**	0.0622	14.42
Thallium	203	0.4634	0.4871	0.4785	**0.4763**	0.012	2.523
Thallium	205	0.4745	0.5077	0.4877	**0.49**	0.0167	3.411
Uranium	238	3.294	3.389	3.327	**3.337**	0.0481	1.442

Internal Standard Factors:

Rhodium	103	1.168	1.163	1.178	**1.168**	n/a	n/a
Lutetium	175	1.06	1.086	1.069	**1.06**	n/a	n/a
Gold	197	1.296	1.28	1.289	**1.296**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-006 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:16					
Arsenic	75	4.253	4.375	4.546	**4.391**	0.1473	3.355
Selenium	77	2.202	1.995	1.694	**1.964**	0.2555	13.01
Selenium	78	0.2856	0.2637	0.2919	**0.2804**	0.0148	5.275
Selenium	82	0.4821	0.5768	0.6269	**0.5619**	0.0735	13.08
Thallium	203	0.5872	0.5784	0.5792	**0.5816**	0.0049	0.8369
Thallium	205	0.6027	0.5782	0.5989	**0.5933**	0.0132	2.217
Uranium	238	2.831	2.757	2.78	**2.789**	0.0384	1.376

Internal Standard Factors:

Rhodium	103	1.172	1.164	1.181	**1.172**	n/a	n/a
Lutetium	175	1.102	1.072	1.076	**1.102**	n/a	n/a
Gold	197	1.302	1.288	1.287	**1.302**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:19					
Arsenic	75	31.18	30.85	30.52	**30.85**	0.3299	1.069
Selenium	77	2.318	2.073	1.729	**2.04**	0.2958	14.5
Selenium	78	0.3913	0.2844	0.4563	**0.3773**	0.0868	22.99
Selenium	82	0.5983	0.7896	0.7724	**0.7201**	0.1058	14.7
Thallium	203	0.5082	0.5015	0.4921	**0.5006**	0.008	1.608
Thallium	205	0.4996	0.5063	0.507	**0.5043**	0.0041	0.8035
Uranium	238	2.775	2.843	2.829	**2.815**	0.0359	1.274

Internal Standard Factors:

Rhodium	103	1.181	1.17	1.165	**1.181**	n/a	n/a
Lutetium	175	1.06	1.074	1.067	**1.06**	n/a	n/a
Gold	197	1.3	1.265	1.282	**1.3**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-008 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:23					
Arsenic	75	75.52	74.88	75.22	**75.21**	0.3162	0.4205
Selenium	77	2.291	2.229	2.245	**2.255**	0.0318	1.408
Selenium	78	0.5789	0.205	0.2297	**0.3379**	0.2091	61.89
Selenium	82	0.7212	0.5139	0.6116	**0.6156**	0.1037	16.85
Thallium	203	0.4932	0.4795	0.4911	**0.488**	0.0074	1.509
Thallium	205	0.4829	0.4906	0.4958	**0.4898**	0.0065	1.32
Uranium	238	2.982	2.94	2.944	**2.956**	0.0234	0.793

Internal Standard Factors:

Rhodium	103	1.173	1.158	1.159	**1.173**	n/a	n/a
Lutetium	175	1.071	1.057	1.071	**1.071**	n/a	n/a
Gold	197	1.31	1.281	1.292	**1.31**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-009 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:26					
Arsenic	75	9.15	8.94	8.79	**8.96**	0.1807	2.016
Selenium	77	2.27	2.142	2.435	**2.283**	0.1468	6.43
Selenium	78	0.3881	0.2289	0.3134	**0.3101**	0.0796	25.67
Selenium	82	0.6658	0.6665	0.668	**0.6667**	0.0011	0.1684
Thallium	203	0.5919	0.5822	0.5857	**0.5866**	0.0049	0.8328
Thallium	205	0.6036	0.5647	0.5711	**0.5798**	0.0209	3.597
Uranium	238	3.06	2.986	3.015	**3.02**	0.0372	1.232

Internal Standard Factors:

Rhodium	103	1.174	1.167	1.161	**1.174**	n/a	n/a
Lutetium	175	1.085	1.059	1.074	**1.085**	n/a	n/a
Gold	197	1.319	1.297	1.275	**1.319**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006676-010 1/5 7/27/10 20:30			Mean	SD	%RSD
Arsenic	75	2.554	2.546	2.444	**2.515**	0.0612	2.432
Selenium	77	2.598	2.513	2.681	**2.597**	0.084	3.234
Selenium	78	0.4699	0.3738	0.1744	**0.3394**	0.1507	44.4
Selenium	82	0.807	0.7979	0.8524	**0.8191**	0.0292	3.568
Thallium	203	0.6743	0.6746	0.6738	**0.6742**	0.0004	0.0624
Thallium	205	0.6899	0.685	0.6827	**0.6859**	0.0037	0.5377
Uranium	238	2.776	2.718	2.686	**2.727**	0.0458	1.68

Internal Standard Factors:

Rhodium	103	1.183	1.169	1.167	**1.183**	n/a	n/a
Lutetium	175	1.067	1.044	1.05	**1.067**	n/a	n/a
Gold	197	1.307	1.289	1.27	**1.307**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/27/10 20:33					
Arsenic	75	24.66	24.54	24.32	**24.51**	0.1717	0.7005
Selenium	77	25.22	24.52	25.17	**24.97**	0.3909	1.565
Selenium	78	24.74	24.36	24.18	**24.43**	0.2872	1.176
Selenium	82	25.73	24.9	24.7	**25.11**	0.5438	2.165
Thallium	203	25.63	27.11	26.77	**26.51**	0.7765	2.93
Thallium	205	25.73	26.8	26.98	**26.5**	0.6761	2.551
Uranium	238	25.52	25.41	25.26	**25.4**	0.1328	0.5228

Internal Standard Factors:

Rhodium	103	1.126	1.098	1.095	**1.126**	n/a	n/a
Lutetium	175	1.047	1.039	1.04	**1.047**	n/a	n/a
Gold	197	1.088	1.083	1.069	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/27/10 20:38					
Arsenic	75	0.0599	0.0048	-0.0109	**0.0179**	0.0372	207.3
Selenium	77	-0.2933	-0.3176	-0.295	**-0.302**	0.0136	4.497
Selenium	78	-0.2074	-0.0773	-0.2144	**-0.1664**	0.0773	46.43
Selenium	82	0.1116	-0.1352	-0.1527	**-0.0588**	0.1478	251.4
Thallium	203	-0.0007	0.0021	0.0007	**0.0007**	0.0014	190.5
Thallium	205	0.0028	0.0026	0.0028	**0.0027**	0.0002	5.577
Uranium	238	0.0013	0.0052	0.0063	**0.0043**	0.0026	61.09

Internal Standard Factors:

Rhodium	103	1.127	1.099	1.099	**1.127**	n/a	n/a
Lutetium	175	1.066	1.049	1.053	**1.066**	n/a	n/a
Gold	197	1.128	1.11	1.085	**1.128**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-011 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:40					
Arsenic	75	66.09	64.03	63.56	**64.56**	1.344	2.082
Selenium	77	2.195	2.344	2.177	**2.239**	0.0919	4.106
Selenium	78	0.4256	0.3829	0.4107	**0.4064**	0.0217	5.329
Selenium	82	0.5861	0.6913	0.6759	**0.6511**	0.0568	8.725
Thallium	203	0.5545	0.5174	0.5135	**0.5285**	0.0226	4.281
Thallium	205	0.5414	0.5297	0.535	**0.5354**	0.0058	1.089
Uranium	238	3.295	3.237	3.249	**3.26**	0.0304	0.9315

Internal Standard Factors:

Rhodium	103	1.154	1.129	1.133	**1.154**	n/a	n/a
Lutetium	175	1.071	1.035	1.037	**1.071**	n/a	n/a
Gold	197	1.311	1.286	1.3	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006676-012 1/5 7/27/10 20:44			Mean	SD	%RSD
Arsenic	75	14.07	13.81	13.49	**13.79**	0.2919	2.117
Selenium	77	2.263	2.204	1.92	**2.129**	0.1836	8.622
Selenium	78	0.8173	0.2137	0.3345	**0.4552**	0.3194	70.17
Selenium	82	0.4501	0.7262	0.5788	**0.585**	0.1381	23.61
Thallium	203	0.4847	0.4776	0.4947	**0.4857**	0.0086	1.767
Thallium	205	0.4833	0.4932	0.4924	**0.4897**	0.0055	1.12
Uranium	238	2.649	2.657	2.743	**2.683**	0.0523	1.95

Internal Standard Factors:

Rhodium	103	1.174	1.157	1.148	**1.174**	n/a	n/a
Lutetium	175	1.057	1.053	1.073	**1.057**	n/a	n/a
Gold	197	1.322	1.337	1.318	**1.322**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-013 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:47					
Arsenic	75	2.652	2.815	2.701	**2.723**	0.0837	3.075
Selenium	77	2.264	1.984	2.147	**2.132**	0.1407	6.599
Selenium	78	0.2586	0.1211	0.317	**0.2322**	0.1006	43.32
Selenium	82	0.5617	0.8801	0.8651	**0.769**	0.1797	23.36
Thallium	203	0.5941	0.5997	0.5817	**0.5918**	0.0092	1.561
Thallium	205	0.5883	0.5873	0.5901	**0.5886**	0.0014	0.2435
Uranium	238	3.088	3.026	2.997	**3.037**	0.0467	1.539

Internal Standard Factors:

Rhodium	103	1.172	1.166	1.171	**1.172**	n/a	n/a
Lutetium	175	1.08	1.071	1.066	**1.08**	n/a	n/a
Gold	197	1.328	1.328	1.324	**1.328**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-014 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:51					
Arsenic	75	57.09	56.48	57.21	**56.93**	0.3866	0.6792
Selenium	77	1.84	2.18	2.236	**2.085**	0.2143	10.28
Selenium	78	0.1341	0.3105	0.3949	**0.2798**	0.1331	47.55
Selenium	82	0.8607	0.7811	0.6178	**0.7532**	0.1238	16.44
Thallium	203	0.426	0.4242	0.4127	**0.421**	0.0072	1.721
Thallium	205	0.4348	0.4321	0.4241	**0.4303**	0.0055	1.285
Uranium	238	7.159	6.776	6.613	**6.849**	0.2802	4.09

Internal Standard Factors:

Rhodium	103	1.179	1.164	1.182	**1.179**	n/a	n/a
Lutetium	175	1.084	1.058	1.041	**1.084**	n/a	n/a
Gold	197	1.37	1.346	1.376	**1.37**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-015 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:54					
Arsenic	75	19.39	19.12	19.05	**19.19**	0.1809	0.943
Selenium	77	2.084	1.852	1.848	**1.928**	0.1353	7.017
Selenium	78	0.1772	0.0501	0.2502	**0.1592**	0.1012	63.6
Selenium	82	0.7987	0.818	0.5261	**0.7143**	0.1632	22.85
Thallium	203	0.4016	0.4177	0.4101	**0.4098**	0.0081	1.968
Thallium	205	0.4052	0.413	0.4186	**0.4123**	0.0067	1.631
Uranium	238	3.246	3.217	3.209	**3.224**	0.0195	0.6047

Internal Standard Factors:

Rhodium	103	1.177	1.157	1.165	**1.177**	n/a	n/a
Lutetium	175	1.074	1.08	1.081	**1.074**	n/a	n/a
Gold	197	1.361	1.317	1.337	**1.361**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-016 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 20:58					
Arsenic	75	10.02	9.771	9.631	**9.809**	0.1991	2.03
Selenium	77	2.784	2.614	2.659	**2.686**	0.0881	3.281
Selenium	78	0.4373	0.3178	0.6732	**0.4761**	0.1808	37.98
Selenium	82	1.045	0.4615	0.453	**0.6533**	0.3396	51.98
Thallium	203	0.5709	0.5753	0.584	**0.5767**	0.0066	1.15
Thallium	205	0.575	0.5675	0.5647	**0.569**	0.0053	0.9381
Uranium	238	3.829	3.852	3.783	**3.821**	0.0351	0.918

Internal Standard Factors:

Rhodium	103	1.181	1.167	1.183	**1.181**	n/a	n/a
Lutetium	175	1.071	1.072	1.074	**1.071**	n/a	n/a
Gold	197	1.352	1.297	1.3	**1.352**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-017 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:01					
Arsenic	75	8.409	8.341	8.245	**8.332**	0.0825	0.9906
Selenium	77	2.831	2.811	2.574	**2.739**	0.1429	5.217
Selenium	78	0.5375	0.4373	0.422	**0.4656**	0.0627	13.47
Selenium	82	0.9632	0.6739	0.6568	**0.7646**	0.1721	22.51
Thallium	203	0.5241	0.5141	0.5154	**0.5179**	0.0054	1.049
Thallium	205	0.5177	0.5323	0.5166	**0.5222**	0.0088	1.677
Uranium	238	3.117	3.052	2.999	**3.056**	0.0592	1.936

Internal Standard Factors:

Rhodium	103	1.203	1.181	1.185	**1.203**	n/a	n/a
Lutetium	175	1.079	1.081	1.07	**1.079**	n/a	n/a
Gold	197	1.311	1.316	1.296	**1.311**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006676-019 1/5 7/27/10 21:05			Mean	SD	%RSD
Arsenic	75	18.72	18.27	18.45	**18.48**	0.2238	1.211
Selenium	77	2.075	1.905	2.21	**2.063**	0.1527	7.399
Selenium	78	0.2895	0.4921	0.4306	**0.4041**	0.1038	25.7
Selenium	82	0.578	0.5783	0.754	**0.6368**	0.1015	15.94
Thallium	203	0.5624	0.5465	0.5395	**0.5495**	0.0117	2.133
Thallium	205	0.5433	0.546	0.5416	**0.5436**	0.0022	0.4025
Uranium	238	4.658	4.637	4.58	**4.625**	0.0403	0.8708

Internal Standard Factors:

Rhodium	103	1.199	1.178	1.181	**1.199**	n/a	n/a
Lutetium	175	1.09	1.085	1.064	**1.09**	n/a	n/a
Gold	197	1.356	1.332	1.354	**1.356**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006676-020 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:09					
Arsenic	75	5.54	5.448	5.46	**5.483**	0.0504	0.9199
Selenium	77	2.216	1.941	2.015	**2.057**	0.1423	6.917
Selenium	78	0.4991	0.2894	0.4601	**0.4162**	0.1115	26.8
Selenium	82	0.7659	0.4881	0.4715	**0.5751**	0.1654	28.76
Thallium	203	0.5411	0.5381	0.5315	**0.5369**	0.0049	0.9147
Thallium	205	0.5383	0.5548	0.5227	**0.5386**	0.0161	2.982
Uranium	238	5.57	5.436	5.448	**5.485**	0.0745	1.358

Internal Standard Factors:

Rhodium	103	1.201	1.175	1.195	**1.201**	n/a	n/a
Lutetium	175	1.081	1.081	1.063	**1.081**	n/a	n/a
Gold	197	1.284	1.292	1.294	**1.284**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		7/27/10 21:12					
Arsenic	75	24.54	24.45	24.19	**24.39**	0.1808	0.7411
Selenium	77	24.27	24.16	25.2	**24.54**	0.5707	2.325
Selenium	78	24.34	24.16	24.73	**24.41**	0.2919	1.196
Selenium	82	25.01	25.2	25.24	**25.15**	0.1231	0.4894
Thallium	203	25.7	26.56	26.7	**26.32**	0.5428	2.063
Thallium	205	25.99	26.85	26.36	**26.4**	0.4324	1.638
Uranium	238	25.38	25.74	25.33	**25.48**	0.2255	0.8849

Internal Standard Factors:

Rhodium	103	1.125	1.105	1.101	**1.125**	n/a	n/a
Lutetium	175	1.054	1.05	1.038	**1.054**	n/a	n/a
Gold	197	1.101	1.066	1.074	**1.101**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		7/27/10 21:16					
Arsenic	75	0.0445	0.0853	0.089	**0.073**	0.0247	33.82
Selenium	77	-0.338	-0.346	-0.3219	**-0.3353**	0.0123	3.661
Selenium	78	-0.1583	-0.2211	-0.0429	**-0.1408**	0.0904	64.23
Selenium	82	0.0126	0.1637	0.2037	**0.1267**	0.1008	79.56
Thallium	203	0.0012	0.004	0.0029	**0.0027**	0.0014	53.44
Thallium	205	0.0036	0.0038	0.0029	**0.0034**	0.0005	13.74
Uranium	238	0.0033	0.0045	0.0051	**0.0043**	0.0009	21.61

Internal Standard Factors:

Rhodium	103	1.13	1.107	1.11	**1.13**	n/a	n/a
Lutetium	175	1.064	1.048	1.044	**1.064**	n/a	n/a
Gold	197	1.122	1.108	1.099	**1.122**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-MB 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:19					
Arsenic	75	-0.0056	-0.0399	0.0338	**-0.0039**	0.0369	947.9
Selenium	77	-0.297	-0.3207	-0.4287	**-0.3488**	0.0702	20.13
Selenium	78	-0.1835	-0.2894	-0.3756	**-0.2828**	0.0962	34.02
Selenium	82	-0.014	-0.1138	0.0793	**-0.0161**	0.0966	598.5
Thallium	203	-0.0087	-0.0077	-0.0071	**-0.0078**	0.0008	10.15
Thallium	205	-0.0056	-0.006	-0.0063	**-0.006**	0.0004	6.303
Uranium	238	-0.0077	-0.0075	-0.0076	**-0.0076**	0.0001	1.231

Internal Standard Factors:

Rhodium	103	1.122	1.103	1.081	**1.122**	n/a	n/a
Lutetium	175	1.066	1.041	1.043	**1.066**	n/a	n/a
Gold	197	1.271	1.245	1.226	**1.271**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		LCSS K1006777 1/100 7/27/10 21:22			Mean	SD	%RSD
Arsenic	75	8.402	8.333	8.354	**8.363**	0.0356	0.4258
Selenium	77	18.83	19.07	18.29	**18.73**	0.4017	2.145
Selenium	78	18.32	18.49	18.33	**18.38**	0.098	0.5331
Selenium	82	19.26	19.07	18.78	**19.04**	0.2412	1.267
Thallium	203	27.7	27.08	27.51	**27.43**	0.317	1.156
Thallium	205	27.51	27.3	27.25	**27.35**	0.1361	0.4977
Uranium	238	0.1713	0.1651	0.1673	**0.1679**	0.0031	1.857

Internal Standard Factors:

Rhodium	103	1.106	1.085	1.088	**1.106**	n/a	n/a
Lutetium	175	1.037	1.007	1.017	**1.037**	n/a	n/a
Gold	197	1.158	1.165	1.157	**1.158**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		LCSW K1006777 1/5 7/27/10 21:25			Mean	SD	%RSD
Arsenic	75	0.0102	0.0172	-0.0019	**0.0085**	0.0097	113.6
Selenium	77	-0.3798	-0.3021	-0.3821	**-0.3547**	0.0455	12.84
Selenium	78	0.0455	-0.2888	-0.1881	**-0.1438**	0.1715	119.3
Selenium	82	-0.0529	0.0885	-0.0572	**-0.0072**	0.0829	1154
Thallium	203	0.0135	0.014	0.0138	**0.0138**	0.0003	1.816
Thallium	205	0.016	0.0134	0.0123	**0.0139**	0.0019	13.57
Uranium	238	38.23	38.37	38.98	**38.53**	0.4002	1.039

Internal Standard Factors:

Rhodium	103	1.108	1.097	1.067	**1.108**	n/a	n/a
Lutetium	175	1.04	1.026	1.024	**1.04**	n/a	n/a
Gold	197	1.242	1.187	1.204	**1.242**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-005 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:28					
Arsenic	75	10.03	9.858	9.855	**9.913**	0.0984	0.9922
Selenium	77	4.192	4.188	4.199	**4.193**	0.0055	0.1315
Selenium	78	0.8128	0.6346	0.8394	**0.7623**	0.1114	14.61
Selenium	82	1.48	1.297	1.167	**1.315**	0.1573	11.97
Thallium	203	0.7418	0.7107	0.7228	**0.7251**	0.0157	2.165
Thallium	205	0.7372	0.7288	0.717	**0.7276**	0.0102	1.395
Uranium	238	2.2	2.156	2.179	**2.179**	0.0221	1.016

Internal Standard Factors:

Rhodium	103	1.167	1.144	1.161	**1.167**	n/a	n/a
Lutetium	175	1.033	1.024	1.026	**1.033**	n/a	n/a
Gold	197	1.205	1.214	1.211	**1.205**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006777-005 1/5D 7/27/10 21:32			Mean	SD	%RSD
Arsenic	75	11.38	11.25	11.24	**11.29**	0.0768	0.68
Selenium	77	5.121	4.802	4.937	**4.954**	0.1603	3.235
Selenium	78	0.9587	0.9972	0.7716	**0.9092**	0.1207	13.27
Selenium	82	1.269	1.103	1.31	**1.227**	0.1096	8.928
Thallium	203	0.916	0.8946	0.9069	**0.9058**	0.0107	1.184
Thallium	205	0.9206	0.9138	0.9038	**0.9128**	0.0084	0.9258
Uranium	238	2.802	2.771	2.71	**2.761**	0.0466	1.687

Internal Standard Factors:

Rhodium	103	1.166	1.162	1.174	**1.166**	n/a	n/a
Lutetium	175	1.038	1.024	1.028	**1.038**	n/a	n/a
Gold	197	1.3	1.294	1.275	**1.3**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-005 1/25L			Mean	SD	%RSD
TimeStamp		7/27/10 21:35					
Arsenic	75	2.451	2.308	2.402	**2.387**	0.0725	3.037
Selenium	77	0.6942	0.8139	0.7928	**0.7669**	0.0639	8.331
Selenium	78	-0.0215	-0.2128	0.0115	**-0.0743**	0.1211	163
Selenium	82	0.4683	0.268	0.4278	**0.388**	0.1059	27.29
Thallium	203	0.1663	0.1596	0.1666	**0.1642**	0.004	2.426
Thallium	205	0.1582	0.1658	0.1658	**0.1633**	0.0044	2.669
Uranium	238	0.5031	0.4889	0.489	**0.4937**	0.0082	1.656

Internal Standard Factors:

Rhodium	103	1.145	1.125	1.133	**1.145**	n/a	n/a
Lutetium	175	1.043	1.047	1.039	**1.043**	n/a	n/a
Gold	197	1.219	1.192	1.158	**1.219**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-005 1/5 +50A			Mean	SD	%RSD
TimeStamp		7/27/10 21:39					
Arsenic	75	58.33	57.6	57.58	**57.84**	0.4282	0.7403
Selenium	77	51.92	51.8	52.2	**51.97**	0.2041	0.3927
Selenium	78	48.64	48.23	47.67	**48.18**	0.4865	1.01
Selenium	82	49.27	49.41	48.55	**49.08**	0.4653	0.948
Thallium	203	50.87	51.45	50.79	**51.04**	0.3622	0.7096
Thallium	205	50.97	51.59	50.87	**51.14**	0.3892	0.761
Uranium	238	53.72	54.34	53.81	**53.96**	0.3361	0.6228

Internal Standard Factors:

Rhodium	103	1.137	1.133	1.139	**1.137**	n/a	n/a
Lutetium	175	0.987	0.994	0.994	**0.987**	n/a	n/a
Gold	197	1.186	1.16	1.162	**1.186**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006777-005 1/25S 7/27/10 21:42			Mean	SD	%RSD
Arsenic	75	43.08	43	43.43	**43.17**	0.2307	0.5343
Selenium	77	41.99	42.96	43.75	**42.9**	0.8802	2.052
Selenium	78	42.27	42.59	42.38	**42.42**	0.1639	0.3863
Selenium	82	42.89	42.91	43.56	**43.12**	0.3844	0.8914
Thallium	203	42.37	42.33	42.69	**42.46**	0.1982	0.4668
Thallium	205	42.77	42.53	42.62	**42.64**	0.1204	0.2823
Uranium	238	8.997	8.992	8.875	**8.955**	0.0692	0.7732

Internal Standard Factors:

Rhodium	103	1.117	1.114	1.11	**1.117**	n/a	n/a
Lutetium	175	1.023	1.028	1.031	**1.023**	n/a	n/a
Gold	197	1.194	1.133	1.151	**1.194**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-001 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:46					
Arsenic	75	65.55	64.7	63.9	**64.72**	0.8276	1.279
Selenium	77	2.22	2.42	2.473	**2.371**	0.1336	5.634
Selenium	78	0.2977	0.3107	0.2827	**0.2971**	0.014	4.715
Selenium	82	0.6968	0.7495	0.7414	**0.7292**	0.0284	3.887
Thallium	203	0.4071	0.3859	0.4173	**0.4034**	0.016	3.973
Thallium	205	0.4085	0.3961	0.4	**0.4015**	0.0064	1.582
Uranium	238	3.924	3.789	3.972	**3.895**	0.0951	2.44

Internal Standard Factors:

Rhodium	103	1.172	1.158	1.16	**1.172**	n/a	n/a
Lutetium	175	1.06	1.031	1.057	**1.06**	n/a	n/a
Gold	197	1.306	1.274	1.257	**1.306**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-002 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 21:50					
Arsenic	75	22.23	22.21	21.92	**22.12**	0.1749	0.7909
Selenium	77	2.368	2.79	2.527	**2.562**	0.2131	8.317
Selenium	78	0.4601	0.505	0.3768	**0.4473**	0.0651	14.55
Selenium	82	0.7268	0.7095	0.5702	**0.6688**	0.0859	12.84
Thallium	203	0.4741	0.4697	0.4636	**0.4691**	0.0053	1.122
Thallium	205	0.4564	0.4709	0.4553	**0.4609**	0.0087	1.896
Uranium	238	3.491	3.523	3.449	**3.488**	0.0368	1.056

Internal Standard Factors:

Rhodium	103	1.175	1.169	1.16	**1.175**	n/a	n/a
Lutetium	175	1.063	1.062	1.052	**1.063**	n/a	n/a
Gold	197	1.291	1.291	1.292	**1.291**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV7			Mean	SD	%RSD
TimeStamp		7/27/10 21:53					
Arsenic	75	24.16	24.37	24.59	**24.37**	0.2116	0.8683
Selenium	77	24.94	24.59	24.32	**24.62**	0.3123	1.269
Selenium	78	24.48	24.1	24.88	**24.49**	0.3902	1.594
Selenium	82	25.07	25.07	25.78	**25.31**	0.4074	1.61
Thallium	203	26.01	25.72	26.5	**26.08**	0.3948	1.514
Thallium	205	26.49	25.59	26.41	**26.17**	0.498	1.903
Uranium	238	25.78	25.13	24.95	**25.29**	0.44	1.74

Internal Standard Factors:

Rhodium	103	1.105	1.093	1.089	**1.105**	n/a	n/a
Lutetium	175	1.05	1.008	1.024	**1.05**	n/a	n/a
Gold	197	1.095	1.077	1.078	**1.095**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB7			Mean	SD	%RSD
TimeStamp		7/27/10 22:02					
Arsenic	75	0.0107	0.0165	0.0446	**0.0239**	0.0181	75.71
Selenium	77	-0.3541	-0.3125	-0.2404	**-0.3024**	0.0575	19.03
Selenium	78	-0.2471	-0.1203	-0.0883	**-0.1519**	0.084	55.31
Selenium	82	-0.1154	-0.043	0.1626	**0.0014**	0.1442	10260
Thallium	203	0.0052	0.0053	0.0019	**0.0041**	0.0019	47
Thallium	205	0.0059	0.0064	0.006	**0.0061**	0.0003	4.141
Uranium	238	0.0043	0.0056	0.0065	**0.0055**	0.0011	20.75

Internal Standard Factors:

Rhodium	103	1.113	1.098	1.096	**1.113**	n/a	n/a
Lutetium	175	1.057	1.047	1.035	**1.057**	n/a	n/a
Gold	197	1.119	1.123	1.084	**1.119**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: / TimeStamp		K1006777-003 1/5 7/27/10 22:05			Mean	SD	%RSD
Arsenic	75	6.964	6.858	7.016	**6.946**	0.0807	1.162
Selenium	77	3.287	3.288	2.977	**3.184**	0.1793	5.632
Selenium	78	0.8557	0.6433	0.6461	**0.715**	0.1218	17.04
Selenium	82	1.026	1.237	0.9264	**1.063**	0.1586	14.92
Thallium	203	0.5086	0.5232	0.5218	**0.5179**	0.008	1.551
Thallium	205	0.5219	0.5177	0.5184	**0.5193**	0.0023	0.4362
Uranium	238	4.614	4.697	4.667	**4.659**	0.0422	0.9047

Internal Standard Factors:

Rhodium	103	1.169	1.156	1.173	**1.169**	n/a	n/a
Lutetium	175	1.036	1.045	1.042	**1.036**	n/a	n/a
Gold	197	1.277	1.269	1.281	**1.277**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-004 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:08					
Arsenic	75	65.52	66.6	65.48	**65.87**	0.6351	0.9642
Selenium	77	2.75	2.844	2.704	**2.766**	0.0712	2.575
Selenium	78	0.4861	0.5529	0.2617	**0.4336**	0.1526	35.19
Selenium	82	0.6109	1.09	0.9039	**0.8683**	0.2416	27.82
Thallium	203	0.4722	0.4817	0.4788	**0.4776**	0.0049	1.018
Thallium	205	0.4611	0.4795	0.4805	**0.4737**	0.0109	2.31
Uranium	238	3.242	3.337	3.243	**3.274**	0.0547	1.67

Internal Standard Factors:

Rhodium	103	1.168	1.167	1.161	**1.168**	n/a	n/a
Lutetium	175	1.041	1.049	1.039	**1.041**	n/a	n/a
Gold	197	1.305	1.3	1.299	**1.305**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006777-006 1/5 7/27/10 22:12			Mean	SD	%RSD
Arsenic	75	5.99	6.057	5.854	**5.967**	0.1037	1.737
Selenium	77	2.403	2.376	2.31	**2.363**	0.0478	2.023
Selenium	78	0.5137	0.5335	0.6016	**0.5496**	0.0461	8.386
Selenium	82	0.7769	0.9333	0.6753	**0.7952**	0.13	16.35
Thallium	203	0.5674	0.5508	0.5641	**0.5608**	0.0088	1.564
Thallium	205	0.565	0.5479	0.5458	**0.5529**	0.0106	1.908
Uranium	238	1.689	1.711	1.711	**1.704**	0.0128	0.7487

Internal Standard Factors:

Rhodium	103	1.181	1.182	1.184	**1.181**	n/a	n/a
Lutetium	175	1.071	1.053	1.054	**1.071**	n/a	n/a
Gold	197	1.342	1.322	1.34	**1.342**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-007 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:15					
Arsenic	75	74.72	73.34	73.71	**73.93**	0.7145	0.9665
Selenium	77	2.312	2.342	1.996	**2.217**	0.1916	8.644
Selenium	78	0.0059	0.2712	0.195	**0.1574**	0.1366	86.78
Selenium	82	0.7729	0.6436	0.6521	**0.6895**	0.0723	10.49
Thallium	203	0.4347	0.4198	0.4265	**0.427**	0.0075	1.751
Thallium	205	0.424	0.4213	0.4232	**0.4228**	0.0014	0.3207
Uranium	238	3.648	3.664	3.729	**3.68**	0.043	1.169

Internal Standard Factors:

Rhodium	103	1.166	1.15	1.157	**1.166**	n/a	n/a
Lutetium	175	1.056	1.042	1.061	**1.056**	n/a	n/a
Gold	197	1.333	1.31	1.299	**1.333**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006777-009 1/5 7/27/10 22:19			Mean	SD	%RSD
Arsenic	75	28.47	27.94	28.67	**28.36**	0.3755	1.324
Selenium	77	2.153	2.229	2.22	**2.201**	0.0417	1.894
Selenium	78	0.478	0.369	0.1965	**0.3478**	0.142	40.81
Selenium	82	0.489	0.4438	0.67	**0.5342**	0.1197	22.4
Thallium	203	0.5136	0.516	0.4967	**0.5088**	0.0106	2.073
Thallium	205	0.5038	0.5147	0.5073	**0.5086**	0.0056	1.093
Uranium	238	2.255	2.299	2.302	**2.285**	0.0266	1.162

Internal Standard Factors:

Rhodium	103	1.178	1.155	1.183	**1.178**	n/a	n/a
Lutetium	175	1.06	1.055	1.05	**1.06**	n/a	n/a
Gold	197	1.351	1.337	1.339	**1.351**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006777-010 1/5 7/27/10 22:22			Mean	SD	%RSD
Arsenic	75	10.32	10.1	10.19	**10.2**	0.1115	1.093
Selenium	77	2.385	2.276	2.102	**2.254**	0.1425	6.32
Selenium	78	0.4667	0.4125	0.4142	**0.4311**	0.0308	7.142
Selenium	82	0.9986	0.5357	0.5366	**0.6903**	0.267	38.68
Thallium	203	0.4495	0.451	0.4558	**0.4521**	0.0033	0.7292
Thallium	205	0.4534	0.4598	0.4513	**0.4548**	0.0044	0.9707
Uranium	238	2.041	2.009	2.058	**2.036**	0.0249	1.224

Internal Standard Factors:

Rhodium	103	1.181	1.166	1.168	**1.181**	n/a	n/a
Lutetium	175	1.05	1.039	1.058	**1.05**	n/a	n/a
Gold	197	1.332	1.336	1.321	**1.332**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-011 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:26					
Arsenic	75	3.256	3.279	3.302	**3.279**	0.0232	0.7084
Selenium	77	3.005	2.706	2.937	**2.883**	0.1569	5.443
Selenium	78	0.5084	0.5927	0.5389	**0.5467**	0.0427	7.804
Selenium	82	0.7995	0.6716	0.7413	**0.7375**	0.064	8.679
Thallium	203	0.6417	0.6733	0.6441	**0.653**	0.0176	2.69
Thallium	205	0.6409	0.6656	0.6488	**0.6518**	0.0126	1.932
Uranium	238	2.668	2.7	2.69	**2.686**	0.0161	0.5998

Internal Standard Factors:

Rhodium	103	1.187	1.186	1.201	**1.187**	n/a	n/a
Lutetium	175	1.041	1.054	1.047	**1.041**	n/a	n/a
Gold	197	1.292	1.266	1.257	**1.292**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-012 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:29					
Arsenic	75	72.36	71.56	74.48	**72.8**	1.511	2.076
Selenium	77	1.671	1.474	1.644	**1.596**	0.1066	6.675
Selenium	78	0.3157	0.471	0.4467	**0.4111**	0.0835	20.31
Selenium	82	0.4837	0.4347	0.6045	**0.5076**	0.0874	17.21
Thallium	203	0.41	0.4294	0.4216	**0.4203**	0.0097	2.317
Thallium	205	0.4145	0.4179	0.4177	**0.4167**	0.0019	0.4583
Uranium	238	5.223	5.254	5.326	**5.268**	0.0527	0.9994

Internal Standard Factors:

Rhodium	103	1.176	1.155	1.194	**1.176**	n/a	n/a
Lutetium	175	1.059	1.054	1.061	**1.059**	n/a	n/a
Gold	197	1.384	1.365	1.347	**1.384**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-013 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:33					
Arsenic	75	28.09	27.68	27.91	**27.89**	0.2061	0.739
Selenium	77	1.712	1.582	1.745	**1.68**	0.086	5.118
Selenium	78	0.3612	0.4051	0.2884	**0.3515**	0.059	16.77
Selenium	82	0.6511	0.5431	0.5309	**0.575**	0.0662	11.51
Thallium	203	0.4886	0.4804	0.4796	**0.4829**	0.005	1.036
Thallium	205	0.4613	0.4603	0.4789	**0.4668**	0.0105	2.246
Uranium	238	4.583	4.487	4.429	**4.499**	0.0776	1.725

Internal Standard Factors:

Rhodium	103	1.173	1.161	1.177	**1.173**	n/a	n/a
Lutetium	175	1.088	1.048	1.056	**1.088**	n/a	n/a
Gold	197	1.488	1.457	1.436	**1.488**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-014 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:37					
Arsenic	75	5.935	6.039	5.754	**5.909**	0.1443	2.443
Selenium	77	2.005	1.961	2.199	**2.055**	0.1268	6.172
Selenium	78	0.418	0.2973	0.4178	**0.3777**	0.0697	18.45
Selenium	82	0.3279	0.5006	0.4212	**0.4166**	0.0864	20.75
Thallium	203	0.6737	0.6624	0.6561	**0.6641**	0.0089	1.341
Thallium	205	0.657	0.6629	0.6652	**0.6617**	0.0042	0.6353
Uranium	238	3.329	3.307	3.279	**3.305**	0.0252	0.7635

Internal Standard Factors:

Rhodium	103	1.193	1.183	1.186	**1.193**	n/a	n/a
Lutetium	175	1.081	1.079	1.074	**1.081**	n/a	n/a
Gold	197	1.481	1.445	1.473	**1.481**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV8			Mean	SD	%RSD
TimeStamp		7/27/10 22:40					
Arsenic	75	24.6	23.94	23.79	**24.11**	0.4322	1.793
Selenium	77	24.78	24.41	24.09	**24.43**	0.3437	1.407
Selenium	78	25.04	24.26	24.28	**24.53**	0.4408	1.797
Selenium	82	25.88	24.44	24.56	**24.96**	0.7979	3.197
Thallium	203	26.38	26.49	26.21	**26.36**	0.1431	0.5428
Thallium	205	26.26	26.88	26.46	**26.53**	0.3155	1.189
Uranium	238	25.78	25.26	25.37	**25.47**	0.2734	1.074

Internal Standard Factors:

Rhodium	103	1.131	1.092	1.084	**1.131**	n/a	n/a
Lutetium	175	1.046	1.038	1.022	**1.046**	n/a	n/a
Gold	197	1.112	1.097	1.098	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB8			Mean	SD	%RSD
TimeStamp		7/27/10 22:49					
Arsenic	75	0.0528	0.0977	0.0468	**0.0657**	0.0278	42.34
Selenium	77	-0.3482	-0.4234	-0.4077	**-0.3931**	0.0397	10.09
Selenium	78	-0.1171	-0.105	-0.1045	**-0.1088**	0.0071	6.531
Selenium	82	0.0801	0.197	-0.0206	**0.0855**	0.1089	127.4
Thallium	203	0.0058	0.007	0.0032	**0.0054**	0.0019	36.01
Thallium	205	0.0076	0.0061	0.0059	**0.0065**	0.0009	14.26
Uranium	238	0.006	0.0065	0.0076	**0.0067**	0.0008	12.52

Internal Standard Factors:

Rhodium	103	1.123	1.091	1.089	**1.123**	n/a	n/a
Lutetium	175	1.055	1.048	1.031	**1.055**	n/a	n/a
Gold	197	1.12	1.107	1.09	**1.12**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-015 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:51					
Arsenic	75	31.35	30.89	31.1	**31.11**	0.2316	0.7443
Selenium	77	2.114	2.078	2.01	**2.067**	0.053	2.561
Selenium	78	0.3371	0.5241	0.3223	**0.3945**	0.1125	28.51
Selenium	82	1.028	0.6847	0.6674	**0.7933**	0.2033	25.62
Thallium	203	0.3894	0.4029	0.3913	**0.3945**	0.0073	1.853
Thallium	205	0.3876	0.3875	0.3983	**0.3912**	0.0062	1.586
Uranium	238	1.873	1.862	1.889	**1.875**	0.014	0.7448

Internal Standard Factors:

Rhodium	103	1.138	1.125	1.142	**1.138**	n/a	n/a
Lutetium	175	1.056	1.055	1.049	**1.056**	n/a	n/a
Gold	197	1.498	1.475	1.492	**1.498**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name: TimeStamp		K1006777-016 1/5 7/27/10 22:55			Mean	SD	%RSD
Arsenic	75	9.467	9.296	9.361	**9.375**	0.0865	0.9223
Selenium	77	2.339	2.248	2.404	**2.33**	0.0786	3.374
Selenium	78	0.2302	0.45	0.4937	**0.3913**	0.1412	36.09
Selenium	82	0.343	0.6703	0.7358	**0.583**	0.2104	36.09
Thallium	203	0.3902	0.3754	0.3925	**0.386**	0.0093	2.398
Thallium	205	0.3927	0.3753	0.378	**0.382**	0.0094	2.454
Uranium	238	2.012	1.918	1.982	**1.971**	0.0481	2.441

Internal Standard Factors:

Rhodium	103	1.159	1.131	1.143	**1.159**	n/a	n/a
Lutetium	175	1.065	1.024	1.038	**1.065**	n/a	n/a
Gold	197	1.391	1.347	1.338	**1.391**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		K1006777-017 1/5			Mean	SD	%RSD
TimeStamp		7/27/10 22:58					
Arsenic	75	3.886	3.802	3.832	**3.84**	0.0425	1.106
Selenium	77	2.449	2.292	2.413	**2.385**	0.0826	3.464
Selenium	78	0.7111	0.6263	0.6871	**0.6748**	0.0437	6.478
Selenium	82	0.7738	0.802	0.7469	**0.7742**	0.0275	3.555
Thallium	203	0.4248	0.4103	0.4048	**0.4133**	0.0103	2.499
Thallium	205	0.4057	0.4051	0.4101	**0.407**	0.0027	0.666
Uranium	238	2.375	2.291	2.374	**2.347**	0.048	2.045

Internal Standard Factors:

Rhodium	103	1.168	1.146	1.162	**1.168**	n/a	n/a
Lutetium	175	1.056	1.029	1.037	**1.056**	n/a	n/a
Gold	197	1.366	1.333	1.348	**1.366**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCV9			Mean	SD	%RSD
TimeStamp		7/27/10 23:02					
Arsenic	75	24.34	23.97	23.79	**24.03**	0.283	1.177
Selenium	77	24.02	24.88	24.74	**24.54**	0.4626	1.885
Selenium	78	24.41	24.9	24.31	**24.54**	0.3164	1.289
Selenium	82	25.24	25.3	24.24	**24.93**	0.5922	2.376
Thallium	203	26.72	26.16	26.23	**26.37**	0.3014	1.143
Thallium	205	26.82	26.32	26.19	**26.44**	0.3317	1.254
Uranium	238	25.1	25.18	24.8	**25.03**	0.1975	0.7892

Internal Standard Factors:

Rhodium	103	1.104	1.083	1.078	**1.104**	n/a	n/a
Lutetium	175	1.052	1.014	1.004	**1.052**	n/a	n/a
Gold	197	1.095	1.097	1.089	**1.095**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-27-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210137

Sample Name:		CCB9			Mean	SD	%RSD
TimeStamp		7/27/10 23:10					
Arsenic	75	-0.0027	0.0325	0.078	**0.0359**	0.0405	112.6
Selenium	77	-0.1199	-0.3057	-0.2945	**-0.24**	0.1042	43.42
Selenium	78	0.0254	0.3246	-0.0277	**0.1074**	0.19	176.8
Selenium	82	0.0488	0.0751	0.2175	**0.1138**	0.0908	79.76
Thallium	203	0.0069	0.005	0.0061	**0.006**	0.0009	15.68
Thallium	205	0.007	0.007	0.0074	**0.0071**	0.0003	3.68
Uranium	238	0.0083	0.0074	0.0071	**0.0076**	0.0006	7.906

Internal Standard Factors:

Rhodium	103	1.12	1.091	1.083	**1.12**	n/a	n/a
Lutetium	175	1.062	1.031	1.03	**1.062**	n/a	n/a
Gold	197	1.121	1.114	1.084	**1.121**	n/a	n/a

Service Request # K1006777 (HCl)_____
Calibration _____072810D_____
QC in calibration__072810D_____
QC Service Request K1006777_____
STARLIMS Batch # 210314_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: Report Ag-109.

Primary Review by _____ Date 7/29/10
Secondary Review by _____ Date 7/29/10
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	SOIL CRA	Unknown	0 kg	0 ml	1.00	0	1	4	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006285-MB 1/5	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSS K1006285 1/100	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	K1006285-001 1/5	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006285-001 1/5D	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006285-001 1/25L	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006285-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006285-001 1/25S	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006285-002 1/5	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006285-003 1/5	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006285-004 1/5	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006285-005 1/5	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006285-006 1/5	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006285-006 1/5D	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006285-006 1/25S	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006285-007 1/5	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006285-008 1/5	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006285-009 1/5	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006285-010 1/5	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006285-011 1/5	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006285-012 1/5	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006285-013 1/5	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	K1006285-014 1/5	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006285-015 1/5	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	K1006285-016 1/5	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	K1006285-017 1/5	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006285-018 1/5	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006285-019 1/5	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006285-020 1/5	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
43	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
44	K105734-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	5	145
45	LCSW K1005734 1/25	Unknown	0 kg	0 ml	1.00	1	3	6	145
46	K1005734-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1005734-001 1/5D	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1005734-001 1/25S	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006453-MB 1/5	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	LCSS K1006453 1/100	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006453-001 1/5	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006453-001 1/5D	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	K1006453-001 1/25L	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
55	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
56	K1006453-001 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	1	4	3	145
57	K1006453-001 1/25S	Unknown	0 kg	0 ml	1.00	1	4	4	145
58	K1006453-002 1/5	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006453-003 1/5	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006453-004 1/5	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006453-005 1/5	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006453-006 1/5	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006453-007 1/5	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1006453-008 1/5	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1006453-009 1/5	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
67	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
68	K1006453-010 1/5	Unknown	0 kg	0 ml	1.00	1	5	1	145
69	K1006453-011 1/5	Unknown	0 kg	0 ml	1.00	1	5	2	145
70	K1006453-012 1/5	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	K1006453-013 1/5	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1006453-014 1/5	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1006453-015 1/5	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1006804-001 1/5	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1006804-002 1/5	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1006804-003 1/5	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
78	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145
79	K1006615-MB 1/5	Unknown	0 kg	0 ml	1.00	1	5	10	145
80	LCSS K1006615 1/100	Unknown	0 kg	0 ml	1.00	1	5	11	145
81	K1006615-006 1/5	Unknown	0 kg	0 ml	1.00	1	5	12	145
82	K1006615-006 1/5D	Unknown	0 kg	0 ml	1.00	2	1	1	145
83	K1006615-006 1/25L	Unknown	0 kg	0 ml	1.00	2	1	2	145
84	K1006615-006 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	1	3	145
85	K1006615-006 1/25S	Unknown	0 kg	0 ml	1.00	2	1	4	145
86	K1006615-001 1/5	Unknown	0 kg	0 ml	1.00	2	1	5	145
87	K1006615-002 1/5	Unknown	0 kg	0 ml	1.00	2	1	6	145
88	K1006615-003 1/5	Unknown	0 kg	0 ml	1.00	2	1	7	145
89	CCV8	Unknown	0 kg	0 ml	1.00	0	1	2	145
90	CCB8	Unknown	0 kg	0 ml	1.00	0	1	1	145
91	K1006615-004 1/5	Unknown	0 kg	0 ml	1.00	2	1	8	145
92	K1006615-005 1/5	Unknown	0 kg	0 ml	1.00	2	1	9	145
93	K1006615-007 1/5	Unknown	0 kg	0 ml	1.00	2	1	10	145
94	K1006615-008 1/5	Unknown	0 kg	0 ml	1.00	2	1	11	145
95	K1006615-009 1/5	Unknown	0 kg	0 ml	1.00	2	1	12	145
96	K1006636-001 1/5	Unknown	0 kg	0 ml	1.00	2	2	1	145
97	K1006636-002 1/5	Unknown	0 kg	0 ml	1.00	2	2	2	145
98	K1006636-003 1/5	Unknown	0 kg	0 ml	1.00	2	2	3	145
99	K1006636-005 1/5	Unknown	0 kg	0 ml	1.00	2	2	4	145

100	K1006636-006 1/5	Unknown	0 kg	0 ml	1.00	2	2	5	145
101	CCV9	Unknown	0 kg	0 ml	1.00	0	1	7	145
102	CCB9	Unknown	0 kg	0 ml	1.00	0	1	8	145
103	K1006636-007 1/5	Unknown	0 kg	0 ml	1.00	2	2	6	145
104	K1006676-MB 1/5	Unknown	0 kg	0 ml	1.00	2	2	7	145
105	LCSS K1006676 1/100	Unknown	0 kg	0 ml	1.00	2	2	8	145
106	K1006676-018 1/5	Unknown	0 kg	0 ml	1.00	2	2	9	145
107	K1006676-018 1/5D	Unknown	0 kg	0 ml	1.00	2	2	10	145
108	K1006676-018 1/25L	Unknown	0 kg	0 ml	1.00	2	2	11	145
109	K1006676-018 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	2	12	145
110	K1006676-018 1/25S	Unknown	0 kg	0 ml	1.00	2	3	1	145
111	K1006676-001 1/5	Unknown	0 kg	0 ml	1.00	2	3	2	145
112	K1006676-002 1/5	Unknown	0 kg	0 ml	1.00	2	3	3	145
113	CCV10	Unknown	0 kg	0 ml	1.00	0	1	7	145
114	CCB10	Unknown	0 kg	0 ml	1.00	0	1	8	145
115	K1006676-003 1/5	Unknown	0 kg	0 ml	1.00	2	3	4	145
116	K1006676-004 1/5	Unknown	0 kg	0 ml	1.00	2	3	5	145
117	K1006676-005 1/5	Unknown	0 kg	0 ml	1.00	2	3	6	145
118	K1006676-006 1/5	Unknown	0 kg	0 ml	1.00	2	3	7	145
119	K1006676-007 1/5	Unknown	0 kg	0 ml	1.00	2	3	8	145
120	K1006676-008 1/5	Unknown	0 kg	0 ml	1.00	2	3	9	145
121	K1006676-009 1/5	Unknown	0 kg	0 ml	1.00	2	3	10	145
122	K1006676-010 1/5	Unknown	0 kg	0 ml	1.00	2	3	11	145
123	K1006676-011 1/5	Unknown	0 kg	0 ml	1.00	2	3	12	145
124	K1006676-012 1/5	Unknown	0 kg	0 ml	1.00	2	4	1	145
125	CCV11	Unknown	0 kg	0 ml	1.00	0	1	7	145
126	CCB11	Unknown	0 kg	0 ml	1.00	0	1	8	145
127	K1006676-013 1/5	Unknown	0 kg	0 ml	1.00	2	4	2	145
128	K1006676-014 1/5	Unknown	0 kg	0 ml	1.00	2	4	3	145
129	K1006676-015 1/5	Unknown	0 kg	0 ml	1.00	2	4	4	145
130	K1006676-016 1/5	Unknown	0 kg	0 ml	1.00	2	4	5	145
131	K1006676-017 1/5	Unknown	0 kg	0 ml	1.00	2	4	6	145
132	K1006676-019 1/5	Unknown	0 kg	0 ml	1.00	2	4	7	145
133	K1006676-020 1/5	Unknown	0 kg	0 ml	1.00	2	4	8	145
134	K1006777-MB 1/5	Unknown	0 kg	0 ml	1.00	2	4	9	145
135	LCSS K1006777 1/100	Unknown	0 kg	0 ml	1.00	2	4	10	145
136	CCV12	Unknown	0 kg	0 ml	1.00	0	1	7	145
137	CCB12	Unknown	0 kg	0 ml	1.00	0	1	8	145
138	K1006777-005 1/5	Unknown	0 kg	0 ml	1.00	2	4	11	145
139	K1006777-005 1/5D	Unknown	0 kg	0 ml	1.00	2	4	12	145
140	K1006777-005 1/25L	Unknown	0 kg	0 ml	1.00	2	5	1	145
141	K1006777-005 1/5 +10/50A	Unknown	0 kg	0 ml	1.00	2	5	2	145
142	K1006777-005 1/25S	Unknown	0 kg	0 ml	1.00	2	5	3	145
143	K1006777-001 1/5	Unknown	0 kg	0 ml	1.00	2	5	4	145
144	K1006777-002 1/5	Unknown	0 kg	0 ml	1.00	2	5	5	145
145	K1006777-003 1/5	Unknown	0 kg	0 ml	1.00	2	5	6	145
146	K1006777-004 1/5	Unknown	0 kg	0 ml	1.00	2	5	7	145
147	K1006777-006 1/5	Unknown	0 kg	0 ml	1.00	2	5	8	145
148	CCV13	Unknown	0 kg	0 ml	1.00	0	1	7	145
149	CCB13	Unknown	0 kg	0 ml	1.00	0	1	8	145
150	K1006777-007 1/5	Unknown	0 kg	0 ml	1.00	2	5	9	145

151	K1006777-009 1/5	Unknown	0 kg	0 ml	1.00	2	5	10	145
152	K1006777-010 1/5	Unknown	0 kg	0 ml	1.00	2	5	11	145
153	K1006777-011 1/5	Unknown	0 kg	0 ml	1.00	2	5	12	145
154	K1006777-012 1/5	Unknown	0 kg	0 ml	1.00	3	1	1	145
155	K1006777-0131/5	Unknown	0 kg	0 ml	1.00	3	1	2	145
156	K1006777-014 1/5	Unknown	0 kg	0 ml	1.00	3	1	3	145
157	K1006777-015 1/5	Unknown	0 kg	0 ml	1.00	3	1	4	145
158	K1006777-016 1/5	Unknown	0 kg	0 ml	1.00	3	1	5	145
159	K1006777-017 1/5	Unknown	0 kg	0 ml	1.00	3	1	6	145
160	CCV14	Unknown	0 kg	0 ml	1.00	0	1	7	145
161	CCB14	Unknown	0 kg	0 ml	1.00	0	1	8	145

Instrument Setup - Sample Configuration

Sample	Configuration	Date
All Samples	acqmet11	7:45:18 7/28/10

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 7:45:18 7/28/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-500.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-36.00
Focus	12.00

ExCell Mass Calibration Date: 7/28/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1298	0.715	0.003	TRUE	
7.016	1558	0.715	-0.018	TRUE	Li-7
9.012	2058	0.766	0.012	TRUE	Be-9
23.985	5872	0.715	-0.007	TRUE	Mg-24
24.986	6132	0.715	-0.028	TRUE	Co-59
25.983	6379	0.715	-0.002	TRUE	In-115
26.982	6632	0.766	0.002	TRUE	Ce-140
43.956	10955	0.766	-0.012	TRUE	Pb-208
45.953	11456	0.715	0.017	TRUE	Bi-209
50.944	12730	0.715	0.003	TRUE	U-238
51.94	12983	0.766	0.005	TRUE	
53.949	13497	0.817	-0.005	TRUE	
55.935	13997	0.766	0.016	TRUE	
56.935	14257	0.766	-0.005	TRUE	
57.934	14511	0.817	-0.004	TRUE	
58.933	14764	0.766	0.001	TRUE	
69.925	17559	0.766	0.014	TRUE	
75.92	19080	0.766	0.036	TRUE	
112.904	28508	0.765	0.005	TRUE	
114.904	29015	0.765	0.014	TRUE	
118.903	30068	0.765	-0.119	FALSE	
139.905	35392	0.714	-0.008	TRUE	
141.908	35905	0.663	-0.018	TRUE	
155.923	39480	0.663	-0.027	TRUE	
205.974	52240	0.612	-0.006	TRUE	
206.976	52493	0.663	0.004	TRUE	
207.977	52753	0.663	-0.015	TRUE	
208.98	53007	0.612	-0.006	TRUE	
238.051	60417	0.611	0.029	TRUE	

Excluded In Calib | Excluded In Results | Full Run Excluded | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard E-Calibration Edited I-Invalid Calibration V-Valley Integration Failed
F-Interference Correction Failed T-Tripped P-Pulse Counting M-Result Over Max

Run	Label	TimeStamp	58Ni	7Li	9Be	59Co	115In	208Pb
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)0.000	(P)24428.035	(P)6899.499	(P)45309.250	(P)50755.843	(P)21934.332
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)0.000	(P)24748.921	(P)6993.212	(P)45460.390	(P)51236.885	(P)22352.481
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)0.167	(P)24481.798	(P)6897.665	(P)45473.095	(P)51369.028	(P)22254.657
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)0.333	(P)24662.608	(P)7024.727	(P)45043.069	(P)51126.994	(P)22314.086
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)0.167	(P)24508.006	(P)6833.467	(P)44691.469	(P)51035.002	(P)22241.303
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)0.133	(P)24565.873	(P)6929.714	(P)45195.455	(P)51104.751	(P)22219.372
	SD of Stability 07-28-20		(P)0.139	(P)134.425	(P)77.883	(P)330.699	(P)231.516	(P)165.577
	%RSD of Stability 07		(P)104.583	(P)0.547	(P)1.124	(P)0.732	(P)0.453	(P)0.745

Run	Label	TimeStamp	209Bi	220Bi+q	238U
1	Stability 07-28-2010	7/28/2010 7:56:52 A	(P)33849.903	(P)0.000	(P)37051.522
2	Stability 07-28-2010	7/28/2010 7:58:07 A	(P)34233.310	(P)0.000	(P)37714.241
3	Stability 07-28-2010	7/28/2010 7:59:22 A	(P)34624.094	(P)0.000	(P)38361.799
4	Stability 07-28-2010	7/28/2010 8:00:37 A	(P)34381.159	(P)0.000	(P)38348.598
5	Stability 07-28-2010	7/28/2010 8:01:52 A	(P)34239.158	(P)0.000	(P)38481.961
	Mean of Stability 07-28	7/28/2010 7:56:52 A	(P)34265.525	(P)0.000	(P)37991.624
	SD of Stability 07-28-20		(P)281.255	(P)0.000	(P)605.315
	%RSD of Stability 07		(P)0.821	(P)0.000	(P)1.593

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		Cal. Blk 7/28/10 15:50			Mean	SD	%RSD
Antimony	121	0.0054	-0.0035	-0.0019	**0**	0.0047	0
Antimony	123	0.0049	-0.0042	-0.0006	**0**	0.0046	0
Silver	107	0	-0.0002	0.0002	**0**	0.0002	0
Silver	109	-0.0001	0.0007	-0.0006	**0**	0.0007	0

Internal Standard Factors:

Rhodium	103	1.012	1.002	0.986	**1.012**	n/a	n/a
Indium	115	1.018	0.991	0.991	**1.018**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		Cal. Stn 7/28/10 15:52			Mean	SD	%RSD
Antimony	121	25.11	24.84	25.05	**25**	0.1438	0.5751
Antimony	123	25.36	24.35	25.29	**25**	0.5612	2.245
Silver	107	25.05	24.91	25.04	**25**	0.0796	0.3183
Silver	109	25.16	24.86	24.99	**25**	0.1502	0.6009

Internal Standard Factors:

Rhodium	103	0.974	0.966	0.971	**0.974**	n/a	n/a
Indium	115	0.973	0.948	0.96	**0.973**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:54					
Antimony	121	24.6	24.61	24.59	**24.6**	0.0078	0.0318
Antimony	123	24.56	24.63	24.35	**24.51**	0.1477	0.6024
Silver	107	12.8	12.71	12.9	**12.8**	0.0943	0.7367
Silver	109	12.78	12.75	12.76	**12.76**	0.0176	0.1381

Internal Standard Factors:

Rhodium	103	0.997	0.986	0.98	**0.997**	n/a	n/a
Indium	115	0.977	0.968	0.969	**0.977**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/28/10 15:56					
Antimony	121	25.28	25.19	26.06	**25.51**	0.4765	1.868
Antimony	123	25.28	24.73	25.75	**25.25**	0.5124	2.029
Silver	107	24.97	24.75	24.77	**24.83**	0.1205	0.4852
Silver	109	24.83	25.17	24.99	**25**	0.1689	0.6755

Internal Standard Factors:

Rhodium	103	0.987	0.987	0.988	**0.987**	n/a	n/a
Indium	115	0.982	0.968	0.982	**0.982**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:03					
Antimony	121	-0.0014	-0.0061	-0.0135	**-0.007**	0.0061	86.42
Antimony	123	-0.0083	0.0029	-0.0114	**-0.0056**	0.0075	134.7
Silver	107	0.0145	0.0136	0.0112	**0.0131**	0.0017	12.99
Silver	109	0.0148	0.0107	0.0121	**0.0126**	0.0021	16.49

Internal Standard Factors:

Rhodium	103	1.024	1.015	1.018	**1.024** n/a		n/a
Indium	115	1.027	1.015	1.006	**1.027** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/28/10 16:06					
Antimony	121	-0.0125	-0.0127	-0.0096	**-0.0116**	0.0017	14.87
Antimony	123	-0.0071	-0.011	-0.0099	**-0.0093**	0.0021	22.04
Silver	107	0.0104	0.0097	0.0073	**0.0091**	0.0016	17.91
Silver	109	0.0083	0.0074	0.0079	**0.0079**	0.0005	5.836

Internal Standard Factors:

Rhodium	103	1.026	1.016	1.01	**1.026**	n/a	n/a
Indium	115	1.021	1.004	1.013	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		SOIL CRA			Mean	SD	%RSD
TimeStamp		7/28/10 16:08					
Antimony	121	0.0981	0.101	0.098	**0.099**	0.0017	1.755
Antimony	123	0.0884	0.0943	0.0797	**0.0875**	0.0073	8.401
Silver	107	0.0536	0.0513	0.0564	**0.0538**	0.0026	4.765
Silver	109	0.0523	0.0544	0.0561	**0.0542**	0.0019	3.445

Internal Standard Factors:

Rhodium	103	1.024	1.009	1.01	**1.024**	n/a	n/a
Indium	115	1.005	1.001	1.01	**1.005**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/28/10 16:10					
Antimony	121	0.0927	0.0885	0.0833	**0.0882**	0.0047	5.341
Antimony	123	0.0783	0.0901	0.0854	**0.0846**	0.0059	7.024
Silver	107	0.0884	0.0829	0.0832	**0.0848**	0.0031	3.617
Silver	109	0.0801	0.0759	0.0815	**0.0792**	0.0029	3.656

Internal Standard Factors:

Rhodium	103	1.262	1.256	1.245	**1.262**	n/a	n/a
Indium	115	1.185	1.194	1.191	**1.185**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/28/10 16:12					
Antimony	121	0.1155	0.1123	0.115	**0.1143**	0.0017	1.492
Antimony	123	0.0993	0.1083	0.0959	**0.1011**	0.0064	6.338
Silver	107	12.48	12.61	12.55	**12.55**	0.0652	0.5197
Silver	109	12.42	12.53	12.5	**12.49**	0.0566	0.4532

Internal Standard Factors:

Rhodium	103	1.25	1.245	1.251	**1.25**	n/a	n/a
Indium	115	1.171	1.176	1.169	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:16					
Antimony	121	-0.0271	-0.0258	-0.0251	**-0.026**	0.001	4.036
Antimony	123	-0.0253	-0.02	-0.0277	**-0.0243**	0.0039	16.14
Silver	107	0.0265	0.0252	0.0259	**0.0259**	0.0006	2.415
Silver	109	0.0247	0.0252	0.0239	**0.0246**	0.0006	2.526

Internal Standard Factors:

Rhodium	103	1.128	1.106	1.114	**1.128**	n/a	n/a
Indium	115	1.099	1.099	1.086	**1.099**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		LCSS K1006285 1/100 7/28/10 16:19			Mean	SD	%RSD
Antimony	121	8.715	8.741	8.759	**8.738**	0.0224	0.2558
Antimony	123	8.697	8.546	8.567	**8.603**	0.0817	0.9499
Silver	107	7.833	7.852	7.831	**7.839**	0.0116	0.1478
Silver	109	7.89	7.797	7.869	**7.852**	0.0486	0.6184

Internal Standard Factors:

Rhodium	103	1.055	1.057	1.05	**1.055** n/a		n/a
Indium	115	1.041	1.032	1.035	**1.041** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:25					
Antimony	121	1.097	1.107	1.119	**1.108**	0.0111	0.9973
Antimony	123	1.091	1.111	1.111	**1.104**	0.0112	1.012
Silver	107	0.3393	0.3354	0.3315	**0.3354**	0.0039	1.167
Silver	109	0.2519	0.2478	0.2402	**0.2467**	0.0059	2.408

Internal Standard Factors:

Rhodium	103	1.16	1.157	1.156	**1.16**	n/a	n/a
Indium	115	1.109	1.112	1.111	**1.109**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-001 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 16:29					
Antimony	121	2.22	2.223	2.309	**2.251**	0.0505	2.244
Antimony	123	2.276	2.249	2.276	**2.267**	0.0154	0.6804
Silver	107	0.34	0.3332	0.3312	**0.3348**	0.0046	1.374
Silver	109	0.2387	0.24	0.2409	**0.2399**	0.0011	0.4543

Internal Standard Factors:

Rhodium	103	1.178	1.172	1.168	**1.178** n/a		n/a
Indium	115	1.122	1.118	1.126	**1.122** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-001 1/25L 7/28/10 16:32			Mean	SD	%RSD
Antimony	121	0.1786	0.1822	0.1786	**0.1798**	0.0021	1.177
Antimony	123	0.1846	0.1756	0.19	**0.1834**	0.0073	3.979
Silver	107	0.0598	0.0642	0.0628	**0.0623**	0.0022	3.589
Silver	109	0.0435	0.0434	0.0478	**0.0449**	0.0025	5.62

Internal Standard Factors:

Rhodium	103	1.096	1.089	1.1	**1.096**	n/a	n/a
Indium	115	1.063	1.071	1.065	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-001 1/5 +10/50A 7/28/10 16:35			Mean	SD	%RSD
Antimony	121	51.82	51.77	50.92	**51.5**	0.5044	0.9794
Antimony	123	51.09	51.53	50.04	**50.89**	0.7693	1.512
Silver	107	9.961	9.917	9.956	**9.945**	0.024	0.241
Silver	109	9.716	9.741	9.822	**9.76**	0.0555	0.5687

Internal Standard Factors:

Rhodium	103	1.164	1.144	1.159	**1.164** n/a		n/a
Indium	115	1.089	1.092	1.083	**1.089** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-001 1/25S 7/28/10 16:39			Mean	SD	%RSD
Antimony	121	20.86	20.57	20.88	**20.77**	0.1759	0.8469
Antimony	123	20.47	20.32	20.69	**20.49**	0.1901	0.9278
Silver	107	4.159	4.159	4.174	**4.164**	0.0087	0.2079
Silver	109	4.165	4.082	4.116	**4.121**	0.0414	1.004

Internal Standard Factors:

Rhodium	103	1.1	1.088	1.091	**1.1**	n/a	n/a
Indium	115	1.071	1.064	1.077	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-002 1/5 7/28/10 16:45			Mean	SD	%RSD
Antimony	121	1.065	1.05	1.053	**1.056**	0.0078	0.7423
Antimony	123	1.06	1.058	1.027	**1.048**	0.0186	1.77
Silver	107	0.3849	0.3649	0.3756	**0.3752**	0.01	2.67
Silver	109	0.0864	0.0832	0.0848	**0.0848**	0.0016	1.895

Internal Standard Factors:

Rhodium	103	1.202	1.194	1.192	**1.202** n/a		n/a
Indium	115	1.14	1.137	1.136	**1.14** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 16:48					
Antimony	121	0.2803	0.2865	0.2729	**0.2799**	0.0068	2.44
Antimony	123	0.2591	0.289	0.269	**0.2723**	0.0152	5.591
Silver	107	0.1235	0.1213	0.1162	**0.1204**	0.0037	3.115
Silver	109	0.0652	0.0662	0.0652	**0.0655**	0.0006	0.8399

Internal Standard Factors:

Rhodium	103	1.191	1.18	1.197	**1.191**	n/a	n/a
Indium	115	1.134	1.136	1.13	**1.134**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-004 1/5 7/28/10 16:51			Mean	SD	%RSD
Antimony	121	1.586	1.595	1.632	**1.604**	0.0248	1.546
Antimony	123	1.533	1.545	1.537	**1.539**	0.0062	0.4019
Silver	107	0.3254	0.3286	0.3099	**0.3213**	0.01	3.122
Silver	109	0.0893	0.0874	0.0957	**0.0908**	0.0044	4.811

Internal Standard Factors:							
Rhodium	103	1.186	1.186	1.191	**1.186** n/a		n/a
Indium	115	1.137	1.139	1.13	**1.137** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/28/10 16:54					
Antimony	121	25.79	25.48	25.19	**25.48**	0.2988	1.172
Antimony	123	25.65	25.42	25.21	**25.42**	0.2187	0.8601
Silver	107	24.58	25.01	25.05	**24.88**	0.2619	1.052
Silver	109	24.89	25.17	25.14	**25.07**	0.1542	0.6149

Internal Standard Factors:

Rhodium	103	1.037	1.029	1.037	**1.037**	n/a	n/a
Indium	115	1.027	1.019	1.012	**1.027**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/28/10 17:00					
Antimony	121	-0.0344	-0.0349	-0.0317	**-0.0337**	0.0017	5.093
Antimony	123	-0.0326	-0.0394	-0.0347	**-0.0356**	0.0035	9.719
Silver	107	0.0101	0.0093	0.0084	**0.0092**	0.0009	9.583
Silver	109	0.0104	0.0095	0.0119	**0.0106**	0.0012	11.62

Internal Standard Factors:

Rhodium	103	1.022	1.028	1.026	**1.022** n/a		n/a
Indium	115	1.033	1.018	1.017	**1.033** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-005 1/5 7/28/10 17:02			Mean	SD	%RSD
Antimony	121	0.139	0.1335	0.146	**0.1395**	0.0063	4.504
Antimony	123	0.149	0.1529	0.1543	**0.1521**	0.0028	1.827
Silver	107	0.0986	0.092	0.0881	**0.0929**	0.0053	5.73
Silver	109	0.0448	0.0476	0.0434	**0.0453**	0.0021	4.701

Internal Standard Factors:

Rhodium	103	1.188	1.198	1.186	**1.188** n/a		n/a
Indium	115	1.141	1.112	1.131	**1.141** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/5 7/28/10 17:05			Mean	SD	%RSD
Antimony	121	4.583	4.504	4.377	**4.488**	0.1037	2.31
Antimony	123	4.572	4.458	4.42	**4.484**	0.079	1.763
Silver	107	0.2809	0.277	0.2657	**0.2745**	0.0079	2.87
Silver	109	0.1218	0.116	0.117	**0.1183**	0.0031	2.602

Internal Standard Factors:

Rhodium	103	1.173	1.154	1.162	**1.173** n/a		n/a
Indium	115	1.128	1.125	1.113	**1.128** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-006 1/5D 7/28/10 17:08			Mean	SD	%RSD
Antimony	121	8.676	8.813	8.85	**8.779**	0.0918	1.045
Antimony	123	8.404	8.557	8.581	**8.514**	0.0958	1.125
Silver	107	0.2635	0.2607	0.2417	**0.2553**	0.0119	4.654
Silver	109	0.0993	0.0945	0.1029	**0.0989**	0.0042	4.254

Internal Standard Factors:

Rhodium	103	1.151	1.151	1.15	**1.151** n/a		n/a
Indium	115	1.102	1.103	1.11	**1.102** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-006 1/25S 7/28/10 17:12			Mean	SD	%RSD
Antimony	121	32.05	32.44	32.11	**32.2**	0.2113	0.6562
Antimony	123	31.48	32.34	31.59	**31.8**	0.4708	1.481
Silver	107	4.161	4.134	4.188	**4.161**	0.0269	0.6461
Silver	109	4.132	4.127	4.172	**4.144**	0.0245	0.5923

Internal Standard Factors:

Rhodium	103	1.094	1.073	1.075	**1.094** n/a		n/a
Indium	115	1.065	1.07	1.061	**1.065** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-007 1/5 7/28/10 17:17			Mean	SD	%RSD
Antimony	121	13.04	13.19	13.03	**13.09**	0.0913	0.6974
Antimony	123	12.91	12.79	13.03	**12.91**	0.118	0.9139
Silver	107	0.198	0.1904	0.1899	**0.1928**	0.0046	2.366
Silver	109	0.1207	0.1125	0.1072	**0.1134**	0.0068	5.997

Internal Standard Factors:

Rhodium	103	1.203	1.196	1.203	**1.203** n/a		n/a
Indium	115	1.152	1.15	1.161	**1.152** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-008 1/5 7/28/10 17:20			Mean	SD	%RSD
Antimony	121	0.1263	0.1032	0.1124	**0.114**	0.0116	10.22
Antimony	123	0.1127	0.113	0.1044	**0.11**	0.0049	4.475
Silver	107	0.106	0.105	0.0993	**0.1035**	0.0036	3.482
Silver	109	0.0407	0.0483	0.0391	**0.0427**	0.0049	11.54

Internal Standard Factors:

Rhodium	103	1.238	1.205	1.215	**1.238**	n/a	n/a
Indium	115	1.151	1.161	1.157	**1.151**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:23					
Antimony	121	0.0877	0.0784	0.0873	**0.0845**	0.0052	6.205
Antimony	123	0.0973	0.1048	0.106	**0.1027**	0.0047	4.602
Silver	107	0.082	0.0836	0.0829	**0.0829**	0.0008	0.9431
Silver	109	0.038	0.0356	0.0361	**0.0366**	0.0013	3.451

Internal Standard Factors:

Rhodium	103	1.226	1.217	1.205	**1.226**	n/a	n/a
Indium	115	1.159	1.146	1.15	**1.159**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:26					
Antimony	121	0.0646	0.0629	0.0703	**0.0659**	0.0039	5.846
Antimony	123	0.0889	0.0761	0.073	**0.0793**	0.0084	10.62
Silver	107	0.128	0.1236	0.1135	**0.1217**	0.0074	6.115
Silver	109	0.0768	0.0767	0.0717	**0.0751**	0.0029	3.9

Internal Standard Factors:							
Rhodium	103	1.205	1.202	1.198	**1.205** n/a		n/a
Indium	115	1.15	1.15	1.159	**1.15** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:29					
Antimony	121	0.2351	0.2499	0.2314	**0.2388**	0.0098	4.115
Antimony	123	0.229	0.25	0.2268	**0.2353**	0.0128	5.444
Silver	107	0.1524	0.1626	0.1676	**0.1609**	0.0078	4.831
Silver	109	0.0778	0.0788	0.0845	**0.0804**	0.0036	4.496

Internal Standard Factors:							
Rhodium	103	1.237	1.224	1.233	**1.237** n/a		n/a
Indium	115	1.167	1.176	1.165	**1.167** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-012 1/5 7/28/10 17:32			Mean	SD	%RSD
Antimony	121	0.717	0.7121	0.735	**0.7214**	0.0121	1.674
Antimony	123	0.707	0.6963	0.6516	**0.685**	0.0294	4.284
Silver	107	0.2411	0.2515	0.2422	**0.2449**	0.0057	2.342
Silver	109	0.035	0.0413	0.0389	**0.0384**	0.0032	8.304

Internal Standard Factors:

Rhodium	103	1.218	1.211	1.214	**1.218** n/a		n/a
Indium	115	1.163	1.159	1.145	**1.163** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/28/10 17:35					
Antimony	121	25.83	25.48	26.02	**25.77**	0.2734	1.061
Antimony	123	25.3	25	25.83	**25.38**	0.4181	1.648
Silver	107	25.29	24.97	25.08	**25.11**	0.1644	0.6548
Silver	109	25.28	25.08	25.06	**25.14**	0.1218	0.4846

Internal Standard Factors:							
Rhodium	103	1.062	1.055	1.047	**1.062** n/a		n/a
Indium	115	1.062	1.038	1.037	**1.062** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/28/10 17:41					
Antimony	121	-0.0357	-0.0362	-0.0338	**-0.0353**	0.0013	3.572
Antimony	123	-0.0312	-0.0369	-0.0408	**-0.0363**	0.0048	13.35
Silver	107	0.0088	0.0087	0.0079	**0.0084**	0.0005	5.837
Silver	109	0.0101	0.0088	0.0072	**0.0087**	0.0014	16.13

Internal Standard Factors:

Rhodium	103	1.053	1.044	1.04	**1.053**	n/a	n/a
Indium	115	1.033	1.037	1.034	**1.033**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006285-013 1/5 7/28/10 17:43			Mean	SD	%RSD
Antimony	121	0.3565	0.357	0.3831	**0.3655**	0.0152	4.167
Antimony	123	0.3744	0.3734	0.3451	**0.3643**	0.0166	4.555
Silver	107	0.1647	0.1527	0.1511	**0.1562**	0.0074	4.749
Silver	109	0.0417	0.0418	0.0392	**0.0409**	0.0015	3.648

Internal Standard Factors:

Rhodium	103	1.169	1.178	1.168	**1.169** n/a		n/a
Indium	115	1.133	1.129	1.133	**1.133** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-014 1/5 7/28/10 17:46			Mean	SD	%RSD
Antimony	121	1.062	1.01	0.9777	**1.017**	0.0426	4.195
Antimony	123	1.031	1.002	0.9829	**1.005**	0.0243	2.416
Silver	107	0.454	0.5066	0.4807	**0.4804**	0.0263	5.467
Silver	109	0.037	0.0362	0.0343	**0.0359**	0.0014	3.842

Internal Standard Factors:							
Rhodium	103	1.181	1.181	1.187	**1.181**	n/a	n/a
Indium	115	1.14	1.129	1.124	**1.14**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-015 1/5 7/28/10 17:50			Mean	SD	%RSD
Antimony	121	0.5675	0.5865	0.6019	**0.5853**	0.0172	2.944
Antimony	123	0.5897	0.5596	0.5632	**0.5708**	0.0165	2.882
Silver	107	0.5162	0.5277	0.5335	**0.5258**	0.0088	1.674
Silver	109	0.0341	0.034	0.0347	**0.0343**	0.0004	1.147

Internal Standard Factors:

Rhodium	103	1.159	1.171	1.162	**1.159** n/a		n/a
Indium	115	1.116	1.106	1.112	**1.116** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-016 1/5 7/28/10 17:53			Mean	SD	%RSD
Antimony	121	0.9052	0.8857	0.8943	**0.8951**	0.0098	1.095
Antimony	123	0.8855	0.8969	0.8361	**0.8728**	0.0323	3.702
Silver	107	0.3826	0.3794	0.35	**0.3707**	0.018	4.841
Silver	109	0.0637	0.0623	0.0672	**0.0644**	0.0025	3.896

Internal Standard Factors:

Rhodium	103	1.196	1.17	1.187	**1.196** n/a		n/a
Indium	115	1.126	1.134	1.113	**1.126** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-017 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 17:56					
Antimony	121	0.7407	0.7663	0.759	**0.7553**	0.0132	1.746
Antimony	123	0.7242	0.7885	0.7628	**0.7585**	0.0324	4.27
Silver	107	0.2087	0.2313	0.2173	**0.2191**	0.0114	5.202
Silver	109	0.0196	0.0192	0.02	**0.0196**	0.0004	2.127

Internal Standard Factors:

Rhodium	103	1.16	1.16	1.154	**1.16**	n/a	n/a
Indium	115	1.097	1.116	1.12	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006285-018 1/5 7/28/10 17:59			Mean	SD	%RSD
Antimony	121	0.9514	0.9345	0.9302	**0.9387**	0.0112	1.193
Antimony	123	0.9733	0.901	0.9251	**0.9331**	0.0368	3.946
Silver	107	0.3126	0.2952	0.3213	**0.3097**	0.0133	4.296
Silver	109	0.0348	0.034	0.0331	**0.034**	0.0008	2.462

Internal Standard Factors:

Rhodium	103	1.171	1.166	1.168	**1.171**	n/a	n/a
Indium	115	1.135	1.108	1.125	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-019 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:02					
Antimony	121	4.027	3.997	3.946	**3.99**	0.041	1.028
Antimony	123	4.016	3.93	3.923	**3.956**	0.0518	1.31
Silver	107	0.3871	0.3596	0.3523	**0.3664**	0.0184	5.01
Silver	109	0.0523	0.0569	0.0563	**0.0552**	0.0025	4.544

Internal Standard Factors:

Rhodium	103	1.25	1.24	1.245	**1.25**	n/a	n/a
Indium	115	1.187	1.17	1.176	**1.187**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006285-020 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:05					
Antimony	121	1.361	1.362	1.412	**1.378**	0.0292	2.12
Antimony	123	1.349	1.377	1.343	**1.356**	0.0182	1.34
Silver	107	0.4161	0.386	0.4004	**0.4008**	0.015	3.751
Silver	109	0.0479	0.0413	0.0471	**0.0454**	0.0036	7.94

Internal Standard Factors:

Rhodium	103	1.246	1.225	1.236	**1.246**	n/a	n/a
Indium	115	1.167	1.173	1.155	**1.167**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV4			Mean	SD	%RSD
TimeStamp		7/28/10 18:08					
Antimony	121	25.62	25.24	25.63	**25.5**	0.2204	0.8645
Antimony	123	25.17	25.25	25.02	**25.15**	0.116	0.4612
Silver	107	24.95	24.84	25.17	**24.98**	0.1672	0.6694
Silver	109	24.61	24.98	25.1	**24.9**	0.2522	1.013

Internal Standard Factors:

Rhodium	103	1.082	1.066	1.072	**1.082** n/a		n/a
Indium	115	1.054	1.053	1.039	**1.054** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB4			Mean	SD	%RSD
TimeStamp		7/28/10 18:14					
Antimony	121	-0.0403	-0.0415	-0.0396	**-0.0405**	0.001	2.411
Antimony	123	-0.0319	-0.0429	-0.0475	**-0.0408**	0.0081	19.78
Silver	107	0.0087	0.009	0.0086	**0.0088**	0.0002	2.829
Silver	109	0.0087	0.0089	0.0094	**0.009**	0.0003	3.541

Internal Standard Factors:							
Rhodium	103	1.071	1.05	1.057	**1.071**	n/a	n/a
Indium	115	1.06	1.047	1.031	**1.06**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K105734-MB 1/5 7/28/10 18:16			Mean	SD	%RSD
Antimony	121	-0.0571	-0.05	-0.0574	**-0.0548**	0.0042	7.68
Antimony	123	-0.0543	-0.0589	-0.0548	**-0.056**	0.0025	4.508
Silver	107	0.0114	0.0099	0.0073	**0.0096**	0.002	21.4
Silver	109	0.0084	0.0078	0.0079	**0.008**	0.0004	4.377

Internal Standard Factors:

Rhodium	103	1.039	1.017	1.029	**1.039**	n/a	n/a
Indium	115	1.016	1.016	1.012	**1.016**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		LCSW K1005734 1/25 7/28/10 18:18			Mean	SD	%RSD
Antimony	121	42.05	42.05	40.88	**41.66**	0.6731	1.616
Antimony	123	41.04	41.67	40.63	**41.11**	0.5235	1.273
Silver	107	4.004	4.04	4.039	**4.028**	0.0202	0.5017
Silver	109	3.933	4.043	4.057	**4.011**	0.0682	1.7

Internal Standard Factors:

Rhodium	103	0.987	0.99	0.997	**0.987**	n/a	n/a
Indium	115	0.989	0.996	0.977	**0.989**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1005734-001 1/5 7/28/10 18:23			Mean	SD	%RSD
Antimony	121	0.0549	0.0518	0.0693	**0.0586**	0.0094	15.96
Antimony	123	0.0601	0.0539	0.0591	**0.0577**	0.0033	5.699
Silver	107	0.0576	0.0564	0.0569	**0.057**	0.0006	1.091
Silver	109	0.0427	0.0418	0.0406	**0.0417**	0.0011	2.583

Internal Standard Factors:							
Rhodium	103	1.12	1.119	1.107	**1.12** n/a		n/a
Indium	115	1.111	1.088	1.088	**1.111** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1005734-001 1/5D 7/28/10 18:26			Mean	SD	%RSD
Antimony	121	0.0739	0.0719	0.0822	**0.076**	0.0054	7.161
Antimony	123	0.0654	0.0745	0.0905	**0.0768**	0.0127	16.5
Silver	107	0.0418	0.0493	0.0425	**0.0446**	0.0041	9.266
Silver	109	0.0332	0.0314	0.0331	**0.0326**	0.001	3.126

Internal Standard Factors:

Rhodium	103	1.088	1.082	1.087	**1.088**	n/a	n/a
Indium	115	1.071	1.061	1.068	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1005734-001 1/25S 7/28/10 18:29			Mean	SD	%RSD
Antimony	121	39.37	38.13	39.21	**38.9**	0.677	1.74
Antimony	123	38.7	37.15	38.45	**38.1**	0.8349	2.191
Silver	107	4.064	3.937	4.049	**4.017**	0.0696	1.733
Silver	109	4.087	3.897	4.108	**4.031**	0.1164	2.888

Internal Standard Factors:							
Rhodium	103	1.048	1.02	1.045	**1.048** n/a		n/a
Indium	115	1.037	1.013	1.027	**1.037** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:33					
Antimony	121	0.0675	0.0502	0.0432	**0.0536**	0.0126	23.4
Antimony	123	0.053	0.0546	0.0444	**0.0507**	0.0055	10.87
Silver	107	0.0117	0.0102	0.011	**0.011**	0.0007	6.829
Silver	109	0.0127	0.0113	0.0084	**0.0108**	0.0022	20.4

Internal Standard Factors:

Rhodium	103	1.072	1.052	1.06	**1.072**	n/a	n/a
Indium	115	1.048	1.057	1.032	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		LCSS K1006453 1/100 7/28/10 18:36			Mean	SD	%RSD
Antimony	121	8.672	8.82	8.626	**8.706**	0.1016	1.167
Antimony	123	8.629	8.635	8.393	**8.553**	0.138	1.613
Silver	107	7.713	7.743	7.692	**7.716**	0.0255	0.331
Silver	109	7.683	7.816	7.748	**7.749**	0.0661	0.8535

Internal Standard Factors:							
Rhodium	103	1.044	1.046	1.051	**1.044** n/a		n/a
Indium	115	1.034	1.033	1.012	**1.034** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 18:41					
Antimony	121	0.6511	0.6318	0.6277	**0.6369**	0.0125	1.963
Antimony	123	0.6353	0.5939	0.6324	**0.6205**	0.0231	3.721
Silver	107	0.2921	0.3078	0.2834	**0.2944**	0.0124	4.197
Silver	109	0.171	0.1711	0.1653	**0.1691**	0.0034	1.985

Internal Standard Factors:

Rhodium	103	1.139	1.13	1.138	**1.139**	n/a	n/a
Indium	115	1.105	1.088	1.094	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-001 1/5D 7/28/10 18:44			Mean	SD	%RSD
Antimony	121	0.5303	0.5203	0.5322	**0.5276**	0.0064	1.215
Antimony	123	0.5456	0.5309	0.5379	**0.5381**	0.0074	1.368
Silver	107	0.2506	0.2645	0.251	**0.2554**	0.0079	3.088
Silver	109	0.1317	0.1316	0.1281	**0.1305**	0.002	1.561

Internal Standard Factors:

Rhodium	103	1.13	1.141	1.135	**1.13**	n/a	n/a
Indium	115	1.113	1.093	1.089	**1.113**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-001 1/25L 7/28/10 18:47			Mean	SD	%RSD
Antimony	121	0.0634	0.0652	0.0744	**0.0676**	0.0059	8.716
Antimony	123	0.058	0.0534	0.0657	**0.059**	0.0062	10.48
Silver	107	0.0503	0.0511	0.0516	**0.051**	0.0007	1.295
Silver	109	0.0287	0.0292	0.0322	**0.03**	0.0019	6.311

Internal Standard Factors:

Rhodium	103	1.095	1.091	1.09	**1.095** n/a		n/a
Indium	115	1.062	1.06	1.074	**1.062** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV5			Mean	SD	%RSD
TimeStamp		7/28/10 18:51					
Antimony	121	25.45	25.65	26.13	**25.74**	0.3492	1.357
Antimony	123	25.21	25.19	25.66	**25.35**	0.2642	1.042
Silver	107	25.13	25.05	25.13	**25.1**	0.0443	0.1764
Silver	109	24.92	25.01	24.98	**24.97**	0.0434	0.1738

Internal Standard Factors:

Rhodium	103	1.029	1.029	1.015	**1.029**	n/a	n/a
Indium	115	1.01	1.006	1.014	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB5			Mean	SD	%RSD
TimeStamp		7/28/10 18:57					
Antimony	121	-0.0259	-0.0236	-0.0231	**-0.0242**	0.0014	5.986
Antimony	123	-0.0292	-0.0265	-0.0275	**-0.0277**	0.0013	4.78
Silver	107	0.0113	0.0111	0.0114	**0.0113**	0.0002	1.605
Silver	109	0.0114	0.0095	0.0078	**0.0096**	0.0018	18.99

Internal Standard Factors:

Rhodium	103	1.028	1.022	1.018	**1.028**	n/a	n/a
Indium	115	1.013	1.014	1.004	**1.013**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-001 1/5 +10/50A 7/28/10 18:59			Mean	SD	%RSD
Antimony	121	52.05	50.51	51.74	**51.44**	0.8128	1.58
Antimony	123	51.65	50.56	50.71	**50.97**	0.5931	1.164
Silver	107	10.12	10.01	10.09	**10.08**	0.0588	0.5832
Silver	109	9.951	9.795	9.89	**9.879**	0.0788	0.7973

Internal Standard Factors:

Rhodium	103	1.094	1.09	1.092	**1.094** n/a		n/a
Indium	115	1.045	1.033	1.05	**1.045** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-001 1/25S 7/28/10 19:03			Mean	SD	%RSD
Antimony	121	21	21	20.92	**20.98**	0.0476	0.2271
Antimony	123	20.4	21	20.72	**20.71**	0.2998	1.448
Silver	107	4.244	4.179	4.177	**4.2**	0.0379	0.9023
Silver	109	4.234	4.128	4.221	**4.195**	0.0577	1.376

Internal Standard Factors:

Rhodium	103	1.083	1.07	1.065	**1.083** n/a		n/a
Indium	115	1.054	1.053	1.046	**1.054** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-002 1/5 7/28/10 19:08			Mean	SD	%RSD
Antimony	121	2.698	2.725	2.746	**2.723**	0.0241	0.8841
Antimony	123	2.699	2.692	2.64	**2.677**	0.0321	1.2
Silver	107	0.4406	0.4282	0.4381	**0.4356**	0.0065	1.501
Silver	109	0.3521	0.3476	0.3647	**0.3548**	0.0089	2.496

Internal Standard Factors:

Rhodium	103	1.134	1.129	1.134	**1.134** n/a		n/a
Indium	115	1.066	1.074	1.072	**1.066** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-003 1/5 7/28/10 19:11			Mean	SD	%RSD
Antimony	121	2.044	1.986	1.998	**2.01**	0.0306	1.524
Antimony	123	2.063	1.959	1.98	**2**	0.0552	2.757
Silver	107	0.47	0.4767	0.4678	**0.4715**	0.0046	0.9792
Silver	109	0.3048	0.2945	0.2984	**0.2993**	0.0052	1.736

Internal Standard Factors:							
Rhodium	103	1.159	1.144	1.159	**1.159** n/a		n/a
Indium	115	1.103	1.103	1.099	**1.103** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-004 1/5 7/28/10 19:14			Mean	SD	%RSD
Antimony	121	2.829	2.809	2.837	**2.825**	0.0147	0.5212
Antimony	123	2.774	2.674	2.845	**2.764**	0.0855	3.094
Silver	107	1.833	1.801	1.794	**1.809**	0.0205	1.131
Silver	109	1.685	1.677	1.689	**1.684**	0.0065	0.3886

Internal Standard Factors:

Rhodium	103	1.169	1.161	1.148	**1.169** n/a		n/a
Indium	115	1.092	1.068	1.1	**1.092** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:18					
Antimony	121	0.115	0.0996	0.0928	**0.1025**	0.0114	11.13
Antimony	123	0.1111	0.122	0.1073	**0.1134**	0.0076	6.727
Silver	107	0.2964	0.2939	0.2741	**0.2881**	0.0122	4.248
Silver	109	0.0938	0.0895	0.084	**0.0891**	0.0049	5.519

Internal Standard Factors:

Rhodium	103	1.162	1.147	1.148	**1.162** n/a		n/a
Indium	115	1.097	1.091	1.088	**1.097** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-006 1/5 7/28/10 19:21			Mean	SD	%RSD
Antimony	121	0.4525	0.4536	0.4557	**0.4539**	0.0016	0.362
Antimony	123	0.4439	0.4577	0.442	**0.4479**	0.0085	1.906
Silver	107	0.2507	0.2339	0.2434	**0.2427**	0.0084	3.479
Silver	109	0.0849	0.0786	0.0801	**0.0812**	0.0033	4.112

Internal Standard Factors:

Rhodium	103	1.166	1.144	1.155	**1.166** n/a		n/a
Indium	115	1.097	1.105	1.098	**1.097** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-007 1/5 7/28/10 19:24			Mean	SD	%RSD
Antimony	121	51.86	51.02	50.59	**51.16**	0.6434	1.258
Antimony	123	51.53	51.28	49.85	**50.89**	0.9091	1.787
Silver	107	0.2001	0.1846	0.195	**0.1932**	0.0079	4.097
Silver	109	0.1087	0.1083	0.1068	**0.1079**	0.001	0.8916

Internal Standard Factors:

Rhodium	103	1.187	1.182	1.181	**1.187** n/a		n/a
Indium	115	1.096	1.093	1.072	**1.096** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-008 1/5 7/28/10 19:27			Mean	SD	%RSD
Antimony	121	3.211	3.175	3.098	**3.161**	0.0576	1.821
Antimony	123	3.124	3.171	3.067	**3.12**	0.052	1.668
Silver	107	0.4981	0.5029	0.4943	**0.4984**	0.0043	0.869
Silver	109	0.3065	0.3051	0.2999	**0.3039**	0.0035	1.138

Internal Standard Factors:							
Rhodium	103	1.211	1.176	1.192	**1.211** n/a		n/a
Indium	115	1.126	1.123	1.107	**1.126** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-009 1/5 7/28/10 19:31			Mean	SD	%RSD
Antimony	121	6.295	6.296	6.053	**6.215**	0.14	2.252
Antimony	123	6.176	6.153	5.993	**6.108**	0.0995	1.63
Silver	107	0.6276	0.6318	0.6209	**0.6268**	0.0055	0.8768
Silver	109	0.4761	0.4599	0.464	**0.4667**	0.0084	1.799

Internal Standard Factors:

Rhodium	103	1.185	1.17	1.188	**1.185**	n/a	n/a
Indium	115	1.115	1.126	1.112	**1.115**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV6			Mean	SD	%RSD
TimeStamp		7/28/10 19:34					
Antimony	121	25.52	25.4	25.52	**25.48**	0.0728	0.2856
Antimony	123	25.5	24.77	25.11	**25.13**	0.3641	1.449
Silver	107	24.89	25.12	24.8	**24.94**	0.1663	0.6667
Silver	109	24.88	25.17	24.9	**24.98**	0.1664	0.6659

Internal Standard Factors:

Rhodium	103	1.032	1.038	1.026	**1.032**	n/a	n/a
Indium	115	1.026	1.007	1.009	**1.026**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB6			Mean	SD	%RSD
TimeStamp		7/28/10 19:40					
Antimony	121	-0.032	-0.0342	-0.0364	**-0.0342**	0.0022	6.41
Antimony	123	-0.0388	-0.0457	-0.045	**-0.0432**	0.0038	8.837
Silver	107	0.0138	0.0099	0.0103	**0.0113**	0.0021	18.68
Silver	109	0.0131	0.0125	0.0096	**0.0117**	0.0018	15.74

Internal Standard Factors:							
Rhodium	103	1.013	1.008	1.005	**1.013**	n/a	n/a
Indium	115	1.015	1.002	0.996	**1.015**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:42					
Antimony	121	0.4643	0.4904	0.499	**0.4845**	0.0181	3.729
Antimony	123	0.4398	0.4419	0.4849	**0.4555**	0.0255	5.589
Silver	107	0.1764	0.1897	0.183	**0.183**	0.0066	3.615
Silver	109	0.0775	0.0766	0.0795	**0.0778**	0.0015	1.929

Internal Standard Factors:							
Rhodium	103	1.1	1.115	1.127	**1.1**	n/a	n/a
Indium	115	1.05	1.082	1.088	**1.05**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-011 1/5 7/28/10 19:45			Mean	SD	%RSD
Antimony	121	13.5	13.45	13.38	**13.44**	0.0604	0.449
Antimony	123	13.58	13.06	13.39	**13.34**	0.2628	1.97
Silver	107	0.4706	0.4678	0.4682	**0.4689**	0.0015	0.3175
Silver	109	0.3588	0.3766	0.3725	**0.3693**	0.0093	2.531

Internal Standard Factors:

Rhodium	103	1.139	1.154	1.147	**1.139**	n/a	n/a
Indium	115	1.029	1.01	1.026	**1.029**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-012 1/5 7/28/10 19:48			Mean	SD	%RSD
Antimony	121	0.5581	0.5704	0.5808	**0.5698**	0.0114	1.995
Antimony	123	0.5592	0.5638	0.5558	**0.5596**	0.004	0.7203
Silver	107	0.309	0.293	0.2971	**0.2997**	0.0083	2.771
Silver	109	0.193	0.1963	0.1972	**0.1955**	0.0022	1.123

Internal Standard Factors:

Rhodium	103	1.168	1.167	1.16	**1.168** n/a		n/a
Indium	115	1.11	1.098	1.11	**1.11** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-013 1/5 7/28/10 19:52			Mean	SD	%RSD
Antimony	121	0.6264	0.6336	0.6075	**0.6225**	0.0135	2.165
Antimony	123	0.6332	0.5911	0.6074	**0.6106**	0.0212	3.476
Silver	107	0.3977	0.3886	0.3869	**0.3911**	0.0058	1.493
Silver	109	0.2298	0.2353	0.2337	**0.2329**	0.0028	1.205

Internal Standard Factors:

Rhodium	103	1.165	1.174	1.17	**1.165**	n/a	n/a
Indium	115	1.123	1.11	1.11	**1.123**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006453-014 1/5 7/28/10 19:55			Mean	SD	%RSD
Antimony	121	0.1451	0.1263	0.1299	**0.1338**	0.01	7.464
Antimony	123	0.1293	0.1329	0.1236	**0.1286**	0.0047	3.64
Silver	107	0.1231	0.1208	0.1143	**0.1194**	0.0045	3.805
Silver	109	0.037	0.0367	0.0352	**0.0363**	0.001	2.654

Internal Standard Factors:							
Rhodium	103	1.156	1.14	1.154	**1.156** n/a		n/a
Indium	115	1.108	1.105	1.101	**1.108** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006453-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 19:58					
Antimony	121	0.8102	0.8245	0.8203	**0.8183**	0.0073	0.896
Antimony	123	0.818	0.7715	0.785	**0.7915**	0.0239	3.022
Silver	107	0.2763	0.2598	0.2722	**0.2694**	0.0086	3.179
Silver	109	0.0992	0.0939	0.0982	**0.0971**	0.0028	2.894

Internal Standard Factors:							
Rhodium	103	1.174	1.145	1.149	**1.174** n/a		n/a
Indium	115	1.103	1.107	1.092	**1.103** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006804-001 1/5 7/28/10 20:01			Mean	SD	%RSD
Antimony	121	0.0088	0.0074	0.0199	**0.012**	0.0068	56.59
Antimony	123	0.0175	0.0085	0.0157	**0.0139**	0.0047	34.16
Silver	107	0.1462	0.1469	0.1418	**0.145**	0.0028	1.937
Silver	109	0.0675	0.0677	0.0674	**0.0675**	0.0002	0.2383

Internal Standard Factors:

Rhodium	103	1.26	1.255	1.25	**1.26** n/a		n/a
Indium	115	1.205	1.192	1.18	**1.205** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:04					
Antimony	121	0.2534	0.2525	0.2322	**0.246**	0.012	4.869
Antimony	123	0.2602	0.2692	0.2456	**0.2584**	0.0119	4.607
Silver	107	0.2558	0.2438	0.2523	**0.2507**	0.0062	2.46
Silver	109	0.1845	0.181	0.1898	**0.1851**	0.0044	2.383

Internal Standard Factors:

Rhodium	103	1.249	1.219	1.232	**1.249**	n/a	n/a
Indium	115	1.178	1.187	1.166	**1.178**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006804-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:07					
Antimony	121	0.032	0.025	0.0319	**0.0296**	0.0041	13.68
Antimony	123	0.0348	0.032	0.0341	**0.0336**	0.0015	4.423
Silver	107	0.1921	0.1831	0.1884	**0.1879**	0.0045	2.405
Silver	109	0.1197	0.1226	0.1191	**0.1205**	0.0019	1.563

Internal Standard Factors:

Rhodium	103	1.234	1.217	1.213	**1.234** n/a		n/a
Indium	115	1.156	1.156	1.159	**1.156** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV7			Mean	SD	%RSD
TimeStamp		7/28/10 20:10					
Antimony	121	25.52	25.59	25.96	**25.69**	0.2398	0.9333
Antimony	123	25.72	25.46	25.46	**25.55**	0.1491	0.5836
Silver	107	24.97	25	25	**24.99**	0.0189	0.0758
Silver	109	24.99	25.12	24.85	**24.99**	0.134	0.5365

Internal Standard Factors:							
Rhodium	103	1.093	1.095	1.09	**1.093**	n/a	n/a
Indium	115	1.073	1.066	1.058	**1.073**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB7			Mean	SD	%RSD
TimeStamp		7/28/10 20:16					
Antimony	121	-0.0395	-0.0453	-0.0403	**-0.0417**	0.0032	7.571
Antimony	123	-0.0425	-0.0391	-0.0418	**-0.0411**	0.0018	4.427
Silver	107	0.0137	0.0132	0.0142	**0.0137**	0.0005	3.705
Silver	109	0.0132	0.0122	0.0111	**0.0121**	0.001	8.53

Internal Standard Factors:							
Rhodium	103	1.099	1.095	1.09	**1.099** n/a		n/a
Indium	115	1.073	1.067	1.065	**1.073** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-MB 1/5 7/28/10 20:18			Mean	SD	%RSD
Antimony	121	-0.054	-0.057	-0.0538	**-0.0549**	0.0018	3.229
Antimony	123	-0.0545	-0.0563	-0.0559	**-0.0556**	0.001	1.71
Silver	107	0.0094	0.0081	0.0067	**0.0081**	0.0014	17.13
Silver	109	0.009	0.0072	0.0043	**0.0069**	0.0024	34.77

Internal Standard Factors:

Rhodium	103	1.088	1.066	1.074	**1.088**	n/a	n/a
Indium	115	1.063	1.048	1.044	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		LCSS K1006615 1/100 7/28/10 20:20			Mean	SD	%RSD
Antimony	121	9.607	9.595	9.622	**9.608**	0.0132	0.1378
Antimony	123	9.469	9.461	9.479	**9.47**	0.0092	0.0972
Silver	107	8.386	8.104	8.259	**8.25**	0.1413	1.713
Silver	109	8.389	8.191	8.235	**8.272**	0.1039	1.257

Internal Standard Factors:

Rhodium	103	1.038	1.028	1.02	**1.038**	n/a	n/a
Indium	115	1.01	0.987	1.004	**1.01**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006615-006 1/5 7/28/10 20:27			Mean	SD	%RSD
Antimony	121	0.1454	0.1532	0.1486	**0.1491**	0.0039	2.599
Antimony	123	0.1656	0.1669	0.141	**0.1578**	0.0146	9.261
Silver	107	0.1825	0.186	0.1765	**0.1817**	0.0048	2.659
Silver	109	0.0906	0.087	0.0819	**0.0865**	0.0044	5.091

Internal Standard Factors:

Rhodium	103	1.154	1.137	1.152	**1.154** n/a		n/a
Indium	115	1.098	1.101	1.089	**1.098** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 20:30					
Antimony	121	0.1617	0.1494	0.1598	**0.157**	0.0066	4.205
Antimony	123	0.152	0.1595	0.1601	**0.1572**	0.0045	2.881
Silver	107	0.1714	0.1671	0.1736	**0.1707**	0.0033	1.955
Silver	109	0.0652	0.0701	0.0678	**0.0677**	0.0024	3.59

Internal Standard Factors:							
Rhodium	103	1.163	1.167	1.159	**1.163** n/a		n/a
Indium	115	1.128	1.107	1.114	**1.128** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-006 1/25L 7/28/10 20:33			Mean	SD	%RSD
Antimony	121	-0.0295	-0.0331	-0.0257	**-0.0294**	0.0037	12.61
Antimony	123	-0.0283	-0.0325	-0.0328	**-0.0312**	0.0025	8.104
Silver	107	0.0253	0.0291	0.0299	**0.0281**	0.0025	8.844
Silver	109	0.012	0.0131	0.0132	**0.0128**	0.0007	5.31

Internal Standard Factors:							
Rhodium	103	1.101	1.11	1.114	**1.101**	n/a	n/a
Indium	115	1.089	1.072	1.077	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-006 1/5 +10/50A 7/28/10 20:36			Mean	SD	%RSD
Antimony	121	51.57	51.24	51.82	**51.54**	0.2882	0.5591
Antimony	123	51.43	50.41	50.26	**50.7**	0.6369	1.256
Silver	107	9.857	9.942	9.894	**9.897**	0.0427	0.4318
Silver	109	9.663	9.842	9.75	**9.752**	0.0897	0.9195

Internal Standard Factors:

Rhodium	103	1.131	1.145	1.145	**1.131** n/a		n/a
Indium	115	1.075	1.065	1.063	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-006 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 20:39					
Antimony	121	21.14	21.48	21.5	**21.37**	0.2005	0.9383
Antimony	123	21.21	20.93	20.86	**21**	0.1886	0.8979
Silver	107	4.038	4.154	4.094	**4.096**	0.0582	1.422
Silver	109	3.996	4.099	4.115	**4.07**	0.0646	1.588

Internal Standard Factors:							
Rhodium	103	1.117	1.11	1.119	**1.117** n/a		n/a
Indium	115	1.075	1.08	1.078	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:44					
Antimony	121	0.7826	0.7803	0.7377	**0.7669**	0.0253	3.298
Antimony	123	0.7709	0.7817	0.7607	**0.7711**	0.0105	1.36
Silver	107	0.3584	0.3395	0.3431	**0.347**	0.0101	2.903
Silver	109	0.248	0.2273	0.226	**0.2338**	0.0124	5.287

Internal Standard Factors:							
Rhodium	103	1.173	1.153	1.153	**1.173** n/a		n/a
Indium	115	1.107	1.101	1.094	**1.107** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-002 1/5 7/28/10 20:48			Mean	SD	%RSD
Antimony	121	0.2075	0.219	0.2136	**0.2134**	0.0058	2.705
Antimony	123	0.2137	0.2133	0.2179	**0.215**	0.0026	1.191
Silver	107	0.2167	0.2197	0.2155	**0.2173**	0.0022	1.001
Silver	109	0.1089	0.1061	0.1071	**0.1074**	0.0014	1.324

Internal Standard Factors:							
Rhodium	103	1.166	1.17	1.166	**1.166** n/a		n/a
Indium	115	1.106	1.101	1.109	**1.106** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 20:51					
Antimony	121	0.1622	0.1721	0.1557	**0.1633**	0.0082	5.049
Antimony	123	0.1827	0.148	0.1473	**0.1593**	0.0203	12.71
Silver	107	0.2114	0.1983	0.2002	**0.2033**	0.0071	3.474
Silver	109	0.0594	0.0626	0.0604	**0.0608**	0.0017	2.771

Internal Standard Factors:							
Rhodium	103	1.18	1.174	1.178	**1.18** n/a		n/a
Indium	115	1.14	1.115	1.116	**1.14** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV8			Mean	SD	%RSD
TimeStamp		7/28/10 20:54					
Antimony	121	25.55	25.86	25.64	**25.68**	0.1588	0.6185
Antimony	123	25.3	25.92	25.36	**25.53**	0.3446	1.35
Silver	107	24.68	24.8	25.14	**24.87**	0.2399	0.9644
Silver	109	24.76	24.73	25.02	**24.84**	0.1625	0.6542

Internal Standard Factors:							
Rhodium	103	1.051	1.031	1.029	**1.051**	n/a	n/a
Indium	115	1.011	1.013	1.01	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB8			Mean	SD	%RSD
TimeStamp		7/28/10 21:00					
Antimony	121	-0.0435	-0.0411	-0.0421	**-0.0423**	0.0012	2.864
Antimony	123	-0.0416	-0.0453	-0.0459	**-0.0443**	0.0023	5.287
Silver	107	0.014	0.0132	0.0131	**0.0134**	0.0005	3.677
Silver	109	0.0148	0.0125	0.0144	**0.0139**	0.0012	8.96

Internal Standard Factors:							
Rhodium	103	1.05	1.034	1.024	**1.05** n/a		n/a
Indium	115	1.026	1.013	1.017	**1.026** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: TimeStamp		K1006615-004 1/5 7/28/10 21:02			Mean	SD	%RSD
Antimony	121	0.7282	0.7291	0.737	**0.7314**	0.0048	0.6628
Antimony	123	0.7119	0.7536	0.727	**0.7308**	0.0211	2.888
Silver	107	0.2744	0.2777	0.2694	**0.2738**	0.0042	1.536
Silver	109	0.1829	0.176	0.1722	**0.177**	0.0054	3.066

Internal Standard Factors:							
Rhodium	103	1.121	1.116	1.111	**1.121** n/a		n/a
Indium	115	1.075	1.069	1.075	**1.075** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-005 1/5 7/28/10 21:05			Mean	SD	%RSD
Antimony	121	0.2534	0.2584	0.2549	**0.2556**	0.0025	0.9952
Antimony	123	0.2492	0.2438	0.2452	**0.2461**	0.0028	1.149
Silver	107	0.2681	0.2552	0.2594	**0.2609**	0.0066	2.527
Silver	109	0.0696	0.0749	0.0782	**0.0742**	0.0043	5.813

Internal Standard Factors:							
Rhodium	103	1.155	1.16	1.152	**1.155** n/a		n/a
Indium	115	1.108	1.101	1.095	**1.108** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:09					
Antimony	121	0.6036	0.5814	0.5765	**0.5872**	0.0145	2.462
Antimony	123	0.5799	0.5582	0.5576	**0.5653**	0.0127	2.248
Silver	107	0.2573	0.2691	0.2684	**0.265**	0.0067	2.51
Silver	109	0.1351	0.1512	0.1442	**0.1435**	0.0081	5.639

Internal Standard							
Factors:							
Rhodium	103	1.138	1.146	1.146	**1.138** n/a		n/a
Indium	115	1.095	1.08	1.09	**1.095** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006615-008 1/5 7/28/10 21:12			Mean	SD	%RSD
Antimony	121	0.2453	0.2365	0.2344	**0.2387**	0.0058	2.433
Antimony	123	0.2218	0.2244	0.2261	**0.2241**	0.0022	0.9601
Silver	107	0.1792	0.1667	0.1602	**0.1687**	0.0096	5.715
Silver	109	0.0857	0.088	0.0877	**0.0871**	0.0013	1.441

Internal Standard Factors:

Rhodium	103	1.141	1.142	1.135	**1.141** n/a		n/a
Indium	115	1.09	1.075	1.081	**1.09** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006615-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:15					
Antimony	121	0.3505	0.338	0.3422	**0.3436**	0.0064	1.853
Antimony	123	0.34	0.3688	0.3171	**0.342**	0.0259	7.571
Silver	107	0.2693	0.2716	0.2614	**0.2675**	0.0054	2.001
Silver	109	0.1658	0.166	0.1714	**0.1677**	0.0032	1.907

Internal Standard Factors:							
Rhodium	103	1.215	1.199	1.2	**1.215** n/a		n/a
Indium	115	1.135	1.145	1.126	**1.135** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:18					
Antimony	121	0.9161	0.9397	0.9415	**0.9324**	0.0142	1.523
Antimony	123	0.912	0.9326	0.8968	**0.9138**	0.0179	1.964
Silver	107	0.3393	0.3326	0.3597	**0.3438**	0.0141	4.097
Silver	109	0.2174	0.2162	0.2269	**0.2201**	0.0059	2.667

Internal Standard Factors:

Rhodium	103	1.154	1.145	1.15	**1.154** n/a		n/a
Indium	115	1.09	1.093	1.09	**1.09** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-002 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:21					
Antimony	121	0.2132	0.2321	0.2279	**0.2244**	0.0099	4.414
Antimony	123	0.2467	0.2274	0.2234	**0.2325**	0.0125	5.363
Silver	107	0.3089	0.308	0.3035	**0.3068**	0.0029	0.9423
Silver	109	0.1226	0.115	0.1168	**0.1181**	0.004	3.367

Internal Standard Factors:

Rhenium	103	1.159	1.162	1.142	**1.159**	n/a	n/a
Indium	115	1.112	1.102	1.1	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:24					
Antimony	121	0.188	0.1821	0.1824	**0.1842**	0.0034	1.819
Antimony	123	0.1867	0.1777	0.1862	**0.1835**	0.0051	2.759
Silver	107	0.335	0.3172	0.3214	**0.3246**	0.0093	2.876
Silver	109	0.1197	0.1248	0.122	**0.1222**	0.0026	2.1

Internal Standard							
Factor:							
Rhodium	103	1.17	1.175	1.171	**1.17** n/a		n/a
Indium	115	1.121	1.106	1.099	**1.121** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006636-005 1/5 7/28/10 21:27			Mean	SD	%RSD
Antimony	121	1.136	1.125	1.114	**1.125**	0.0107	0.9534
Antimony	123	1.103	1.117	1.131	**1.117**	0.0138	1.234
Silver	107	0.4152	0.4121	0.4	**0.4091**	0.008	1.965
Silver	109	0.295	0.2785	0.2825	**0.2853**	0.0086	3.016

Internal Standard Factors:							
Rhodium	103	1.163	1.158	1.142	**1.163** n/a		n/a
Indium	115	1.098	1.081	1.079	**1.098** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006636-006 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:31					
Antimony	121	0.3177	0.3059	0.2932	**0.3056**	0.0122	4.001
Antimony	123	0.3106	0.2919	0.3055	**0.3027**	0.0097	3.195
Silver	107	0.2768	0.2588	0.2707	**0.2688**	0.0091	3.403
Silver	109	0.1208	0.1193	0.1179	**0.1193**	0.0015	1.223

Internal Standard Factors:							
Rhodium	103	1.16	1.148	1.163	**1.16** n/a		n/a
Indium	115	1.109	1.099	1.084	**1.109** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCV9			Mean	SD	%RSD
TimeStamp		7/28/10 21:34					
Antimony	121	25.88	26.25	25.56	**25.9**	0.3454	1.333
Antimony	123	25.39	25.63	25.56	**25.53**	0.125	0.4898
Silver	107	24.87	24.99	24.96	**24.94**	0.0615	0.2467
Silver	109	24.85	25.07	25.06	**24.99**	0.1221	0.4887

Internal Standard Factors:							
Rhenium	103	1.054	1.046	1.032	**1.054** n/a		n/a
Indium	115	1.03	1.022	1.019	**1.03** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		CCB9			Mean	SD	%RSD
TimeStamp		7/28/10 21:39					
Antimony	121	-0.0537	-0.0534	-0.0539	**-0.0536**	0.0002	0.4556
Antimony	123	-0.0527	-0.0544	-0.0545	**-0.0538**	0.001	1.809
Silver	107	0.0064	0.0068	0.0036	**0.0056**	0.0017	30.66
Silver	109	0.0062	0.0048	0.0053	**0.0054**	0.0007	12.73

Internal Standard							
Factor:							
Rhenium	103	1.063	1.05	1.042	**1.063**	n/a	n/a
Indium	115	1.048	1.022	1.009	**1.048**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006636-007 1/5 7/28/10 21:42			Mean	SD	%RSD
Antimony	121	0.1731	0.1664	0.1775	**0.1723**	0.0056	3.238
Antimony	123	0.1751	0.1849	0.1897	**0.1832**	0.0074	4.064
Silver	107	0.316	0.295	0.3084	**0.3065**	0.0106	3.471
Silver	109	0.1265	0.1229	0.1241	**0.1245**	0.0018	1.479

Internal Standard / Factor:							
Rhodium	103	1.162	1.164	1.162	**1.162** n/a		n/a
Indium	115	1.111	1.09	1.109	**1.111** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-MB 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:45					
Antimony	121	-0.053	-0.0523	-0.0482	**-0.0512**	0.0026	5.105
Antimony	123	-0.0499	-0.0592	-0.0593	**-0.0561**	0.0054	9.546
Silver	107	0.0053	0.0068	0.0038	**0.0053**	0.0015	27.95
Silver	109	0.0027	0.0024	0.0024	**0.0025**	0.0002	7.666

Internal Standard Factors:							
Rhodium	103	1.062	1.046	1.038	**1.062** n/a		n/a
Indium	115	1.03	1.015	1.022	**1.03** n/a		n/a

Instrument ID: K-ICP-MS-02
Calibration: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		LCSS K1006676 1/100			Mean	SD	%RSD
Time Stamp		7/28/10 21:47					
Antimony	121	8.447	8.322	8.501	**8.424**	0.0919	1.091
Antimony	123	8.353	8.097	8.231	**8.227**	0.1281	1.557
Silver	107	7.739	7.674	7.666	**7.693**	0.0399	0.5184
Silver	109	7.613	7.65	7.668	**7.644**	0.0284	0.3713

Internal Standard
Factors:

Rhodium	103	1.038	1.045	1.051	**1.038**	n/a	n/a
Indium	115	1.007	0.987	1	**1.007**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-018 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 21:53					
Antimony	121	1.066	1.101	1.063	**1.077**	0.0212	1.972
Antimony	123	1.067	1.06	1.064	**1.064**	0.0034	0.3239
Silver	107	0.329	0.3334	0.332	**0.3315**	0.0022	0.6747
Silver	109	0.3163	0.3054	0.3007	**0.3075**	0.008	2.598

Internal Standard Factors:							
Rhodium	103	1.151	1.137	1.15	**1.151** n/a		n/a
Indium	115	1.077	1.095	1.073	**1.077** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name: / TimeStamp		K1006676-018 1/5D 7/28/10 21:56			Mean	SD	%RSD
Antimony	121	0.9835	0.967	0.9706	**0.9737**	0.0087	0.8911
Antimony	123	0.9508	0.9523	0.9619	**0.955**	0.006	0.6275
Silver	107	0.2958	0.2901	0.3003	**0.2954**	0.0051	1.725
Silver	109	0.2618	0.2631	0.2745	**0.2665**	0.007	2.633

Internal Standard Factors:

Rhodium	103	1.147	1.136	1.142	**1.147** n/a		n/a
Indium	115	1.086	1.094	1.089	**1.086** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #210314

Sample Name:		K1006676-013 1/25L			Mean	SD	%RSD
TimeStamp		7/28/10 22:00					
Antimony	121	0.1735	0.1853	0.181	**0.1799**	0.006	3.325
Antimony	123	0.1816	0.1826	0.1833	**0.1825**	0.0009	0.4925
Silver	107	0.0637	0.0605	0.0675	**0.0639**	0.0035	5.431
Silver	109	0.0602	0.0643	0.0635	**0.0626**	0.0022	3.455

Internal Standard Factors:

Rhodium	103	1.1	1.102	1.096	**1.1**	n/a	n/a
Indium	115	1.064	1.06	1.066	**1.064**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-018 1/5 +10/50A			Mean	SD	%RSD
TimeStamp		7/28/10 22:03					
Antimony	121	53.93	53.1	53.91	**53.65**	0.471	0.878
Antimony	123	53.69	52.75	52.65	**53.03**	0.5714	1.077
Silver	107	10.34	10.43	10.34	**10.37**	0.0521	0.5026
Silver	109	10.19	10.38	10.18	**10.25**	0.112	1.092

Internal Standard Factors:

Rhodium	103	1.134	1.146	1.137	**1.134** n/a		n/a
Indium	115	1.067	1.052	1.053	**1.067** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-018 1/25S			Mean	SD	%RSD
TimeStamp		7/28/10 22:06					
Antimony	121	21.76	21.65	22.25	**21.89**	0.3189	1.457
Antimony	123	21.26	21.53	21.56	**21.45**	0.1632	0.761
Silver	107	4.186	4.181	4.235	**4.201**	0.0296	0.7043
Silver	109	4.171	4.194	4.227	**4.197**	0.0281	0.6687

Internal Standard Factors:

Rhodium	103	1.123	1.115	1.112	**1.123**	n/a	n/a
Indium	115	1.067	1.076	1.085	**1.067**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-001 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:11					
Antimony	121	0.6879	0.6539	0.705	**0.6823**	0.026	3.812
Antimony	123	0.7017	0.6666	0.6442	**0.6708**	0.029	4.318
Silver	107	0.3098	0.3009	0.306	**0.3056**	0.0045	1.468
Silver	109	0.1562	0.1591	0.1594	**0.1582**	0.0018	1.134

Internal Standard Factors:

Rhodium	103	1.143	1.139	1.145	**1.143** n/a		n/a
Indium	115	1.084	1.073	1.097	**1.084** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-002 1/5 7/28/10 22:14			Mean	SD	%RSD
Antimony	121	0.2456	0.2484	0.2408	**0.245**	0.0039	1.576
Antimony	123	0.2674	0.2451	0.25	**0.2542**	0.0117	4.613
Silver	107	0.3284	0.3343	0.3532	**0.3386**	0.013	3.824
Silver	109	0.1223	0.1208	0.1228	**0.122**	0.001	0.8382

Internal Standard Factors:

Rhodium	103	1.166	1.178	1.189	**1.166**	n/a	n/a
Indium	115	1.112	1.113	1.122	**1.112**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV10			Mean	SD	%RSD
TimeStamp		7/28/10 22:17					
Antimony	121	25.79	25.96	25.88	**25.88**	0.0881	0.3403
Antimony	123	24.98	25.22	24.99	**25.06**	0.1353	0.5397
Silver	107	25.07	25.2	25.08	**25.12**	0.0742	0.2954
Silver	109	25.31	25.4	25.16	**25.29**	0.119	0.4707

Internal Standard Factors:

Rhodium	103	1.035	1.038	1.032	**1.035** n/a		n/a
Indium	115	1.009	1.003	0.999	**1.009** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB10			Mean	SD	%RSD
TimeStamp		7/28/10 22:23					
Antimony	121	-0.0514	-0.0541	-0.0542	**-0.0532**	0.0016	2.945
Antimony	123	-0.0538	-0.0572	-0.0516	**-0.0542**	0.0028	5.236
Silver	107	0.0089	0.0082	0.0085	**0.0086**	0.0003	3.889
Silver	109	0.0071	0.0062	0.0052	**0.0061**	0.0009	15.17

Internal Standard Factors:

Rhodium	103	1.024	1.03	1.027	**1.024** n/a		n/a
Indium	115	1.015	1	1.006	**1.015** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-003 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:25					
Antimony	121	0.141	0.1409	0.1457	**0.1425**	0.0027	1.928
Antimony	123	0.1455	0.1562	0.1385	**0.1467**	0.0089	6.084
Silver	107	0.2452	0.2393	0.241	**0.2418**	0.003	1.245
Silver	109	0.0809	0.0811	0.0803	**0.0808**	0.0004	0.5045

Internal Standard Factors:

Rhodium	103	1.162	1.158	1.148	**1.162**	n/a	n/a
Indium	115	1.092	1.087	1.096	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-004 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:28					
Antimony	121	1.167	1.195	1.155	**1.173**	0.0205	1.747
Antimony	123	1.115	1.16	1.164	**1.146**	0.0274	2.387
Silver	107	0.344	0.346	0.3344	**0.3415**	0.0062	1.82
Silver	109	0.2651	0.2634	0.2693	**0.2659**	0.0031	1.147

Internal Standard Factors:

Rhodium	103	1.153	1.146	1.135	**1.153**	n/a	n/a
Indium	115	1.088	1.084	1.085	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006676-005 1/5 7/28/10 22:31			Mean	SD	%RSD
Antimony	121	0.2463	0.2447	0.2269	**0.2393**	0.0108	4.491
Antimony	123	0.2302	0.2375	0.2333	**0.2337**	0.0037	1.574
Silver	107	0.2083	0.2007	0.2082	**0.2057**	0.0043	2.104
Silver	109	0.1101	0.1088	0.1176	**0.1121**	0.0047	4.223

Internal Standard Factors:

Rhodium	103	1.167	1.157	1.148	**1.167**	n/a	n/a
Indium	115	1.105	1.101	1.101	**1.105**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-006 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:35					
Antimony	121	0.1533	0.1409	0.1348	**0.143**	0.0094	6.608
Antimony	123	0.1272	0.141	0.1438	**0.1374**	0.0089	6.466
Silver	107	0.1677	0.1663	0.1756	**0.1699**	0.005	2.956
Silver	109	0.0734	0.0741	0.0748	**0.0741**	0.0007	0.9287

Internal Standard Factors:

Rhodium	103	1.164	1.146	1.157	**1.164**	n/a	n/a
Indium	115	1.091	1.099	1.089	**1.091**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-007 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:38					
Antimony	121	0.2709	0.2869	0.2869	**0.2816**	0.0092	3.274
Antimony	123	0.2624	0.3001	0.2629	**0.2751**	0.0216	7.864
Silver	107	0.1987	0.2048	0.2059	**0.2031**	0.0039	1.906
Silver	109	0.1138	0.1191	0.1127	**0.1152**	0.0034	2.953

Internal Standard Factors:

Rhodium	103	1.163	1.151	1.146	**1.163**	n/a	n/a
Indium	115	1.093	1.095	1.096	**1.093**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-008 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:41					
Antimony	121	0.76	0.7638	0.8105	**0.7781**	0.0281	3.616
Antimony	123	0.7952	0.7968	0.7779	**0.79**	0.0105	1.329
Silver	107	0.2728	0.2794	0.2891	**0.2804**	0.0082	2.936
Silver	109	0.1791	0.1864	0.1848	**0.1834**	0.0038	2.091

Internal Standard Factors:

Rhodium	103	1.147	1.14	1.152	**1.147**	n/a	n/a
Indium	115	1.086	1.091	1.071	**1.086**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-009 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:44					
Antimony	121	0.1894	0.1916	0.1727	**0.1846**	0.0104	5.609
Antimony	123	0.1844	0.1834	0.183	**0.1836**	0.0007	0.399
Silver	107	0.2402	0.2383	0.2352	**0.2379**	0.0026	1.072
Silver	109	0.0952	0.0924	0.0954	**0.0944**	0.0017	1.759

Internal Standard Factors:

Rhodium	103	1.164	1.138	1.149	**1.164** n/a		n/a
Indium	115	1.094	1.088	1.092	**1.094** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-010 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:47					
Antimony	121	0.1683	0.1525	0.1471	**0.156**	0.011	7.06
Antimony	123	0.1712	0.1437	0.1511	**0.1553**	0.0142	9.156
Silver	107	0.2109	0.2174	0.215	**0.2144**	0.0033	1.539
Silver	109	0.0804	0.0862	0.082	**0.0829**	0.003	3.621

Internal Standard Factors:

Rhodium	103	1.17	1.155	1.157	**1.17**	n/a	n/a
Indium	115	1.102	1.101	1.092	**1.102**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-011 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:50					
Antimony	121	0.7131	0.6762	0.679	**0.6894**	0.0206	2.987
Antimony	123	0.6951	0.6674	0.6626	**0.675**	0.0175	2.595
Silver	107	0.3223	0.318	0.2969	**0.3124**	0.0136	4.358
Silver	109	0.1899	0.1963	0.197	**0.1944**	0.0039	2.006

Internal Standard Factors:

Rhodium	103	1.155	1.15	1.149	**1.155** n/a		n/a
Indium	115	1.117	1.083	1.091	**1.117** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-012 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 22:54					
Antimony	121	0.308	0.2899	0.2901	**0.296**	0.0104	3.516
Antimony	123	0.2868	0.2805	0.3037	**0.2903**	0.012	4.122
Silver	107	0.2529	0.2654	0.2512	**0.2565**	0.0077	3.018
Silver	109	0.1126	0.1113	0.1128	**0.1123**	0.0008	0.7433

Internal Standard Factors:

Rhodium	103	1.163	1.144	1.155	**1.163**	n/a	n/a
Indium	115	1.1	1.1	1.097	**1.1**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV11			Mean	SD	%RSD
TimeStamp		7/28/10 22:57					
Antimony	121	25.88	25.53	25.91	**25.77**	0.2104	0.8163
Antimony	123	25.27	25.62	25.58	**25.49**	0.192	0.7534
Silver	107	24.88	25.03	25.21	**25.04**	0.1652	0.6598
Silver	109	25.05	24.92	25.13	**25.03**	0.105	0.4195

Internal Standard Factors:

Rhodium	103	1.048	1.039	1.032	**1.048**	n/a	n/a
Indium	115	1.011	1.003	1.004	**1.011**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB11			Mean	SD	%RSD
TimeStamp		7/28/10 23:02					
Antimony	121	-0.0551	-0.0593	-0.0515	**-0.0553**	0.0039	7.063
Antimony	123	-0.0539	-0.0525	-0.0554	**-0.0539**	0.0015	2.728
Silver	107	0.0074	0.0081	0.0076	**0.0077**	0.0003	4.325
Silver	109	0.0092	0.0057	0.0069	**0.0072**	0.0018	24.58

Internal Standard Factors:

Rhodium	103	1.045	1.027	1.013	**1.045**	n/a	n/a
Indium	115	1.005	0.996	1.006	**1.005**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006676-013 1/5 7/28/10 23:05			Mean	SD	%RSD
Antimony	121	0.1939	0.1849	0.178	**0.1856**	0.008	4.308
Antimony	123	0.1789	0.1849	0.1826	**0.1821**	0.003	1.66
Silver	107	0.2693	0.2686	0.2722	**0.27**	0.0019	0.7038
Silver	109	0.1031	0.1006	0.0967	**0.1001**	0.0032	3.239

Internal Standard Factors:

Rhodium	103	1.151	1.139	1.148	**1.151**	n/a	n/a
Indium	115	1.092	1.084	1.082	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006676-014 1/5 7/28/10 23:08			Mean	SD	%RSD
Antimony	121	0.6752	0.6811	0.6778	**0.678**	0.003	0.4362
Antimony	123	0.6685	0.6438	0.6784	**0.6635**	0.0178	2.688
Silver	107	0.3115	0.3087	0.3071	**0.3091**	0.0022	0.7181
Silver	109	0.2508	0.2457	0.2533	**0.25**	0.0039	1.541

Internal Standard Factors:

Rhodium	103	1.144	1.15	1.133	**1.144** n/a		n/a
Indium	115	1.089	1.076	1.087	**1.089** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-015 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:11					
Antimony	121	0.238	0.239	0.2207	**0.2326**	0.0103	4.422
Antimony	123	0.2312	0.2364	0.2383	**0.2353**	0.0037	1.558
Silver	107	0.1858	0.1715	0.181	**0.1794**	0.0073	4.073
Silver	109	0.117	0.1202	0.126	**0.1211**	0.0046	3.76

Internal Standard Factors:

Rhodium	103	1.138	1.123	1.133	**1.138**	n/a	n/a
Indium	115	1.09	1.082	1.075	**1.09**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-016 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:14					
Antimony	121	0.1742	0.1806	0.1873	**0.1807**	0.0066	3.648
Antimony	123	0.1866	0.1834	0.173	**0.181**	0.0071	3.931
Silver	107	0.2081	0.1801	0.1862	**0.1915**	0.0148	7.705
Silver	109	0.1211	0.1161	0.1232	**0.1201**	0.0037	3.044

Internal Standard Factors:

Rhodium	103	1.15	1.132	1.141	**1.15**	n/a	n/a
Indium	115	1.097	1.095	1.091	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-017 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:17					
Antimony	121	0.1865	0.1801	0.183	**0.1832**	0.0032	1.747
Antimony	123	0.1955	0.1924	0.1886	**0.1922**	0.0034	1.791
Silver	107	0.1951	0.19	0.1906	**0.1919**	0.0028	1.453
Silver	109	0.1238	0.1268	0.1309	**0.1272**	0.0036	2.835

Internal Standard Factors:

Rhodium	103	1.154	1.145	1.142	**1.154**	n/a	n/a
Indium	115	1.088	1.093	1.089	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-019 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:20					
Antimony	121	0.2325	0.235	0.2327	**0.2334**	0.0014	0.5925
Antimony	123	0.2304	0.221	0.2533	**0.2349**	0.0166	7.063
Silver	107	0.2786	0.2667	0.2848	**0.2767**	0.0092	3.325
Silver	109	0.2327	0.2319	0.2413	**0.2353**	0.0052	2.222

Internal Standard Factors:

Rhodium	103	1.173	1.159	1.16	**1.173**	n/a	n/a
Indium	115	1.088	1.103	1.1	**1.088**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006676-020 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:23					
Antimony	121	0.1233	0.1413	0.1428	**0.1358**	0.0108	7.966
Antimony	123	0.1404	0.1391	0.1339	**0.1378**	0.0034	2.473
Silver	107	0.3144	0.3169	0.315	**0.3155**	0.0013	0.4213
Silver	109	0.2502	0.2505	0.2418	**0.2475**	0.005	2.003

Internal Standard Factors:

Rhodium	103	1.159	1.169	1.158	**1.159**	n/a	n/a
Indium	115	1.097	1.078	1.092	**1.097**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006777-MB 1/5 7/28/10 23:27			Mean	SD	%RSD
Antimony	121	-0.0554	-0.0551	-0.0567	**-0.0557**	0.0008	1.509
Antimony	123	-0.0565	-0.0583	-0.0554	**-0.0567**	0.0015	2.611
Silver	107	0.0007	0.0005	0.0019	**0.001**	0.0008	75.32
Silver	109	0.0007	-0.0006	0.0004	**0.0002**	0.0007	368.6

Internal Standard Factors:

Rhodium	103	1.075	1.056	1.051	**1.075**	n/a	n/a
Indium	115	1.03	1.034	1.028	**1.03**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		LCSS K1006777 1/100			Mean	SD	%RSD
TimeStamp		7/28/10 23:29					
Antimony	121	8.412	8.18	8.168	**8.253**	0.1378	1.669
Antimony	123	8.284	8.138	8.127	**8.183**	0.0874	1.068
Silver	107	8.159	8.194	8.159	**8.171**	0.0204	0.2497
Silver	109	8.224	8.194	8.23	**8.216**	0.0189	0.2301

Internal Standard Factors:

Rhodium	103	1.051	1.051	1.059	**1.051**	n/a	n/a
Indium	115	1.02	1.009	1.003	**1.02**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV12			Mean	SD	%RSD
TimeStamp		7/28/10 23:35					
Antimony	121	26.01	25.03	26.01	**25.68**	0.5691	2.216
Antimony	123	25.94	25.7	25.77	**25.8**	0.1223	0.4742
Silver	107	25.33	25.14	25.4	**25.29**	0.1338	0.5292
Silver	109	25.32	25.22	25.32	**25.28**	0.0586	0.2318

Internal Standard Factors:

Rhodium	103	1.035	1.026	1.036	**1.035**	n/a	n/a
Indium	115	1.021	1	0.999	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB12			Mean	SD	%RSD
TimeStamp		7/28/10 23:41					
Antimony	121	-0.0546	-0.0538	-0.0501	**-0.0529**	0.0024	4.534
Antimony	123	-0.0544	-0.0534	-0.0578	**-0.0552**	0.0023	4.125
Silver	107	0.0114	0.0094	0.0093	**0.01**	0.0012	11.95
Silver	109	0.0099	0.0082	0.0095	**0.0092**	0.0009	9.942

Internal Standard Factors:

Rhodium	103	1.042	1.031	1.039	**1.042**	n/a	n/a
Indium	115	1.001	1.013	1.005	**1.001**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-005 1/5			Mean	SD	%RSD
TimeStamp		7/28/10 23:43					
Antimony	121	0.2632	0.2867	0.2943	**0.2814**	0.0162	5.765
Antimony	123	0.2881	0.2826	0.3049	**0.2919**	0.0116	3.975
Silver	107	0.7084	0.7046	0.7246	**0.7125**	0.0106	1.484
Silver	109	0.2203	0.2161	0.2157	**0.2174**	0.0026	1.186

Internal Standard Factors:

Rhodium	103	1.149	1.162	1.146	**1.149** n/a		n/a
Indium	115	1.078	1.077	1.1	**1.078** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-005 1/5D			Mean	SD	%RSD
TimeStamp		7/28/10 23:46					
Antimony	121	0.2735	0.2615	0.2901	**0.275**	0.0144	5.223
Antimony	123	0.2949	0.2787	0.2729	**0.2822**	0.0114	4.027
Silver	107	0.5495	0.5326	0.5718	**0.5513**	0.0197	3.563
Silver	109	0.1834	0.1764	0.1772	**0.179**	0.0038	2.144

Internal Standard Factors:

Rhodium	103	1.156	1.153	1.145	**1.156** n/a		n/a
Indium	115	1.084	1.09	1.094	**1.084** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006777-005 1/25L 7/28/10 23:50			Mean	SD	%RSD
Antimony	121	0.0035	0.0062	-0.0018	**0.0026**	0.0041	156.6
Antimony	123	-0.0012	0.0004	-0.0015	**-0.0007**	0.001	139.7
Silver	107	0.1302	0.1209	0.1184	**0.1232**	0.0062	5.026
Silver	109	0.0415	0.0439	0.0414	**0.0422**	0.0014	3.387

Internal Standard Factors:

Rhodium	103	1.102	1.119	1.098	**1.102**	n/a	n/a
Indium	115	1.065	1.055	1.062	**1.065**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006777-005 1/5 +10/50A 7/28/10 23:53			Mean	SD	%RSD
Antimony	121	50.48	50.64	50.68	**50.6**	0.104	0.2055
Antimony	123	49.88	50.56	50.3	**50.24**	0.3438	0.6843
Silver	107	10.16	10.14	10.21	**10.17**	0.0379	0.3727
Silver	109	9.583	9.673	9.752	**9.669**	0.0845	0.8737

Internal Standard Factors:

Rhodium	103	1.146	1.14	1.155	**1.146**	n/a	n/a
Indium	115	1.061	1.063	1.063	**1.061**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006777-005 1/25S 7/28/10 23:57			Mean	SD	%RSD
Antimony	121	17.4	16.95	17.05	**17.13**	0.234	1.366
Antimony	123	16.68	16.84	16.71	**16.74**	0.0875	0.5228
Silver	107	4.171	4.145	4.11	**4.142**	0.031	0.749
Silver	109	4.129	4.067	4.068	**4.088**	0.0354	0.8659

Internal Standard Factors:

Rhodium	103	1.127	1.115	1.11	**1.127**	n/a	n/a
Indium	115	1.069	1.054	1.059	**1.069**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-001 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:01					
Antimony	121	1.202	1.211	1.255	**1.223**	0.0284	2.322
Antimony	123	1.182	1.241	1.224	**1.216**	0.0302	2.486
Silver	107	0.4526	0.4393	0.4425	**0.4448**	0.0069	1.556
Silver	109	0.3236	0.3263	0.3149	**0.3216**	0.006	1.854

Internal Standard Factors:

Rhodium	103	1.155	1.145	1.139	**1.155**	n/a	n/a
Indium	115	1.068	1.083	1.076	**1.068**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-002 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:04					
Antimony	121	0.3732	0.3729	0.3583	**0.3681**	0.0085	2.308
Antimony	123	0.3695	0.3736	0.3584	**0.3672**	0.0079	2.146
Silver	107	0.2616	0.2595	0.2725	**0.2645**	0.007	2.636
Silver	109	0.1084	0.1085	0.1102	**0.109**	0.001	0.9382

Internal Standard Factors:

Rhodium	103	1.163	1.137	1.145	**1.163**	n/a	n/a
Indium	115	1.081	1.091	1.09	**1.081**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006777-003 1/5 7/29/10 0:08			Mean	SD	%RSD
Antimony	121	0.1892	0.1806	0.1817	**0.1838**	0.0047	2.533
Antimony	123	0.195	0.1949	0.1936	**0.1945**	0.0007	0.3835
Silver	107	0.3707	0.3588	0.3819	**0.3705**	0.0116	3.118
Silver	109	0.1095	0.1082	0.1101	**0.1093**	0.0009	0.8445

Internal Standard Factors:

Rhodium	103	1.201	1.186	1.187	**1.201** n/a		n/a
Indium	115	1.118	1.114	1.119	**1.118** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-004 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:11					
Antimony	121	0.9407	0.9657	0.9616	**0.956**	0.0134	1.402
Antimony	123	0.9545	0.9737	0.989	**0.9724**	0.0173	1.775
Silver	107	0.4317	0.4452	0.4303	**0.4357**	0.0082	1.888
Silver	109	0.2698	0.2709	0.2682	**0.2696**	0.0014	0.5202

Internal Standard Factors:

Rhodium	103	1.164	1.171	1.153	**1.164** n/a		n/a
Indium	115	1.092	1.094	1.1	**1.092** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-006 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:14					
Antimony	121	0.2276	0.2142	0.2187	**0.2202**	0.0068	3.095
Antimony	123	0.2259	0.2296	0.2292	**0.2282**	0.0021	0.9118
Silver	107	0.3633	0.3534	0.3585	**0.3584**	0.0049	1.373
Silver	109	0.1334	0.1278	0.1293	**0.1302**	0.0029	2.228

Internal Standard Factors:

Rhodium	103	1.214	1.206	1.205	**1.214**	n/a	n/a
Indium	115	1.132	1.141	1.134	**1.132**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV13			Mean	SD	%RSD
TimeStamp		7/29/10 0:17					
Antimony	121	26	25.92	25.88	**25.93**	0.063	0.243
Antimony	123	25.62	25.53	25.83	**25.66**	0.1503	0.5856
Silver	107	25.41	24.97	25.17	**25.18**	0.2196	0.8723
Silver	109	25.26	24.97	25.14	**25.12**	0.1439	0.5727

Internal Standard Factors:

Rhodium	103	1.076	1.054	1.043	**1.076**	n/a	n/a
Indium	115	1.028	1.016	1.026	**1.028**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB13			Mean	SD	%RSD
TimeStamp		7/29/10 0:23					
Antimony	121	-0.0545	-0.0525	-0.0527	**-0.0533**	0.0011	2.046
Antimony	123	-0.056	-0.0536	-0.0562	**-0.0553**	0.0014	2.572
Silver	107	0.0096	0.0072	0.008	**0.0083**	0.0012	14.66
Silver	109	0.0085	0.0082	0.0065	**0.0077**	0.0011	14.08

Internal Standard Factors:

Rhodium	103	1.046	1.044	1.033	**1.046**	n/a	n/a
Indium	115	1.021	1.014	1.014	**1.021**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-007 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:25					
Antimony	121	0.879	1.131	1.044	**1.018**	0.1281	12.58
Antimony	123	0.8517	1.16	1.029	**1.014**	0.1548	15.27
Silver	107	0.3014	0.3998	0.3555	**0.3522**	0.0493	13.99
Silver	109	0.2259	0.2801	0.2605	**0.2555**	0.0275	10.76

Internal Standard Factors:

Rhodium	103	1.039	1.206	1.144	**1.039**	n/a	n/a
Indium	115	0.99	1.134	1.081	**0.99**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-009 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:28					
Antimony	121	0.4517	0.4346	0.4351	**0.4405**	0.0098	2.215
Antimony	123	0.4209	0.4302	0.4285	**0.4265**	0.005	1.163
Silver	107	0.2344	0.247	0.2383	**0.2399**	0.0065	2.696
Silver	109	0.1279	0.1301	0.1241	**0.1274**	0.0031	2.413

Internal Standard Factors:

Rhodium	103	1.163	1.136	1.158	**1.163**	n/a	n/a
Indium	115	1.089	1.099	1.086	**1.089**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-010 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:31					
Antimony	121	0.2343	0.2367	0.2396	**0.2369**	0.0027	1.123
Antimony	123	0.2299	0.2351	0.2227	**0.2292**	0.0062	2.723
Silver	107	0.2229	0.1966	0.2104	**0.21**	0.0131	6.259
Silver	109	0.0802	0.0755	0.0787	**0.0781**	0.0024	3.102

Internal Standard Factors:

Rhodium	103	1.195	1.176	1.183	**1.195**	n/a	n/a
Indium	115	1.127	1.12	1.119	**1.127**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-011 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:35					
Antimony	121	0.1863	0.1703	0.1764	**0.1777**	0.0081	4.535
Antimony	123	0.1692	0.178	0.1568	**0.168**	0.0107	6.357
Silver	107	0.2026	0.2026	0.2091	**0.2048**	0.0038	1.842
Silver	109	0.0933	0.0898	0.0894	**0.0909**	0.0021	2.364

Internal Standard Factors:

Rhodium	103	1.209	1.208	1.204	**1.209**	n/a	n/a
Indium	115	1.138	1.124	1.138	**1.138**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-012 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:38					
Antimony	121	1.184	1.143	1.208	**1.178**	0.0329	2.795
Antimony	123	1.183	1.151	1.18	**1.171**	0.0173	1.476
Silver	107	0.3298	0.3278	0.3184	**0.3254**	0.0061	1.866
Silver	109	0.2618	0.2594	0.2654	**0.2622**	0.003	1.161

Internal Standard Factors:

Rhodium	103	1.159	1.162	1.152	**1.159**	n/a	n/a
Indium	115	1.103	1.076	1.098	**1.103**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-0131/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:41					
Antimony	121	0.4902	0.4771	0.4887	**0.4853**	0.0072	1.48
Antimony	123	0.4729	0.4409	0.4903	**0.468**	0.0251	5.359
Silver	107	0.2715	0.2631	0.2684	**0.2676**	0.0043	1.594
Silver	109	0.1682	0.1688	0.1763	**0.1711**	0.0045	2.627

Internal Standard Factors:

Rhodium	103	1.157	1.163	1.157	**1.157**	n/a	n/a
Indium	115	1.11	1.086	1.095	**1.11**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006777-014 1/5 7/29/10 0:44			Mean	SD	%RSD
Antimony	121	0.1444	0.1456	0.1453	**0.1451**	0.0006	0.4331
Antimony	123	0.136	0.1304	0.1369	**0.1344**	0.0035	2.628
Silver	107	0.1799	0.1734	0.1735	**0.1756**	0.0037	2.134
Silver	109	0.0824	0.0798	0.0825	**0.0816**	0.0015	1.866

Internal Standard Factors:

Rhodium	103	1.174	1.169	1.172	**1.174**	n/a	n/a
Indium	115	1.119	1.123	1.12	**1.119**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: / TimeStamp		K1006777-015 1/5 7/29/10 0:47			Mean	SD	%RSD
Antimony	121	0.5334	0.5099	0.5097	**0.5177**	0.0136	2.629
Antimony	123	0.5031	0.5006	0.5097	**0.5045**	0.0047	0.9278
Silver	107	0.287	0.2806	0.2698	**0.2791**	0.0087	3.104
Silver	109	0.1663	0.1655	0.1723	**0.168**	0.0037	2.193

Internal Standard Factors:

Rhodium	103	1.149	1.138	1.148	**1.149** n/a		n/a
Indium	115	1.086	1.086	1.075	**1.086** n/a		n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		K1006777-016 1/5			Mean	SD	%RSD
TimeStamp		7/29/10 0:50					
Antimony	121	0.2276	0.2355	0.2177	**0.227**	0.0089	3.93
Antimony	123	0.2245	0.2078	0.2205	**0.2176**	0.0087	4.014
Silver	107	0.3219	0.3221	0.3204	**0.3215**	0.0009	0.2823
Silver	109	0.1228	0.1227	0.1253	**0.1236**	0.0015	1.189

Internal Standard Factors:

Rhodium	103	1.189	1.186	1.181	**1.189**	n/a	n/a
Indium	115	1.122	1.11	1.109	**1.122**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name: TimeStamp		K1006777-017 1/5 7/29/10 0:53			Mean	SD	%RSD
Antimony	121	0.16	0.1616	0.1717	**0.1644**	0.0064	3.863
Antimony	123	0.1724	0.162	0.17	**0.1681**	0.0054	3.221
Silver	107	0.2528	0.2626	0.2442	**0.2532**	0.0092	3.639
Silver	109	0.0973	0.091	0.0926	**0.0936**	0.0033	3.502

Internal Standard Factors:

Rhodium	103	1.239	1.244	1.236	**1.239**	n/a	n/a
Indium	115	1.171	1.16	1.161	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCV14			Mean	SD	%RSD
TimeStamp		7/29/10 0:57					
Antimony	121	26.31	25.94	26.1	**26.12**	0.1817	0.6956
Antimony	123	25.95	25.27	26.02	**25.75**	0.4139	1.607
Silver	107	25.35	25.38	25.01	**25.24**	0.2052	0.8129
Silver	109	25.31	25.23	25.13	**25.22**	0.0927	0.3674

Internal Standard Factors:

Rhodium	103	1.082	1.081	1.078	**1.082**	n/a	n/a
Indium	115	1.071	1.044	1.039	**1.071**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-28-10D
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #221314

Sample Name:		CCB14			Mean	SD	%RSD
TimeStamp		7/29/10 1:02					
Antimony	121	-0.0553	-0.0528	-0.0586	**-0.0556**	0.0029	5.199
Antimony	123	-0.0561	-0.0515	-0.0553	**-0.0543**	0.0025	4.519
Silver	107	0.0092	0.0095	0.0088	**0.0092**	0.0003	3.697
Silver	109	0.0094	0.0076	0.0082	**0.0084**	0.0009	11.13

Internal Standard Factors:

Rhodium	103	1.066	1.057	1.048	**1.066**	n/a	n/a
Indium	115	1.027	1.016	1.014	**1.027**	n/a	n/a

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow Plant Background
Project No.: 24-46-0006.13-2010-400

Service Request: K1006777

Sample Name:	Lab Code:
Batch QC1D	K1006524-005D
Batch QC1S	K1006524-005S
BG-120 COMP	K1006777-008
BG-120 COMPD	K1006777-008D
BG-120 COMPS	K1006777-008S
Method Blank	K1006777-MB

Comments:

Approved By: _____ **Date:** 7/30/13

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	24-46-0006.13-2010-400	**Date Collected:**	06/29/10
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	07/01/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: BG-120 COMP **Lab Code:** K1006777-008

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	0.02	1.0	07/21/10	07/26/10	0.02	U	
Arsenic	6020	0.50	0.07	1.0	07/21/10	07/26/10	0.07	U	
Barium	6010B	5.0	0.6	1.0	07/21/10	07/22/10	0.6	U	
Beryllium	6010B	5.0	0.05	1.0	07/21/10	07/22/10	0.05	U	
Cadmium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Calcium	6010B	50.0	6.0	1.0	07/21/10	07/22/10	8.4	J	
Chromium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Cobalt	6010B	10	2.0	1.0	07/21/10	07/22/10	2.0	U	
Copper	6010B	10.0	2.0	1.0	07/21/10	07/22/10	2.9	J	
Iron	6010B	20.0	0.8	1.0	07/21/10	07/22/10	2.6	J	
Lead	6010B	50.0	20.0	1.0	07/21/10	07/22/10	20.0	U	
Magnesium	6010B	20.0	0.3	1.0	07/21/10	07/22/10	0.3	U	
Manganese	6010B	5.00	0.20	1.0	07/21/10	07/22/10	0.21	J	
Mercury	7470A	0.20	0.02	1.0	07/07/10	07/09/10	0.02	J	
Nickel	6010B	20.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Potassium	6010B	400	40	1.0	07/21/10	07/22/10	40	U	
Selenium	6020	1.0	0.3	1.0	07/21/10	07/26/10	0.3	U	
Silver	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Sodium	6010B	100	20	1.0	07/21/10	07/22/10	20	U	
Thallium	6020	0.020	0.002	1.0	07/21/10	07/26/10	0.002	U	
Uranium	6020	0.020	0.003	1.0	07/21/10	07/26/10	0.003	U	
Vanadium	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Zinc	6010B	10.0	0.8	1.0	07/21/10	07/22/10	1.0	J	

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	24-46-0006.13-2010-400	**Date Collected:**	
Project Name:	Rhodia Silver Bow Plant Backgrou	**Date Received:**	
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: Method Blank **Lab Code:** K1006777-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	0.02	1.0	07/21/10	07/26/10	0.02	U	
Arsenic	6020	0.50	0.07	1.0	07/21/10	07/26/10	0.07	U	
Barium	6010B	5.0	0.6	1.0	07/21/10	07/22/10	0.6	U	
Beryllium	6010B	5.0	0.05	1.0	07/21/10	07/22/10	0.05	U	
Cadmium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Calcium	6010B	50.0	6.0	1.0	07/21/10	07/22/10	6.0	U	
Chromium	6010B	5.0	2.0	1.0	07/21/10	07/22/10	2.8	J	
Cobalt	6010B	10	2.0	1.0	07/21/10	07/22/10	2.0	U	
Copper	6010B	10.0	2.0	1.0	07/21/10	07/22/10	2.4	J	
Iron	6010B	20.0	0.8	1.0	07/21/10	07/22/10	1.1	J	
Lead	6010B	50.0	20.0	1.0	07/21/10	07/22/10	20.0	U	
Magnesium	6010B	20.0	0.3	1.0	07/21/10	07/22/10	0.3	U	
Manganese	6010B	5.00	0.20	1.0	07/21/10	07/22/10	0.20	U	
Mercury	7470A	0.20	0.02	1.0	07/07/10	07/09/10	0.02	U	
Nickel	6010B	20.0	2.0	1.0	07/21/10	07/22/10	2.0	U	
Potassium	6010B	400	40	1.0	07/21/10	07/22/10	40	U	
Selenium	6020	1.0	0.3	1.0	07/21/10	07/26/10	0.3	U	
Silver	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Sodium	6010B	100	20	1.0	07/21/10	07/22/10	20	U	
Thallium	6020	0.020	0.002	1.0	07/21/10	07/26/10	0.002	U	
Uranium	6020	0.020	0.003	1.0	07/21/10	07/26/10	0.003	U	
Vanadium	6010B	10.0	5.0	1.0	07/21/10	07/22/10	5.0	U	
Zinc	6010B	10.0	0.8	1.0	07/21/10	07/22/10	0.8	U	

% Solids: 0.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	23.7	95	25.0	24.9	100	25.2	101	6020
Arsenic	25.0	24.7	99	25.0	25.0	100	24.9	100	6020
Barium	5000	5080	102	2500	2402	96	2395	96	6010B
Beryllium	125	124	99	50	50	100	50	100	6010B
Cadmium	1250	1287	103	500	513	103	504	101	6010B
Calcium	5000	5148	103	2500	2499	100	2467	99	6010B
Calcium	12500	12653	101	25000	25159	101	25306	101	6010B
Chromium	500	521	104	500	509	102	502	100	6010B
Cobalt	1250	1291	103	500	512	102	506	101	6010B
Copper	625	635	102	500	506	101	515	103	6010B
Iron	2500	2536	101	500	505	101	515	103	6010B
Iron	10000	9723	97	25000	24909	100	24953	100	6010B
Lead	2500	2570	103	2500	2542	102	2492	100	6010B
Magnesium	5000	4903	98	2000	1972	99	1966	98	6010B
Magnesium	12500	12485	100	25000	25062	100	25070	100	6010B
Manganese	1250	1253	100	1000	1002	100	993	99	6010B
Manganese	10000	9806	98	5000	4936	99	4908	98	6010B
Mercury	5.00	5.00	100	5.00	5.10	102	4.80	96	7470A
Nickel	1250	1282	103	500	513	103	504	101	6010B
Potassium	12500	12809	102	10000	9989	100	10133	101	6010B
Selenium	25.0	24.4	98	25.0	25.1	100	25.4	102	6020
Silver	625	635	102	500	500	100	503	101	6010B
Sodium	12500	12460	100	10000	9816	98	9955	100	6010B
Thallium	25.0	26.9	108	25.0	25.7	103	25.5	102	6020
Uranium	25.00	24.6	98	25.00	24.6	98	25.2	101	6020
Vanadium	1250	1282	103	500	509	102	502	100	6010B
Zinc	1250	1295	104	500	511	102	500	100	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.1	100			6020
Arsenic				25.0	24.8	99			6020
Barium				2500	2432	97	2434	97	6010B
Beryllium				50	50	100	49	98	6010B
Cadmium				500	518	104	518	104	6010B
Calcium				2500	2469	99	2461	98	6010B
Calcium				25000	25527	102	26255	105	6010B
Chromium				500	511	102	511	102	6010B
Cobalt				500	514	103	509	102	6010B
Copper				500	517	103	518	104	6010B
Iron				500	519	104	520	104	6010B
Iron				25000	24978	100	25334	101	6010B
Lead				2500	2518	101	2503	100	6010B
Magnesium				2000	1979	99	1981	99	6010B
Magnesium				25000	25106	100	25174	101	6010B
Manganese				1000	1010	101	1010	101	6010B
Manganese				5000	4951	99	4921	98	6010B
Mercury				5.00	5.00	100	4.90	98	7470A
Nickel				500	511	102	511	102	6010B
Potassium				10000	10015	100	9820	98	6010B
Selenium				25.0	25.5	102			6020
Silver				500	498	100	503	101	6010B
Sodium				10000	9871	99	9661	97	6010B
Thallium				25.0	26.1	104			6020
Uranium				25.00	25.9	104			6020
Vanadium				500	496	99	493	99	6010B
Zinc				500	516	103	511	102	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures **CCV Source:** CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.00	4.90	98	5.20	104	7470A

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Mercury				5.00	4.90	98			7470A

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05	0.04	80		
Arsenic				0.50	0.55	110		
Barium				5.00	4.75	95		
Beryllium				5.00	4.71	94		
Cadmium				5.00	4.43	89		
Calcium				50.00	62.10	124		
Chromium				5.00	7.71	154		
Cobalt				10.00	10.25	102		
Copper				10.00	11.45	114		
Iron				20.00	29.52	148		
Lead				50.00	50.73	101		
Magnesium				20.00	23.95	120		
Manganese				5.00	5.73	115		
Mercury				0.20	0.20	100		
Nickel				20.00	21.31	107		
Potassium				400.00	462.84	116		
Selenium				1.0	0.9	90		
Silver				10.00	8.39	84		
Sodium				200.00	262.94	131		
Thallium				0.020	0.025	125		
Uranium				0.02	0.02	100		
Vanadium				10.00	9.00	90		
Zinc				10.00	9.27	93		

Metals

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.020	U	0.020	U	-0.023	J	-0.024	J	6020
Arsenic	0.07	U	0.07	U	0.07	U	0.07	U	6020
Barium	0.6	U	0.6	U	0.6	U	0.6	U	6010B
Beryllium	0.05	U	0.05	U	0.09	J	0.12	J	6010B
Cadmium	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Calcium	6.0	U	6.0	U	6.0	U	6.0	U	6010B
Chromium	4.6	J	2.0	U	2.1	J	2.0	U	6010B
Cobalt	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Copper	2.0	U	2.0	U	2.0	U	3.0	J	6010B
Iron	5.1	J	2.2	J	4.3	J	3.5	J	6010B
Lead	20	U	20	U	20	U	20	U	6010B
Magnesium	0.3	U	0.3	U	0.4	J	2.0	J	6010B
Manganese	1.0	J	0.6	J	0.8	J	0.9	J	6010B
Mercury	0.02	J	0.03	J	0.02	J	0.02	U	7470A
Nickel	2.0	U	2.0	U	2.0	U	2.0	U	6010B
Potassium	40	U	40	U	40	U	40	U	6010B
Selenium	0.3	U	0.3	U	0.3	U	0.3	U	6020
Silver	5.0	U	5.0	U	5.0	U	5.0	U	6010B
Sodium	20	U	20	U	20	U	20	U	6010B
Thallium	0.006	J	0.003	J	0.006	J	0.006	J	6020
Uranium	0.003	U	0.003	U	0.003	J	0.004	J	6020
Vanadium	5.0	U	5.0	U	5.0	U	5.0	U	6010B
Zinc	0.8	U	0.8	U	0.8	U	0.8	U	6010B

Metals

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Barium			0.6	U					6010B
Beryllium			0.12	J					6010B
Cadmium			2.0	U					6010B
Calcium			6.0	U					6010B
Chromium			2.0	U					6010B
Cobalt			2.0	U					6010B
Copper			2.9	J					6010B
Iron			4.3	J					6010B
Lead			20	U					6010B
Magnesium			2.7	J					6010B
Manganese			1.1	J					6010B
Mercury			0.02	U	0.02	U	0.02	U	7470A
Nickel			2.0	U					6010B
Potassium			40	U					6010B
Silver			5.0	U					6010B
Sodium			20	U					6010B
Vanadium			5.0	U					6010B
Zinc			0.8	U					6010B

Metals

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BLANKS

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Mercury			0.02	U					7470A

Metals

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ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony			0.04	0.03				
Arsenic		25	0.64	26.1	104			
Selenium		25	-0.13	25.2	101			
Thallium			0.05	0.03				
Uranium			0.01	0.00				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Barium		500	0	448.6	89.7			
Beryllium		500	0	518.0	103.6			
Cadmium		1000	12	984.0	98.4			
Calcium	500000	500000	484643	481689.4	96.3			
Chromium		500	-1	493.9	98.8			
Cobalt		500	1	488.0	97.6			
Copper		500	4	489.7	97.9			
Iron	200000	200000	202073	197213.3	98.6			
Lead		1000	1	1003.0	100.3			
Magnesium	500000	500000	516485	514251.2	102.9			
Manganese		500	13	464.2	92.8			
Nickel		1000	-4	955.8	95.6			
Potassium			3	-34.9				
Silver		1000	1	975.9	97.6			
Sodium			147	40.6				
Vanadium		500	3	504.5	100.9			
Zinc		1000	7	955.4	95.5			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Matrix: WATER

Service Request: K1006777

Units: UG/L

Basis: N/A

% Solids: 0.0

Sample Name: Batch QC1S

Lab Code: K1006524-005S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	66 - 133	20.7		0.11		20.00	103.0		6020
Arsenic	72 - 129	30.8		9.55		20.00	106.2		6020
Barium	80 - 124	1960		97.2		2000.00	93.1		6010B
Beryllium	87 - 114	46		0.05	U	50.00	92.0		6010B
Cadmium	71 - 142	47		2.0	U	50.00	94.0		6010B
Chromium	89 - 117	194		2.0	U	200.00	97.0		6010B
Cobalt	88 - 117	472		2.0	U	500.00	94.4		6010B
Copper	86 - 113	226		2.0	U	250.00	90.4		6010B
Iron		6620		5810		1000.00	81.0		6010B
Lead	75 - 130	465		20.0	U	500.00	93.0		6010B
Manganese	84 - 121	1010		543		500.00	93.4		6010B
Nickel	86 - 120	475		7.3	J	500.00	93.5		6010B
Selenium	47 - 150	37.2		15.1		20.00	110.5		6020
Silver	79 - 120	42.8		5.0	U	50.00	85.6		6010B
Thallium	75 - 121	19.9		0.005	J	20.00	99.5		6020
Uranium	75 - 125	21.3		0.076		20.00	106.1		6020
Vanadium	89 - 115	484		5.0	U	500.00	96.8		6010B
Zinc	87 - 113	474		2.8	J	500.00	94.2		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	Service Request:	K1006777
Project No.:	24-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: BG-120 COMPS Lab Code: K1006777-008S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	76 - 126	1.10		0.02	J	1.00	108.0		7470A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company
Service Request: K1006777
Project No.: 24-46-0006.13-2010-400
Units: UG/L
Project Name: Rhodia Silver Bow Plant Backgrou
Basis: N/A
Matrix: WATER

Sample Name: Batch QC1A
Lab Code: K1006524-005A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	20.50		0.11		20	102		6020
Arsenic	75 - 125	30.33		9.55		20	104		6020
Selenium	75 - 125	36.1		15.1		20	105		6020
Thallium	75 - 125	19.710		0.005	J	20	99		6020
Uranium	75 - 125	21.35		0.08		20	106		6020

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	**Service Request:**	K1006777
Project No.:	24-46-0006.13-2010-400	**Units:**	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	**Basis:**	N/A
Matrix:	WATER		

Sample Name: BG-120 COMPA **Lab Code:** K1006777-008A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	85 - 115	1.10		0.02	J	1.0	108		7470A

Metals

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DUPLICATES

Client: Barr Engineering Company
Service Request: K1006777

Project No.: 24-46-0006.13-2010-400
Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou
Basis: N/A

Matrix: WATER
% Solids: 0.0

Sample Name: Batch QC1D
Lab Code: K1006524-005D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.11		0.11		0.0		6020
Arsenic	20	9.55		9.57		0.2		6020
Barium	20	97.2		96.4		0.8		6010B
Beryllium		0.05	U	0.05	J	200.0		6010B
Cadmium		2.0	U	2.0	U			6010B
Calcium	20	46900		46400		1.1		6010B
Chromium		2.0	U	2.0	U			6010B
Cobalt		2.0	U	2.0	U			6010B
Copper		2.0	U	2.0	U			6010B
Iron	20	5810		5790		0.3		6010B
Lead		20.0	U	20.0	U			6010B
Magnesium	20	52100		51700		0.8		6010B
Manganese	20	543		540		0.6		6010B
Nickel		7.3	J	6.6	J	10.1		6010B
Potassium	20	35500		35600		0.3		6010B
Selenium	20	15.1		16.1		6.4		6020
Silver		5.0	U	5.0	U			6010B
Sodium	20	122000		123000		0.8		6010B
Thallium		0.005	J	0.002	U	200.0		6020
Uranium		0.076		0.074		2.7		6020
Vanadium		5.0	U	5.0	U			6010B
Zinc		2.8	J	4.5	J	46.6		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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DUPLICATES

Client:	Barr Engineering Company	Service Request:	K1006777
Project No.:	24-46-0006.13-2010-400	Units:	UG/L
Project Name:	Rhodia Silver Bow Plant Backgrou	Basis:	N/A
Matrix:	WATER	% Solids:	0.0

Sample Name: BG-120 COMPD Lab Code: K1006777-008D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.02	J	0.02	U	200.0		7470A

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Aqueous LCS Source: CAS MIXED Solid LCS Source:

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony	20	20.6	103.0					
Arsenic	20	20.4	102.0					
Barium	5000	5010	100.2					
Beryllium	125	122	97.6					
Cadmium	1250	1290	103.2					
Calcium	12500	12300	98.4					
Chromium	500	513	102.6					
Cobalt	1250	1270	101.6					
Copper	625	627	100.3					
Iron	2500	2470	98.8					
Lead	2500	2560	102.4					
Magnesium	12500	12400	99.2					
Manganese	1250	1240	99.2					
Mercury	5	5.20	104.0					
Nickel	1250	1260	100.8					
Potassium	12500	12900	103.2					
Selenium	20	20.3	101.5					
Silver	625	625	100.0					
Sodium	12500	12800	102.4					
Thallium	20	22.6	113.0					
Uranium	20	20.8	104.0					
Vanadium	1250	1260	100.8					
Zinc	1250	1250	100.0					

Metals

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company

Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Sample Name: Batch QC1L

Lab Code: K1006524-005L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.106		0.100	U	100.0		MS
Arsenic	9.55		10.00		5		MS
Selenium	15.1		14.6		3		MS
Thallium	0.005	J	0.010	U	100.0		MS
Uranium	0.076		0.066	J	13		MS

Metals

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400 Units: UG/L

Project Name: Rhodia Silver Bow Plant Backgrou

Sample Name: BG-120 COMPL Lab Code: K1006777-008L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Barium	0.60	U	3.00	U			P
Beryllium	0.05	U	0.25	U			P
Cadmium	2.00	U	10.00	U			P
Calcium	8.36	J	31.85	J	281.0		P
Chromium	2.00	U	10.00	U			P
Cobalt	2.00	U	10.00	U			P
Copper	2.91	J	14.90	J	412.0		P
Iron	2.56	J	4.00	U	100.0		P
Lead	20.00	U	100.00	U			P
Magnesium	0.30	U	1.50	U			P
Manganese	0.21	J	1.00	U	100.0		P
Nickel	2.00	U	10.00	U			P
Potassium	40	U	200	U			P
Silver	5.00	U	25.00	U			P
Sodium	20.00	U	100.00	U			P
Vanadium	5.00	U	25.00	U			P
Zinc	1.02	J	7.20	J	605.9		P

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Barium	233.5		5	0.6	P
Beryllium	313.04		5.0	0.05	P
Cadmium	226.50		5	2.0	P
Calcium	211.2		50	6.0	P
Chromium	267.72		5	2.0	P
Cobalt	228.62		10	2.0	P
Copper	324.75		10	2.0	P
Iron	259.90		20	0.8	P
Lead	220.35		50	20.0	P
Magnesium	202.5		20	0.3	P
Manganese	257.61		5	0.2	P
Nickel	231.60		20	2.0	P
Potassium	766.49		400	40.0	P
Silver	328.07		10	5.0	P
Sodium	330.23		100	20.0	P
Vanadium	310.2		10	5.0	P
Zinc	206.2		10	0.8	P

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #: K-ICP-MS-02

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.05	0.02	MS
Arsenic	75		0.5	0.07	MS
Selenium	82		1.0	0.3	MS
Thallium	205		0.02	0.002	MS
Uranium	238		0.02	0.003	MS

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP/ICP-MS ID #:

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.7		0.20	0.02	CV

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals
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ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Barium	5.000	45000	6010B
Beryllium	5.000	9000	6010B
Cadmium	5.000	90000	6010B
Calcium	5.000	1800000	6010B
Chromium	5.000	90000	6010B
Cobalt	5.000	90000	6010B
Copper	5.000	90000	6010B
Iron	5.000	900000	6010B
Lead	5.000	90000	6010B
Magnesium	5.000	900000	6010B
Manganese	5.000	180000	6010B
Nickel	5.000	90000	6010B
Potassium	5.000	450000	6010B
Silver	5.000	9000	6010B
Sodium	5.000	180000	6010B
Vanadium	5.000	90000	6010B
Zinc	5.000	90000	6010B

Comments:

Metals
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ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

ICP ID Number: K-ICP-MS-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	900	6020
Arsenic	15.000	900	6020
Selenium	15.000	900	6020
Thallium	15.000	450	6020
Uranium	15.000	450	6020

Comments:

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: ~~MS~~ CV

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1006777-008	07/07/10	20.0	20.0
K1006777-008D	07/07/10	20.0	20.0
K1006777-008S	07/07/10	20.0	20.0
K1006777-MB	07/07/10	20.0	20.0
LCSW	07/07/10	20.0	20.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1006524-005D	07/21/10	50.0	50.0
K1006524-005S	07/21/10	50.0	50.0
K1006777-008	07/21/10	50.0	50.0
K1006777-MB	07/21/10	50.0	50.0
LCSW	07/21/10	50.0	50.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1006524-005D	07/21/10	50.0	50.0
K1006524-005S	07/21/10	50.0	50.0
K1006777-008	07/21/10	50.0	50.0
K1006777-MB	07/21/10	50.0	50.0
LCSW	07/21/10	50.0	50.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/22/10 **End Date:** 07/22/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
Blank	1	07:45					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
STDB	1	07:48					X	X		X				X		X	X			X			X							
STDA	1	07:51							X	X	X	X	X	X	X	X	X		X			X			X	X				
ICV1	1	07:55					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ICV1	1	07:58								X				X		X	X													
ICB1	1	08:01					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
CCV1	1	08:10					X	X		X				X		X	X			X			X							
CCV1	1	08:15							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB1	1	08:21					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
CRA1	1	08:24					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ICS-A1	1	08:27					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ICS-AB1	1	08:30					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	08:33																												
CCV2	1	08:36					X	X		X				X		X	X			X			X							
CCV2	1	08:39							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB2	1	08:42					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-MB	1	08:45					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
LCSW	1	08:48					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	08:51																												
K1006524-005D	1	08:54					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006524-005S	1	08:57					X	X	X		X	X	X	X	X		X		X			X			X	X				
ZZZZZZ	1	09:00																												
ZZZZZZ	1	09:03																												
ZZZZZZ	1	09:06																												
ZZZZZZ	1	09:09																												
ZZZZZZ	1	09:12																												
CCV3	1	09:15					X	X		X				X		X	X			X			X							
CCV3	1	09:18							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB3	1	09:21					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
ZZZZZZ	1	09:31																												
K1006777-008	1	09:34					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				
K1006777-008L	5	09:37					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 07/22/10 **End Date:** 07/22/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	09:40																												
ZZZZZZ	1	09:43																												
ZZZZZZ	1	09:46																												
ZZZZZZ	1	09:49																												
ZZZZZZ	1	09:52																												
ZZZZZZ	1	09:55																												
ZZZZZZ	1	09:58																												
CCV4	1	10:01					X	X		X				X		X	X			X			X							
CCV4	1	10:04							X	X	X	X	X	X	X	X	X		X			X			X	X				
CCB4	1	10:07					X	X	X	X	X	X	X	X	X	X	X		X	X		X	X		X	X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/26/10 **End Date:** 07/26/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	15:34			X	X															X			X				*
Cal. Stn	1	15:37			X	X															X			X				*
ICV1	1	15:41			X	X															X			X				*
CCV1	1	15:44			X	X															X			X				*
ICB1	1	15:53			X	X															X			X				*
CCB1	1	15:57			X	X															X			X				*
CRA1	1	16:00			X	X															X			X				*
ICS-A1	1	16:04			X	X															X			X				*
ICS-AB1	1	16:16			X	X															X			X				*
K1006777-MB	1	16:20			X	X															X			X				*
LCSW	1	16:24			X	X															X			X				*
ZZZZZZ	1	16:29																										
K1006524-005D	1	16:33			X	X															X			X				*
K1006524-005L	5	16:36			X	X															X			X				*
K1006524-005A	1	16:40			X	X															X			X				*
K1006524-005S	1	16:49			X	X															X			X				*
ZZZZZZ	1	16:53																										
ZZZZZZ	1	16:57																										
ZZZZZZ	1	17:01																										
CCV2	1	17:05			X	X															X			X				*
CCB2	1	17:13			X	X															X			X				*
ZZZZZZ	1	17:16																										
ZZZZZZ	1	17:20																										
ZZZZZZ	1	17:24																										
K1006777-008	1	17:28			X	X															X			X				*
ZZZZZZ	1	17:31																										
ZZZZZZ	1	17:34																										
ZZZZZZ	1	17:37																										
ZZZZZZ	1	17:41																										
ZZZZZZ	1	17:44																										
ZZZZZZ	1	17:48																										
CCV3	1	17:51			X	X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 **Method:** MS

Start Date: 07/26/10 **End Date:** 07/26/10

Sample No.	D/F	Time	% R	Analytes																									
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
CCB3	1	17:58			X	X															X			X				*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-ICP-MS-02 Method: MS
Start Date: 07/26/10 End Date: 07/26/10

Sample No.	D/F	Time	% R	Analytes B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U
Cal. Blk	1.00	15:34															X
Cal. Stn	1.00	15:37															X
ICV1	1.00	15:41															X
CCV1	1.00	15:44															X
ICB1	1.00	15:53															X
CCB1	1.00	15:57															X
CRA1	1.00	16:00															X
ICS-A1	1.00	16:04															X
ICS-AB1	1.00	16:16															X
K1006777-MB	1.00	16:20															X
LCSW	1.00	16:24															X
ZZZZZZ	1.00	16:29															
K1006524-005D	1.00	16:33															X
K1006524-005L	5.00	16:36															X
K1006524-005A	1.00	16:40															X
K1006524-005S	1.00	16:49															X
ZZZZZZ	1.00	16:53															
ZZZZZZ	1.00	16:57															
ZZZZZZ	1.00	17:01															
CCV2	1.00	17:05															X
CCB2	1.00	17:13															X
ZZZZZZ	1.00	17:16															
ZZZZZZ	1.00	17:20															
ZZZZZZ	1.00	17:24															
K1006777-008	1.00	17:28															X
ZZZZZZ	1.00	17:31															
ZZZZZZ	1.00	17:34															
ZZZZZZ	1.00	17:37															
ZZZZZZ	1.00	17:41															
ZZZZZZ	1.00	17:44															
ZZZZZZ	1.00	17:48															
CCV3	1.00	17:51															X
CCB3	1.00	17:58															X

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 07/09/10 **End Date:** 07/09/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
CalibrationBlank	1	11:25																X												
Standard#1	1	11:26																X												
Standard#2	1	11:28																X												
Standard#3	1	11:30																X												
Standard#4	1	11:31																X												
Standard#5	1	11:33																X												
ICV1	1	11:35																X												
ICB1	1	11:36																X												
CRA1	1	11:38																X												
CCV1	1	11:39																X												
CCB1	1	11:41																X												
K1006777-MB	1	11:43																X												
LCSW	1	11:44																X												
K1006777-008	1	11:46																X												
ZZZZZZ	1	11:47																												
K1006777-008D	1	11:49																X												
K1006777-008S	1	11:51																X												
ZZZZZZ	1	11:52																												
ZZZZZZ	1	11:54																												
ZZZZZZ	1	11:56																												
ZZZZZZ	1	11:57																												
CCV2	1	11:59																X												
CCB2	1	12:00																X												
ZZZZZZ	1	12:02																												
ZZZZZZ	1	12:04																												
ZZZZZZ	1	12:05																												
ZZZZZZ	1	12:07																												
ZZZZZZ	1	12:09																												
ZZZZZZ	1	12:10																												
ZZZZZZ	1	12:12																												
ZZZZZZ	1	12:13																												
ZZZZZZ	1	12:15																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 07/09/10 **End Date:** 07/09/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	12:17																												
CCV3	1	12:18																X												
CCB3	1	12:20																X												
ZZZZZZ	1	12:27																												
ZZZZZZ	1	12:29																												
ZZZZZZ	1	12:31																												
ZZZZZZ	1	12:32																												
ZZZZZZ	1	12:34																												
ZZZZZZ	1	12:36																												
ZZZZZZ	1	12:37																												
ZZZZZZ	1	12:39																												
ZZZZZZ	1	12:40																												
CCV4	1	12:42																X												
CCB4	1	12:44																X												
ZZZZZZ	1	12:45																												
ZZZZZZ	1	12:47																												
ZZZZZZ	1	12:48																												
ZZZZZZ	1	12:50																												
ZZZZZZ	1	12:52																												
ZZZZZZ	1	12:53																												
ZZZZZZ	1	12:55																												
ZZZZZZ	1	12:57																												
ZZZZZZ	1	12:58																												
ZZZZZZ	1	13:00																												
ZZZZZZ	1	13:01																												
CCV5	1	13:03																X												
CCB5	1	13:05																X												
ZZZZZZ	1	13:06																												
ZZZZZZ	1	13:08																												
ZZZZZZ	1	13:09																												
ZZZZZZ	1	13:11																												
ZZZZZZ	1	13:13																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1006777

Project No.: 24-46-0006.13-2010-400

Project Name: Rhodia Silver Bow Plant Backgrou

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 07/09/10 **End Date:** 07/09/10

Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	13:14																										
ZZZZZZ	1	13:16																										
ZZZZZZ	1	13:18																										
ZZZZZZ	1	13:19																										
ZZZZZZ	1	13:21																										
CCV6	1	13:22																X										
CCB6	1	13:24																X										
K1006777-008A	1	13:26																X										
CCV7	1	13:27																X										
CCB7	1	13:29																X										

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115798
Team: Metals
Analyst: WSchumann

Prep Workflow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 07/21/2010 12:40
Due Date: 07/10/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007192-03	Method Blank		50 mL	50 mL			Metals D, Metals T	1% HNO3
KQ1007192-04	Lab Control Sample		50 mL	50 mL	1 mL 1 mL	11605 19309	Metals D, Metals T	1% HNO3
K1006465-001	MW2-16S	.03	50 mL	50 mL			Metals D	1% HNO3
K1006465-002	MW2-16D	.03	50 mL	50 mL			Metals D	1% HNO3
K1006465-003	MW2-17S	.03	50 mL	50 mL			Metals D	1% HNO3
K1006465-004	MW2-17D	.03	50 mL	50 mL			Metals D	1% HNO3
K1006465-005	MW2-18S	.03	50 mL	50 mL			Metals D	1% HNO3
K1006465-006	MW2-18D	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-001	MW1-10	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-002	NSL-2	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-003	MW2-15	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-004	MW2-1	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-005	MW-2-2	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-005: KQ1007192-05	Duplicate	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-005: KQ1007192-06	Matrix Spike	.03	50 mL	50 mL	1 mL 1 mL	11605 19309	Metals D	1% HNO3
K1006524-006	M-1	.03	50 mL	50 mL			Metals D	1% HNO3
K1006524-007	FB-1	.03	50 mL	50 mL			Metals D	1% HNO3
K1006777-008	BG-120 COMP	.01	50 mL	50 mL			Metals T	1% HNO3

18 Total Samples consisting of 14 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET 200.8 1000ug/L Stock	Spike	19309	1/5/2011	K-MET Ag 1000 ppb Stock	Spike	11605	8/17/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-06	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	21-JUL-10 12:40	21-JUL-10 15:40	WSchumann		N	

Comments

Review

Reviewed by: _____ Date: 7/22/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115799
Team: Metals
Analyst: WSchumann

Prep Workflow: MetDigAqICP
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: N/A

Status: Prepped
Current Step: Digestion

Prep Date: 07/21/2010 12:40
Due Date: 07/10/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007193-03	Method Blank		50 mL	50 mL			Metals D, Metals T	1% HNO3 5% HCL
KQ1007193-04	Lab Control Sample		50 mL	50 mL	0.25 mL 0.25 mL 0.25 mL 0.5 mL	12778 14972 18109 18980	Metals D, Metals T	1% HNO3 5% HCL
K1006465-001	MW2-16S	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006465-002	MW2-16D	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006465-003	MW2-17S	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006465-004	MW2-17D	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006465-005	MW2-18S	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006465-006	MW2-18D	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-001	MW1-10	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-002	NSL-2	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-003	MW2-15	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-004	MW2-1	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-005	MW-2-2	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-005: KQ1007193-05	Duplicate	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-005: KQ1007193-06	Matrix Spike	.03	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL	17544 18837 18980 19543	Metals D	1% HNO3 5% HCL
K1006524-006	M-1	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006524-007	FB-1	.03	50 mL	50 mL			Metals D	1% HNO3 5% HCL
K1006777-008	BG-120 COMP	.01	50 mL	50 mL			Metals T	1% HNO3 5% HCL

18 Total Samples consisting of 14 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET QCP-CICV-1	Spike	18109	6/1/2011	K-MET SS3	Spike	18837	12/1/2010
K-MET QCP-CICV-2	Spike	12778	12/1/2010	K-MET SS4	Spike	18980	12/16/2010
K-MET QCP-CICV-3	Spike	14972	1/28/2011	K-MET SS5	Spike	19543	2/25/2011

K-MET SS1	Spike	17544	9/11/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET HCL	18676

Step	Name	ID
Digestion	K-MET HNO3	18888

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-06	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	21-JUL-10 12:40	21-JUL-10 15:40	WSchumann		N	

Comments

Review

Reviewed by: _____ Date: 7/22/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	0.50
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	0.50
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	0.50
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	0.50
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	
K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	0.25
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	0.25
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	0.25
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

CVAA Mercury Data Review Form

K-CVAA- 2

Element: Hg H_2O

Analysis Lot #: 208023

Cal. STD/CCV Source: HG1-93-O

Service Request Numbers:

K1006777, K1006817, K1006773, K1006827, K1006869

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

Data reviewed against service request(s) to ensure no samples were omitted: JDB (initials)

Primary Reviewed By: JDB Date: 7/9/10

Secondary Reviewed By: [signature] Date: 7/30/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.00		100%
2	ICB1	~	~	~	0.02		< 0.2
3	CRA1	~	~	~	0.20		100%
4	CCV1	~	~	~	5.10		102%
5	CCB1	~	~	~	0.03		< 0.2
6	K1006777-MB	20	20	~	0.00		0.00
7	LCSW	20	20	~	5.20		104%
8	K1006777-008	20	20	~	0.02		0.02
9	~~K1006777-008A~~	~~20~~	~~20~~	~~~~	~~0.76~~		~~76%~~ JB 7/9/10
10	K1006777-008D	20	20	~	0.00		0.00
11	K1006777-008S	20	20	~	1.10		108%
12	K1006817-001	20	20	~	0.01		0.01
13	K1006817-002	20	20	~	-0.01		-0.01
14	K1006817-003	20	20	~	0.00		0.00
15	K1006817-004	20	20	~	0.00		0.00
16	CCV2	~	~	~	4.80		96%
17	CCB2	~	~	~	0.02		< 0.2
18	K1006817-005	20	20	~	0.32		0.32
19	K1006817-006	20	20	~	0.00		0.00
20	K1006817-007	20	20	~	0.25		0.25
21	K1006817-008	20	20	~	0.25		0.25
22	K1006817-009	20	20	~	-0.01		-0.01
23	K1006817-010	20	20	~	0.00		0.00
24	K1006817-011	20	20	~	0.00		0.00
25	K1006817-012	20	20	~	0.00		0.00

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level: 1.0 ppb

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Josh D Baird	7/9/10	1

[Controlled - HgWaterRunForm 2-18-10] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K1006817-013	20	20	~	0.00		0.00
27	K1006817-014	20	20	~	0.23		0.23
28	CCV3	~	~	~	5.00		100%
29	CCB3	~	~	~	0.00		< 0.2
30	K1006817-001 DISS	20	20	~	0.00		0.00
31	K1006817-002 DISS	20	20	~	-0.01		-0.01
32	K1006817-003 DISS	20	20	~	-0.01		-0.01
33	K1006817-004 DISS	20	20	~	-0.01		-0.01
34	K1006817-005 DISS	20	20	~	0.30		0.30
35	K1006817-MB	20	20	~	0.00		0.00
36	LCSW	20	20	~	5.20		104%
37	K1006817-006 DISS	20	20	~	0.00		0.00
38	K1006817-007 DISS	20	20	~	0.24		0.24
39	CCV4	~	~	~	4.90		98%
40	CCB4	~	~	~	0.01		< 0.2
41	K1006817-008 DISS	20	20	~	0.26		0.26
42	K1006817-009 DISS	20	20	~	0.00		0.00
43	K1006817-010 DISS	20	20	~	0.00		0.00
44	K1006817-011 DISS	20	20	~	0.00		0.00
45	K1006817-012 DISS	20	20	~	-0.01		-0.01
46	K1006817-013 DISS	20	20	~	0.00		0.00
47	K1006817-014 DISS	20	20	~	0.21		0.21
48	K1006827-001	20	20	~	0.05		0.05
49	K1006869-001	20	20	~	0.04		0.04
50	K1006869-001 DISS	20	20	~	0.04		0.04

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Josh O'Brien	7/9/10	2

[Controlled - HgWaterRunForm 2-18-10] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	K1006773-001	20	20	~	0.04		0.04
52	CCV5	~	~	~	4.90		98%
53	CCB5	~	~	~	0.01		< 0.2
54	K1006773-002	20	20	~	0.01		0.01
55	K1006773-002A	20	20	~	1.10		109%
56	K1006773-002D	20	20	~	0.01		0.01
57	K1006773-002S	20	20	~	1.10		109%
58	K1006773-003	20	20	~	0.00		0.00
59	K1006773-004	20	20	~	0.00		0.00
60	K1006733-001 DISS	20	20	~	0.00		0.00
61	K1006773-002 DISS	20	20	~	0.00		0.00
62	K1006773-003 DISS	20	20	~	-0.01		-0.01
63	K1006773-004 DISS	20	20	~	-0.01		-0.01
64	CCV6	~	~	~	5.20		104%
65	CCB6	~	~	~	0.00		< 0.2
66	K1006777-008A	20	20	~	1.10		108%
67	CCV7	~	~	~	4.90		98%
68	CCB7	~	~	~	0.00		< 0.2
69							
70							
71							
72							
73							
74							
75							

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Josh D Burk	7/9/10	3

[Controlled - HgWaterRunForm 2-18-10] HG3.XLS

Columbia Analytical Services K-CVAA-02

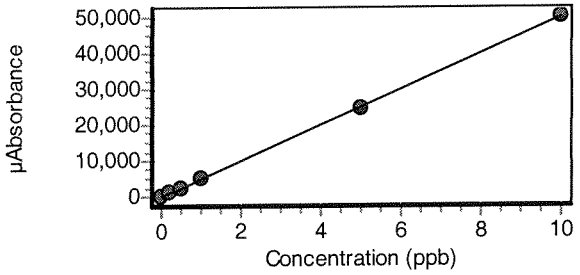
Report Generated By CETAC QuickTrace
Analyst: ACQMET18
Worksheet file: C:\Program Files\QuickTrace\Worksheets\070910A.wsz
Date Started: 7/9/2010 10:42:25 AM
Comment:

Results

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank				STD	07/09/10 11:25:23 am	0.00	124	16.53	
Replicates	121.4	153.4	106.5	114.8					
Standard #1				STD	07/09/10 11:26:59 am	0.20	1062	1.46	
Replicates	1083.3	1047.5	1054.6	1060.8					
Standard #2				STD	07/09/10 11:28:36 am	0.50	2551	1.91	
Replicates	2479.0	2561.1	2581.0	2581.4					
Standard #3				STD	07/09/10 11:30:14 am	1.00	5137	0.77	
Replicates	5095.4	5187.1	5148.4	5118.6					
Standard #4				STD	07/09/10 11:31:52 am	5.00	24872	0.69	
Replicates	24703.2	24746.2	25005.3	25033.7					
Standard #5				STD	07/09/10 11:33:30 am	10.00	50254	1.48	
Replicates	49906.3	49582.8	50230.7	51297.8					

Calibration

Equation: A = 124.022 + 5000.064C
R2: 0.99995
SEE: 173.1500
Flags:



ICV1				ICV	07/09/10 11:35:09 am	5.00	25099	0.19	
Replicates	25141.6	25066.0	25051.9	25137.4					
% Recovery	99.90								

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB1					ICB	07/09/10 11:36:45 am	0.02	229	18.99	
	Replicates	285.9	235.3	213.9	182.3					
CRA1					CRDL	07/09/10 11:38:21 am	0.20	1128	0.44	
	Replicates	1120.7	1130.0	1128.8	1132.1					
	% Recovery	100.39								
CCV1					CCV	07/09/10 11:39:59 am	5.10	25518	2.15	
	Replicates	24871.1	25904.1	26034.7	25260.7					
	% Recovery	101.57								
CCB1					CCB	07/09/10 11:41:35 am	0.03	247	25.23	
	Replicates	337.2	236.4	213.2	199.8					
K1006777-MB					UNK	07/09/10 11:43:10 am	0.00	118	10.16	
	Replicates	116.2	101.6	125.1	128.3					
LCSW					UNK	07/09/10 11:44:47 am	5.20	25981	1.34	
	Replicates	25526.2	26051.4	25978.6	26368.1					
K1006777-008					UNK	07/09/10 11:46:23 am	0.02	228	24.82	
	Replicates	300.4	245.9	179.5	186.7					
K1006777-008A					UNK	07/09/10 11:47:59 am	0.76	3948	1.72	
	Replicates	4026.3	3982.6	3886.5	3895.8					
K1006777-~~008S~~ 0085					UNK	07/09/10 11:49:36 am	0.00	146	12.06	
	Replicates	153.3	136.7	127.8	167.6					
K1006777-0085 ~~K1006817-001~~ JB 7/7/10					UNK	07/09/10 11:51:14 am	1.10	5412	1.10	
	Replicates	5458.7	5431.4	5433.5	5324.5					
K1006817-~~002~~ 001					UNK	07/09/10 11:52:51 am	0.01	180	13.16	
	Replicates	212.4	181.5	164.0	160.8					
K1006817-~~003~~ 002					UNK	07/09/10 11:54:29 am	-0.01	76	46.52	
	Replicates	30.7	93.6	113.1	68.5					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006817-~~004~~ 003				UNK	07/09/10 11:56:07 am	0.00	111	27.04	
Replicates	119.7	149.8	87.6	87.1					
K1006817-~~005~~ 004				UNK	07/09/10 11:57:45 am	0.00	111	14.07	
Replicates	96.9	125.5	98.1	123.5					
CCV2				CCV	07/09/10 11:59:23 am	4.80	24340	1.42	
Replicates	24090.8	24103.6	24334.0	24829.9					
% Recovery	96.86								
CCB2				CCB	07/09/10 12:00:59 pm	0.02	238	21.36	
Replicates	301.9	247.0	225.7	179.1					
K1006817-~~006~~ 005				UNK	07/09/10 12:02:37 pm	0.32	1729	0.98	
Replicates	1712.7	1737.6	1717.4	1748.5					
K1006817-~~007~~ 006				UNK	07/09/10 12:04:16 pm	0.00	133	23.75	
Replicates	110.2	146.2	170.7	103.5					
K1006817-~~008~~ 007				UNK	07/09/10 12:05:51 pm	0.25	1391	1.06	
Replicates	1403.1	1370.6	1391.8	1400.1					
K1006817-~~009~~ 008				UNK	07/09/10 12:07:27 pm	0.25	1380	2.58	
Replicates	1427.0	1386.8	1348.2	1356.7					
K1006817-~~010~~ 009				UNK	07/09/10 12:09:03 pm	-0.01	91	23.58	
Replicates	72.3	114.1	73.5	105.1					
K1006817-~~011~~ 010 JB 7/9/10				UNK	07/09/10 12:10:39 pm	0.00	101	10.21	
Replicates	97.9	91.9	115.8	98.1					
K1006817-~~012~~ 011				UNK	07/09/10 12:12:15 pm	0.00	117	12.85	
Replicates	130.6	96.8	125.6	114.3					
K1006817-~~013~~ 012				UNK	07/09/10 12:13:52 pm	0.00	105	19.63	
Replicates	99.9	132.5	103.5	83.0					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006817-~~014~~ 013				UNK	07/09/10 12:15:29 pm	0.00	136	6.84	
Replicates	122.3	138.1	141.3	142.3					
JB 7/2/10									
K1006817-~~001 DISS~~ 014				UNK	07/09/10 12:17:06 pm	0.23	1289	1.52	
Replicates	1288.3	1266.2	1286.8	1314.1					
CCV3				CCV	07/09/10 12:18:44 pm	5.00	24981	0.55	
Replicates	24823.6	24965.6	24974.6	25160.8					
% Recovery	99.43								
CCB3				CCB	07/09/10 12:20:20 pm	0.00	130	22.11	
Replicates	165.5	133.9	95.9	124.0					
K1006817-001 DISS				UNK	07/09/10 12:27:57 pm	0.00	124	11.91	
Replicates	123.9	134.7	134.7	103.3					
K1006817-002 DISS				UNK	07/09/10 12:29:35 pm	-0.01	76	21.81	
Replicates	66.3	83.7	57.9	94.3					
K1006817-003 DISS				UNK	07/09/10 12:31:13 pm	-0.01	91	17.35	
Replicates	94.6	108.6	88.2	70.7					
K1006817-004 DISS				UNK	07/09/10 12:32:52 pm	-0.01	88	24.07	
Replicates	67.3	72.7	104.1	108.9					
K1006817-005 DISS				UNK	07/09/10 12:34:27 pm	0.30	1646	0.97	
Replicates	1656.1	1634.3	1630.3	1662.9					
K1006817-MB				UNK	07/09/10 12:36:03 pm	0.00	122	7.45	
Replicates	130.8	124.8	123.0	109.3					
LCSW				UNK	07/09/10 12:37:39 pm	5.20	25971	3.39	
Replicates	25804.9	25131.5	25736.9	27210.0					
K1006817-006 DISS				UNK	07/09/10 12:39:15 pm	0.00	144	17.11	
Replicates	171.6	131.0	156.2	116.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006817-007 DISS				UNK	07/09/10 12:40:51 pm	0.24	1346	0.55	
Replicates	1350.9	1345.0	1335.4	1351.2					
CCV4				CCV	07/09/10 12:42:29 pm	4.90	24764	1.06	
Replicates	25060.4	24892.2	24623.2	24478.8					
% Recovery	98.56								
CCB4				CCB	07/09/10 12:44:05 pm	0.01	161	13.35	
Replicates	155.0	192.1	150.4	144.7					
K1006817-008 DISS				UNK	07/09/10 12:45:41 pm	0.26	1439	2.97	
Replicates	1428.6	1483.9	1457.8	1384.3					
K1006817-009 DISS				UNK	07/09/10 12:47:18 pm	0.00	138	16.83	
Replicates	112.1	131.8	138.8	168.0					
K1006817-010 DISS				UNK	07/09/10 12:48:56 pm	0.00	114	30.95	
Replicates	146.0	90.8	76.9	142.0					
K1006817-011 DISS				UNK	07/09/10 12:50:33 pm	0.00	121	37.64	
Replicates	183.5	75.4	108.6	114.6					
K1006817-012 DISS				UNK	07/09/10 12:52:11 pm	-0.01	97	32.44	
Replicates	99.5	54.5	130.3	105.0					
K1006817-013 DISS				UNK	07/09/10 12:53:49 pm	0.00	136	17.18	
Replicates	130.4	149.2	159.7	106.3					
K1006817-014 DISS				UNK	07/09/10 12:55:28 pm	0.21	1155	1.42	
Replicates	1135.8	1163.2	1173.3	1148.8					
K6827-001				UNK	07/09/10 12:57:04 pm	0.05	368	7.59	
Replicates	350.5	337.3	393.7	388.7					
K1006869-001				UNK	07/09/10 12:58:39 pm	0.04	302	12.32	
Replicates	349.0	312.2	282.0	264.2					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006869-001 DISS				UNK	07/09/10 01:00:15 pm	0.04	310	9.54	
Replicates	339.0	328.9	299.1	273.8					
K1006773-001				UNK	07/09/10 01:01:51 pm	0.04	307	9.69	
Replicates	351.2	285.6	297.3	294.6					
CCV5				CCV	07/09/10 01:03:29 pm	4.90	24682	0.26	
Replicates	24733.3	24626.4	24627.8	24742.4					
% Recovery	98.23								
CCB5				CCB	07/09/10 01:05:05 pm	0.01	185	8.86	
Replicates	169.0	182.2	182.5	208.2					
K1006773-002				UNK	07/09/10 01:06:41 pm	0.01	165	18.42	
Replicates	171.6	204.3	150.9	133.6					
K1006773-002A				UNK	07/09/10 01:08:18 pm	1.10	5607	0.50	
Replicates	5606.0	5636.6	5569.5	5617.1					
K1006773-002D				UNK	07/09/10 01:09:56 pm	0.01	160	7.34	
Replicates	151.4	176.7	152.7	157.5					
K1006773-002S				UNK	07/09/10 01:11:33 pm	1.10	5546	1.74	
Replicates	5400.8	5597.1	5593.9	5591.3					
K1006773-003				UNK	07/09/10 01:13:11 pm	0.00	113	30.17	
Replicates	149.2	127.4	108.6	68.5					
K1006773-004				UNK	07/09/10 01:14:49 pm	0.00	145	14.09	
Replicates	174.1	126.8	139.1	138.9					
K1006733-001 DISS				UNK	07/09/10 01:16:27 pm	0.00	132	17.71	
Replicates	149.3	137.4	143.7	97.7					
K1006773-002 DISS				UNK	07/09/10 01:18:05 pm	0.00	106	11.58	
Replicates	103.2	122.3	105.4	92.7					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1006773-003 DISS				UNK	07/09/10 01:19:41 pm	-0.01	94	29.58	
Replicates	123.8	112.0	65.8	75.7					
K1006773-004 DISS				UNK	07/09/10 01:21:17 pm	-0.01	93	14.13	
Replicates	85.2	112.1	88.8	84.5					
CCV6				CCV	07/09/10 01:22:55 pm	5.20	26066	2.01	
Replicates	25487.1	26549.6	26466.2	25761.3					
% Recovery	103.77								
CCB6				CCB	07/09/10 01:24:31 pm	0.00	128	8.56	
Replicates	143.0	129.5	121.8	118.2					
K1006777-008A				UNK	07/09/10 01:26:07 pm	1.10	5657	1.26	
Replicates	5619.3	5763.9	5621.8	5624.2					
CCV7				CCV	07/09/10 01:27:45 pm	4.90	24729	0.36	
Replicates	24858.0	24720.0	24682.7	24656.4					
% Recovery	98.42								
CCB7				CCB	07/09/10 01:29:21 pm	0.00	126	22.50	
Replicates	153.8	112.7	92.2	143.3					

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114975 **Prep Workflow:** HgDigAq **Status:** Prepped **Prep Date:** 07/07/2010 11:00
Team: Metals **Prep Method:** Method **Current Step:** Digestion **Due Date:** 07/14/2010
Analyst: KKLEIN **Rush/NPDES:** N/A

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006717-01	Method Blank		20 mL	20 mL			Hg T	
KQ1006717-02	Lab Control Sample		20 mL	20 mL	0.1 mL	19170	Hg T	
K1006777-008	BG-120 COMP	.01	20 mL	20 mL			Hg T	
K1006777-008: KQ1006717-03	Duplicate	.01	20 mL	20 mL			Hg T	
K1006777-008: KQ1006717-04	Matrix Spike	.01	20 mL	20 mL	J.2mL	19247	Hg T	
K1006817-001	K-20	.02	20 mL	20 mL			Hg D	
K1006817-001	K-20	.01	20 mL	20 mL			Hg T	
K1006817-002	FB1	.02	20 mL	20 mL			Hg D	
K1006817-002	FB1	.01	20 mL	20 mL			Hg T	
K1006817-003	K-21	.02	20 mL	20 mL			Hg D	
K1006817-003	K-21	.01	20 mL	20 mL			Hg T	
K1006817-004	M-1	.02	20 mL	20 mL			Hg D	
K1006817-004	M-1	.01	20 mL	20 mL			Hg T	
K1006817-005	K-22	.02	20 mL	20 mL			Hg D	
K1006817-005	K-22	.01	20 mL	20 mL			Hg T	
K1006817-006	K-12	.01	20 mL	20 mL			Hg T	
K1006817-007	K-2	.01	20 mL	20 mL			Hg T	
K1006817-008	M-2	.01	20 mL	20 mL			Hg T	
K1006817-009	K-3	.01	20 mL	20 mL			Hg T	
K1006817-010	K-4	.01	20 mL	20 mL			Hg T	
K1006817-011	K-7	.01	20 mL	20 mL			Hg T	
K1006817-012	K-10	.01	20 mL	20 mL			Hg T	
K1006817-013	K-13	.01	20 mL	20 mL			Hg T	

K1006817-014	K-6	.01	20 mL	20 mL			Hg T	

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L		19247	8/1/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET K2S2O8 Hg	15561
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET H2SO4 Hg	16385
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Step	Name	Property	Value	
Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	07-JUL-10 11:00	07-JUL-10 13:00	KKLEIN		N	

Comments

Cal. STD/CCV Source: HG1-93-O

Review

Reviewed by: JDB Date: 7/9/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 114976 **Prep Workflow**: HgDigAq **Status**: Draft **Prep Date**: 07/07/2010 11:00
Team: Metals **Prep Method**: Method **Current Step**: Digestion **Due Date**: 07/09/2010
Analyst: KKLEIN **Rush/NPDES**: Both

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1006718-01	Method Blank		20 mL	20 mL			Hg T	
KQ1006718-02	Lab Control Sample		20 mL	20 mL	0.1 mL	19170	Hg T	
K1006773-001	WQ14	.04	20 mL	20 mL			Hg D	
K1006773-001	WQ14	.03	20 mL	20 mL			Hg T	
K1006773-002	PAG Pond	.04	20 mL	20 mL			Hg D	
K1006773-002	PAG Pond	.03	20 mL	20 mL			Hg T	
K1006773-002: KQ1006718-03	Duplicate	.03	20 mL	20 mL			Hg T	
K1006773-002: KQ1006718-04	Matrix Spike	.03	20 mL	20 mL	0.2mL	19247	Hg T	
K1006773-003	WQ20	.04	20 mL	20 mL			Hg D	
K1006773-003	WQ20	.03	20 mL	20 mL			Hg T	
K1006773-004	WQ21	.04	20 mL	20 mL			Hg D	
K1006773-004	WQ21	.03	20 mL	20 mL			Hg T	
K1006817-006	K-12	.02	20 mL	20 mL			Hg D	
K1006817-007	K-2	.02	20 mL	20 mL			Hg D	
K1006817-008	M-2	.02	20 mL	20 mL			Hg D	
K1006817-009	K-3	.02	20 mL	20 mL			Hg D	
K1006817-010	K-4	.02	20 mL	20 mL			Hg D	
K1006817-011	K-7	.02	20 mL	20 mL			Hg D	
K1006817-012	K-10	.02	20 mL	20 mL			Hg D	
K1006817-013	K-13	.02	20 mL	20 mL			Hg D	
K1006817-014	K-6	.02	20 mL	20 mL			Hg D	
K1006827-001	070110	.05	20 mL	20 mL			Hg T	
K1006869-001	GM34921	.18	20 mL	20 mL			Hg D	

K1006869-001	GM34921	.13	20 mL	20 mL			Hg T	

19 Total Samples consisting of 15 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L		19247	8/1/2010

Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET K2S2O8 Hg	15561
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET H2SO4 Hg	16385
Digestion	K-MET 100ml Centrifuge Tube	16760

Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Step	Name	Property	Value	
Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	07-JUL-10 11:00	07-JUL-10 13:00	KKLEIN		N	

Comments

Cal STD/CCV Source: HG1-93-O

Review

Reviewed by: JDB Date: 7/9/10

Service Request # K1006777 (water)
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 072210AICP02
Star Lims: 209391

Primary Review by BC Date 7/22/10

Secondary Review by [signature] Date 7/22/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 07/22/10 07:45 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1150	.0319	.0249	.00021
Stddev	.0137	.0059	.0098	.00004
%RSD	11.95	18.42	39.26	19.163
#1	.1053	.0360	.0319	.00024
#2	.1247	.0277	.0180	.00018

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00259	.4045	.0004	.3623
Stddev	.00011	.0158	.0001	.0050
%RSD	4.2169	3.899	22.40	1.376
#1	-.00267	.3934	.0005	.3588
#2	-.00251	.4157	.0004	.3658

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.1187	-.0006	.0003	-.0414
Stddev	.0196	.0001	.0003	.0469
%RSD	16.50	19.90	102.4	113.2
#1	-.1325	-.0005	.0001	-.0745
#2	-.1048	-.0007	.0005	-.0083

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0011	.0005	.0001	.1455
Stddev	.0001	.0001	.0001	.0215
%RSD	6.698	19.61	197.7	14.79
#1	.0011	.0004	.0001	.1607
#2	.0010	.0006	.0000	.1302

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	-.01932	.00084	-.0005	.0002
Stddev	.00391	.00003	.0000	.0001
%RSD	20.260	3.8774	3.428	49.61
#1	-.02209	.00086	-.0005	.0002
#2	-.01655	.00081	-.0005	.0001

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.3230	-.0125	.0580
Stddev	.0002	.0623	.0294	.0195
%RSD	120.1	19.28	235.7	33.62
#1	.0000	.2789	.0083	.0442
#2	-.0003	.3670	-.0333	.0717

Sample Name: Blank Run Time: 07/22/10 07:45

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0027	.0005	.0073	.0009
Stddev	.0004	.0000	.0002	.0001
%RSD	16.55	1.262	2.591	9.422
#1	.0024	.0005	.0072	.0008
#2	.0030	.0005	.0074	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0353	.2840	.00298	.0001
Stddev	.0245	.0176	.00019	.0000
%RSD	69.31	6.185	6.3698	41.31
#1	.0526	.2964	.00312	.0001
#2	.0180	.2716	.00285	.0002

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.19736	-.00089
Stddev	.07623	.00027
%RSD	38.624	30.443
#1	.25126	-.00108
#2	.14346	-.00070

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	197.11
Stddev	.66
%RSD	.33649
#1	196.64
#2	197.58

7/22/10

7/22/10

Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 07/22/10 07:48 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.37	2.8877	.46912	36.63
Stddev	.11	.0326	.00107	.63
%RSD	.5297	1.1308	.22809	1.731
#1	20.29	2.8646	.46836	36.18
#2	20.44	2.9108	.46987	37.08

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.7388	59.71	.6628	225.7
Stddev	.0085	.17	.0018	.2
%RSD	1.149	.2927	.2756	.1012
#1	.7328	59.59	.6615	225.9
#2	.7448	59.84	.6641	225.5

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.650	46.31	97.06	434.27
Stddev	.014	.45	1.01	1.55
%RSD	.3016	.9759	1.042	.35730
#1	4.660	45.99	96.35	435.37
#2	4.640	46.63	97.78	433.18

Elem	Sr4077
Line	407.771 { 82}
Avg	8.4457
Stddev	.0083
%RSD	.09819
#1	8.4399
#2	8.4516

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	194.67
Stddev	.10
%RSD	.04944
#1	194.60
#2	194.74

Method: 2010A Sample Name: STDA ICP7-62-A Operator:
Comment:
Run Time: 07/22/10 07:51 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	16.71	11.28	48.42	.2741
Stddev	.07	.00	.16	.0066
%RSD	.4105	.0151	.3205	2.395
#1	16.66	11.28	48.31	.2787
#2	16.76	11.28	48.53	.2694

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	31.25	.1122	.1791	19.39
Stddev	.03	.0031	.0044	.11
%RSD	.0985	2.737	2.472	.5810
#1	31.23	.1144	.1822	19.47
#2	31.27	.1100	.1760	19.31

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4015	.0846	1416.5	2.9440
Stddev	.0178	.0020	29.5	.0749
%RSD	4.438	2.423	2.0799	2.5452
#1	.4141	.0860	1437.3	2.9969
#2	.3889	.0831	1395.6	2.8910

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1456	.1641	10.78	18.85
Stddev	.0021	.0039	.07	.02
%RSD	1.451	2.377	.6860	.1269
#1	.1471	.1669	10.72	18.86
#2	.1441	.1614	10.83	18.83

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0820	.1480	.1405	.16816
Stddev	.0018	.0038	.0038	.00443
%RSD	2.241	2.599	2.673	2.6327
#1	.0833	.1507	.1431	.17129
#2	.0807	.1453	.1378	.16503

Elem	Tl1908
Line	190.864 {176}
Avg	.0735
Stddev	.0013
%RSD	1.784
#1	.0745
#2	.0726

Sample Name: STDA Run Time: 07/22/10 07:51

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	203.29
Stddev	5.98
%RSD	2.9409
#1	199.06
#2	207.52

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 07/22/10 07:55 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.112	2.529	2.595	5.0802	.12418	.0021
Stddev	.023	.033	.032	.0100	.00023	.0002
%RSD	.4562	1.292	1.242	.19782	.18543	10.47
#1	5.095	2.506	2.572	5.0731	.12434	.0023
#2	5.128	2.552	2.618	5.0873	.12401	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	5.000%	5.000%	5.000%	5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.287	12.65	.5214	1.291	.6347	2.536
Stddev	.009	.23	.0063	.011	.0002	.017
%RSD	.7287	1.847	1.208	.8141	.0300	.6646
#1	1.280	12.49	.5170	1.284	.6346	2.524
#2	1.293	12.82	.5259	1.298	.6348	2.548
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.570	12.48	1.2528	2.057	1.282	12.81
Stddev	.033	.15	.0230	.032	.013	.26
%RSD	1.285	1.186	1.8322	1.566	1.014	2.037
#1	2.546	12.38	1.2366	2.035	1.272	12.62
#2	2.593	12.59	1.2690	2.080	1.291	12.99
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	5.000%	5.000%	5.0000%	5.000%	5.000%	5.000%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.549	.6351	12.46	.0127	1.282	1.295
Stddev	.001	.0056	.27	.0051	.000	.014
%RSD	.0366	.8821	2.152	40.21	.0275	1.095
#1	2.549	.6391	12.27	.0164	1.282	1.285
#2	2.550	.6312	12.65	.0091	1.281	1.305
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	5.000%	5.000%	5.000%		5.000%	5.000%

Sample Name: ICV1 Run Time: 07/22/10 07:55

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0196	-.1472	2.0766	2.590	.00042	.00694
Stddev	.0141	.0019	.0003	.027	.00022	.00007
%RSD	71.72	1.274	.01639	1.038	50.948	.97027
#1	-.0097	-.1459	2.0764	2.571	.00027	.00699
#2	-.0296	-.1486	2.0769	2.609	.00058	.00689
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	199.35
Stddev	.01
%RSD	.00530
#1	199.35
#2	199.34

Method: 2010A Sample Name: ICVB1 ICPM-S6-C Operator:
Comment:
Run Time: 07/22/10 07:58 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.018	.0182	.0030	.00660	.00026	1.987
Stddev	.018	.0007	.0013	.00065	.00004	.009
%RSD	1.810	3.809	43.00	9.8501	14.581	.4721
#1	1.031	.0187	.0021	.00706	.00028	1.980
#2	1.005	.0177	.0040	.00614	.00023	1.993
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	5.148	.0067	.0020	.0033	9.723
Stddev	.0001	.033	.0027	.0006	.0023	.044
%RSD	3.426	.6412	39.76	30.91	71.21	.4527
#1	.0018	5.124	.0086	.0024	.0016	9.755
#2	.0019	5.171	.0048	.0016	.0049	9.692
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097	4.9029	9.806	.0133	.0016	.0818
Stddev	.0099	.0209	.025	.0073	.0008	.0031
%RSD	101.7	.42526	.2533	54.48	47.78	3.821
#1	.0168	4.8881	9.789	.0185	.0011	.0840
#2	.0027	4.9176	9.824	.0082	.0022	.0795
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		5.0000%	5.000%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	-.0004	.0898	4.990	.0053	.0034
Stddev	.0100	.0004	.0008	.000	.0005	.0007
%RSD	119.6	97.34	.8673	.0000	9.755	20.60
#1	.0154	-.0001	.0903	4.990	.0049	.0029
#2	.0013	-.0007	.0892	4.990	.0057	.0039
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				5.000%		

Sample Name: ICVB1 Run Time: 07/22/10 07:58

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.017	5.105	.00398	.0163	2.0744	1.9786
Stddev	.029	.019	.00005	.0188	.0177	.0080
%RSD	.5777	.3705	1.2548	115.5	.85530	.40189
#1	4.997	5.092	.00394	.0296	2.0869	1.9842
#2	5.038	5.119	.00401	.0030	2.0618	1.9730
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	199.78
Stddev	.62
%RSD	.31079
#1	199.34
#2	200.22

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 07/22/10 08:01 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	-.0054	.0000	-.00016	.00001
Stddev	.0029	.0000	.0017	.00011	.00001
%RSD	108.2	.0283	41640.	66.052	84.600
#1	-.0006	-.0054	.0012	-.00023	.00001
#2	-.0047	-.0054	-.0012	-.00008	.00000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0007	-.0009	-.0029	.0045	.0013
Stddev	.0001	.0000	.0003	.0000	.0002
%RSD	11.00	4.148	10.85	.9509	14.99
#1	.0007	-.0009	-.0026	.0046	.0011
#2	.0006	-.0008	-.0031	.0045	.0014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0016	.0051	.0025	-.00004	.00101
Stddev	.0000	.0056	.0026	.00007	.00093
%RSD	.0664	110.0	106.2	169.86	91.456
#1	.0016	.0091	.0006	-.00009	.00167
#2	.0016	.0011	.0044	.00001	.00036
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0000	.0070	.0199	.0016
Stddev	.0001	.001	.0043	.0073	.0037
%RSD	3.578	2532.	61.96	36.50	231.2
#1	.0018	.0004	.0101	.0251	-.0010
#2	.0019	-.0004	.0039	.0148	.0043
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: ICB Run Time: 07/22/10 08:01

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0019	.0037	-.0007	-.0003	.0067
Stddev	.0031	.0043	.0014	.0001	.0021
%RSD	164.4	116.8	196.8	23.50	31.65
#1	.0040	.0067	-.0017	-.0003	.0052
#2	-.0003	.0006	.0003	-.0004	.0082
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0017	.00067	-.0010	.00000	.00011
Stddev	.0009	.00083	.0108	.00001	.00006
%RSD	55.64	122.50	1133.	275.96	54.753
#1	-.0024	.00009	-.0086	.00000	.00015
#2	-.0010	.00126	.0067	.00001	.00006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	197.18
Stddev	.13
%RSD	.06746
#1	197.09
#2	197.28

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 08:10 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.972	.0121	.0002	2.4021	.04966	.0037
Stddev	.037	.0076	.0077	.0068	.00018	.0006
%RSD	.7439	62.71	3426.	.28288	.37150	16.32
#1	4.935	.0069	-.0049	2.3955	.04983	.0035
#2	4.945	.0168	.0038	2.3982	.04978	.0030
#3	5.008	.0201	.0093	2.4037	.04963	.0038
#4	4.999	.0044	-.0073	2.4109	.04942	.0044
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	5.000%			5.0000%	5.0000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.16	.0021	-.0003	.0001	24.91
Stddev	.0002	.37	.0024	.0006	.0017	.19
%RSD	14.76	1.461	114.1	198.5	2382.	.7638
#1	.0014	24.62	.0013	-.0011	.0006	24.63
#2	.0014	25.31	.0037	.0003	-.0025	25.03
#3	.0018	25.45	-.0009	.0000	.0011	25.04
#4	.0013	25.25	.0042	-.0005	.0011	24.94
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		5.000%				5.000%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	25.06	4.936	.0006	-.0027	9.989
Stddev	.0089	.07	.008	.0011	.0005	.092
%RSD	313.7	.2804	.1652	200.1	18.41	.9219
#1	-.0050	24.97	4.929	.0003	-.0024	9.882
#2	.0099	25.09	4.930	.0013	-.0035	9.946
#3	-.0108	25.06	4.947	-.0009	-.0026	10.05
#4	-.0054	25.13	4.936	.0015	-.0024	10.08
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		5.000%	5.000%			5.000%

Sample Name: CCVB Run Time: 07/22/10 08:10

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	-.0001	9.816	-.0014	.0048	.0014
Stddev	.0106	.0018	.041	.0048	.0015	.0006
%RSD	213.0	1258.	.4210	339.3	30.12	41.18
#1	-.0040	-.0019	9.789	.0035	.0048	.0020
#2	.0012	.0007	9.781	-.0010	.0052	.0013
#3	.0204	.0019	9.824	-.0001	.0064	.0007
#4	.0024	-.0013	9.872	-.0080	.0029	.0016
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			5.000%			

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.01	2.498	.00102	.0256	.49911	.49648
Stddev	.06	.009	.00163	.0099	.00391	.00070
%RSD	.6396	.3781	160.19	38.63	.78246	.14047
#1	9.940	2.485	.00034	.0330	.49474	.49707
#2	9.979	2.499	.00024	.0137	.49822	.49702
#3	10.07	2.506	.00346	.0213	.49931	.49561
#4	10.06	2.503	.00003	.0345	.50419	.49621
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	5.000%	5.000%			5.0000%	5.0000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.47
Stddev	.74
%RSD	.37640
#1	196.48
#2	197.54
#3	197.56
#4	198.29

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 08:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4862	2.482	2.472	.45362	.52958	.5023
Stddev	.0149	.021	.021	.00095	.00120	.0017
%RSD	3.074	.8532	.8351	.21002	.22727	.3471
#1	.4954	2.451	2.449	.45366	.52928	.5003
#2	.5024	2.494	2.489	.45270	.52943	.5029
#3	.4736	2.492	2.460	.45322	.53124	.5017
#4	.4734	2.493	2.490	.45493	.52836	.5044
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		5.000%	5.000%			5.000%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5125	2.499	.5093	.5117	.5061	.5050
Stddev	.0022	.022	.0010	.0014	.0030	.0018
%RSD	.4243	.8921	.1973	.2679	.5854	.3570
#1	.5120	2.474	.5095	.5122	.5071	.5074
#2	.5102	2.519	.5088	.5114	.5087	.5031
#3	.5124	2.486	.5082	.5100	.5066	.5049
#4	.5154	2.516	.5105	.5132	.5018	.5046
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	5.000%	5.000%	5.000%	5.000%	5.000%	5.000%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.542	1.9720	1.0016	1.019	.5133	5.115
Stddev	.004	.0067	.0063	.004	.0034	.036
%RSD	.1746	.34197	.62452	.3559	.6659	.6950
#1	2.546	1.9622	.99552	1.016	.5136	5.133
#2	2.544	1.9767	1.0028	1.018	.5086	5.088
#3	2.536	1.9727	.99825	1.018	.5144	5.157
#4	2.542	1.9762	1.0098	1.024	.5167	5.084
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	5.000%	5.0000%	5.0000%	5.000%	5.000%	

Sample Name: CCVA Run Time: 07/22/10 08:15

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.470	.5004	.4722	2.490	.5088	.5111
Stddev	.008	.0035	.0064	.013	.0055	.0033
%RSD	.3262	.6958	1.364	.5190	1.080	.6451
#1	2.475	.4961	.4658	2.498	.5082	.5100
#2	2.478	.5046	.4691	2.475	.5018	.5091
#3	2.463	.5005	.4808	2.484	.5151	.5095
#4	2.462	.5005	.4730	2.503	.5100	.5161
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	5.000%	5.000%		5.000%	5.000%	5.000%

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0191	.2854	.50908	5.038	.51264	.49386
Stddev	.0088	.0031	.00191	.025	.00263	.00103
%RSD	46.42	1.082	.37521	.5059	.51312	.20782
#1	-.0082	.2851	.50638	5.027	.51268	.49501
#2	-.0225	.2870	.50926	5.031	.51174	.49254
#3	-.0166	.2813	.51081	5.019	.51620	.49373
#4	-.0290	.2884	.50989	5.076	.50994	.49416
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			5.0000%	5.000%		

Int. Std.	Sc3572
Units	Cts/S
Avg	201.05
Stddev	.45
%RSD	.22214
#1	200.57
#2	201.57
#3	200.81
#4	201.25

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 08:21 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0116	-.0009	.00007	.00003	.0002
Stddev	.0029	.0158	.0048	.00022	.00005	.0002
%RSD	7419.	135.7	521.0	297.77	153.53	74.41
#1	.0021	.0228	-.0043	.00023	.00007	.0004
#2	-.0020	.0005	.0025	-.00008	.00000	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0037	.0009	.0004	.0012	.0022
Stddev	.0005	.0028	.0030	.0002	.0011	.0012
%RSD	82.00	74.98	335.2	57.38	91.41	55.15
#1	-.0009	.0057	.0031	.0003	.0004	.0031
#2	-.0003	.0018	-.0012	.0006	.0020	.0014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.00006	.00058	.0034	.0002	.0036
Stddev	.0003	.00013	.00028	.0013	.0014	.0102
%RSD	8.134	211.88	47.770	38.68	601.5	287.3
#1	.0032	-.00003	.00077	.0044	-.0007	-.0037
#2	.0036	.00016	.00038	.0025	.0012	.0108
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	-.0021	.0035	.0026	.0021	-.0001
Stddev	.0036	.0002	.0021	.0056	.0000	.0003
%RSD	566.9	10.12	60.84	216.5	.5856	311.7
#1	.0032	-.0022	.0020	.0066	.0021	.0001
#2	-.0019	-.0019	.0050	-.0014	.0021	-.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 08:21

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094	-.0060	.00044	.0021	.00036	.00011
Stddev	.0120	.0001	.00065	.0123	.00009	.00000
%RSD	127.4	2.415	145.44	599.5	25.061	.26025
#1	.0009	-.0059	.00090	.0108	.00030	.00011
#2	.0178	-.0061	-.00001	-.0067	.00042	.00011
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	196.00
Stddev	.50
%RSD	.25443
#1	195.65
#2	196.35

Method: 2010A Sample Name: CRI ICP7-56-B Operator:
Comment:
Run Time: 07/22/10 08:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0617	.0451	.0764	.00475	.00471	.0487
Stddev	.0030	.0000	.0018	.00037	.00003	.0004
%RSD	4.823	.0743	2.334	7.7971	.66586	.8534
#1	.0638	.0452	.0776	.00501	.00469	.0490
#2	.0596	.0451	.0751	.00449	.00474	.0485
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044	.0621	.0077	.0103	.0115	.0295
Stddev	.0003	.0050	.0034	.0004	.0007	.0003
%RSD	7.162	8.034	43.77	3.678	6.149	.9659
#1	.0047	.0656	.0101	.0105	.0110	.0297
#2	.0042	.0586	.0053	.0100	.0119	.0293
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0507	.02395	.00573	.0101	.0213	.4628
Stddev	.0002	.00036	.00029	.0018	.0016	.0111
%RSD	.4709	1.4892	5.0542	18.20	7.419	2.409
#1	.0506	.02370	.00594	.0114	.0202	.4707
#2	.0509	.02421	.00553	.0088	.0224	.4550
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0957	.0084	.2629	.0358	.0090	.0093
Stddev	.0145	.0008	.0110	.0037	.0008	.0010
%RSD	15.14	9.930	4.198	10.21	8.342	10.66
#1	.0854	.0090	.2707	.0384	.0085	.0086
#2	.1059	.0078	.2551	.0332	.0095	.0100
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 07/22/10 08:24

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1761	.3994	.00969	.1454	.01025	.00954
Stddev	.0026	.0018	.00121	.0063	.00023	.00031
%RSD	1.457	.4572	12.498	4.358	2.2488	3.2546
#1	.1779	.3981	.01054	.1499	.01042	.00976
#2	.1742	.4007	.00883	.1409	.01009	.00932
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.2000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	198.57
Stddev	4.38
%RSD	2.2065
#1	195.47
#2	201.66

Method: 2010A Sample Name: ICSA ICP764-B Operator:
Comment:
Run Time: 07/22/10 08:27 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	507.5	.0468	.0022	-.00036	.00008	-.0142
Stddev	1.8	.0164	.0051	.00032	.00000	.0022
%RSD	.3544	35.01	228.5	89.142	.46515	15.32
#1	506.2	.0352	-.0014	-.00058	.00008	-.0127
#2	508.7	.0583	.0058	-.00013	.00008	-.0158
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	484.6	-.0010	.0007	.0038	202.1
Stddev	.0000	1.3	.0026	.0004	.0014	3.5
%RSD	.1450	.2666	256.2	48.73	36.05	1.730
#1	.0119	483.7	-.0028	.0005	.0028	199.6
#2	.0119	485.6	.0008	.0010	.0048	204.5
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	516.5	.00520	.0040	-.0036	.0030
Stddev	.0119	3.6	.00003	.0019	.0008	.0122
%RSD	817.1	.6887	.53889	47.28	22.81	399.6
#1	-.0069	514.0	.00518	.0027	-.0030	-.0056
#2	.0098	519.0	.00522	.0053	-.0041	.0117
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	.0015	.1470	-.0129	.0031	.0075
Stddev	.0030	.0010	.0002	.0119	.0005	.0009
%RSD	21.25	70.71	.1700	92.77	15.56	11.37
#1	.0122	.0007	.1472	-.0213	.0035	.0069
#2	.0165	.0022	.1468	-.0044	.0028	.0081
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 07/22/10 08:27

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0410	-.0186	.01313	.1493	.01240	.01613
Stddev	.0120	.0005	.00058	.0026	.00040	.00033
%RSD	29.36	2.864	4.4502	1.757	3.2393	2.0364
#1	.0325	-.0190	.01354	.1512	.01268	.01590
#2	.0495	-.0182	.01271	.1475	.01211	.01636
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	180.10
Stddev	1.89
%RSD	1.0468
#1	181.43
#2	178.77

Method: 2010A Sample Name: ICSAB ICP7-61-B Operator:
Comment:
Run Time: 07/22/10 08:30 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	502.2	1.055	.0028	.44855	.51804	-.0109
Stddev	2.8	.010	.0064	.00187	.00202	.0007
%RSD	.5641	.9360	227.9	.41756	.38919	6.759
#1	500.2	1.048	.0074	.44723	.51662	-.0103
#2	504.2	1.062	-.0017	.44988	.51947	-.0114
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9840	481.7	.4939	.4880	.4897	197.2
Stddev	.0057	1.7	.0033	.0028	.0042	.7
%RSD	.5817	.3444	.6617	.5830	.8613	.3381
#1	.9800	480.5	.4916	.4860	.4927	196.7
#2	.9881	482.9	.4962	.4900	.4867	197.7
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.003	514.3	.46434	.0024	.9558	-.0349
Stddev	.022	.4	.00210	.0015	.0000	.0061
%RSD	2.184	.0778	.45287	63.27	.0041	17.39
#1	.9875	514.0	.46286	.0034	.9558	-.0306
#2	1.019	514.5	.46583	.0013	.9559	-.0392
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0184	.9759	.0406	-.0113	.5045	.9554
Stddev	.0152	.0006	.0015	.0043	.0021	.0031
%RSD	82.59	.0654	3.757	37.70	.4182	.3238
#1	.0292	.9764	.0395	-.0144	.5060	.9532
#2	.0077	.9755	.0416	-.0083	.5030	.9576
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/22/10 08:30

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	-.0186	.01319	.1350	.01188	.01604
Stddev	.0030	.0066	.00098	.0394	.00004	.00012
%RSD	22.05	35.59	7.4560	29.18	.33994	.75162
#1	.0159	-.0233	.01249	.1071	.01185	.01596
#2	.0116	-.0139	.01388	.1628	.01191	.01613
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	183.21
Stddev	.29
%RSD	.15992
#1	183.00
#2	183.41

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 07/22/10 08:33 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	504.0	1.037	-.0048	.45052	.52121	-.0113
Stddev	1.5	.002	.0050	.00043	.00347	.0002
%RSD	.3047	.1691	106.0	.09559	.66505	1.533
#1	505.1	1.036	-.0012	.45083	.52366	-.0114
#2	502.9	1.038	-.0083	.45022	.51876	-.0112
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9875	484.5	.4939	.4875	.4887	197.2
Stddev	.0031	3.3	.0042	.0025	.0006	.6
%RSD	.3186	.6792	.8505	.5040	.1186	.2874
#1	.9897	482.2	.4909	.4892	.4891	196.8
#2	.9853	486.9	.4968	.4858	.4883	197.6
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.010	515.6	.46511	-.0004	.9595	-.0393
Stddev	.013	1.3	.00142	.0024	.0024	.0036
%RSD	1.283	.2531	.30489	658.1	.2459	9.269
#1	1.019	514.7	.46611	-.0021	.9611	-.0419
#2	1.001	516.5	.46411	.0013	.9578	-.0368
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0404	.9832	.0374	-.0097	.5039	.9554
Stddev	.0100	.0017	.0021	.0007	.0055	.0015
%RSD	24.88	.1735	5.733	7.466	1.084	.1548
#1	.0475	.9820	.0389	-.0092	.5078	.9544
#2	.0333	.9844	.0359	-.0102	.5000	.9565
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 07/22/10 08:33

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0371	-.0203	.01382	.1268	.01190	.01640
Stddev	.0188	.0024	.00240	.0217	.00007	.00072
%RSD	50.79	11.71	17.334	17.12	.58593	4.3624
#1	.0238	-.0186	.01552	.1114	.01194	.01691
#2	.0504	-.0220	.01213	.1421	.01185	.01589
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	183.33
Stddev	1.12
%RSD	.61104
#1	182.54
#2	184.12

7/22/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 08:36 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.049	.0102	-.0021	2.3950	.04952	.0040
Stddev	.056	.0035	.0013	.0005	.00001	.0005
%RSD	1.111	34.07	62.73	.02112	.02826	11.32
#1	5.089	.0127	-.0030	2.3946	.04953	.0043
#2	5.010	.0078	-.0012	2.3953	.04951	.0037
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.31	.0004	-.0009	.0021	24.95
Stddev	.0002	.12	.0013	.0007	.0003	.08
%RSD	14.17	.4706	356.8	75.44	13.99	.3366
#1	.0016	25.22	-.0006	-.0014	.0019	25.01
#2	.0013	25.39	.0013	-.0004	.0023	24.89
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0029	25.07	4.908	.0005	-.0015	10.13
Stddev	.0082	.08	.001	.0014	.0009	.02
%RSD	281.4	.3347	.0189	300.2	62.98	.1593
#1	.0029	25.01	4.907	-.0005	-.0021	10.12
#2	-.0087	25.13	4.908	.0014	-.0008	10.14
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0095	.0016	9.955	.0052	.0063	.0020
Stddev	.0009	.0017	.005	.0011	.0009	.0014
%RSD	9.625	102.5	.0488	20.36	14.74	70.14
#1	.0101	.0028	9.958	.0059	.0069	.0029
#2	.0089	.0004	9.951	.0044	.0056	.0010
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 08:36

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.03	2.494	.00174	.0175	.50737	.49755
Stddev	.08	.013	.00055	.0055	.00202	.00121
%RSD	.7866	.5260	31.790	31.58	.39844	.24243
#1	9.973	2.484	.00214	.0214	.50594	.49840
#2	10.08	2.503	.00135	.0136	.50880	.49669
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.82
Stddev	.77
%RSD	.38942
#1	197.28
#2	198.36

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 08:39 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4762	2.466	2.459	.44481	.52415	.5016
Stddev	.0137	.031	.008	.00004	.00064	.0029
%RSD	2.872	1.261	.3302	.00949	.12196	.5732
#1	.4665	2.444	2.465	.44484	.52461	.4995
#2	.4859	2.488	2.453	.44478	.52370	.5036
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5043	2.467	.5017	.5059	.5149	.5146
Stddev	.0004	.005	.0014	.0018	.0041	.0149
%RSD	.0751	.1926	.2729	.3611	.7984	2.897
#1	.5041	2.463	.5027	.5046	.5178	.5251
#2	.5046	2.470	.5007	.5072	.5120	.5040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.492	1.9664	.99318	.9939	.5037	5.135
Stddev	.006	.0073	.00036	.0057	.0007	.022
%RSD	.2294	.36922	.03642	.5715	.1468	.4255
#1	2.488	1.9613	.99292	.9899	.5032	5.119
#2	2.496	1.9716	.99343	.9979	.5042	5.150
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.454	.5025	.4700	2.433	.5015	.5003
Stddev	.023	.0017	.0029	.018	.0013	.0009
%RSD	.9494	.3350	.6223	.7490	.2668	.1770
#1	2.438	.5014	.4720	2.421	.5025	.4996
#2	2.471	.5037	.4679	2.446	.5006	.5009
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 08:39

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0177	.2856	.50737	5.004	.51518	.49258
Stddev	.0080	.0007	.00005	.042	.00058	.00055
%RSD	45.19	.2611	.01028	.8398	.11330	.11261
#1	-.0120	.2851	.50741	4.974	.51477	.49219
#2	-.0233	.2861	.50734	5.033	.51560	.49297
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	202.54
Stddev	.75
%RSD	.36897
#1	202.02
#2	203.07

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 08:42 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	.0133	-.0074	-.00007	.00009
Stddev	.0010	.0053	.0052	.00028	.00008
%RSD	36.79	40.29	70.70	403.81	91.417
#1	-.0020	.0170	-.0037	.00013	.00003
#2	-.0034	.0095	-.0111	-.00027	.00015
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0008	-.0007	.0021	.0001
Stddev	.0009	.0001	.0028	.0027	.0005
%RSD	470.9	10.69	420.3	127.7	781.4
#1	.0009	-.0009	.0013	.0040	-.0003
#2	-.0005	-.0008	-.0026	.0002	.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0043	.0047	.00035	.00079
Stddev	.0012	.0013	.0030	.00019	.00021
%RSD	65.26	31.22	62.54	53.409	26.825
#1	.0027	.0052	.0068	.00022	.00094
#2	.0010	.0033	.0026	.00048	.00064
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0006	-.0078	.0141	-.0001
Stddev	.0050	.0005	.0010	.0082	.0004
%RSD	199.8	89.90	13.27	57.87	290.5
#1	.0060	.0010	-.0086	.0199	.0002
#2	-.0010	.0002	-.0071	.0083	-.0004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/22/10 08:42

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0031	.0070	-.0012	.0000	.0034
Stddev	.0014	.0014	.0000	.000	.0001
%RSD	44.99	19.57	1.429	863.9	2.456
#1	-.0021	.0061	-.0011	-.0003	.0035
#2	-.0040	.0080	-.0012	.0002	.0034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0037	.00012	-.0096	.00021	.00022
Stddev	.0000	.00113	.0121	.00031	.00002
%RSD	1.260	937.75	125.3	143.46	8.9136
#1	-.0036	-.00068	-.0182	.00043	.00021
#2	-.0037	.00092	-.0011	.00000	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	198.59
Stddev	.61
%RSD	.30531
#1	198.16
#2	199.02

Method: 2010A Sample Name: K1006524-MB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0109	-.0033	-.0028	-.00027	.00003
#1	-.0061	-.0029	-.0080	-.00030	.00002
#2	-.0157	-.0037	.0025	-.00024	.00004

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	-.0005	-.0009	.0028	.0003
#1	-.0003	-.0003	.0026	.0020	.0005
#2	-.0004	-.0007	-.0044	.0035	.0001

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0024	.0011	-.0007	-.00001	-.00014
#1	.0028	.0007	-.0007	-.00005	-.00018
#2	.0020	.0015	-.0007	.00004	-.00011

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0001	.0098	.0013	-.0010
#1	.0016	.0000	.0120	.0122	-.0025
#2	.0017	.0003	.0076	-.0096	.0004

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0028	.0030	.0012	.0001	.3152
#1	-.0010	.0021	.0006	.0001	.3186
#2	-.0046	.0039	.0018	.0001	.3119

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0065	.00058	-.0088	-.00010	.00000
#1	-.0074	.00205	-.0031	-.00028	-.00001
#2	-.0056	-.00089	-.0144	.00009	.00001

Int. Std.	Sc3572
Units	Cts/S
Avg	200.82
#1	201.15
#2	200.49

Method: 2010A Sample Name: LCSW Operator: JC
Comment: K1006524 (209391) (072210A)
Run Time: 07/22/10 08:48 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.992	2.488	2.604	5.0074	.12220	1.000
#1	4.955	2.466	2.599	4.9909	.12208	.9972
#2	5.029	2.510	2.609	5.0239	.12232	1.003

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.292	12.34	.5126	1.267	.6275	2.474
#1	1.288	12.17	.5081	1.263	.6300	2.468
#2	1.296	12.51	.5171	1.271	.6250	2.481

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.562	12.44	1.2429	1.003	1.261	12.90
#1	2.555	12.36	1.2337	.9948	1.258	12.91
#2	2.568	12.51	1.2521	1.011	1.264	12.89

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.533	.6255	12.75	.0096	1.259	1.255
#1	2.506	.6236	12.80	.0143	1.259	1.248
#2	2.560	.6274	12.71	.0050	1.259	1.261

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2059	.0332	.00210	2.618	.00020	.00664
#1	.1974	.0345	.00275	2.565	.00012	.00663
#2	.2143	.0319	.00146	2.670	.00028	.00665

Int. Std.	Sc3572
Units	Cts/S
Avg	198.43
#1	197.93
#2	198.94

Method: 2010A Sample Name: K1006524-005 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	.0110	.0057	.09719	-.00002	.2434
#1	.0223	.0093	.0066	.09682	.00000	.2425
#2	-.0092	.0127	.0048	.09756	-.00004	.2443

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	46.90	.0018	.0007	.0010	5.808
#1	.0001	46.54	.0019	.0008	.0003	5.813
#2	.0000	47.27	.0017	.0005	.0017	5.802

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	52.15	.54288	1.021	.0073	35.47
#1	.0023	51.93	.54273	1.018	.0075	35.57
#2	.0048	52.36	.54304	1.024	.0071	35.36

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0106	.0001	122.3	-.0034	.0003	.0028
#1	.0228	.0004	123.4	-.0096	-.0007	.0032
#2	-.0016	-.0002	121.3	.0028	.0013	.0025

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6680	6.785	.00183	.0631	.10413	.15459
#1	.6696	6.765	.00174	.0672	.10451	.15509
#2	.6664	6.804	.00192	.0589	.10376	.15409

Int. Std.	Sc3572
Units	Cts/S
Avg	195.22
#1	194.41
#2	196.03

Method: 2010A Sample Name: K1006524-005D Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:54 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126	.0066	.0053	.09641	.00005	.2440
#1	.0072	.0061	.0041	.09534	.00004	.2425
#2	.0181	.0072	.0066	.09747	.00006	.2454

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	46.35	-.0031	.0001	.0000	5.794
#1	.0006	46.23	-.0031	-.0001	-.0010	5.767
#2	-.0004	46.47	-.0031	.0004	.0010	5.821

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0023	51.75	.54003	1.028	.0066	35.56
#1	-.0069	51.46	.53788	1.019	.0070	35.46
#2	.0024	52.04	.54218	1.037	.0061	35.66

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0054	.0040	122.9	-.0023	.0046	.0045
#1	-.0106	.0043	122.5	.0014	.0074	.0059
#2	-.0003	.0037	123.4	-.0061	.0018	.0032

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6742	6.744	-.00029	.0693	.10523	.15573
#1	.6730	6.697	-.00044	.0654	.10457	.15561
#2	.6753	6.791	-.00014	.0731	.10590	.15585

Int. Std.	Sc3572
Units	Cts/S
Avg	194.07
#1	193.87
#2	194.27

Method: 2010A Sample Name: K1006524-005S Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 08:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.923	.4615	.9390	1.9603	.04579	1.162
#1	1.939	.4485	.9218	1.9546	.04560	1.159
#2	1.907	.4745	.9563	1.9661	.04597	1.165

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0471	53.62	.1942	.4720	.2264	6.622
#1	.0472	53.40	.1943	.4704	.2265	6.587
#2	.0470	53.84	.1940	.4737	.2263	6.657

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4647	59.99	1.0144	1.950	.4753	43.33
#1	.4610	59.93	1.0163	1.940	.4722	43.29
#2	.4684	60.05	1.0125	1.961	.4784	43.37

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9377	.0428	124.3	-.0003	.4841	.4739
#1	.9364	.0430	124.2	-.0023	.4821	.4726
#2	.9390	.0425	124.4	.0017	.4860	.4753

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6586	6.612	.00008	.9893	.09762	.15047
#1	.6478	6.605	-.00038	.9548	.09773	.15024
#2	.6693	6.618	.00053	1.024	.09751	.15070

Int. Std.	Sc3572
Units	Cts/S
Avg	193.10
#1	193.14
#2	193.06

Method: 2010A Sample Name: K1006524-001 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	.0099	.0057	.17250	-.00004	.4514
#1	.0238	.0083	.0112	.17228	-.00001	.4492
#2	-.0022	.0115	.0001	.17273	-.00007	.4537

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	118.8	.0033	.0003	-.0015	6.193
#1	.0005	117.5	.0015	.0004	-.0020	6.215
#2	.0007	120.2	.0052	.0003	-.0010	6.172

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	34.79	.57972	.0177	.0028	9.288
#1	-.0082	34.73	.57877	.0204	.0030	9.380
#2	.0121	34.84	.58068	.0149	.0027	9.196

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074	-.0010	>180.0	.0050	.0026	.3119
#1	.0036	.0013	>180.0	.0080	.0020	.3112
#2	.0113	-.0034	>180.0	.0020	.0032	.3125

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2465	10.14	.00200	.0742	.02637	.25775
#1	.2494	10.10	.00182	.0647	.02676	.25786
#2	.2436	10.18	.00219	.0837	.02599	.25764

Int. Std.	Sc3572
Units	Cts/S
Avg	192.73
#1	192.03
#2	193.44

Method: 2010A Sample Name: K1006524-002 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:03 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0006	.0031	.05535	-.00008
#1	-.0184	.0048	.0105	.05541	-.00016
#2	.0089	-.0035	-.0043	.05529	-.00001

Elem	B_2497	Cd2265	Ca2112	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0484	-.0006	46.26	-.0005	.0002
#1	.0488	-.0007	45.96	.0003	.0003
#2	.0479	-.0006	46.57	-.0013	.0002

Elem	Cu3247	Fe2599	Pb2203	Mg2025	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0013	.0694	-.0048	21.01	.00172
#1	.0009	.0722	-.0123	21.01	.00183
#2	.0018	.0666	.0027	21.02	.00161

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0106	-.0005	3.824	.0026	.0000
#1	.0113	-.0009	3.847	.0058	.0013
#2	.0099	-.0002	3.801	-.0006	-.0013

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	72.52	-.0059	.0036	.0033	.2303
#1	73.11	.0021	.0044	.0033	.2290
#2	71.92	-.0140	.0027	.0033	.2316

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	3.375	.00077	.0318	.00721	.10988
#1	3.368	.00105	.0318	.00693	.10999
#2	3.383	.00049	.0317	.00749	.10977

Int. Std.	Sc3572
Units	Cts/S
Avg	196.49
#1	196.24
#2	196.73

Method: 2010A Sample Name: K1006524-003 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:06 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.0008	-.0017	.03634	-.00002	.0904
#1	.0131	.0045	-.0038	.03629	.00000	.0901
#2	-.0005	-.0029	.0005	.03639	-.00004	.0906

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	29.93	.0015	-.0001	.0041	.2980
#1	-.0008	29.66	.0005	-.0004	.0027	.2968
#2	-.0002	30.20	.0024	.0002	.0055	.2991

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029	5.6820	.16251	.1324	.0002	6.975
#1	.0033	5.6757	.16234	.1315	.0001	6.987
#2	.0025	5.6884	.16269	.1333	.0004	6.962

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090	.0017	55.25	-.0005	.0045	.0015
#1	.0058	.0002	55.40	-.0011	.0041	.0013
#2	.0122	.0032	55.09	.0001	.0049	.0017

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5542	6.254	.00159	.0340	.00232	.27721
#1	.5550	6.237	-.00007	.0417	.00239	.27790
#2	.5535	6.271	.00324	.0263	.00225	.27651

Int. Std.	Sc3572
Units	Cts/S
Avg	197.63
#1	197.24
#2	198.03

Method: 2010A Sample Name: K1006524-004 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:09 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0295	.0170	.0058	.04211	-.00004	.2253
#1	.0213	.0100	.0058	.04204	.00001	.2250
#2	.0377	.0241	.0058	.04217	-.00010	.2257

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	157.2	.0036	-.0010	.0283	.0032
#1	-.0001	156.2	.0018	-.0006	.0290	.0035
#2	-.0005	158.1	.0054	-.0014	.0277	.0029

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.23	.05097	.00033	2.787	-.0005	46.98
#1	25.11	.05093	.00037	2.762	-.0009	47.06
#2	25.35	.05101	.00029	2.812	-.0002	46.91

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0008	93.12	-.0011	.0049	.4032
#1	.0109	.0041	93.41	.0010	.0052	.4017
#2	.0058	-.0024	92.83	-.0031	.0047	.4047

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2041	.4803	.00136	.0023	.21064	.35868
#1	.2078	.4773	.00139	-.0045	.21065	.35968
#2	.2003	.4833	.00133	.0091	.21064	.35768

Int. Std.	Sc3572
Units	Cts/S
Avg	193.10
#1	192.83
#2	193.37

Method: 2010A Sample Name: K1006524-006 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:12 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	.0071	.0084	.09230	-.00001	.2492
#1	.0055	.0158	.0053	.09156	-.00002	.2487
#2	.0110	-.0016	.0115	.09305	.00001	.2497

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	47.26	.0025	.0005	.0005	5.054
#1	-.0001	46.97	.0014	.0006	-.0008	5.033
#2	.0006	47.54	.0036	.0004	.0017	5.074

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086	52.78	.55066	1.055	.0069	35.74
#1	.0152	52.69	.54794	1.054	.0075	35.63
#2	.0020	52.88	.55338	1.055	.0064	35.86

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	-.0001	124.1	.0002	.0039	.0040
#1	.0048	.0002	123.7	-.0006	.0015	.0033
#2	-.0029	-.0004	124.5	.0011	.0064	.0047

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4952	6.875	.00015	.0784	.10516	.15819
#1	.4878	6.854	-.00037	.0756	.10482	.15819
#2	.5027	6.896	.00067	.0813	.10550	.15818

Int. Std.	Sc3572
Units	Cts/S
Avg	193.17
#1	193.03
#2	193.31

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 09:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.984	.0120	.0010	2.4324	.05009	.0036
Stddev	.005	.0000	.0091	.0078	.00017	.0008
%RSD	.1076	.3402	909.8	.32238	.33877	20.93
#1	4.981	.0120	.0075	2.4268	.05021	.0042
#2	4.988	.0120	-.0055	2.4379	.04997	.0031
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	25.53	.0018	-.0015	-.0001	24.98
Stddev	.0002	.21	.0034	.0005	.0017	.10
%RSD	15.69	.8046	185.7	34.92	1200.	.3840
#1	.0014	25.38	.0042	-.0019	.0011	24.91
#2	.0017	25.67	-.0006	-.0011	-.0014	25.05
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045	25.11	4.951	.0065	-.0023	10.02
Stddev	.0006	.01	.011	.0045	.0008	.04
%RSD	12.21	.0540	.2200	70.16	33.59	.4371
#1	.0042	25.10	4.944	.0097	-.0017	10.05
#2	.0049	25.12	4.959	.0033	-.0028	9.984
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127	-.0013	9.871	.0034	.0035	.0019
Stddev	.0036	.0033	.089	.0013	.0019	.0014
%RSD	28.52	253.1	.8993	39.74	54.30	73.80
#1	.0153	.0010	9.934	.0043	.0049	.0009
#2	.0101	-.0037	9.808	.0024	.0022	.0029
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 09:15

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.994	2.504	.00179	.0377	.50180	.49639
Stddev	.013	.011	.00152	.0042	.00500	.00272
%RSD	.1253	.4227	84.714	11.17	.99687	.54810
#1	9.986	2.496	.00287	.0406	.50534	.49832
#2	10.00	2.511	.00072	.0347	.49826	.49447
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	197.33
Stddev	.80
%RSD	.40765
#1	196.76
#2	197.90

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 09:18 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4763	2.474	2.510	.45575	.52311	.5002
Stddev	.0038	.023	.013	.00250	.00161	.0021
%RSD	.8017	.9377	.5051	.54913	.30844	.4202
#1	.4736	2.457	2.501	.45398	.52197	.4987
#2	.4790	2.490	2.519	.45752	.52425	.5017
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5177	2.469	.5106	.5138	.5167	.5193
Stddev	.0031	.012	.0047	.0028	.0039	.0131
%RSD	.5912	.4929	.9280	.5538	.7577	2.520
#1	.5155	2.477	.5072	.5118	.5139	.5285
#2	.5198	2.460	.5139	.5158	.5195	.5100
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.518	1.9785	1.0097	1.007	.5105	5.019
Stddev	.003	.0044	.0045	.012	.0038	.041
%RSD	.1118	.22174	.44760	1.223	.7523	.8150
#1	2.516	1.9816	1.0065	.9983	.5078	4.990
#2	2.520	1.9754	1.0129	1.016	.5133	5.048
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.448	.4984	.4701	2.462	.4964	.5156
Stddev	.002	.0021	.0013	.008	.0001	.0048
%RSD	.0966	.4179	.2859	.3242	.0244	.9226
#1	2.446	.4970	.4691	2.456	.4964	.5122
#2	2.450	.4999	.4710	2.468	.4963	.5190
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 09:18

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0083	.2849	.50929	5.048	.50427	.48689
Stddev	.0075	.0053	.00000	.040	.00468	.00119
%RSD	90.12	1.867	.00004	.7975	.92722	.24445
#1	-.0136	.2811	.50929	5.019	.50097	.48605
#2	-.0030	.2887	.50929	5.076	.50758	.48774
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	202.98
Stddev	.04
%RSD	.02137
#1	202.95
#2	203.02

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 09:21 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	-.0016	.0022	.00000	.00012	-.0009
Stddev	.0058	.0065	.0004	.0002	.00006	.0008
%RSD	94.74	414.4	20.41	11541.	48.793	98.38
#1	.0103	.0030	.0025	.00014	.00016	-.0003
#2	.0020	-.0061	.0018	-.00014	.00008	-.0014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0020	-.0009	.0003	.0030	.0035
Stddev	.0006	.0028	.0014	.0001	.0002	.0004
%RSD	113.8	142.1	157.0	25.18	6.717	11.37
#1	-.0001	.0000	.0001	.0003	.0028	.0038
#2	-.0009	.0040	-.0019	.0004	.0031	.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061	.00202	.00093	.0046	.0008	.0099
Stddev	.0136	.00003	.00013	.0020	.0000	.0186
%RSD	223.1	1.3512	13.718	44.17	3.580	186.6
#1	.0157	.00200	.00102	.0060	.0008	.0231
#2	-.0035	.00203	.00084	.0032	.0009	-.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0010	.0028	.0038	-.0021	.0004
Stddev	.0136	.0008	.0026	.0064	.0013	.0001
%RSD	353.0	80.33	90.35	166.7	62.08	27.87
#1	.0135	.0004	.0047	.0083	-.0012	.0005
#2	-.0058	.0016	.0010	-.0007	-.0030	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 07/22/10 09:21

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0119	-.0059	.00126	.0055	.00032	.00019
Stddev	.0135	.0006	.00058	.0094	.00013	.00001
%RSD	113.8	10.74	45.838	171.8	40.154	6.3297
#1	.0215	-.0055	.00085	.0121	.00023	.00020
#2	.0023	-.0064	.00167	-.0012	.00042	.00018
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	199.92
Stddev	.12
%RSD	.05901
#1	199.83
#2	200.00

Method: 2010A Sample Name: K1006524-007 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:31 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027	.0013	.0022	.00007	-.00003	.0001
#1	-.0007	-.0037	-.0012	-.00014	-.00003	-.0004
#2	.0061	.0062	.0055	.00028	-.00003	.0006

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	-.0011	-.0012	.0003	.0019	.0114
#1	-.0009	-.0013	-.0007	.0004	.0013	.0196
#2	-.0008	-.0009	-.0018	.0001	.0026	.0032

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.00009	.00002	.0004	-.0001	.0162
#1	.0019	.00012	.00012	.0016	.0003	.0164
#2	-.0031	.00005	-.00008	-.0008	-.0005	.0159

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0083	-.0006	.0072	-.0016	-.0008	.0000
#1	-.0019	-.0019	.0070	.0016	-.0030	-.0002
#2	-.0148	.0007	.0074	-.0047	.0014	.0003

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2498	-.0047	.00166	-.0020	-.00019	.00011
#1	.2446	-.0041	.00200	-.0067	-.00011	.00010
#2	.2549	-.0053	.00132	.0028	-.00027	.00013

Int. Std.	Sc3572
Units	Cts/S
Avg	197.49
#1	196.58
#2	198.40

Method: 2010A Sample Name: K1006777-008 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.0041	.0009	-.00020	-.00002	.0001
#1	-.0034	-.0029	.0031	-.00011	-.00011	-.0001
#2	.0171	.0112	-.0012	-.00030	.00006	.0003

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0084	.0017	-.0008	.0029	.0026
#1	-.0005	.0084	.0030	-.0012	.0026	.0025
#2	-.0007	.0084	.0004	-.0005	.0033	.0027

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0033	.00021	.00021	.0010	-.0002	-.0026
#1	-.0023	.00018	.00024	.0011	.0003	-.0167
#2	-.0044	.00024	.00019	.0009	-.0007	.0115

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0013	.0105	-.0056	-.0003	.0010
#1	.0096	.0010	.0083	-.0022	.0010	.0015
#2	.0045	.0016	.0127	-.0091	-.0016	.0005

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2641	.0475	.00025	-.0077	-.00041	.00006
#1	.2587	.0472	.00010	-.0125	-.00047	.00007
#2	.2694	.0479	.00041	-.0030	-.00035	.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	198.92
#1	198.73
#2	199.11

Method: 2010A Sample Name: K1006777-008L Operator: JC
Comment: 1/5 (209391) (072210A)
Run Time: 07/22/10 09:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	-.0033	-.0031	-.00016	.00003	-.0001
#1	.0144	-.0012	.0006	-.00020	.00009	.0001
#2	-.0116	-.0054	-.0068	-.00012	-.00004	-.0002

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0008	.0064	-.0002	-.0003	.0030	.0007
#1	-.0004	.0009	-.0006	.0005	.0031	.0006
#2	-.0012	.0119	.0003	-.0010	.0028	.0008

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	.00007	.00002	.0002	.0008	.0117
#1	.0081	.00001	-.00001	.0000	.0008	.0204
#2	.0051	.00014	.00005	.0003	.0008	.0030

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0006	.0115	.0000	-.0011	.0014
#1	.0083	.0031	.0113	.0031	-.0016	.0018
#2	-.0006	-.0019	.0116	-.0030	-.0007	.0011

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0568	.0088	-.00051	-.0001	-.00027	.00004
#1	.0533	.0086	-.00114	.0009	-.00012	.00004
#2	.0604	.0091	.00012	-.0011	-.00042	.00005

Int. Std.	Sc3572
Units	Cts/S
Avg	198.26
#1	197.77
#2	198.75

Method: 2010A Sample Name: K1006465-001 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	.0027	-.0057	.06930	-.00004	.1908
#1	.0203	.0023	-.0082	.06846	-.00003	.1903
#2	-.0084	.0032	-.0032	.07013	-.00006	.1913

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0001	47.40	.0010	.0002	.0006	.9854
#1	-.0005	46.93	.0006	.0005	.0012	.9792
#2	.0002	47.86	.0013	.0000	.0000	.9917

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0068	31.52	.20028	.0126	.0024	27.97
#1	.0103	31.38	.19859	.0115	.0018	28.18
#2	.0032	31.65	.20197	.0137	.0029	27.76

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0025	56.55	.0012	.0034	.0009
#1	.0097	.0046	56.79	.0053	.0030	.0008
#2	.0046	.0005	56.30	-.0028	.0038	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8591	8.690	.00140	.0361	.07861	.10755
#1	.8578	8.666	.00163	.0331	.07901	.10758
#2	.8603	8.714	.00118	.0391	.07821	.10752

Int. Std.	Sc3572
Units	Cts/S
Avg	195.23
#1	195.56
#2	194.91

Method: 2010A Sample Name: K1006465-002 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0302	.0047	.0023	.20400	-.00004	.0691
#1	.0240	.0031	-.0015	.20234	-.00007	.0697
#2	.0363	.0064	.0060	.20567	-.00001	.0686

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	140.5	.0024	.0010	.0016	10.08
#1	.0009	139.2	.0030	.0021	.0011	10.00
#2	.0014	141.7	.0017	-.0001	.0022	10.17

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	40.20	.35999	.0090	.0004	2.566
#1	.0075	40.08	.35804	.0089	.0002	2.570
#2	-.0035	40.31	.36194	.0092	.0006	2.561

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205	.0013	39.81	.0003	.0046	.0013
#1	.0231	.0019	40.14	-.0045	.0044	.0017
#2	.0179	.0007	39.47	.0051	.0048	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6768	17.49	.00198	.0867	.00621	.18080
#1	.6636	17.42	.00201	.0927	.00621	.18071
#2	.6900	17.57	.00195	.0807	.00620	.18090

Int. Std.	Sc3572
Units	Cts/S
Avg	193.81
#1	193.50
#2	194.12

Method: 2010A Sample Name: K1006465-003 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	.0127	-.0026	.12998	-.00005	.1240
#1	.0170	.0139	.0042	.12968	-.00005	.1237
#2	.0102	.0114	-.0093	.13029	-.00004	.1242

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	96.23	.0015	-.0001	.0005	6.505
#1	.0004	95.09	.0015	.0000	.0023	6.489
#2	.0006	97.36	.0015	-.0001	-.0013	6.521

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	32.09	.55031	.0114	.0028	2.627
#1	.0007	32.05	.54950	.0119	.0030	2.643
#2	.0019	32.12	.55111	.0109	.0027	2.610

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0229	.0021	82.08	.0076	.0062	.0012
#1	.0229	.0019	83.38	-.0010	.0049	.0008
#2	.0229	.0022	80.78	.0162	.0075	.0015

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5558	11.22	.00096	.0581	.00505	.13356
#1	.5449	11.16	.00054	.0584	.00475	.13429
#2	.5667	11.27	.00137	.0577	.00535	.13284

Int. Std.	Sc3572
Units	Cts/S
Avg	193.66
#1	192.62
#2	194.70

Method: 2010A Sample Name: K1006465-004 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0250	.0087	.0042	.14737	-.00008	.2773
#1	.0160	.0149	-.0020	.14690	-.00008	.2769
#2	.0339	.0025	.0104	.14783	-.00007	.2777

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	62.08	.0019	.0008	.0007	10.79
#1	.0015	61.73	.0016	.0007	.0021	10.68
#2	.0010	62.43	.0021	.0009	-.0007	10.91

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	27.83	.17627	.2016	.0015	19.96
#1	.0023	27.79	.17538	.2004	.0015	20.02
#2	-.0041	27.87	.17716	.2029	.0015	19.91

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	.0014	80.74	.0131	.0021	.0150
#1	.0244	.0035	80.95	.0107	.0016	.0149
#2	-.0013	-.0006	80.53	.0156	.0026	.0151

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4454	8.490	.00247	.0534	.03079	.11327
#1	.4429	8.437	.00194	.0523	.03099	.11320
#2	.4480	8.543	.00299	.0544	.03059	.11334

Int. Std.	Sc3572
Units	Cts/S
Avg	194.44
#1	194.56
#2	194.32

Method: 2010A Sample Name: K1006465-005 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0195	.0117	.0014	.05571	.00000	.1120
#1	.0215	.0208	.0067	.05541	.00005	.1117
#2	.0174	.0026	-.0038	.05600	-.00005	.1123

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	38.42	.0017	.0003	.0020	7.399
#1	.0002	37.88	.0029	.0007	.0016	7.424
#2	.0009	38.95	.0004	-.0002	.0025	7.373

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	10.70	.62260	.0700	.0017	3.549
#1	.0016	10.67	.64718	.0697	.0014	3.563
#2	-.0022	10.73	.59802	.0704	.0020	3.535

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017	.0011	47.58	.0015	.0028	.0005
#1	-.0066	-.0004	48.27	.0030	.0021	.0009
#2	.0101	.0025	46.89	.0001	.0036	.0001

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.130	13.00	.00173	.0431	.00289	.06417
#1	1.117	12.95	.00126	.0492	.00289	.06441
#2	1.144	13.06	.00220	.0371	.00290	.06392

Int. Std.	Sc3572
Units	Cts/S
Avg	198.75
#1	197.52
#2	199.98

Method: 2010A Sample Name: K1006465-006 Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0211	.0100	.0004	.15668	-.00007	.0570
#1	.0198	.0063	.0066	.15689	-.00004	.0563
#2	.0225	.0138	-.0058	.15647	-.00010	.0576

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006	151.9	.0014	.0009	.0004	9.775
#1	.0007	151.4	.0021	.0008	-.0004	9.827
#2	.0005	152.5	.0008	.0010	.0012	9.723

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0050	47.09	.51505	.0036	-.0007	2.293
#1	-.0171	47.12	.51669	.0033	-.0016	2.304
#2	.0070	47.06	.51341	.0038	.0002	2.281

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0154	.0005	52.95	.0098	.0036	.0008
#1	.0166	.0019	53.51	.0136	.0048	-.0001
#2	.0141	-.0010	52.40	.0060	.0024	.0018

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4544	13.46	.00222	.0571	.00743	.19859
#1	.4576	13.45	.00156	.0465	.00779	.19942
#2	.4512	13.47	.00287	.0677	.00707	.19777

Int. Std.	Sc3572
Units	Cts/S
Avg	193.55
#1	193.11
#2	193.99

Method: 2010A Sample Name: RB Operator: JC
Comment: (209391) (072210A)
Run Time: 07/22/10 09:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0130	.0017	.0031	.00016	-.00002
#1	-.0075	-.0012	.0000	.00005	.00002
#2	-.0185	.0046	.0062	.00028	-.00006

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0013	-.0006	.0040	-.0001	.0009
#1	-.0017	-.0007	.0035	.0010	.0009
#2	-.0009	-.0006	.0044	-.0012	.0009

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.0056	.0014	.00064	.00011
#1	.0030	.0098	-.0069	.00088	.00016
#2	.0038	.0014	.0097	.00041	.00007

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0000	-.0044	.0109	-.0021
#1	.0005	.0002	.0027	.0109	-.0010
#2	.0022	-.0002	-.0115	.0109	-.0031

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0071	.0020	.0021	-.0004	.0138
#1	.0067	.0005	.0019	-.0004	.0113
#2	.0074	.0034	.0023	-.0003	.0162

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0041	.00074	-.0058	.00006	.00003
#1	-.0047	.00068	-.0029	.00001	-.00001
#2	-.0034	.00079	-.0087	.00012	.00006

Int. Std.	Sc3572
Units	Cts/S
Avg	198.29
#1	197.92
#2	198.67

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 07/22/10 10:01 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.018	.0098	-.0033	2.4337	.04947	.0027
Stddev	.021	.0006	.0057	.0364	.00011	.0004
%RSD	.4217	6.042	175.0	1.4953	.21973	15.50
#1	5.033	.0102	-.0073	2.4079	.04939	.0024
#2	5.003	.0094	.0008	2.4594	.04954	.0030
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	26.25	.0030	-.0013	.0013	25.33
Stddev	.0001	.39	.0026	.0004	.0001	.33
%RSD	3.919	1.477	84.23	32.92	7.412	1.283
#1	.0014	25.98	.0048	-.0010	.0014	25.10
#2	.0013	26.53	.0012	-.0016	.0012	25.56
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0097	25.17	4.921	.0006	-.0030	9.820
Stddev	.0049	.08	.006	.0015	.0001	.069
%RSD	50.79	.3077	.1200	263.7	3.006	.6991
#1	-.0062	25.12	4.925	.0017	-.0030	9.868
#2	-.0132	25.23	4.917	-.0005	-.0029	9.771
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	-.0015	9.661	.0012	.0021	.0013
Stddev	.0037	.0015	.073	.0048	.0019	.0009
%RSD	57.81	99.51	.7601	403.2	88.99	72.14
#1	.0037	-.0004	9.712	.0046	.0034	.0019
#2	.0089	-.0025	9.609	-.0022	.0008	.0006
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 07/22/10 10:01

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.14	2.512	-.00006	.0125	.48932	.48630
Stddev	.09	.012	.00175	.0093	.00398	.00076
%RSD	.8504	.4664	2805.9	74.17	.81337	.15565
#1	10.08	2.503	-.00130	.0191	.49213	.48683
#2	10.20	2.520	.00118	.0060	.48650	.48576
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	199.97
Stddev	.26
%RSD	.12898
#1	199.78
#2	200.15

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 07/22/10 10:04 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5085	2.480	2.545	.45496	.52062	.5010
Stddev	.0069	.017	.034	.00088	.00012	.0015
%RSD	1.362	.6697	1.328	.19370	.02278	.3073
#1	.5036	2.468	2.521	.45558	.52071	.4999
#2	.5134	2.492	2.569	.45433	.52054	.5021
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5181	2.461	.5114	.5094	.5181	.5200
Stddev	.0007	.012	.0016	.0009	.0048	.0119
%RSD	.1326	.5050	.3223	.1857	.9172	2.285
#1	.5186	2.452	.5126	.5088	.5147	.5284
#2	.5176	2.470	.5103	.5101	.5214	.5116
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.503	1.9812	1.0100	.9998	.5105	5.048
Stddev	.013	.0094	.0019	.0076	.0004	.014
%RSD	.5293	.47172	.18579	.7605	.0714	.2790
#1	2.513	1.9746	1.0086	.9944	.5108	5.058
#2	2.494	1.9878	1.0113	1.005	.5103	5.039
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.462	.5029	.4750	2.425	.4934	.5113
Stddev	.007	.0099	.0022	.027	.0004	.0032
%RSD	.3049	1.972	.4734	1.112	.0804	.6194
#1	2.468	.4958	.4766	2.444	.4937	.5090
#2	2.457	.5099	.4734	2.406	.4931	.5135
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 07/22/10 10:04

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0103	.2884	.50876	5.020	.50347	.48175
Stddev	.0215	.0006	.00008	.025	.00314	.00258
%RSD	209.9	.2021	.01578	.5005	.62351	.53544
#1	-.0255	.2888	.50870	5.037	.50569	.48357
#2	.0050	.2879	.50882	5.002	.50125	.47992
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	204.30
Stddev	.12
%RSD	.05845
#1	204.22
#2	204.39

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 07/22/10 10:07 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0287	.0092	-.0003	.00057	.00012
Stddev	.0048	.0111	.0074	.00011	.00001
%RSD	16.83	121.4	2371.	18.961	5.0586
#1	-.0322	.0170	.0049	.00064	.00011
#2	-.0253	.0013	-.0055	.00049	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0005	-.0002	.0040	-.0001	.0005
Stddev	.0004	.0009	.0012	.0009	.0004
%RSD	89.63	458.0	31.32	910.7	72.03
#1	.0007	-.0008	.0031	-.0008	.0007
#2	.0002	.0004	.0048	.0006	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0029	.0043	.0030	.00273	.00110
Stddev	.0001	.0006	.0035	.00011	.00011
%RSD	3.387	13.69	115.6	4.0726	10.185
#1	.0030	.0047	.0005	.00265	.00118
#2	.0028	.0038	.0054	.00281	.00102
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0049	-.0003	.0004	.0096	-.0004
Stddev	.0020	.0003	.0040	.0036	.0008
%RSD	40.75	95.81	1063.	37.70	189.7
#1	.0063	-.0006	-.0024	.0122	.0001
#2	.0035	-.0001	.0032	.0071	-.0010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 07/22/10 10:07

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0025	.0050	-.0018	.0000	.0095
Stddev	.0051	.0048	.0013	.001	.0025
%RSD	208.6	94.62	70.04	1642.	26.78
#1	.0061	.0084	-.0027	-.0003	.0113
#2	-.0012	.0017	-.0009	.0003	.0077
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0052	.00122	.0053	.00036	.00026
Stddev	.0017	.00069	.0066	.00036	.00002
%RSD	32.36	57.109	125.1	100.41	8.0464
#1	-.0064	.00171	.0006	.00062	.00027
#2	-.0040	.00072	.0100	.00011	.00024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	201.18
Stddev	.05
%RSD	.02304
#1	201.21
#2	201.15

Service Request # K1006777 Water
Calibration 072610B
QC in calibration 072610B
QC Service Request K1006524
STARLIMS Batch # 209940

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL			X
13. CRA run	X		
14. ICSA and ICSAB in control	X		
15. Serial dilution run	X		
16. Post spike in control	X		

Comments: As results calculated without ArCl correction.

Primary Review by _____ Date 7/27/16
Secondary Review by JDB Date 9/27/16
R:\icp\misc\data review forms\PQ ExCell review form

Sample List

Num	Label	Type	Weight	Volume	Dilution	Rack	Row	Column	Height
1	Cal. Blk	Blank	0 kg	0 ml	1.00	0	1	1	145
2	Cal. Stn	Fully Quant Standard	0 kg	0 ml	1.00	0	1	2	145
3	ICV1	Unknown	0 kg	0 ml	1.00	0	1	3	145
4	CCV1	Unknown	0 kg	0 ml	1.00	0	1	2	145
5	ICB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
6	CCB1	Unknown	0 kg	0 ml	1.00	0	1	1	145
7	WATER CRA	Unknown	0 kg	0 ml	1.00	0	1	4	145
8	ICSA	Unknown	0 kg	0 ml	1.00	0	1	5	145
9	ICSAB	Unknown	0 kg	0 ml	1.00	0	1	6	145
10	K1006524-MB	Unknown	0 kg	0 ml	1.00	1	1	1	145
11	LCSW K1006524	Unknown	0 kg	0 ml	1.00	1	1	2	145
12	K1006524-005	Unknown	0 kg	0 ml	1.00	1	1	3	145
13	K1006524-005D	Unknown	0 kg	0 ml	1.00	1	1	4	145
14	K1006524-005 1/5L	Unknown	0 kg	0 ml	1.00	1	1	5	145
15	K1006524-005 +20A	Unknown	0 kg	0 ml	1.00	1	1	6	145
16	K1006524-005S	Unknown	0 kg	0 ml	1.00	1	1	7	145
17	K1006524-001	Unknown	0 kg	0 ml	1.00	1	1	8	145
18	K1006524-002	Unknown	0 kg	0 ml	1.00	1	1	9	145
19	K1006524-003	Unknown	0 kg	0 ml	1.00	1	1	10	145
20	CCV2	Unknown	0 kg	0 ml	1.00	0	1	2	145
21	CCB2	Unknown	0 kg	0 ml	1.00	0	1	1	145
22	K1006524-004	Unknown	0 kg	0 ml	1.00	1	1	11	145
23	K1006524-006	Unknown	0 kg	0 ml	1.00	1	1	12	145
24	K1006524-007	Unknown	0 kg	0 ml	1.00	1	2	1	145
25	K1006777-008	Unknown	0 kg	0 ml	1.00	1	2	2	145
26	K1006465-001	Unknown	0 kg	0 ml	1.00	1	2	3	145
27	K1006465-002	Unknown	0 kg	0 ml	1.00	1	2	4	145
28	K1006465-003	Unknown	0 kg	0 ml	1.00	1	2	5	145
29	K1006465-004	Unknown	0 kg	0 ml	1.00	1	2	6	145
30	K1006465-005	Unknown	0 kg	0 ml	1.00	1	2	7	145
31	K1006465-006	Unknown	0 kg	0 ml	1.00	1	2	8	145
32	CCV3	Unknown	0 kg	0 ml	1.00	0	1	2	145
33	CCB3	Unknown	0 kg	0 ml	1.00	0	1	1	145
34	K1006579-MB	Unknown	0 kg	0 ml	1.00	1	2	9	145
35	LCSW K1006579	Unknown	0 kg	0 ml	1.00	1	2	10	145
36	K1006579-001	Unknown	0 kg	0 ml	1.00	1	2	11	145
37	K1006579-001D	Unknown	0 kg	0 ml	1.00	1	2	12	145
38	K1006579-001 1/5L	Unknown	0 kg	0 ml	1.00	1	3	1	145
39	K1006579-001 +20A	Unknown	0 kg	0 ml	1.00	1	3	2	145
40	K1006579-001S	Unknown	0 kg	0 ml	1.00	1	3	3	145
41	K1006579-002	Unknown	0 kg	0 ml	1.00	1	3	4	145
42	K1006579-003	Unknown	0 kg	0 ml	1.00	1	3	5	145
43	K1006579-004	Unknown	0 kg	0 ml	1.00	1	3	6	145
44	CCV4	Unknown	0 kg	0 ml	1.00	0	1	2	145
45	CCB4	Unknown	0 kg	0 ml	1.00	0	1	1	145
46	K1006579-001 DISS	Unknown	0 kg	0 ml	1.00	1	3	7	145
47	K1006579-002 DISS	Unknown	0 kg	0 ml	1.00	1	3	8	145
48	K1006579-003 DISS	Unknown	0 kg	0 ml	1.00	1	3	9	145

49	K1006579-004 DISS	Unknown	0 kg	0 ml	1.00	1	3	10	145
50	K1006636-004	Unknown	0 kg	0 ml	1.00	1	3	11	145
51	K1006636-008	Unknown	0 kg	0 ml	1.00	1	3	12	145
52	K1006666-MB	Unknown	0 kg	0 ml	1.00	1	4	1	145
53	LCSW K1006666	Unknown	0 kg	0 ml	1.00	1	4	2	145
54	K1006666-001 1/2	Unknown	0 kg	0 ml	1.00	1	4	3	145
55	K1006666-002	Unknown	0 kg	0 ml	1.00	1	4	4	145
56	CCV5	Unknown	0 kg	0 ml	1.00	0	1	2	145
57	CCB5	Unknown	0 kg	0 ml	1.00	0	1	1	145
58	K1006666-003	Unknown	0 kg	0 ml	1.00	1	4	5	145
59	K1006666-004	Unknown	0 kg	0 ml	1.00	1	4	6	145
60	K1006666-001 DISS 1/2	Unknown	0 kg	0 ml	1.00	1	4	7	145
61	K1006666-002 DISS	Unknown	0 kg	0 ml	1.00	1	4	8	145
62	K1006666-003 DISS	Unknown	0 kg	0 ml	1.00	1	4	9	145
63	K1006666-004 DISS	Unknown	0 kg	0 ml	1.00	1	4	10	145
64	K1004241-018	Unknown	0 kg	0 ml	1.00	1	4	11	145
65	K1004241-018D	Unknown	0 kg	0 ml	1.00	1	4	12	145
66	K1004241-018 1/5L	Unknown	0 kg	0 ml	1.00	1	5	1	145
67	K1004241-018 +20A	Unknown	0 kg	0 ml	1.00	1	5	2	145
68	CCV6	Unknown	0 kg	0 ml	1.00	0	1	2	145
69	CCB6	Unknown	0 kg	0 ml	1.00	0	1	1	145
70	K1004241-018S	Unknown	0 kg	0 ml	1.00	1	5	3	145
71	K1004241-010	Unknown	0 kg	0 ml	1.00	1	5	4	145
72	K1004241-011	Unknown	0 kg	0 ml	1.00	1	5	5	145
73	K1004241-012	Unknown	0 kg	0 ml	1.00	1	5	6	145
74	K1004241-013	Unknown	0 kg	0 ml	1.00	1	5	7	145
75	K1004241-014	Unknown	0 kg	0 ml	1.00	1	5	8	145
76	K1004241-015	Unknown	0 kg	0 ml	1.00	1	5	9	145
77	K1004241-016	Unknown	0 kg	0 ml	1.00	1	5	10	145
78	K1004241-017	Unknown	0 kg	0 ml	1.00	1	5	11	145
79	K1004241-019	Unknown	0 kg	0 ml	1.00	1	5	12	145
80	CCV7	Unknown	0 kg	0 ml	1.00	0	1	2	145
81	CCB7	Unknown	0 kg	0 ml	1.00	0	1	1	145

Instrument Setup - Configurations

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:53:05 7/26/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-350.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	-5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80
Nebuliser	0.82
Forward power	1,360.00
HT1 Voltage	1,900.00
HT2 Voltage	2,600.00
D1	-38.00
Focus	12.00

Configuration Name - acqmet11
Description - PQExcell CCT Sim Default
Date - 8:53:05 7/26/10
Maximum Uptake Time - 0
Maximum Washout Time - 0
S-Option Pump Running - No
Plasma Screen Forward - No
Makeup Gas On - No
Use CCT - No
Use Accessory Gas - No

Setting	Value
Extraction	-350.00
Lens1	5.00
Lens2	-50.00
Lens3	-25.00
Pole Bias	5.00
Sampling Depth	400.00
Horizontal	-5.00
Vertical	75.00
Cool	13.00
Auxiliary	0.80

ExCell Mass Calibration Date: 7/26/2010

Mass	Mass DAC	Peak Width (AMU)	Error (AMU)	Include	Masses in Tune Solution
6.015	1286	0.715	-0.026	TRUE	
7.016	1552	0.767	0.019	TRUE	Li-7
9.012	2059	0.767	0.016	TRUE	Be-9
23.985	5871	0.715	0.026	TRUE	Mg-24
24.986	6124	0.766	0.02	TRUE	Co-59
25.983	6378	0.715	0.021	TRUE	In-115
26.982	6625	0.715	-0.007	TRUE	Ce-140
45.953	11466	0.715	0.045	TRUE	Pb-208
53.949	13487	0.766	-0.011	TRUE	Bi-209
55.935	13988	0.817	-0.028	TRUE	U-238
57.934	14495	0.817	-0.036	TRUE	
58.933	14748	0.766	-0.041	TRUE	
63.929	16022	0.766	-0.031	TRUE	
65.926	16536	0.817	-0.009	TRUE	
69.925	17556	0.766	-0.001	TRUE	
75.92	19077	0.766	-0.023	TRUE	
112.904	28501	0.766	0	TRUE	
114.904	29008	0.766	-0.009	TRUE	
139.905	35385	0.714	0.021	TRUE	
141.908	35905	0.714	0.059	TRUE	
155.923	39467	0.714	0.022	TRUE	
205.974	52220	0.612	-0.003	TRUE	
206.976	52473	0.663	-0.012	TRUE	
207.977	52733	0.663	0.007	TRUE	
208.98	52987	0.714	-0.001	TRUE	
238.051	60397	0.612	-0.019	TRUE	

Excluded In Calib | Excluded In Results | Peak Not Centered | Multi Element | Semi Quant | Internal Standard | Standard Addition

Uncorrected ICPS Per Mass

S-Calibration Has Edited Standard
F-Interference Correction Failed
E-Calibration Edited
T-Tripped
I-Invalid Calibration
P-Pulse Counting
V-Valley Integration Failed
M-Result Over Max

Run	Label	TimeStamp	58Ni	7Li	9Be	59Co	115In	208Pb
1	Stability 07-26-2010	7/26/2010 9:08:12 A	(P)0.000	(P)15082.125	(P)5064.231	(P)29777.504	(P)29069.380	(P)16562.096
2	Stability 07-26-2010	7/26/2010 9:09:28 A	(P)0.000	(P)15006.211	(P)5052.060	(P)29372.832	(P)28725.687	(P)16795.034
3	Stability 07-26-2010	7/26/2010 9:10:43 A	(P)0.000	(P)15006.379	(P)5081.237	(P)29147.709	(P)28989.224	(P)16727.288
4	Stability 07-26-2010	7/26/2010 9:11:58 A	(P)0.333	(P)15370.265	(P)5159.265	(P)29160.066	(P)29117.979	(P)17233.722
5	Stability 07-26-2010	7/26/2010 9:13:13 A	(P)0.000	(P)15826.429	(P)5151.095	(P)29351.623	(P)29323.065	(P)17426.457
	Mean of Stability 07-26	7/26/2010 9:08:12 A	(P)0.067	(P)15258.282	(P)5101.578	(P)29361.947	(P)29045.067	(P)16948.919
	SD of Stability 07-26-20		(P)0.149	(P)351.197	(P)50.101	(P)254.738	(P)216.975	(P)364.551
	%RSD of Stability 07		(P)223.607	(P)2.302	(P)0.982	(P)0.868	(P)0.747	(P)2.151

Run	Label	TimeStamp	209Bi	232Th	238U
1	Stability 07-26-2010	7/26/2010 9:08:12 A	(P)28036.654	(P)0.000	(P)30142.437
2	Stability 07-26-2010	7/26/2010 9:09:28 A	(P)26999.492	(P)0.000	(P)30292.603
3	Stability 07-26-2010	7/26/2010 9:10:43 A	(P)26937.874	(P)0.000	(P)30652.706
4	Stability 07-26-2010	7/26/2010 9:11:58 A	(P)27100.348	(P)0.167	(P)31021.838
5	Stability 07-26-2010	7/26/2010 9:13:13 A	(P)27558.389	(P)0.167	(P)31867.184
	Mean of Stability 07-26	7/26/2010 9:08:12 A	(P)27326.551	(P)0.067	(P)30795.354
	SD of Stability 07-26-20		(P)465.618	(P)0.091	(P)689.116
	%RSD of Stability 07		(P)1.704	(P)136.931	(P)2.238

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		Cal. Blk			Mean	SD	%RSD
TimeStamp		7/26/10 15:34					
Antimony	121	-0.0031	0.0045	-0.0015	**0**	0.004	0
Antimony	123	0.0018	-0.002	0.0002	**0**	0.0019	0
Arsenic	75	0.0048	-0.0042	-0.0006	**0**	0.0046	0
Cadmium	111	-0.0021	0.0011	0.001	**0**	0.0018	0
Cadmium	114	0.0004	-0.0002	-0.0002	**0**	0.0003	0
Chromium	52	0.0074	-0.0084	0.001	**0**	0.008	0
Chromium	53	0.1003	-0.0227	-0.0776	**0**	0.0911	0
Lead	206	0.0011	-0.0007	-0.0004	**0**	0.0009	0
Lead	207	-0.0009	0	0.0009	**0**	0.0009	0
Lead	208	-0.0006	0	0.0006	**0**	0.0006	0
Molybdenum	95	0.0021	-0.0016	-0.0005	**0**	0.0019	0
Molybdenum	97	0.0028	0.0029	-0.0057	**0**	0.0049	0
Molybdenum	98	0.001	0.0008	-0.0019	**0**	0.0016	0
Selenium	77	0.0027	-0.006	0.0033	**0**	0.0052	0
Selenium	78	-0.1045	0.0246	0.0799	**0**	0.0947	0
Selenium	82	0.0739	-0.099	0.025	**0**	0.0891	0
Thallium	203	0.001	-0.0014	0.0005	**0**	0.0013	0
Thallium	205	0	-0.0001	0.0001	**0**	0.0001	0
Uranium	238	-0.0003	0.0003	0	**0**	0.0003	0

Internal Standard Factors:

Lithium	6	1.061	0.976	0.968	**1.061**	n/a	n/a
Scandium	45	1.034	0.972	0.996	**1.034**	n/a	n/a
Gallium	71	1.026	0.992	0.983	**1.026**	n/a	n/a
Rhodium	103	1.036	0.984	0.982	**1.036**	n/a	n/a
Indium	115	1.036	0.985	0.981	**1.036**	n/a	n/a
Lutetium	175	1.036	0.988	0.978	**1.036**	n/a	n/a
Gold	197	1.039	0.983	0.98	**1.039**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		Cal. Stn			Mean	SD	%RSD
TimeStamp		7/26/10 15:37					
Antimony	121	25.01	25.11	24.88	**25**	0.1192	0.4767
Antimony	123	25.05	25.11	24.84	**25**	0.145	0.5798
Arsenic	75	25.26	25	24.74	**25**	0.2641	1.056
Cadmium	111	24.98	25.2	24.82	**25**	0.1893	0.7573
Cadmium	114	24.75	25.38	24.87	**25**	0.3333	1.333
Chromium	52	24.78	25.34	24.89	**25**	0.2969	1.188
Chromium	53	24.46	25.55	24.98	**25**	0.5443	2.177
Lead	206	25.1	25.37	24.53	**25**	0.4317	1.727
Lead	207	25.02	25.39	24.59	**25**	0.403	1.612
Lead	208	25.08	25.19	24.73	**25**	0.238	0.9519
Molybdenum	95	25.03	24.86	25.11	**25**	0.1252	0.5007
Molybdenum	97	25.09	25.15	24.76	**25**	0.2142	0.8567
Molybdenum	98	24.68	25.37	24.94	**25**	0.3475	1.39
Selenium	77	25.11	24.94	24.95	**25**	0.0969	0.3874
Selenium	78	24.58	25.49	24.93	**25**	0.4637	1.855
Selenium	82	24.78	25.42	24.8	**25**	0.365	1.46
Thallium	203	24.14	24.95	25.91	**25**	0.8863	3.545
Thallium	205	24.13	25.04	25.82	**25**	0.8454	3.382
Uranium	238	25.05	25.15	24.81	**25**	0.176	0.7042

Internal Standard Factors:

Lithium	6	0.999	1.013	0.986	**0.999**	n/a	n/a
Scandium	45	1.005	1.008	1	**1.005**	n/a	n/a
Gallium	71	0.977	0.946	0.944	**0.977**	n/a	n/a
Rhodium	103	0.982	0.966	0.951	**0.982**	n/a	n/a
Indium	115	0.978	0.98	0.977	**0.978**	n/a	n/a
Lutetium	175	0.972	0.945	0.953	**0.972**	n/a	n/a
Gold	197	0.997	0.973	0.967	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICV1			Mean	SD	%RSD
TimeStamp		7/26/10 15:41					
Antimony	121	23.82	23.75	23.55	**23.71**	0.1395	0.5882
Antimony	123	23.64	23.59	23.74	**23.66**	0.0716	0.3027
Arsenic	75	24.98	24.2	24.86	**24.68**	0.4172	1.691
Cadmium	111	12.17	12.41	12.05	**12.21**	0.1823	1.493
Cadmium	114	12.61	12.49	12.43	**12.51**	0.0951	0.7605
Chromium	52	9.585	9.678	9.477	**9.58**	0.1005	1.049
Chromium	53	9.333	9.355	9.573	**9.421**	0.1326	1.408
Lead	206	22.7	22.85	22.95	**22.83**	0.1224	0.5362
Lead	207	25.04	25.55	25.43	**25.34**	0.2659	1.049
Lead	208	24.21	24.38	24.38	**24.32**	0.0999	0.4108
Molybdenum	95	24.79	24.24	24.89	**24.64**	0.3499	1.42
Molybdenum	97	24.46	24.43	24.92	**24.6**	0.2721	1.106
Molybdenum	98	24.55	24.21	24.82	**24.53**	0.3052	1.244
Selenium	77	24.8	24.8	24.75	**24.78**	0.0308	0.1243
Selenium	78	25.31	24.43	24.65	**24.8**	0.4582	1.848
Selenium	82	24.84	24.49	23.91	**24.41**	0.4693	1.923
Thallium	203	27.09	27.32	26.79	**27.06**	0.265	0.9792
Thallium	205	26.74	26.79	27.03	**26.85**	0.1513	0.5633
Uranium	238	24.49	24.49	24.79	**24.59**	0.1778	0.7229

Internal Standard Factors:

Lithium	6	1.016	0.99	1.006	**1.016**	n/a	n/a
Scandium	45	1.015	0.998	1.003	**1.015**	n/a	n/a
Gallium	71	1.008	0.951	0.962	**1.008**	n/a	n/a
Rhodium	103	0.986	0.956	0.979	**0.986**	n/a	n/a
Indium	115	1.009	0.988	0.982	**1.009**	n/a	n/a
Lutetium	175	0.989	0.969	0.968	**0.989**	n/a	n/a
Gold	197	0.991	0.979	0.982	**0.991**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV1			Mean	SD	%RSD
TimeStamp		7/26/10 15:44					
Antimony	121	24.8	24.92	24.39	**24.7**	0.2758	1.117
Antimony	123	25.11	25.03	24.5	**24.88**	0.3316	1.333
Arsenic	75	25.05	24.91	24.89	**24.95**	0.0842	0.3374
Cadmium	111	24.53	24.48	24.42	**24.48**	0.0557	0.2277
Cadmium	114	24.98	24.97	24.58	**24.84**	0.2269	0.9132
Chromium	52	24.88	24.54	24.57	**24.66**	0.1889	0.766
Chromium	53	24.81	24.28	24.55	**24.55**	0.2641	1.076
Lead	206	24.64	24.57	24.68	**24.63**	0.0572	0.2322
Lead	207	24.74	24.63	24.78	**24.72**	0.0819	0.3314
Lead	208	24.64	24.73	24.8	**24.72**	0.0808	0.327
Molybdenum	95	24.57	24.83	24.66	**24.68**	0.1318	0.5341
Molybdenum	97	24.74	25.19	24.76	**24.9**	0.2544	1.022
Molybdenum	98	24.71	25.32	24.73	**24.92**	0.3466	1.391
Selenium	77	26.02	25.02	24.68	**25.24**	0.6985	2.767
Selenium	78	25.32	24.4	24.43	**24.71**	0.5229	2.116
Selenium	82	25.47	24.66	25.06	**25.06**	0.4053	1.617
Thallium	203	25.74	25.51	26.34	**25.86**	0.4257	1.646
Thallium	205	25.44	25.3	26.25	**25.66**	0.509	1.983
Uranium	238	24.38	24.72	24.56	**24.55**	0.1715	0.6986

Internal Standard Factors:

Lithium	6	1.061	1	0.982	**1.061**	n/a	n/a
Scandium	45	1.019	0.993	0.998	**1.019**	n/a	n/a
Gallium	71	0.991	0.937	0.934	**0.991**	n/a	n/a
Rhodium	103	0.99	0.97	0.967	**0.99**	n/a	n/a
Indium	115	1	0.98	0.953	**1**	n/a	n/a
Lutetium	175	0.994	0.946	0.956	**0.994**	n/a	n/a
Gold	197	0.997	0.966	0.96	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICB1			Mean	SD	%RSD
TimeStamp		7/26/10 15:53					
Antimony	121	-0.0061	-0.0053	-0.006	**-0.0058**	0.0005	7.828
Antimony	123	-0.0105	-0.0084	-0.0112	**-0.01**	0.0015	14.62
Arsenic	75	-0.002	0.0027	0.0047	**0.0018**	0.0034	187.9
Cadmium	111	-0.0003	0.002	-0.0005	**0.0004**	0.0014	373.4
Cadmium	114	0.0012	0.0032	0.0024	**0.0023**	0.001	44.86
Chromium	52	-0.001	0.007	-0.0049	**0.0003**	0.0061	1806
Chromium	53	0.1757	0.0463	-0.0444	**0.0592**	0.1106	186.9
Lead	206	0.0003	0.0005	0.0004	**0.0004**	0.0001	21.18
Lead	207	0.0029	0.0091	0.0021	**0.0047**	0.0038	82.05
Lead	208	0.0013	0.0039	0.0012	**0.0021**	0.0015	72.38
Molybdenum	95	0.001	0.0032	0.0021	**0.0021**	0.0011	51.46
Molybdenum	97	-0.0053	0.0029	0.0003	**-0.0007**	0.0042	584.4
Molybdenum	98	-0.0031	-0.0002	-0.0032	**-0.0022**	0.0017	78.4
Selenium	77	0.024	-0.0988	-0.1087	**-0.0611**	0.0739	120.9
Selenium	78	0.0521	-0.0277	0.0465	**0.0237**	0.0445	188.2
Selenium	82	0.1103	0.1732	-0.0981	**0.0618**	0.142	229.8
Thallium	203	0.0064	0.0073	0.0032	**0.0057**	0.0021	37.58
Thallium	205	0.0047	0.0096	0.0028	**0.0057**	0.0035	62.15
Uranium	238	0.0017	0.0029	0.0018	**0.0022**	0.0006	29.72

Internal Standard Factors:

Lithium	6	1.073	1.03	1.028	**1.073**	n/a	n/a
Scandium	45	1.046	1.014	0.992	**1.046**	n/a	n/a
Gallium	71	1.015	0.966	0.976	**1.015**	n/a	n/a
Rhodium	103	1.041	0.985	0.985	**1.041**	n/a	n/a
Indium	115	1.048	1.006	1.005	**1.048**	n/a	n/a
Lutetium	175	1.021	1.003	0.994	**1.021**	n/a	n/a
Gold	197	1.043	1.003	0.995	**1.043**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB1			Mean	SD	%RSD
TimeStamp		7/26/10 15:57					
Antimony	121	-0.014	-0.013	-0.0145	**-0.0139**	0.0008	5.578
Antimony	123	-0.0111	-0.0137	-0.0161	**-0.0137**	0.0025	18.24
Arsenic	75	-0.0021	-0.0006	0.0017	**-0.0003**	0.0019	552.8
Cadmium	111	-0.0013	-0.0031	0.001	**-0.0011**	0.002	187.1
Cadmium	114	0.0011	0.0006	0.0016	**0.0011**	0.0005	47.31
Chromium	52	0.009	0.0149	-0.0074	**0.0055**	0.0116	210.1
Chromium	53	-0.1385	-0.1454	-0.2912	**-0.1917**	0.0862	44.98
Lead	206	-0.0015	0.0015	0.0012	**0.0004**	0.0017	382.6
Lead	207	-0.0011	0.0025	-0.001	**0.0001**	0.0021	2024
Lead	208	0.0002	0.0012	0.001	**0.0008**	0.0005	67.29
Molybdenum	95	0.0025	-0.0026	-0.0001	**0**	0.0025	5794
Molybdenum	97	-0.0001	0.0058	0.001	**0.0022**	0.0031	139.6
Molybdenum	98	-0.0039	-0.003	-0.001	**-0.0026**	0.0015	57.85
Selenium	77	-0.0819	-0.0517	0.0096	**-0.0413**	0.0466	112.7
Selenium	78	0.1991	0.192	0	**0.1304**	0.113	86.65
Selenium	82	0.2084	-0.0457	-0.0799	**0.0276**	0.1575	570.7
Thallium	203	0.0031	0.0034	0.0017	**0.0028**	0.0009	33.67
Thallium	205	0.004	0.0025	0.0017	**0.0027**	0.0012	43.27
Uranium	238	0.0007	0.0012	0.0026	**0.0015**	0.001	66.21

Internal Standard Factors:

Lithium	6	1.033	0.998	1.015	**1.033**	n/a	n/a
Scandium	45	1.007	1.011	0.975	**1.007**	n/a	n/a
Gallium	71	1.003	0.982	0.962	**1.003**	n/a	n/a
Rhodium	103	1.024	1.008	0.975	**1.024**	n/a	n/a
Indium	115	1.035	0.988	0.98	**1.035**	n/a	n/a
Lutetium	175	1.013	0.986	0.979	**1.013**	n/a	n/a
Gold	197	1.008	1.005	0.974	**1.008**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		WATER CRA			Mean	SD	%RSD
TimeStamp		7/26/10 16:00					
Antimony	121	0.044	0.0309	0.0358	**0.0369**	0.0066	17.98
Antimony	123	0.0419	0.0439	0.0397	**0.0418**	0.0021	4.976
Arsenic	75	0.5658	0.538	0.5492	**0.551**	0.014	2.539
Cadmium	111	0.0227	0.0135	0.025	**0.0204**	0.0061	29.72
Cadmium	114	0.0256	0.0237	0.0195	**0.0229**	0.0032	13.76
Chromium	52	0.2203	0.2169	0.2188	**0.2187**	0.0017	0.7803
Chromium	53	0.0263	0.0372	-0.0865	**-0.0077**	0.0685	890.5
Lead	206	0.0213	0.0234	0.0165	**0.0204**	0.0035	17.17
Lead	207	0.0209	0.0252	0.0279	**0.0247**	0.0036	14.41
Lead	208	0.0223	0.0237	0.0234	**0.0231**	0.0008	3.3
Molybdenum	95	0.0582	0.0568	0.0463	**0.0538**	0.0065	12.07
Molybdenum	97	0.0428	0.062	0.0569	**0.0539**	0.0099	18.42
Molybdenum	98	0.0499	0.0519	0.0582	**0.0533**	0.0044	8.2
Selenium	77	1.195	0.9129	0.9692	**1.026**	0.1495	14.57
Selenium	78	1.372	1.137	1.364	**1.291**	0.1333	10.32
Selenium	82	0.8407	0.9601	0.9095	**0.9034**	0.0599	6.628
Thallium	203	0.0222	0.0222	0.0278	**0.0241**	0.0032	13.33
Thallium	205	0.0256	0.026	0.0241	**0.0252**	0.001	3.861
Uranium	238	0.0202	0.0217	0.0201	**0.0207**	0.0009	4.355

Internal Standard Factors:

Lithium	6	1.009	1.005	0.981	**1.009**	n/a	n/a
Scandium	45	0.986	0.987	0.971	**0.986**	n/a	n/a
Gallium	71	0.977	0.96	0.97	**0.977**	n/a	n/a
Rhodium	103	0.977	0.974	0.986	**0.977**	n/a	n/a
Indium	115	0.996	0.993	0.978	**0.996**	n/a	n/a
Lutetium	175	0.995	0.986	0.977	**0.995**	n/a	n/a
Gold	197	0.987	0.981	0.966	**0.987**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICSA			Mean	SD	%RSD
TimeStamp		7/26/10 16:04					
Antimony	121	0.0482	0.0366	0.0378	**0.0409**	0.0063	15.53
Antimony	123	0.0408	0.0282	0.0388	**0.0359**	0.0068	18.97
Arsenic	75	0.7247	0.5582	0.6483	**0.6437**	0.0833	12.95
Cadmium	111	0.495	0.4622	0.4691	**0.4755**	0.0173	3.636
Cadmium	114	0.4459	0.4355	0.4094	**0.4303**	0.0188	4.376
Chromium	52	0.6804	0.6871	0.664	**0.6772**	0.0119	1.751
Chromium	53	10.63	9.739	9.883	**10.08**	0.4766	4.727
Lead	206	0.0945	0.0852	0.1006	**0.0935**	0.0077	8.281
Lead	207	0.1124	0.1061	0.104	**0.1075**	0.0044	4.063
Lead	208	0.1124	0.1012	0.106	**0.1065**	0.0056	5.275
Molybdenum	95	62	63.9	63.7	**63.2**	1.045	1.654
Molybdenum	97	62.74	63.66	63.83	**63.41**	0.5869	0.9255
Molybdenum	98	63.96	63.37	63.4	**63.58**	0.3314	0.5213
Selenium	77	2.28	2.664	2.292	**2.412**	0.218	9.039
Selenium	78	0.7135	0.7027	0.5813	**0.6658**	0.0734	11.03
Selenium	82	-0.0959	-0.0503	-0.253	**-0.1331**	0.1063	79.89
Thallium	203	0.0445	0.0485	0.0463	**0.0464**	0.002	4.299
Thallium	205	0.0448	0.0459	0.0444	**0.0451**	0.0008	1.715
Uranium	238	0.0079	0.0104	0.0098	**0.0094**	0.0013	14

Internal Standard Factors:

Lithium	6	1.305	1.243	1.214	**1.305**	n/a	n/a
Scandium	45	1.231	1.236	1.243	**1.231**	n/a	n/a
Gallium	71	1.258	1.231	1.233	**1.258**	n/a	n/a
Rhodium	103	1.263	1.279	1.289	**1.263**	n/a	n/a
Indium	115	1.256	1.227	1.25	**1.256**	n/a	n/a
Lutetium	175	1.181	1.179	1.183	**1.181**	n/a	n/a
Gold	197	1.235	1.22	1.255	**1.235**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		ICSAB			Mean	SD	%RSD
TimeStamp		7/26/10 16:16					
Antimony	121	0.0236	0.0231	0.0209	**0.0226**	0.0014	6.305
Antimony	123	0.0217	0.0321	0.0293	**0.0277**	0.0054	19.38
Arsenic	75	26.82	25.44	26.09	**26.12**	0.6913	2.647
Cadmium	111	24.62	24.84	24.95	**24.8**	0.1652	0.6658
Cadmium	114	24.81	24.78	25.15	**24.91**	0.2067	0.8296
Chromium	52	50.39	49.54	51.63	**50.52**	1.051	2.08
Chromium	53	57.44	57.65	58.17	**57.75**	0.3736	0.647
Lead	206	0.0985	0.097	0.1039	**0.0998**	0.0037	3.663
Lead	207	0.1171	0.1229	0.1101	**0.1167**	0.0065	5.532
Lead	208	0.1105	0.1142	0.1134	**0.1127**	0.0019	1.722
Molybdenum	95	53.67	54.42	53.72	**53.94**	0.4146	0.7687
Molybdenum	97	54.27	54.66	55.08	**54.67**	0.4035	0.7381
Molybdenum	98	53.84	54.83	54.41	**54.36**	0.4947	0.9101
Selenium	77	26.64	26.73	25.86	**26.41**	0.4759	1.802
Selenium	78	25.86	25.33	25.83	**25.67**	0.2963	1.154
Selenium	82	25.73	24.67	25.09	**25.16**	0.5332	2.119
Thallium	203	0.0314	0.0291	0.0347	**0.0317**	0.0028	8.933
Thallium	205	0.0338	0.032	0.028	**0.0313**	0.003	9.613
Uranium	238	0.0046	0.0048	0.0051	**0.0048**	0.0002	4.753

Internal Standard Factors:

Lithium	6	1.331	1.215	1.238	**1.331**	n/a	n/a
Scandium	45	1.278	1.253	1.28	**1.278**	n/a	n/a
Gallium	71	1.261	1.248	1.249	**1.261**	n/a	n/a
Rhodium	103	1.3	1.295	1.295	**1.3**	n/a	n/a
Indium	115	1.264	1.249	1.253	**1.264**	n/a	n/a
Lutetium	175	1.203	1.207	1.187	**1.203**	n/a	n/a
Gold	197	1.245	1.246	1.236	**1.245**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-MB			Mean	SD	%RSD
TimeStamp		7/26/10 16:20					
Antimony	121	-0.023	-0.0248	-0.0245	**-0.0241**	0.001	3.985
Antimony	123	-0.0266	-0.0256	-0.0232	**-0.0251**	0.0018	7.01
Arsenic	75	0.0086	0.0114	0.0175	**0.0125**	0.0045	36.28
Cadmium	111	0.0001	-0.0001	-0.0011	**-0.0003**	0.0006	186.2
Cadmium	114	0.0025	0.0019	0.0002	**0.0015**	0.0012	78.19
Chromium	52	0.0171	0.0288	0.0256	**0.0238**	0.006	25.32
Chromium	53	0.3065	0.0493	-0.0333	**0.1075**	0.1772	164.8
Lead	206	-0.0003	-0.0007	-0.0005	**-0.0005**	0.0002	33.9
Lead	207	-0.0036	0.0023	0.0004	**-0.0003**	0.003	1068
Lead	208	-0.0019	0.0007	-0.0012	**-0.0008**	0.0014	173.7
Molybdenum	95	0.0321	0.0229	0.0168	**0.0239**	0.0077	32.28
Molybdenum	97	0.0297	0.0218	0.0187	**0.0234**	0.0057	24.36
Molybdenum	98	0.0238	0.0238	0.0184	**0.022**	0.0031	14.11
Selenium	77	-0.0456	0.0686	0.0435	**0.0221**	0.06	271
Selenium	78	-0.097	-0.1045	-0.0305	**-0.0773**	0.0407	52.64
Selenium	82	0.1485	0.12	0.1195	**0.1293**	0.0166	12.81
Thallium	203	-0.0018	-0.0018	-0.0013	**-0.0016**	0.0003	17.92
Thallium	205	-0.0015	-0.0021	-0.0017	**-0.0018**	0.0003	14.74
Uranium	238	-0.0008	-0.0003	0.0001	**-0.0003**	0.0005	134.7

Internal Standard Factors:

Lithium	6	1.162	1.117	1.125	**1.162**	n/a	n/a
Scandium	45	1.195	1.136	1.127	**1.195**	n/a	n/a
Gallium	71	1.154	1.097	1.098	**1.154**	n/a	n/a
Rhodium	103	1.153	1.092	1.081	**1.153**	n/a	n/a
Indium	115	1.149	1.119	1.097	**1.149**	n/a	n/a
Lutetium	175	1.117	1.071	1.071	**1.117**	n/a	n/a
Gold	197	1.139	1.091	1.081	**1.139**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		LCSW K1006524			Mean	SD	%RSD
TimeStamp		7/26/10 16:24					
Antimony	121	20.51	20.27	20.42	**20.4**	0.1182	0.5791
Antimony	123	20.91	20.42	20.37	**20.57**	0.2992	1.455
Arsenic	75	20.1	20.59	20.56	**20.42**	0.2754	1.349
Cadmium	111	20.46	20.01	20.04	**20.17**	0.2487	1.233
Cadmium	114	20.49	20.29	20.38	**20.39**	0.0977	0.479
Chromium	52	19.72	20.5	20.79	**20.34**	0.5499	2.704
Chromium	53	19.88	20.49	19.78	**20.05**	0.3841	1.915
Lead	206	20.42	20.71	20.59	**20.57**	0.1482	0.7202
Lead	207	20.16	20.59	20.69	**20.48**	0.2836	1.385
Lead	208	20.6	20.86	20.77	**20.75**	0.1312	0.6323
Molybdenum	95	20.29	20.62	20.72	**20.54**	0.2271	1.105
Molybdenum	97	20.48	20.37	20.74	**20.53**	0.1938	0.9442
Molybdenum	98	20.28	20.39	20.54	**20.4**	0.1267	0.6209
Selenium	77	19.59	20.36	19.97	**19.98**	0.3825	1.915
Selenium	78	20.09	21.02	20.69	**20.6**	0.4715	2.289
Selenium	82	19.42	19.62	21.91	**20.32**	1.384	6.813
Thallium	203	22.31	22.45	22.64	**22.47**	0.1648	0.7334
Thallium	205	22.68	22.34	22.74	**22.59**	0.2166	0.9592
Uranium	238	20.91	21	20.55	**20.82**	0.2387	1.147

Internal Standard Factors:

Lithium	6	1.127	1.071	1.15	**1.127**	n/a	n/a
Scandium	45	1.13	1.112	1.119	**1.13**	n/a	n/a
Gallium	71	1.091	1.08	1.072	**1.091**	n/a	n/a
Rhodium	103	1.091	1.071	1.07	**1.091**	n/a	n/a
Indium	115	1.098	1.053	1.062	**1.098**	n/a	n/a
Lutetium	175	1.077	1.048	1.063	**1.077**	n/a	n/a
Gold	197	1.096	1.074	1.075	**1.096**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005			Mean	SD	%RSD
TimeStamp		7/26/10 16:29					
Antimony	121	0.1063	0.1119	0.1088	**0.109**	0.0028	2.564
Antimony	123	0.106	0.1063	0.1044	**0.1056**	0.001	0.9577
Arsenic	75	9.586	9.71	9.363	**9.553**	0.1757	1.839
Cadmium	111	2.351	2.365	2.268	**2.328**	0.0524	2.252
Cadmium	114	1.645	1.705	1.64	**1.663**	0.036	2.164
Chromium	52	0.5749	0.5901	0.5942	**0.5864**	0.0101	1.728
Chromium	53	2.38	2.465	2.385	**2.41**	0.0476	1.976
Lead	206	0.5266	0.5089	0.5269	**0.5208**	0.0103	1.984
Lead	207	0.5655	0.5726	0.5563	**0.5648**	0.0082	1.449
Lead	208	0.5481	0.549	0.553	**0.55**	0.0026	0.4696
Molybdenum	95	1144	1147	1141	**1144**	3.431	0.2999
Molybdenum	97	1157	1171	1165	**1165**	7.057	0.606
Molybdenum	98	1172	1156	1178	**1169**	10.92	0.9346
Selenium	77	0.8201	1.106	1.014	**0.98**	0.1459	14.89
Selenium	78	1.505	2.37	2.532	**2.136**	0.5524	25.86
Selenium	82	14.79	15.12	15.27	**15.06**	0.2494	1.656
Thallium	203	0.0061	0.0051	0.0091	**0.0068**	0.0021	30.46
Thallium	205	0.0054	0.0041	0.0059	**0.0051**	0.0009	17.91
Uranium	238	0.0784	0.0754	0.0739	**0.0759**	0.0023	3.046

See 1/20

Internal Standard Factors:

Lithium	6	1.075	1.038	1.054	**1.075**	n/a	n/a
Scandium	45	1.079	1.067	1.083	**1.079**	n/a	n/a
Gallium	71	1.171	1.214	1.164	**1.171**	n/a	n/a
Rhodium	103	1.178	1.156	1.183	**1.178**	n/a	n/a
Indium	115	1.157	1.15	1.149	**1.157**	n/a	n/a
Lutetium	175	1.042	1.041	1.028	**1.042**	n/a	n/a
Gold	197	1.111	1.118	1.118	**1.111**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name: TimeStamp		K1006524-005D 7/26/10 16:33			Mean	SD	%RSD
Antimony	121	0.1268	0.1077	0.1129	**0.1158**	0.0098	8.483
Antimony	123	0.0984	0.1092	0.1071	**0.1049**	0.0058	5.489
Arsenic	75	9.572	9.877	9.252	**9.567**	0.3123	3.265
~~Cadmium~~	~~111~~	~~2.337~~	~~2.333~~	~~2.328~~	~~**2.333**~~	~~0.0046~~	~~0.1983~~
Cadmium	114	1.69	1.672	1.669	**1.677**	0.0109	0.6486
Chromium	52	0.5395	0.5553	0.555	**0.5499**	0.009	1.641
Chromium	53	2.572	2.379	2.446	**2.466**	0.0977	3.962
Lead	206	0.497	0.5348	0.5014	**0.5111**	0.0207	4.046
Lead	207	0.5729	0.5704	0.5501	**0.5645**	0.0125	2.216
Lead	208	0.5456	0.5531	0.5334	**0.5441**	0.01	1.83
~~Molybdenum~~	~~95~~	~~1137~~	~~1193~~	~~1163~~	~~**1164**~~	~~27.76~~	~~2.384~~
Molybdenum	97	1169	1189	1144	**1167**	22.79	1.952
Molybdenum	98	1166	1175	1139	**1160**	18.54	1.598
Selenium	77	0.9146	0.9052	0.87	**0.8966**	0.0235	2.624
Selenium	78	2.469	2.722	2.246	**2.479**	0.2377	9.588
Selenium	82	15.34	16.58	16.24	**16.05**	0.6421	4
Thallium	203	0.0006	0.001	0.0037	**0.0018**	0.0017	94.06
Thallium	205	0.001	0.0013	0.0006	**0.001**	0.0004	37.78
Uranium	238	0.0735	0.0761	0.0739	**0.0745**	0.0014	1.821

Internal Standard Factors:

Lithium	6	1.062	1.055	1.03	**1.062**	n/a	n/a
Scandium	45	1.099	1.076	1.089	**1.099**	n/a	n/a
Gallium	71	1.257	1.226	1.221	**1.257**	n/a	n/a
Rhodium	103	1.198	1.201	1.178	**1.198**	n/a	n/a
Indium	115	1.176	1.166	1.151	**1.176**	n/a	n/a
Lutetium	175	1.08	1.056	1.058	**1.08**	n/a	n/a
Gold	197	1.146	1.137	1.136	**1.146**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name: TimeStamp		K1006524-005 1/5L 7/26/10 16:36			Mean	SD	%RSD
Antimony	121	-0.0033	0.0067	-0.0054	**-0.0007**	0.0065	997.4
Antimony	123	-0.003	0.0099	0.0078	**0.0049**	0.0069	141.9
Arsenic	75	1.958	2.026	2.013	**1.999**	0.0359	1.795
~~Cadmium~~	~~111~~	~~0.4912~~	~~0.453~~	~~0.4934~~	~~**0.4792**~~	~~0.0227~~	~~4.738~~
Cadmium	114	0.3413	0.3159	0.3401	**0.3324**	0.0143	4.31
Chromium	52	0.1498	0.147	0.1459	**0.1476**	0.002	1.353
Chromium	53	1.115	0.8275	0.7326	**0.8917**	0.199	22.32
Lead	206	0.101	0.1018	0.0991	**0.1006**	0.0014	1.372
Lead	207	0.1093	0.1121	0.1142	**0.1119**	0.0025	2.206
Lead	208	0.1049	0.1112	0.1105	**0.1089**	0.0034	3.14
~~Molybdenum~~	~~95~~	~~212.5~~	~~213~~	~~217.7~~	~~**214.4**~~	~~2.867~~	~~1.337~~
Molybdenum	97	217.3	213.2	217.2	**215.9**	2.33	1.079
Molybdenum	98	216.6	212.1	218.6	**215.8**	3.309	1.534
Selenium	77	0.2786	0.1524	0.2362	**0.2224**	0.0642	28.87
Selenium	78	0.3585	0.5741	0.4709	**0.4678**	0.1078	23.05
Selenium	82	2.91	2.88	2.973	**2.921**	0.0472	1.615
Thallium	203	0.0004	0.0011	-0.0002	**0.0004**	0.0006	144.1
Thallium	205	-0.0009	-0.0002	0.0003	**-0.0003**	0.0006	201.6
Uranium	238	0.0127	0.0124	0.0146	**0.0132**	0.0012	8.844

Internal Standard Factors:

Lithium	6	1.03	1.022	0.985	**1.03**	n/a	n/a
Scandium	45	1.068	1.031	1.057	**1.068**	n/a	n/a
Gallium	71	1.073	1.023	1.061	**1.073**	n/a	n/a
Rhodium	103	1.051	1.028	1.029	**1.051**	n/a	n/a
Indium	115	1.056	1.041	1.019	**1.056**	n/a	n/a
Lutetium	175	1.03	0.999	0.998	**1.03**	n/a	n/a
Gold	197	0.997	0.98	0.971	**0.997**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name: TimeStamp		K1006524-005 +20A 7/26/10 16:40			Mean	SD	%RSD
Antimony	121	20.3	20.48	20.48	**20.42**	0.1039	0.5086
Antimony	123	20.34	20.76	20.41	**20.5**	0.2243	1.094
Arsenic	75	30.46	30.49	30.04	**30.33**	0.2527	0.8334
~~Cadmium~~	~~111~~	~~21.95~~	~~22.14~~	~~21.88~~	~~**21.99**~~	~~0.136~~	~~0.6184~~
Cadmium	114	20.74	21.18	20.94	**20.95**	0.2225	1.062
Chromium	52	19.84	19.44	19.52	**19.6**	0.2127	1.085
Chromium	53	21.76	20.61	21.73	**21.37**	0.6551	3.066
Lead	206	19.53	18.94	19.28	**19.25**	0.2965	1.54
Lead	207	19.31	19	19.09	**19.13**	0.1621	0.8473
Lead	208	19.58	19.15	19.42	**19.38**	0.2198	1.134
~~Molybdenum~~	~~95~~	~~1117~~	~~1137~~	~~1128~~	~~**1127**~~	~~10.12~~	~~0.8977~~
Molybdenum	97	1144	1132	1144	**1140**	6.993	0.6134
Molybdenum	98	1140	1139	1149	**1143**	5.879	0.5145
Selenium	77	21.15	21.57	21.74	**21.49**	0.2998	1.395
Selenium	78	23.15	22.34	22.48	**22.66**	0.4339	1.915
Selenium	82	37.03	36.65	34.68	**36.12**	1.263	3.497
Thallium	203	19.89	19.96	19.74	**19.86**	0.1115	0.5615
Thallium	205	19.82	19.92	19.4	**19.71**	0.2782	1.411
Uranium	238	21.7	20.93	21.41	**21.35**	0.3932	1.842

Internal Standard Factors:

Lithium	6	1.048	1.019	1.028	**1.048**	n/a	n/a
Scandium	45	1.096	1.073	1.109	**1.096**	n/a	n/a
Gallium	71	1.217	1.199	1.221	**1.217**	n/a	n/a
Rhodium	103	1.206	1.189	1.197	**1.206**	n/a	n/a
Indium	115	1.169	1.169	1.162	**1.169**	n/a	n/a
Lutetium	175	1.07	1.054	1.043	**1.07**	n/a	n/a
Gold	197	1.151	1.127	1.135	**1.151**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-005S			Mean	SD	%RSD
TimeStamp		7/26/10 16:49					
Antimony	121	20.68	20.38	20.39	**20.48**	0.1679	0.8197
Antimony	123	21.01	20.44	20.61	**20.69**	0.2937	1.42
Arsenic	75	30.48	30.67	31.15	**30.77**	0.3437	1.117
~~Cadmium~~	~~111~~	~~21.72~~	~~22.23~~	~~21.9~~	~~**21.95**~~	~~0.2576~~	~~1.174~~
Cadmium	114	21.27	21.14	20.93	**21.11**	0.1713	0.8115
Chromium	52	19.73	19.15	19.49	**19.46**	0.294	1.511
Chromium	53	22.21	21.92	21.58	**21.9**	0.3182	1.453
Lead	206	18.94	19.58	19.26	**19.26**	0.3205	1.664
Lead	207	18.83	19.5	19.46	**19.27**	0.377	1.957
Lead	208	19.06	19.63	19.41	**19.36**	0.2903	1.499
~~Molybdenum~~	~~95~~	~~1211~~	~~1177~~	~~1198~~	~~**1195**~~	~~16.98~~	~~1.42~~
Molybdenum	97	1230	1204	1215	**1216**	12.86	1.057
Molybdenum	98	1210	1200	1221	**1210**	10.64	0.8794
Selenium	77	21.22	20.45	22.34	**21.33**	0.9503	4.455
Selenium	78	22.51	22.67	22.54	**22.57**	0.0863	0.3821
Selenium	82	36.91	37.46	37.21	**37.19**	0.2786	0.749
Thallium	203	20.17	20.35	20.25	**20.26**	0.0905	0.4469
Thallium	205	19.8	20.16	19.71	**19.89**	0.2399	1.206
Uranium	238	21.18	21.64	21.14	**21.32**	0.2744	1.287

Internal Standard Factors:

Lithium	6	1.091	1.062	1.065	**1.091**	n/a	n/a
Scandium	45	1.117	1.09	1.085	**1.117**	n/a	n/a
Gallium	71	1.234	1.195	1.231	**1.234**	n/a	n/a
Rhodium	103	1.227	1.197	1.207	**1.227**	n/a	n/a
Indium	115	1.179	1.166	1.169	**1.179**	n/a	n/a
Lutetium	175	1.07	1.063	1.055	**1.07**	n/a	n/a
Gold	197	1.135	1.153	1.139	**1.135**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-001			Mean	SD	%RSD
TimeStamp		7/26/10 16:53					
Antimony	121	0.0826	0.0892	0.0795	**0.0838**	0.005	5.923
Antimony	123	0.066	0.0726	0.0675	**0.0687**	0.0035	5.038
Arsenic	75	3.518	3.616	3.584	**3.573**	0.0497	1.39
Cadmium	111	0.0197	0.0294	0.0215	**0.0235**	0.0052	21.95
Cadmium	114	0.023	0.023	0.0226	**0.0229**	0.0002	1.015
Chromium	52	0.2529	0.2368	0.2413	**0.2437**	0.0083	3.395
Chromium	53	6.842	7.126	7.522	**7.163**	0.3411	4.762
Lead	206	0.4402	0.4423	0.4342	**0.4389**	0.0042	0.9629
Lead	207	0.4929	0.4792	0.5107	**0.4943**	0.0158	3.194
Lead	208	0.4831	0.4741	0.4759	**0.4777**	0.0048	0.9965
Molybdenum	95	11.72	11.64	11.48	**11.61**	0.1207	1.039
Molybdenum	97	11.99	11.84	11.73	**11.85**	0.1306	1.102
Molybdenum	98	11.6	11.36	11.27	**11.41**	0.1691	1.482
Selenium	77	3.087	3.113	2.968	**3.056**	0.0771	2.522
Selenium	78	1.728	1.739	1.69	**1.719**	0.0256	1.49
Selenium	82	21.28	20.99	22.16	**21.48**	0.6096	2.838
Thallium	203	0.006	0.0057	0.006	**0.0059**	0.0002	2.816
Thallium	205	0.0037	0.0038	0.0042	**0.0039**	0.0002	6.186
Uranium	238	0.0515	0.0492	0.047	**0.0492**	0.0023	4.605

7/27/10

See memo with MoO correction

Internal Standard Factors:

Lithium	6	1.262	1.253	1.269	**1.262**	n/a	n/a
Scandium	45	1.175	1.138	1.151	**1.175**	n/a	n/a
Gallium	71	1.395	1.353	1.35	**1.395**	n/a	n/a
Rhodium	103	1.425	1.388	1.389	**1.425**	n/a	n/a
Indium	115	1.359	1.334	1.339	**1.359**	n/a	n/a
Lutetium	175	1.226	1.195	1.199	**1.226**	n/a	n/a
Gold	197	1.354	1.33	1.31	**1.354**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-002			Mean	SD	%RSD
TimeStamp		7/26/10 16:57					
Antimony	121	0.15	0.157	0.172	**0.1597**	0.0112	7.036
Antimony	123	0.16	0.1701	0.163	**0.1644**	0.0052	3.155
Arsenic	75	1.536	1.424	1.494	**1.485**	0.0565	3.803
~~Cadmium~~	~~111~~	0.0312	0.0372	0.0234	**0.0306**	0.0069	22.63
Cadmium	114	0.0255	0.023	0.0269	**0.0251**	0.002	7.815
Chromium	52	0.3244	0.3057	0.3048	**0.3116**	0.0111	3.547
Chromium	53	3.432	3.579	3.557	**3.523**	0.0792	2.249
Lead	206	0.1315	0.1333	0.1194	**0.1281**	0.0075	5.894
Lead	207	0.1607	0.1549	0.1512	**0.1556**	0.0048	3.071
Lead	208	0.1429	0.1399	0.1381	**0.1403**	0.0024	1.708
Molybdenum	95	11.69	11.2	11.41	**11.43**	0.245	2.143
Molybdenum	97	11.5	11.53	11.64	**11.56**	0.0723	0.6256
Molybdenum	98	11.64	11.44	11.59	**11.56**	0.1022	0.8839
Selenium	77	0.8815	0.9974	1.109	**0.9958**	0.1135	11.4
Selenium	78	0.725	0.6298	1.011	**0.7887**	0.1986	25.18
Selenium	82	0.7809	0.516	0.5599	**0.6189**	0.142	22.94
Thallium	203	0.0024	0.002	0.003	**0.0025**	0.0005	21.99
Thallium	205	0.0011	0.0021	0.0008	**0.0013**	0.0007	52.38
Uranium	238	0.4791	0.468	0.4767	**0.4746**	0.0059	1.239

7/27/10

Internal Standard Factors:

Lithium	6	1.139	1.064	1.079	**1.139**	n/a	n/a
Scandium	45	1.08	1.03	1.037	**1.08**	n/a	n/a
Gallium	71	1.178	1.113	1.146	**1.178**	n/a	n/a
Rhodium	103	1.198	1.137	1.151	**1.198**	n/a	n/a
Indium	115	1.178	1.129	1.152	**1.178**	n/a	n/a
Lutetium	175	1.118	1.086	1.086	**1.118**	n/a	n/a
Gold	197	1.174	1.131	1.148	**1.174**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-003			Mean	SD	%RSD
TimeStamp		7/26/10 17:01					
Antimony	121	0.0039	0.0068	0.0039	**0.0049**	0.0016	33.65
Antimony	123	0.0141	0.0133	0.0161	**0.0145**	0.0015	10.18
Arsenic	75	3.559	3.417	3.442	**3.472**	0.0759	2.187
~~Cadmium~~	~~111~~	~~0.3385~~	~~0.3554~~	~~0.3113~~	~~**0.3351**~~	~~0.0223~~	~~6.652~~
Cadmium	114	0.22	0.2454	0.2232	**0.2295**	0.0138	6.022
Chromium	52	0.4472	0.4505	0.4277	**0.4418**	0.0123	2.784
Chromium	53	2.601	2.178	2.045	**2.275**	0.2901	12.75
Lead	206	0.0301	0.031	0.0323	**0.0312**	0.0011	3.637
Lead	207	0.0395	0.0361	0.0293	**0.035**	0.0052	14.96
Lead	208	0.0366	0.0358	0.0359	**0.0361**	0.0004	1.13
Molybdenum	95	155.5	152	152.2	**153.2**	1.937	1.264
Molybdenum	97	159.5	155	152.3	**155.6**	3.632	2.333
Molybdenum	98	158.5	153.1	155.1	**155.6**	2.707	1.74
Selenium	77	0.4527	0.5615	0.4359	**0.4833**	0.0682	14.1
Selenium	78	0.8811	0.9206	0.6738	**0.8251**	0.1326	16.07
Selenium	82	2.489	2.416	2.492	**2.465**	0.043	1.743
Thallium	203	0.0022	0.0007	0.0001	**0.001**	0.0011	106.2
Thallium	205	-0.0005	-0.0005	0.0004	**-0.0002**	0.0005	266.2
Uranium	238	0.0032	0.005	0.0044	**0.0042**	0.001	22.65

Internal Standard Factors:

Lithium	6	1.114	1.085	1.06	**1.114**	n/a	n/a
Scandium	45	1.052	1.045	1.007	**1.052**	n/a	n/a
Gallium	71	1.157	1.091	1.108	**1.157**	n/a	n/a
Rhodium	103	1.159	1.096	1.109	**1.159**	n/a	n/a
Indium	115	1.14	1.107	1.078	**1.14**	n/a	n/a
Lutetium	175	1.079	1.041	1.013	**1.079**	n/a	n/a
Gold	197	1.129	1.098	1.089	**1.129**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV2			Mean	SD	%RSD
TimeStamp		7/26/10 17:05					
Antimony	121	25.03	24.94	24.7	**24.89**	0.1724	0.6925
Antimony	123	25.3	25.25	24.93	**25.16**	0.2041	0.8111
Arsenic	75	24.18	25.43	25.12	**24.91**	0.6491	2.606
Cadmium	111	24.98	25.13	24.88	**24.99**	0.1257	0.503
Cadmium	114	25	24.8	24.83	**24.88**	0.1078	0.4332
Chromium	52	25.35	24.73	25.25	**25.11**	0.3307	1.317
Chromium	53	26.23	25.33	26.04	**25.87**	0.4741	1.833
Lead	206	25.05	24.84	25.3	**25.06**	0.231	0.9217
Lead	207	24.94	24.36	24.87	**24.72**	0.3176	1.285
Lead	208	25.13	24.8	25.17	**25.03**	0.2028	0.8101
Molybdenum	95	24.78	25.09	25.13	**25**	0.1929	0.7717
Molybdenum	97	24.7	25.38	25.01	**25.03**	0.3401	1.359
Molybdenum	98	24.68	25.16	24.74	**24.86**	0.2593	1.043
Selenium	77	24.39	24.28	24.82	**24.5**	0.2817	1.15
Selenium	78	24.86	25.67	25.41	**25.31**	0.4102	1.621
Selenium	82	24.45	26.46	25.22	**25.38**	1.017	4.009
Thallium	203	24.94	25.67	26.61	**25.74**	0.8382	3.256
Thallium	205	24.84	25.45	26.27	**25.52**	0.7202	2.822
Uranium	238	25.34	24.73	25.57	**25.21**	0.4308	1.709

Internal Standard Factors:							
Lithium	6	1.065	0.993	0.978	**1.065**	n/a	n/a
Scandium	45	1.034	1.006	1.025	**1.034**	n/a	n/a
Gallium	71	0.997	0.985	0.987	**0.997**	n/a	n/a
Rhodium	103	0.988	0.978	0.979	**0.988**	n/a	n/a
Indium	115	1.024	0.99	0.996	**1.024**	n/a	n/a
Lutetium	175	1.007	0.981	1.006	**1.007**	n/a	n/a
Gold	197	1.044	1.006	1.025	**1.044**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB2			Mean	SD	%RSD
TimeStamp		7/26/10 17:13					
Antimony	121	-0.0232	-0.0208	-0.0233	**-0.0224**	0.0014	6.407
Antimony	123	-0.0263	-0.0185	-0.0228	**-0.0225**	0.0039	17.21
Arsenic	75	0.0099	0.0168	0.0189	**0.0152**	0.0047	31.05
Cadmium	111	-0.0012	0.002	-0.0005	**0.0001**	0.0017	1724
Cadmium	114	0.0012	0.0017	0.005	**0.0026**	0.002	76.51
Chromium	52	0.0252	0.0171	0.0213	**0.0212**	0.004	19.11
Chromium	53	1.067	0.7123	0.6372	**0.8054**	0.2294	28.48
Lead	206	0.0045	0.0057	0.0038	**0.0047**	0.001	21.08
Lead	207	0.0026	0.0058	0.0044	**0.0043**	0.0016	38.06
Lead	208	0.0034	0.0047	0.004	**0.004**	0.0007	16.98
Molybdenum	95	0.0419	0.0421	0.0474	**0.0438**	0.0031	7.108
Molybdenum	97	0.0403	0.0472	0.0401	**0.0425**	0.004	9.468
Molybdenum	98	0.0382	0.0425	0.0326	**0.0378**	0.0049	13.07
Selenium	77	0.0287	0.0604	0.1294	**0.0728**	0.0515	70.72
Selenium	78	0.3706	0.0558	0.2105	**0.2123**	0.1574	74.15
Selenium	82	-0.1492	-0.1166	-0.0011	**-0.089**	0.0778	87.5
Thallium	203	0.0041	0.0099	0.0047	**0.0062**	0.0032	51.06
Thallium	205	0.0049	0.0075	0.0047	**0.0057**	0.0016	27.76
Uranium	238	0.0021	0.0047	0.0034	**0.0034**	0.0013	38.38

Internal Standard Factors:

Lithium	6	1.079	1.038	1.037	**1.079**	n/a	n/a
Scandium	45	1.045	1.032	1.016	**1.045**	n/a	n/a
Gallium	71	1.036	0.987	0.994	**1.036**	n/a	n/a
Rhodium	103	1.046	0.994	0.989	**1.046**	n/a	n/a
Indium	115	1.063	1.006	0.997	**1.063**	n/a	n/a
Lutetium	175	1.046	1.014	0.993	**1.046**	n/a	n/a
Gold	197	1.083	1.032	1.022	**1.083**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-004			Mean	SD	%RSD
TimeStamp		7/26/10 17:16					
Antimony	121	0.7512	0.7657	0.7467	**0.7545**	0.0099	1.317
Antimony	123	0.7881	0.7129	0.7416	**0.7475**	0.038	5.079
Arsenic	75	1.389	1.438	1.482	**1.436**	0.0468	3.26
~~Cadmium~~	~~111~~	~~6.676~~	~~6.319~~	~~6.457~~	~~**6.484**~~	~~0.18~~	~~2.776~~
Cadmium	114	4.746	4.544	4.417	**4.569**	0.1657	3.628
Chromium	52	2.326	2.378	2.381	**2.362**	0.0308	1.304
Chromium	53	3.363	3.306	2.977	**3.215**	0.2081	6.473
Lead	206	24750	24330	24800	**24630**	259	1.052
Lead	207	25970	26220	25740	**25980**	238.7	0.9188
~~Lead~~	~~208~~	~~25760~~	~~25680~~	~~25910~~	~~**25790**~~	~~116.7~~	~~0.4525~~
~~Molybdenum~~	~~95~~	~~3200~~	~~3247~~	~~3212~~	~~**3220**~~	~~24.24~~	~~0.7528~~
Molybdenum	97	3267	3310	3237	**3271**	37.01	1.131
Molybdenum	98	3296	3333	3211	**3280**	62.68	1.911
Selenium	77	9.516	9.582	10.45	**9.848**	0.5194	5.274
Selenium	78	10.45	9.773	10.23	**10.15**	0.3468	3.416
Selenium	82	32.65	32.03	31.33	**32**	0.6611	2.066
Thallium	203	3.039	3.132	2.995	**3.055**	0.0702	2.296
Thallium	205	2.947	2.934	2.995	**2.959**	0.0322	1.089
Uranium	238	0.0004	0.0012	0.0005	**0.0007**	0.0004	58.17

Internal Standard Factors:

Lithium	6	0.895	0.881	0.903	**0.895**	n/a	n/a
Scandium	45	1.256	1.333	1.352	**1.256**	n/a	n/a
Gallium	71	0.886	0.911	0.932	**0.886**	n/a	n/a
Rhodium	103	1.311	1.369	1.359	**1.311**	n/a	n/a
Indium	115	1.295	1.314	1.314	**1.295**	n/a	n/a
Lutetium	175	1.154	1.18	1.17	**1.154**	n/a	n/a
Gold	197	1.226	1.242	1.25	**1.226**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-006			Mean	SD	%RSD
TimeStamp		7/26/10 17:20					
Antimony	121	0.1128	0.0936	0.1101	**0.1055**	0.0104	9.843
Antimony	123	0.1112	0.1244	0.1139	**0.1165**	0.0069	5.965
Arsenic	75	9.344	9.526	9.777	**9.549**	0.2177	2.28
Cadmium	111	2.318	2.332	2.401	**2.35**	0.0446	1.896
Cadmium	114	1.588	1.63	1.603	**1.607**	0.0211	1.31
Chromium	52	0.5512	0.548	0.5488	**0.5493**	0.0017	0.3004
Chromium	53	3.416	2.959	2.937	**3.104**	0.2701	8.703
Lead	206	0.6164	1.528	3.263	**1.803**	1.345	74.6
Lead	207	0.6347	1.73	3.611	**1.992**	1.505	75.57
Lead	208	0.6354	1.633	3.436	**1.901**	1.42	74.66
Molybdenum	95	1251	1259	1245	**1252**	7.202	0.5753
Molybdenum	97	1260	1263	1241	**1255**	12.22	0.9743
Molybdenum	98	1192	1185	1169	**1182**	11.79	0.9971
Selenium	77	1.081	1.001	0.8956	**0.9926**	0.093	9.371
Selenium	78	1.593	2.02	1.86	**1.824**	0.2158	11.83
Selenium	82	16.81	17.18	16.01	**16.67**	0.6004	3.602
Thallium	203	0.0039	0.0045	0.0077	**0.0054**	0.002	37.98
Thallium	205	0.0026	0.003	0.005	**0.0036**	0.0013	36.35
Uranium	238	0.0781	0.0701	0.0829	**0.0771**	0.0065	8.392

Internal Standard Factors:

Lithium	6	1.046	0.998	1.02	**1.046**	n/a	n/a
Scandium	45	1.231	1.22	1.198	**1.231**	n/a	n/a
Gallium	71	1.368	1.347	1.334	**1.368**	n/a	n/a
Rhodium	103	1.321	1.307	1.271	**1.321**	n/a	n/a
Indium	115	1.273	1.254	1.244	**1.273**	n/a	n/a
Lutetium	175	1.134	1.111	1.123	**1.134**	n/a	n/a
Gold	197	1.221	1.18	1.194	**1.221**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006524-007			Mean	SD	%RSD
TimeStamp		7/26/10 17:24					
Antimony	121	-0.0283	-0.0272	-0.0281	**-0.0279**	0.0006	2.216
Antimony	123	-0.0252	-0.0277	-0.0235	**-0.0254**	0.0021	8.39
Arsenic	75	0.0104	0.0124	0.0121	**0.0116**	0.0011	9.305
Cadmium	111	0.0008	0.0008	0.0014	**0.001**	0.0004	35.62
Cadmium	114	0.001	0.0018	0	**0.0009**	0.0009	95.23
Chromium	52	0.063	0.0952	0.0603	**0.0728**	0.0194	26.64
Chromium	53	0.8534	0.4886	0.323	**0.555**	0.2714	48.9
Lead	206	0.0261	0.0418	0.069	**0.0456**	0.0217	47.56
Lead	207	0.0286	0.0464	0.0961	**0.057**	0.0349	61.27
Lead	208	0.029	0.0459	0.0759	**0.0503**	0.0237	47.2
Molybdenum	95	0.723	0.5131	0.4467	**0.5609**	0.1442	25.71
Molybdenum	97	0.7124	0.5575	0.4237	**0.5645**	0.1445	25.6
Molybdenum	98	0.7126	0.5178	0.4295	**0.5533**	0.1449	26.18
Selenium	77	0.1056	0.0435	0.1146	**0.0879**	0.0387	44.02
Selenium	78	-0.0721	0.336	0.0897	**0.1178**	0.2055	174.4
Selenium	82	0.0608	0.0215	-0.0938	**-0.0039**	0.0803	2083
Thallium	203	-0.0005	-0.001	0.0009	**-0.0002**	0.001	506.7
Thallium	205	-0.0013	-0.0017	-0.0016	**-0.0015**	0.0002	13.62
Uranium	238	-0.0003	-0.0006	-0.0002	**-0.0004**	0.0002	62.69

Internal Standard Factors:

Lithium	6	1.073	1.017	0.999	**1.073**	n/a	n/a
Scandium	45	1.161	1.132	1.082	**1.161**	n/a	n/a
Gallium	71	1.098	1.095	1.047	**1.098**	n/a	n/a
Rhodium	103	1.082	1.095	1.055	**1.082**	n/a	n/a
Indium	115	1.101	1.104	1.044	**1.101**	n/a	n/a
Lutetium	175	1.064	1.074	1.031	**1.064**	n/a	n/a
Gold	197	1.092	1.11	1.06	**1.092**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006777-008			Mean	SD	%RSD
TimeStamp		7/26/10 17:28					
Antimony	121	-0.0268	-0.0245	-0.028	**-0.0264**	0.0018	6.686
Antimony	123	-0.0247	-0.0232	-0.0228	**-0.0235**	0.001	4.213
Arsenic	75	0.0015	0.0167	0.0004	**0.0062**	0.0091	147.2
Cadmium	111	-0.0038	0.0054	0.0043	**0.002**	0.005	256.4
Cadmium	114	0.0002	0.003	0.0001	**0.0011**	0.0016	146.2
Chromium	52	0.0711	0.0886	0.0652	**0.075**	0.0122	16.26
Chromium	53	0.2579	0.1784	0.0518	**0.1627**	0.1039	63.87
Lead	206	0.0748	0.0524	0.0666	**0.0646**	0.0114	17.57
Lead	207	0.0713	0.0658	0.0784	**0.0718**	0.0063	8.786
Lead	208	0.0755	0.0604	0.0768	**0.0709**	0.0091	12.83
Molybdenum	95	0.2429	0.1948	0.1975	**0.2117**	0.027	12.77
Molybdenum	97	0.2687	0.2078	0.1988	**0.2251**	0.038	16.89
Molybdenum	98	0.2187	0.2035	0.183	**0.2017**	0.0179	8.877
Selenium	77	-0.0532	0.1099	0.0072	**0.0213**	0.0824	387.3
Selenium	78	0.2889	0.2347	0.0958	**0.2065**	0.0996	48.25
Selenium	82	-0.2663	-0.1821	-0.0466	**-0.165**	0.1108	67.17
Thallium	203	-0.0007	-0.0016	-0.0009	**-0.001**	0.0005	43.03
Thallium	205	-0.001	-0.0016	-0.0009	**-0.0012**	0.0004	33.92
Uranium	238	-0.0005	-0.0005	0.0006	**-0.0001**	0.0006	457.3

Internal Standard Factors:

Lithium	6	1.03	1.003	1.012	**1.03**	n/a	n/a
Scandium	45	1.114	1.105	1.094	**1.114**	n/a	n/a
Gallium	71	1.113	1.066	1.045	**1.113**	n/a	n/a
Rhodium	103	1.093	1.089	1.05	**1.093**	n/a	n/a
Indium	115	1.103	1.095	1.084	**1.103**	n/a	n/a
Lutetium	175	1.087	1.065	1.029	**1.087**	n/a	n/a
Gold	197	1.094	1.094	1.075	**1.094**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-001			Mean	SD	%RSD
TimeStamp		7/26/10 17:31					
Antimony	121	0.0214	0.0197	0.0165	**0.0192**	0.0025	13.03
Antimony	123	0.027	0.0124	0.0275	**0.0223**	0.0086	38.34
Arsenic	75	0.3401	0.3572	0.3958	**0.3644**	0.0285	7.834
~~Cadmium~~	~~111~~	~~0.043~~	~~0.0325~~	~~0.0352~~	~~**0.0369**~~	~~0.0055~~	~~14.85~~
Cadmium	114	0.0329	0.0227	0.0243	**0.0266**	0.0055	20.72
Chromium	52	0.3114	0.3292	0.3291	**0.3232**	0.0103	3.171
Chromium	53	0.6478	0.5989	0.5359	**0.5942**	0.0561	9.436
Lead	206	0.0648	0.0748	0.0679	**0.0691**	0.0051	7.395
Lead	207	0.0735	0.069	0.0777	**0.0734**	0.0044	5.958
Lead	208	0.0701	0.0737	0.0735	**0.0724**	0.002	2.798
~~Molybdenum~~	~~95~~	~~16.46~~	~~16.46~~	~~16.59~~	~~**16.5**~~	~~0.0743~~	~~0.4502~~
Molybdenum	97	16.79	16.96	16.5	**16.75**	0.2352	1.404
Molybdenum	98	16.73	16.57	16.46	**16.59**	0.1334	0.8045
Selenium	77	0.2276	0.2034	0.2199	**0.217**	0.0124	5.694
Selenium	78	0.5948	0.973	0.9834	**0.8504**	0.2215	26.04
Selenium	82	1.816	2.335	1.987	**2.046**	0.2641	12.91
Thallium	203	-0.0006	-0.0002	-0.0021	**-0.001**	0.001	101.2
Thallium	205	-0.0011	-0.0015	-0.0005	**-0.001**	0.0005	49
Uranium	238	0.0018	0.0016	0.0019	**0.0018**	0.0002	10.33

7/27/10

7/27/10

See
rerun
with MoO
correction

Internal Standard Factors:

Lithium	6	1.026	0.992	0.977	**1.026**	n/a	n/a
Scandium	45	1.066	1.066	1.083	**1.066**	n/a	n/a
Gallium	71	1.215	1.186	1.199	**1.215**	n/a	n/a
Rhodium	103	1.235	1.213	1.2	**1.235**	n/a	n/a
Indium	115	1.195	1.187	1.224	**1.195**	n/a	n/a
Lutetium	175	1.123	1.086	1.087	**1.123**	n/a	n/a
Gold	197	1.173	1.151	1.161	**1.173**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-002			Mean	SD	%RSD
TimeStamp		7/26/10 17:34					
Antimony	121	0.007	0.0039	0.0063	**0.0057**	0.0016	28.59
Antimony	123	0.0077	0.0144	0.0054	**0.0092**	0.0047	50.85
Arsenic	75	0.6633	0.6881	0.6259	**0.6591**	0.0313	4.75
~~Cadmium~~	~~111~~	~~0.0238~~	~~0.0238~~	~~0.0251~~	~~**0.0242**~~	~~0.0008~~	~~3.256~~
Cadmium	114	0.0192	0.0181	0.0197	**0.019**	0.0008	4.395
Chromium	52	0.3587	0.351	0.3516	**0.3538**	0.0043	1.202
Chromium	53	2.412	2.426	2.335	**2.391**	0.0489	2.046
Lead	206	0.0308	0.0317	0.0308	**0.0311**	0.0005	1.724
Lead	207	0.0353	0.0451	0.0438	**0.0414**	0.0053	12.8
Lead	208	0.0335	0.0411	0.0335	**0.036**	0.0044	12.11
~~Molybdenum~~	~~95~~	~~11.18~~	~~11.26~~	~~11.05~~	~~**11.16**~~	~~0.1051~~	~~0.9412~~
Molybdenum	97	11.47	11.52	11.5	**11.49**	0.0284	0.2469
Molybdenum	98	11.07	10.87	10.89	**10.94**	0.1069	0.977
Selenium	77	1.298	1.02	0.9208	**1.08**	0.1957	18.13
Selenium	78	0.7312	0.7984	0.6916	**0.7404**	0.054	7.297
Selenium	82	32.04	30.71	33.18	**31.98**	1.235	3.863
Thallium	203	-0.0001	-0.0007	-0.0021	**-0.001**	0.001	103.3
Thallium	205	-0.0005	-0.0011	-0.0011	**-0.0009**	0.0003	36.85
Uranium	238	0.0002	0.0003	-0.0003	**0.0001**	0.0003	526.5

Internal Standard Factors:

Lithium	6	1.102	1.092	1.075	**1.102**	n/a	n/a
Scandium	45	1.027	1.017	0.976	**1.027**	n/a	n/a
Gallium	71	1.219	1.173	1.189	**1.219**	n/a	n/a
Rhodium	103	1.254	1.241	1.219	**1.254**	n/a	n/a
Indium	115	1.187	1.196	1.166	**1.187**	n/a	n/a
Lutetium	175	1.112	1.096	1.098	**1.112**	n/a	n/a
Gold	197	1.176	1.177	1.158	**1.176**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-003			Mean	SD	%RSD
TimeStamp		7/26/10 17:37					
Antimony	121	0.0438	0.0408	0.036	**0.0402**	0.0039	9.694
Antimony	123	0.0398	0.0424	0.0374	**0.0399**	0.0025	6.197
Arsenic	75	0.5246	0.5269	0.5397	**0.5304**	0.0081	1.526
~~Cadmium~~	~~111~~	~~0.0301~~	~~0.0185~~	~~0.0269~~	~~**0.0252**~~	~~0.006~~	~~23.97~~
Cadmium	114	0.0164	0.0113	0.0265	**0.0181**	0.0077	42.69
Chromium	52	0.5845	0.5636	0.5712	**0.5731**	0.0105	1.839
Chromium	53	1.791	1.704	1.647	**1.714**	0.0725	4.23
Lead	206	0.1082	0.1012	0.1057	**0.105**	0.0035	3.367
Lead	207	0.1244	0.1151	0.1167	**0.1187**	0.005	4.191
Lead	208	0.1094	0.109	0.1152	**0.1112**	0.0035	3.121
~~Molybdenum~~	~~95~~	~~14.19~~	~~14.21~~	~~14.26~~	~~**14.22**~~	~~0.0408~~	~~0.287~~
Molybdenum	97	14.43	14.25	14.58	**14.42**	0.1662	1.152
Molybdenum	98	14.33	14.28	14.23	**14.28**	0.0502	0.3514
Selenium	77	0.7628	1.155	0.8283	**0.9154**	0.2101	22.96
Selenium	78	0.9896	0.9663	0.8732	**0.9431**	0.0616	6.529
Selenium	82	12.46	12.03	11.51	**12**	0.476	3.966
Thallium	203	-0.0007	-0.0002	-0.0018	**-0.0009**	0.0008	91.02
Thallium	205	-0.0019	-0.001	-0.0009	**-0.0013**	0.0005	41.88
Uranium	238	0.0031	0.0032	0.0036	**0.0033**	0.0003	8.451

Internal Standard Factors:

Lithium	6	1.115	1.114	1.136	**1.115**	n/a	n/a
Scandium	45	1.078	1.056	1.071	**1.078**	n/a	n/a
Gallium	71	1.229	1.22	1.225	**1.229**	n/a	n/a
Rhodium	103	1.249	1.232	1.241	**1.249**	n/a	n/a
Indium	115	1.203	1.181	1.199	**1.203**	n/a	n/a
Lutetium	175	1.097	1.085	1.096	**1.097**	n/a	n/a
Gold	197	1.172	1.16	1.186	**1.172**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-004			Mean	SD	%RSD
TimeStamp		7/26/10 17:41					
Antimony	121	0.0322	0.0309	0.023	**0.0287**	0.005	17.46
Antimony	123	0.0339	0.03	0.0309	**0.0316**	0.002	6.453
Arsenic	75	0.7613	0.7773	0.7135	**0.7507**	0.0332	4.419
~~Cadmium~~	~~111~~	~~0.4465~~	~~0.4849~~	~~0.4443~~	~~**0.4585**~~	~~0.0228~~	~~4.981~~
Cadmium	114	0.3223	0.3241	0.3241	**0.3235**	0.0011	0.3262
Chromium	52	0.2434	0.2367	0.2197	**0.2333**	0.0122	5.235
Chromium	53	1.131	1.07	0.82	**1.007**	0.1647	16.36
Lead	206	0.0194	0.019	0.0258	**0.0214**	0.0038	17.65
Lead	207	0.0247	0.0183	0.032	**0.025**	0.0069	27.44
Lead	208	0.0208	0.0201	0.0292	**0.0234**	0.0051	21.71
~~Molybdenum~~	~~95~~	~~229~~	~~234~~	~~227.4~~	~~**230.1**~~	~~3.43~~	~~1.49~~
Molybdenum	97	229.5	236	228.1	**231.2**	4.22	1.825
Molybdenum	98	233.1	233.9	229.2	**232.1**	2.495	1.075
Selenium	77	0.4522	0.6421	0.5504	**0.5482**	0.095	17.32
Selenium	78	0.8291	1.14	1.146	**1.039**	0.1814	17.47
Selenium	82	12.12	12.16	12.09	**12.12**	0.0351	0.2893
Thallium	203	0.0009	-0.0008	-0.0008	**-0.0002**	0.001	453.8
Thallium	205	-0.0013	-0.0019	-0.0013	**-0.0015**	0.0004	25.78
Uranium	238	0.0013	0.0013	0.0014	**0.0013**	0	3.06

Internal Standard Factors:

Lithium	6	1.09	1.114	1.069	**1.09**	n/a	n/a
Scandium	45	1.124	1.119	1.09	**1.124**	n/a	n/a
Gallium	71	1.253	1.243	1.235	**1.253**	n/a	n/a
Rhodium	103	1.242	1.225	1.197	**1.242**	n/a	n/a
Indium	115	1.207	1.172	1.168	**1.207**	n/a	n/a
Lutetium	175	1.091	1.068	1.067	**1.091**	n/a	n/a
Gold	197	1.171	1.143	1.136	**1.171**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-005			Mean	SD	%RSD
TimeStamp		7/26/10 17:44					
Antimony	121	0.0478	0.0446	0.0461	**0.0462**	0.0016	3.473
Antimony	123	0.0401	0.0475	0.0406	**0.0427**	0.0041	9.686
Arsenic	75	0.5655	0.6284	0.657	**0.617**	0.0468	7.586
~~Cadmium~~	~~111~~	~~0.1796~~	~~0.1671~~	~~0.1659~~	~~**0.1709**~~	~~0.0076~~	~~4.454~~
Cadmium	114	0.1165	0.1143	0.1035	**0.1114**	0.007	6.264
Chromium	52	0.9486	0.9096	0.894	**0.9174**	0.0281	3.066
Chromium	53	1.071	1.109	0.8939	**1.025**	0.1149	11.22
Lead	206	0.6291	0.6311	0.6299	**0.63**	0.001	0.161
Lead	207	0.6943	0.7164	0.6715	**0.6941**	0.0224	3.228
Lead	208	0.6822	0.6816	0.6693	**0.6777**	0.0073	1.073
~~Molybdenum~~	~~95~~	~~76.23~~	~~77.38~~	~~76.57~~	~~**76.73**~~	~~0.5881~~	~~0.7665~~
Molybdenum	97	77.61	77.12	77.12	**77.28**	0.2848	0.3686
Molybdenum	98	77.32	77.38	78.91	**77.87**	0.9002	1.156
Selenium	77	0.5072	0.5668	0.3546	**0.4762**	0.1094	22.98
Selenium	78	0.7535	0.6013	0.7916	**0.7155**	0.1007	14.08
Selenium	82	3.4	3.51	2.746	**3.219**	0.4133	12.84
Thallium	203	-0.0015	-0.0015	-0.0013	**-0.0014**	0.0001	9.169
Thallium	205	-0.0012	-0.0009	-0.002	**-0.0014**	0.0006	42.4
Uranium	238	0.0037	0.0031	0.003	**0.0033**	0.0004	12.78

Internal Standard Factors:

Lithium	6	1.156	1.155	1.13	**1.156**	n/a	n/a
Scandium	45	1.123	1.103	1.079	**1.123**	n/a	n/a
Gallium	71	1.255	1.214	1.231	**1.255**	n/a	n/a
Rhodium	103	1.22	1.198	1.201	**1.22**	n/a	n/a
Indium	115	1.206	1.204	1.189	**1.206**	n/a	n/a
Lutetium	175	1.116	1.095	1.078	**1.116**	n/a	n/a
Gold	197	1.191	1.165	1.155	**1.191**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		K1006465-006			Mean	SD	%RSD
TimeStamp		7/26/10 17:48					
Antimony	121	0.0103	0.0033	0.0037	**0.0058**	0.0039	67.54
Antimony	123	0.0056	-0.0018	-0.0032	**0.0002**	0.0047	2496
Arsenic	75	0.4059	0.3904	0.3954	**0.3973**	0.0079	1.985
Cadmium	111	-0.0027	-0.0007	0.0003	**-0.001**	0.0015	147
Cadmium	114	-0.0003	0	0.0044	**0.0014**	0.0026	191.5
Chromium	52	0.2795	0.2832	0.2765	**0.2797**	0.0034	1.202
Chromium	53	1.961	2.099	2.026	**2.029**	0.0694	3.418
Lead	206	0.0559	0.0522	0.0423	**0.0502**	0.0071	14.07
Lead	207	0.0589	0.0478	0.0445	**0.0504**	0.0076	14.98
Lead	208	0.0585	0.0524	0.0423	**0.0511**	0.0082	16.05
Molybdenum	95	0.4265	0.3821	0.3551	**0.3879**	0.036	9.29
Molybdenum	97	0.4816	0.4489	0.4589	**0.4631**	0.0168	3.622
Molybdenum	98	0.325	0.2827	0.264	**0.2906**	0.0313	10.76
Selenium	77	1.23	0.8784	1.089	**1.066**	0.177	16.6
Selenium	78	0.7088	0.871	0.5483	**0.7093**	0.1614	22.75
Selenium	82	13.59	14.79	13.85	**14.08**	0.6285	4.465
Thallium	203	-0.0007	-0.0007	-0.0001	**-0.0005**	0.0003	63.43
Thallium	205	-0.0019	-0.0024	-0.0021	**-0.0021**	0.0003	12.74
Uranium	238	0.0019	0.0017	0.0016	**0.0017**	0.0002	8.703

Internal Standard Factors:

Lithium	6	1.163	1.094	1.089	**1.163**	n/a	n/a
Scandium	45	1.05	1.04	1.03	**1.05**	n/a	n/a
Gallium	71	1.206	1.185	1.18	**1.206**	n/a	n/a
Rhodium	103	1.258	1.224	1.22	**1.258**	n/a	n/a
Indium	115	1.212	1.172	1.188	**1.212**	n/a	n/a
Lutetium	175	1.106	1.12	1.108	**1.106**	n/a	n/a
Gold	197	1.196	1.177	1.173	**1.196**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCV3			Mean	SD	%RSD
TimeStamp		7/26/10 17:51					
Antimony	121	25.62	25.06	24.83	**25.17**	0.406	1.613
Antimony	123	25.35	25.31	24.59	**25.08**	0.4272	1.703
Arsenic	75	24.21	24.81	25.41	**24.81**	0.5991	2.414
Cadmium	111	24.83	24.99	25.01	**24.94**	0.0974	0.3905
Cadmium	114	25.2	24.99	24.74	**24.97**	0.2322	0.9295
Chromium	52	24.83	24.7	24.9	**24.81**	0.0994	0.4006
Chromium	53	25.08	24.36	24.63	**24.69**	0.3674	1.488
Lead	206	26.02	25.37	25.76	**25.72**	0.3285	1.277
Lead	207	25.44	25.39	25.3	**25.38**	0.0683	0.2691
Lead	208	25.8	25.54	25.38	**25.57**	0.2104	0.8227
Molybdenum	95	25.12	25.28	24.86	**25.08**	0.2138	0.8525
Molybdenum	97	24.66	25.14	25.29	**25.03**	0.3267	1.305
Molybdenum	98	25.13	25.15	25.31	**25.2**	0.0994	0.3946
Selenium	77	23.72	25.03	24.84	**24.53**	0.7064	2.88
Selenium	78	25.26	25.98	25.66	**25.63**	0.3593	1.402
Selenium	82	25.38	25.75	25.28	**25.47**	0.2447	0.9607
Thallium	203	25.64	26.74	27.42	**26.6**	0.9003	3.385
Thallium	205	25.34	26.25	26.67	**26.09**	0.679	2.603
Uranium	238	26.1	25.73	25.84	**25.89**	0.1906	0.7361

Internal Standard Factors:

Lithium	6	0.98	0.951	0.962	**0.98**	n/a	n/a
Scandium	45	1.078	1.01	1.048	**1.078**	n/a	n/a
Gallium	71	1.001	0.987	1.012	**1.001**	n/a	n/a
Rhodium	103	1.031	1.003	0.994	**1.031**	n/a	n/a
Indium	115	1.058	1.012	0.987	**1.058**	n/a	n/a
Lutetium	175	1.009	0.994	0.988	**1.009**	n/a	n/a
Gold	197	1.063	1.014	1.019	**1.063**	n/a	n/a

Instrument ID: K-ICP-MS-02
Experiment: 07-26-10B
Units: µg/L (ppb)

Method: EPA 6020
Analyst: Greg Jasper
STARLIMS #209940

Sample Name:		CCB3			Mean	SD	%RSD
TimeStamp		7/26/10 17:58					
Antimony	121	-0.0266	-0.0239	-0.0238	**-0.0248**	0.0016	6.323
Antimony	123	-0.0243	-0.0213	-0.025	**-0.0235**	0.002	8.427
Arsenic	75	0.0075	0.0118	0.0045	**0.0079**	0.0037	46.58
Cadmium	111	0.0015	0.0081	-0.0004	**0.0031**	0.0045	145.6
Cadmium	114	0.0036	0.007	0.0048	**0.0051**	0.0017	33.85
Chromium	52	-0.013	0.0179	0.0067	**0.0039**	0.0156	405.1
Chromium	53	0.1446	-0.1133	-0.2107	**-0.0598**	0.1836	307
Lead	206	0.0033	0.0059	0.0057	**0.005**	0.0014	28.73
Lead	207	0.0041	0.0048	0.0054	**0.0048**	0.0007	14.37
Lead	208	0.0051	0.0074	0.0059	**0.0061**	0.0011	18.47
Molybdenum	95	0.0342	0.0409	0.0345	**0.0365**	0.0038	10.27
Molybdenum	97	0.0288	0.0307	0.0363	**0.0319**	0.0039	12.2
Molybdenum	98	0.0333	0.035	0.0353	**0.0345**	0.001	3.029
Selenium	77	0.0017	0.1224	-0.0358	**0.0294**	0.0827	280.9
Selenium	78	0.0999	-0.0073	0.1916	**0.0948**	0.0996	105.1
Selenium	82	0.0186	0.2344	0.1086	**0.1206**	0.1084	89.91
Thallium	203	0.0056	0.007	0.0037	**0.0054**	0.0017	31.01
Thallium	205	0.0062	0.0067	0.0042	**0.0057**	0.0014	23.88
Uranium	238	0.0027	0.0039	0.0042	**0.0036**	0.0008	22.13

Internal Standard Factors:

Lithium	6	1.065	0.995	1.015	**1.065**	n/a	n/a
Scandium	45	1.054	1.041	1.038	**1.054**	n/a	n/a
Gallium	71	1.014	1.003	1.007	**1.014**	n/a	n/a
Rhodium	103	1.063	1.014	1.021	**1.063**	n/a	n/a
Indium	115	1.06	1.018	1.028	**1.06**	n/a	n/a
Lutetium	175	1.035	1.002	1.02	**1.035**	n/a	n/a
Gold	197	1.054	1.03	1.052	**1.054**	n/a	n/a

Subcontract Laboratory Results

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Revised Analytical Report

Lynda Huckestein
Columbia Analytical Services
1317 South 13th Avenue
Kelso, WA 98626

August 5, 2010

Cc: Columbia Analytical Services, Andrea Nord

Project ID: K1006777
ACZ Project ID: L83111

Lynda Huckestein:

Enclosed are revised analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 07, 2010 and reported on July 28, 2010. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L83111. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L83111. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all the requirements of NELAC.

This report should be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 28, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years. Please notify your Project Manager if you have other needs.

If you have any questions, please contact your Project Manager or Customer Service Representative.

Sue Webber has reviewed and approved this report.

Columbia Analytical Services

August 05, 2010

Project ID: K1006777
ACZ Project ID: L83111

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 ground water sample from Columbia Analytical Services on July 7, 2010. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L83111. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

This sample was analyzed for radiochemistry parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

This report was revised on 08/05/10 to delete Thorium 228 and Thorium 232 data since it was not requested. No other changes were made.

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-120 COMP
Locator:

ACZ Sample ID: ***L83111-01***
Date Sampled: *06/29/10 11:20*
Date Received: *07/07/10*
Sample Matrix: *Ground Water*

Lead 210, total — Prep Method:
EICHROM, OTW01

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210, total	07/23/10 11:16		0.75	1.5	4	pCi/L	*	mwm

Radium 226, total — Prep Method:
M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226, total	07/22/10 15:18		0.12	0.07	0.18	pCi/L	*	jjg

Thorium 230, total — Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230, total	07/23/10 14:35		0.01	0.35	0.57	pCi/L	*	jjg

Uranium, Isotopic Total — Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234, total	07/16/10 9:12		-0.57	1.9	1.1	pCi/L	*	mwm
Uranium 235, total	07/16/10 9:12		-0.13	0.79	1.1	pCi/L	*	mwm
Uranium 238, total	07/16/10 9:12		2.63	1.5	1.1	pCi/L	*	mwm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services
Project ID: K1006777

ACZ Project ID: ***L83111***

Lead 210, total EICHROM, OTW01 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286821																
L83111-01MS	MS	07/23/10	RC100623-1	77.23	0.75	1.5	4	60	2.8	3.8	76.7	47	102			
WG286182LCSW	LCSW	07/23/10	RC100623-1	77.23				61	2.9	4.2	79	47	102			
WG286182PBW	PBW	07/23/10						2	1.5	4			8			
L83111-01DUP	DUP-RER	07/23/10			0.75	1.5	4	1.3	1.3	3.5				0.28	2	

Radium 226, total M903.1 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286588																
WG286107PBW	PBW	07/22/10						.03	0.1	0.25			0.5			
WG286107LCSW	LCSW	07/22/10	RC100624-2	23.92				27	0.67	0.23	112.9	45	131			
L83111-01DUP	DUP-RER	07/22/10			0.12	0.07	0.18	.02	0.11	0.45				0.76	2	
L83254-06MS	MS	07/22/10	RC100624-2	23.92	0.55	0.12	0.24	32	0.86	0.32	131.5	45	131			M1

Thorium 230, total ESM 4506 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286828																
WG286339PBW	PBW	07/23/10						.53	0.4	0.56			1.12			
WG286339LCSW	LCSW	07/23/10	RC091215-1	162.12				170	4.6	0.64	104.9	90	120			
L83111-01DUP	DUP-RER	07/23/10			0.01	0.35	0.57	.46	0.4	0.65				0.85	2	
L83298-10DUP	DUP-RER	07/23/10			-0.08	0.22	0.57	.17	0.35	0.63				0.6	2	
L83111-01MS	MS	07/23/10	RC091215-1	162.12	0.01	0.35	0.57	170	3.8	0.44	104.9	90	120			

Uranium 234 Eichrom pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286268																
WG285975PBW	PBW	07/16/10						.58	1.4	1.1			2.2			
WG285975LCSW	LCSW	07/16/10	RC100223-2	165.63				180	13	1.7	108.7	89	132			
L82973-01DUP	DUP-RER	07/16/10			-0.21	1.6	1	-.27	1.7	0.97				0.03	2	
L83216-04DUP	DUP-RER	07/16/10			3.5	1.9	1.1	1.8	1.9	1				0.63	2	
L83111-01MS	MS	07/16/10	RC100223-2	165.63	-0.57	1.9	1.1	160	12	1.7	96.9	89	132			

Uranium 235 Eichrom pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286268																
WG285975PBW	PBW	07/16/10						0	0.87	1.1			2.2			
WG285975LCSW	LCSW	07/16/10	RC100223-2	7.91				8	3.1	1.7	101.1	45	150			
L82973-01DUP	DUP-RER	07/16/10			-0.34	0.88	1	0	0.74	0.97				0.3	2	
L83216-04DUP	DUP-RER	07/16/10			0.63	0.59	1.1	-.24	0.6	1				1.03	2	
L83111-01MS	MS	07/16/10	RC100223-2	7.91	-0.13	0.79	1.1	5.7	2.5	1.7	73.7	45	150			

Radiochemistry QC Summary

Columbia Analytical Services
Project ID: K1006777

ACZ Project ID: ***L83111***

Uranium 238 Eichrom pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG286268																
WG285975PBW	PBW	07/16/10						.84	0.91	1.1			2.2			
WG285975LCSW	LCSW	07/16/10	RC100223-2	171.94				175	12	1.7	101.8	87	132			
L82973-01DUP	DUP-RER	07/16/10			-0.35	1	1	.89	0.99	0.97				0.88	2	
L83216-04DUP	DUP-RER	07/16/10			3.63	1.5	1.1	2.1	1.4	1				0.75	2	
L83111-01MS	MS	07/16/10	RC100223-2	171.94	2.63	1.5	1.1	168	12	1.7	96.2	87	132			

Columbia Analytical Services

ACZ Project ID: ***L83111***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L83111-01	WG286588	Radium 226, total	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lead 210, total	EICHROM, OTW01
Thorium 228	ESM 4506
Thorium 230	ESM 4506
Thorium 232	ESM 4506
Uranium 234, total	Eichrom
Uranium 235, total	Eichrom
Uranium 238, total	Eichrom

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006777

ACZ Project ID: L83111
Date Received: 07/07/2010 10:44
Received By: gac
Date Printed: 7/8/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
Na11170		3.1	12

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006777

ACZ Project ID: L83111
Date Received: 07/07/2010 10:44
Received By: gac
Date Printed: 7/8/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L83111-01	BG-120 COMP	Y										

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

L83111

Project Number: K1006777
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006777-001	BG-1 0-2 COMP	1	Soil	6/29/10	1500	ACZ	✓	✓	✓	✓
K1006777-002	BG-1 2-12 COMP	1	Soil	6/29/10	1505	ACZ	✓	✓	✓	✓
K1006777-003	BG-1 12-18 COMP	1	Soil	6/29/10	1510	ACZ	✓	✓	✓	✓
K1006777-004	BG-2 0-2 COMP	1	Soil	6/30/10	1005	ACZ	✓	✓	✓	✓
K1006777-005	BG-2 2-12 COMP	3	Soil	6/30/10	1015	ACZ	✓	✓	✓	✓
K1006777-006	BG-2 12-18 COMP	1	Soil	6/30/10	1025	ACZ	✓	✓	✓	✓
K1006777-007	BG-100 0-2 COMP	1	Soil	6/29/10	1505	ACZ	✓	✓	✓	✓
K1006777-008	BG-120 COMP	2	Water	6/29/10	1120	ACZ	✓	✓	✓	✓
K1006777-009	BG-3 0-2 COMP	1	Soil	6/29/10	1055	ACZ	✓	✓	✓	✓
K1006777-010	BG-3 2-12 COMP	1	Soil	6/29/10	1100	ACZ	✓	✓	✓	✓
K1006777-011	BG-3 12-18 COMP	1	Soil	6/29/10	1105	ACZ	✓	✓	✓	✓
K1006777-012	BG-4 0-2 COMP	1	Soil	6/28/10	1425	ACZ	✓	✓	✓	✓

COPY

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
___ RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
✓ STANDARD
Requested FAX Date: _____
Requested Report Date: 07/18/10

Report Requirements
___ I. Results Only
___ II. Results + QC Summaries
___ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
PQL/MDL/J (Y)
EDD

Invoice Information
PO# K1006777
Bill to

Relinquished By: [signature] CAS 7-6-10 8:30 am
Received By: [signature] 7-7-10 10:40
Airbill Number: _____

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

August 06, 2010

Report to:
Lynda Huckestein
Columbia Analytical Services
1317 S. 13th Ave.
Kelso, WA 98626

Bill to:
Accounts Payable
Columbia Analytical Services
1317 South 13th Ave.
Kelso, WA 98626

cc: Columbia Analytical Services, Inc., Andrea A. Nord

Project ID: K1006777
ACZ Project ID: L83112

Lynda Huckestein:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 07, 2010. This project has been assigned to ACZ's project number, L83112. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L83112. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after September 06, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

ADDENDUM

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-1 0-2 COMP

ACZ Sample ID: ***L83112-01***
Date Sampled: *06/29/10 15:00*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:00	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:00	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-1 2-12 COMP

ACZ Sample ID: ***L83112-02***
Date Sampled: *06/29/10 15:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:04	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:08	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-1 12-18 COMP

ACZ Sample ID: ***L83112-03***
Date Sampled: *06/29/10 15:10*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:08	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:16	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-2 0-2 COMP

ACZ Sample ID: ***L83112-04***
Date Sampled: *06/30/10 10:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:12	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:24	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-2 2-12 COMP

ACZ Sample ID: ***L83112-05***
Date Sampled: *06/30/10 10:15*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:16	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:32	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-2 12-18 COMP

ACZ Sample ID: ***L83112-06***
Date Sampled: *06/30/10 10:25*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:20	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:40	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-100 0-2 COMP

ACZ Sample ID: ***L83112-07***
Date Sampled: *06/29/10 15:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:24	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:48	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-3 0-2 COMP

ACZ Sample ID: ***L83112-08***
Date Sampled: *06/29/10 10:55*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:28	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 10:56	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-3 2-12 COMP

ACZ Sample ID: ***L83112-09***
Date Sampled: *06/29/10 11:00*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:32	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:04	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-3 12-18 COMP

ACZ Sample ID: ***L83112-10***
Date Sampled: *06/29/10 11:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:36	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:12	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-4 0-2 COMP

ACZ Sample ID: ***L83112-11***
Date Sampled: *06/28/10 14:25*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:40	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:20	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-4 2-12 COMP

ACZ Sample ID: ***L83112-12***
Date Sampled: *06/28/10 14:30*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:44	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:28	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-4 12-18 COMP

ACZ Sample ID: ***L83112-13***
Date Sampled: *06/28/10 14:35*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:48	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:36	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-6 0-2 COMP

ACZ Sample ID: ***L83112-14***
Date Sampled: *06/28/10 17:30*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:52	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:44	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-6 2-12 COMP

ACZ Sample ID: ***L83112-15***
Date Sampled: *06/28/10 17:35*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 15:56	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 11:52	nrc

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-6 12-18 COMP

ACZ Sample ID: ***L83112-16***
Date Sampled: *06/28/10 17:40*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							07/19/10 16:00	meg
Crush and Pulverize	USDA No. 1, 1972							07/26/10 12:00	nrc

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit, typically 5 times the MDL.
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	SDL	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.

(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

(5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.

(6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.

(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

Columbia Analytical Services

ACZ Project ID: ***L83112***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-1 0-2 COMP
Locator:

ACZ Sample ID: ***L83112-01***
Date Sampled: *06/29/10 15:00*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		3.3	1.5	4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:39		2.1	0.48	0.9	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 7:56		1.2	0.61	0.65	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:26		0.55	0.48	0.22	pCi/g	*	mwm
Uranium 235	08/02/10 9:26		-0.2	0.23	0.22	pCi/g	*	mwm
Uranium 238	08/02/10 9:26		0.87	0.35	0.22	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-1 2-12 COMP
Locator:

ACZ Sample ID: ***L83112-02***
Date Sampled: *06/29/10 15:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		0.0	1.6	4.9	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:41		5	0.74	0.94	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 7:58		1.6	0.57	0.63	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:28		0.94	0.56	0.25	pCi/g	*	mwm
Uranium 235	08/02/10 9:28		-0.15	0.25	0.25	pCi/g	*	mwm
Uranium 238	08/02/10 9:28		0.89	0.41	0.25	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-1 12-18 COMP
Locator:

ACZ Sample ID: ***L83112-03***
Date Sampled: *06/29/10 15:10*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		2.4	1.4	4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:42		1.7	0.35	0.62	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 7:59		3.4	0.72	0.65	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:29		1.1	0.61	0.26	pCi/g	*	mwm
Uranium 235	08/02/10 9:29		0.12	0.22	0.26	pCi/g	*	mwm
Uranium 238	08/02/10 9:29		1.21	0.5	0.26	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-2 0-2 COMP
Locator:

ACZ Sample ID: ***L83112-04***
Date Sampled: *06/30/10 10:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		1.9	1.4	3.8	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:44		3.5	0.58	0.81	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:01		2	0.57	0.59	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:31		0.68	0.59	0.31	pCi/g	*	mwm
Uranium 235	08/02/10 9:31		0.03	0.23	0.31	pCi/g	*	mwm
Uranium 238	08/02/10 9:31		0.99	0.46	0.31	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-2 2-12 COMP
Locator:

ACZ Sample ID: ***L83112-05***
Date Sampled: *06/30/10 10:15*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		0.57	1.3	3.9	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:45		2.2	0.44	0.73	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:02		1.1	0.55	0.66	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:32		0.9	0.56	0.36	pCi/g	*	mwm
Uranium 235	08/02/10 9:32		0.08	0.25	0.36	pCi/g	*	mwm
Uranium 238	08/02/10 9:32		0.72	0.47	0.36	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-2 12-18 COMP
Locator:

ACZ Sample ID: ***L83112-06***
Date Sampled: *06/30/10 10:25*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		0.0	1.5	4.3	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:47		1.6	0.41	0.84	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:04		1.1	0.54	0.6	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:34		0.53	0.43	0.24	pCi/g	*	mwm
Uranium 235	08/02/10 9:34		0.08	0.19	0.24	pCi/g	*	mwm
Uranium 238	08/02/10 9:34		0.34	0.3	0.24	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-100 0-2 COMP
Locator:

ACZ Sample ID: ***L83112-07***
Date Sampled: *06/29/10 15:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 12:43		0.96	1.5	4.3	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:48		1.9	0.46	0.92	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:05		3.4	0.77	0.66	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:35		1.4	0.64	0.31	pCi/g	*	mwm
Uranium 235	08/02/10 9:35		0.0	0.24	0.31	pCi/g	*	mwm
Uranium 238	08/02/10 9:35		1.21	0.56	0.31	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-3 0-2 COMP
Locator:

ACZ Sample ID: ***L83112-08***
Date Sampled: *06/29/10 10:55*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.0	1.6	4.6	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:49		2.8	0.55	0.9	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:06		0.67	0.47	0.68	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:36		0.15	0.49	0.26	pCi/g	*	mwm
Uranium 235	08/02/10 9:36		0.06	0.25	0.26	pCi/g	*	mwm
Uranium 238	08/02/10 9:36		0.68	0.33	0.26	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-3 2-12 COMP
Locator:

ACZ Sample ID: ***L83112-09***
Date Sampled: *06/29/10 11:00*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.12	1.4	4	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:51		2	0.45	0.88	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:08		0.76	0.47	0.67	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:38		0.54	0.54	0.29	pCi/g	*	mwm
Uranium 235	08/02/10 9:38		-0.2	0.28	0.29	pCi/g	*	mwm
Uranium 238	08/02/10 9:38		0.52	0.39	0.29	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-3 12-18 COMP
Locator:

ACZ Sample ID: ***L83112-10***
Date Sampled: *06/29/10 11:05*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.0	1.4	4.2	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:52		1.7	0.37	0.66	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:09		0.66	0.51	0.72	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:39		0.75	0.55	0.33	pCi/g	*	mwm
Uranium 235	08/02/10 9:39		0.26	0.26	0.33	pCi/g	*	mwm
Uranium 238	08/02/10 9:39		0.79	0.41	0.33	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-4 0-2 COMP
Locator:

ACZ Sample ID: ***L83112-11***
Date Sampled: *06/28/10 14:25*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.48	1.1	3.3	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:54		1.8	0.44	0.88	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:11		0.96	0.55	0.67	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:41		1	0.5	0.26	pCi/g	*	mwm
Uranium 235	08/02/10 9:41		0.09	0.29	0.26	pCi/g	*	mwm
Uranium 238	08/02/10 9:41		0.7	0.38	0.26	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-4 2-12 COMP
Locator:

ACZ Sample ID: ***L83112-12***
Date Sampled: *06/28/10 14:30*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.0	1.7	4.9	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:55		2.1	0.47	0.85	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:12		1.1	0.5	0.59	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:42		0.73	0.72	0.38	pCi/g	*	mwm
Uranium 235	08/02/10 9:42		-0.04	0.2	0.38	pCi/g	*	mwm
Uranium 238	08/02/10 9:42		0.95	0.5	0.38	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-4 12-18 COMP
Locator:

ACZ Sample ID: ***L83112-13***
Date Sampled: *06/28/10 14:35*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		1.3	1.6	4.6	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:57		1.7	0.39	0.72	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:14		0.67	0.47	0.57	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:44		1	0.68	0.32	pCi/g	*	mwm
Uranium 235	08/02/10 9:44		0.26	0.23	0.32	pCi/g	*	mwm
Uranium 238	08/02/10 9:44		0.56	0.43	0.32	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-6 0-2 COMP
Locator:

ACZ Sample ID: ***L83112-14***
Date Sampled: *06/28/10 17:30*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.54	1.3	3.7	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 9:58		7.5	0.87	0.88	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:15		0.55	0.49	0.55	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:45		0.47	0.5	0.3	pCi/g	*	mwm
Uranium 235	08/02/10 9:45		-0.1	0.21	0.3	pCi/g	*	mwm
Uranium 238	08/02/10 9:45		0.68	0.33	0.3	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-6 2-12 COMP
Locator:

ACZ Sample ID: ***L83112-15***
Date Sampled: *06/28/10 17:35*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.95	1.5	4.3	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 10:00		2.6	0.52	0.9	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:17		0.42	0.54	0.68	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:47		0.38	0.49	0.26	pCi/g	*	mwm
Uranium 235	08/02/10 9:47		0.06	0.2	0.26	pCi/g	*	mwm
Uranium 238	08/02/10 9:47		0.27	0.31	0.26	pCi/g	*	mwm

Columbia Analytical Services
Project ID: K1006777
Sample ID: BG-6 12-18 COMP
Locator:

ACZ Sample ID: ***L83112-16***
Date Sampled: *06/28/10 17:40*
Date Received: *07/07/10*
Sample Matrix: *Soil*

Lead 210 (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Lead 210 (3050)	08/03/10 14:16		0.12	1.3	3.9	pCi/g	*	mwm

Radium 226 + Alpha Emitting Radium Isotopes (3050) Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/10 10:01		1.8	0.45	0.88	pCi/g	*	mwm

Thorium 230 (3050) Prep Method:
ESM 4506

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Thorium 230 (3050)	07/29/10 8:18		0.31	0.44	0.57	pCi/g	*	jjg

Uranium, Isotopic (3050) Prep Method:
Eichrom

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Uranium 234	08/02/10 9:48		-0.07	0.54	0.29	pCi/g	*	mwm
Uranium 235	08/02/10 9:48		-0.2	0.3	0.29	pCi/g	*	mwm
Uranium 238	08/02/10 9:48		0.78	0.44	0.29	pCi/g	*	mwm

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services
Project ID: K1006777

ACZ Project ID: ***L83112***

Lead 210 (3050) Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287330																
WG286762PBS	PBS	08/03/10						1	1.4	4.1			8.2			
WG286762LCSS	LCSS	08/03/10	RC100623-1	77.16				60	2.7	4.4	77.8	47	102			
L83112-01DUP	DUP-RER	08/03/10			3.3	1.5	4	0	1.4	4.3				1.61	2	
L83112-14MS	MS	08/03/10	RC100623-1	77.16	0.54	1.3	3.7	55	2.6	4.1	70.6	47	102			
L83112-16DUP	DUP-RER	08/03/10			0.12	1.3	3.9	0	1.6	4.7				0.06	2	

Radium 226 + Alpha Emitting Radium M9315 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287344																
WG286917PBS	PBS	08/02/10						.07	0.13	0.89			1.78			
WG286917LCSS	LCSS	08/02/10	RC100624-2	47.83				48	2.1	0.84	100.4	71	121			
L83112-01DUP	DUP-RER	08/02/10			2.1	0.48	0.9	5.4	0.73	0.83				3.78	2	RC
L83112-16DUP	DUP-RER	08/02/10			1.8	0.45	0.88	3.6	0.59	0.81				2.43	2	RC
L83112-02MS	MS	08/02/10	RC100624-2	48.81	5	0.74	0.94	48	2.2	0.85	88.1	71	121			

Thorium 230 (3050) ESM 4506 pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287089																
WG286738PBS	PBS	07/29/10						.15	0.47	0.63			1.26			
WG286738LCSS	LCSS	07/29/10	RC091215-1	162.12				170	5.4	0.88	104.9	90	120			
L83112-01DUP	DUP-RER	07/29/10			1.2	0.61	0.65	1	0.59	0.65				0.24	2	
L83112-15DUP	DUP-RER	07/29/10			0.42	0.54	0.68	.5	0.42	0.59				0.12	2	
L83112-16MS	MS	07/29/10	RC091215-1	165.43	0.31	0.44	0.57	170	4.4	0.57	102.6	90	120			

Uranium 234 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287341																
WG286896PBS	PBS	08/02/10						-.21	0.32	0.21			0.42			
WG286896LCSS	LCSS	08/02/10	RC100223-2	33.13				35	2.5	0.32	105.6	89	132			
L83112-01DUP	DUP-RER	08/02/10			0.55	0.48	0.22	3	0.79	0.26				2.65	2	RC
L83112-16DUP	DUP-RER	08/02/10			-0.07	0.54	0.29	.65	0.47	0.22				1.01	2	
L83112-03MS	MS	08/02/10	RC100223-2	33.8	1.1	0.61	0.26	35	3	0.45	100.3	89	132			

Uranium 235 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287341																
WG286896PBS	PBS	08/02/10						.02	0.15	0.21			0.42			
WG286896LCSS	LCSS	08/02/10	RC100223-2	1.58				1.5	0.62	0.32	94.9	45	150			
L83112-01DUP	DUP-RER	08/02/10			-0.2	0.23	0.22	0	0.33	0.26				0.5	2	
L83112-16DUP	DUP-RER	08/02/10			-0.2	0.3	0.29	.08	0.27	0.22				0.69	2	
L83112-03MS	MS	08/02/10	RC100223-2	1.61	0.12	0.22	0.26	1.4	0.65	0.45	79.5	45	150			

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Radiochemistry QC Summary

Columbia Analytical Services
Project ID: K1006777

ACZ Project ID: ***L83112***

Uranium 238 Eichrom pCi/g

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287341																
WG286896PBS	PBS	08/02/10						.06	0.22	0.21			0.42			
WG286896LCSS	LCSS	08/02/10	RC100223-2	34.39				35.5	2.4	0.32	103.2	87	132			
L83112-01DUP	DUP-RER	08/02/10			0.87	0.35	0.22	2.86	0.64	0.26				2.73	2	RC
L83112-16DUP	DUP-RER	08/02/10			0.78	0.44	0.29	.45	0.31	0.22				0.61	2	
L83112-03MS	MS	08/02/10	RC100223-2	35.09	1.21	0.5	0.26	37.5	3	0.45	103.4	87	132			

Columbia Analytical Services

ACZ Project ID: ***L83112***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L83112-01	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-02	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-03	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-04	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-05	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-06	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-07	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.

Columbia Analytical Services

ACZ Project ID: ***L83112***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L83112-08	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-09	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-10	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
	WG287341	Uranium 234	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
		Uranium 238	Eichrom	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-11	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-12	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-13	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-14	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-15	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
L83112-16	WG287344	Radium 226 + Alpha Emitting Radium Isotopes (3050)	M9315	RC	For a solid matrix, the matrix duplicate precision assessment (RPD or RER) exceeded the control limit, which is attributable to the non-homogeneity of the sample.

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Lead 210 (3050)	Eichrom
Thorium 230 (3050)	ESM 4506
Uranium 234	Eichrom
Uranium 235	Eichrom
Uranium 238	Eichrom

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006777

ACZ Project ID: L83112
Date Received: 07/07/2010 10:48
Received By:
Date Printed: 7/8/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
Na11170		3.1	12
na11171		4.1	14

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1006777

ACZ Project ID: L83112
Date Received: 07/07/2010 10:48
Received By:
Date Printed: 7/8/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L83112-01	BG-1 0-2 COMP									X		
L83112-02	BG-1 2-12 COMP									X		
L83112-03	BG-1 12-18 COMP									X		
L83112-04	BG-2 0-2 COMP									X		
L83112-05	BG-2 2-12 COMP									X		
L83112-06	BG-2 12-18 COMP									X		
L83112-07	BG-100 0-2 COMP									X		
L83112-08	BG-3 0-2 COMP									X		
L83112-09	BG-3 2-12 COMP									X		
L83112-10	BG-3 12-18 COMP									X		
L83112-11	BG-4 0-2 COMP									X		
L83112-12	BG-4 2-12 COMP									X		
L83112-13	BG-4 12-18 COMP									X		
L83112-14	BG-6 0-2 COMP									X		
L83112-15	BG-6 2-12 COMP									X		
L83112-16	BG-6 12-18 COMP									X		

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

L83112

Project Number: K1006777
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006777-001	BG-1 0-2 COMP	1	Soil	6/29/10	1500	ACZ	✓	✓	✓	✓
K1006777-002	BG-1 2-12 COMP	1	Soil	6/29/10	1505	ACZ	✓	✓	✓	✓
K1006777-003	BG-1 12-18 COMP	1	Soil	6/29/10	1510	ACZ	✓	✓	✓	✓
K1006777-004	BG-2 0-2 COMP	1	Soil	6/30/10	1005	ACZ	✓	✓	✓	✓
K1006777-005	BG-2 2-12 COMP	3	Soil	6/30/10	1015	ACZ	✓	✓	✓	✓
K1006777-006	BG-2 12-18 COMP	1	Soil	6/30/10	1025	ACZ	✓	✓	✓	✓
K1006777-007	BG-100 0-2 COMP	1	Soil	6/29/10	1505	ACZ	✓	✓	✓	✓
K1006777-008	BG-120 COMP	2	Water	6/29/10	1120	ACZ	✓	✓	✓	✓
K1006777-009	BG-3 0-2 COMP	1	Soil	6/29/10	1055	ACZ	✓	✓	✓	✓
K1006777-010	BG-3 2-12 COMP	1	Soil	6/29/10	1100	ACZ	✓	✓	✓	✓
K1006777-011	BG-3 12-18 COMP	1	Soil	6/29/10	1105	ACZ	✓	✓	✓	✓
K1006777-012	BG-4 0-2 COMP	1	Soil	6/28/10	1425	ACZ	✓	✓	✓	✓

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address:
kelso_data@caslab.com

Turnaround Requirements
____RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
✓ STANDARD
Requested FAX Date: _____
Requested Report Date: 07/18/10

Report Requirements
____ I. Results Only
____ II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
✓ IV. Data Validation Report with Raw Data
PQL/MDL/J (Y)
EDD

Invoice Information
PO# K1006777
Bill to

Relinquished By: [signature] CAS 7-6-10 8:30 am Received By: [signature] 7-7-10 10:40 Airbill Number: _____

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1079

CAS Contact: Lynda Huckestein

L83112

Project Number: K1006777
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None	MISC_OUT_3 None	MISC_OUT_4 None
K1006777-013	BG-4 2-12 COMP	1	Soil	6/28/10	1430	ACZ	✓	✓	✓	✓
K1006777-014	BG-4 12-18 COMP	1	Soil	6/28/10	1435	ACZ	✓	✓	✓	✓
K1006777-015	BG-6 0-2 COMP	1	Soil	6/28/10	1730	ACZ	✓	✓	✓	✓
K1006777-016	BG-6 2-12 COMP	1	Soil	6/28/10	1735	ACZ	✓	✓	✓	✓
K1006777-017	BG-6 12-18 COMP	1	Soil	6/28/10	1740	ACZ	✓	✓	✓	✓

Test Comments

MISC_OUT_1 - None	K1006777-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	Lead 210/Eichrom to ACZ
MISC_OUT_2 - None	K1006777-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	Uranium234 and 238-isotopic/Eichrom
MISC_OUT_3 - None	K1006777-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	Thorium230-isotopic/ESM 4506
MISC_OUT_4 - None	K1006777-001,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	Radium 226 /M9315 and M9320

Folder Comments:
-005=QC. Extra volume rec'd.

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com	____RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ____ STANDARD Requested FAX Date: _____ Requested Report Date: 07/18/10	____ I. Results Only ____ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ____ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD	PO# K1006777 Bill to

Relinquished By: [signature] CAS 6-7-10 8:30 am Received By: _____ Airbill Number: _____

Table 1-3
ACZ Labratories Inc. - Steamboat Springs, Colorado
Analytical Parameters, Method and Quantitation Limits for Groundwater and Surface Water Samples
Rhodia Silver Bow Plant
Butte, Montana

Parameter	Matrix	Method	Unit	PQL	Tap Water Screening Level
Groundwater					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	1.5
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	0.12
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	0.046
Surface Water					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	1.5
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	0.12
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	0.046
Field Blank Parameters Associated with Aqueous Matrix Project Samples					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	--
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	--
Field Blank Parameters Associated with Solid Matrix Project Samples					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	--
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	--
Lead 210	Water	Eichrom OTW01	pCi/L	4	--
Thorium 230	Water	ESM 4506	pCi/L	0.6	--
Uranium 234	Water	Eichrom Mod	pCi/L	1.0	--
Uranium 238	Water	Eichrom Mod	pCi/L	1.0	--
Parameter	**Matrix**	**Method**	**Unit**	**PQL**	**Residential Soil Screening Level**
Sediment Associated with Surface Water Locations, Native Soil and Tailings Basin Solids					
Radiological Parameters					
Gross Alpha	Soil	EPA9310 Mod	pCi/g	1 to 2	--
Gross Beta	Soil	EPA9310 Mod	pCi/g	1 to 2	--
Radium 226	Soil	EPA9315 Mod	pCi/g	1.0	0.013
Radium 228	Soil	EPA9320 Mod	pCi/g	1.5	0.046
Solid					
Radiological Parameters					
Radium 226	Soil	EPA9315 Mod	pCi/g	1.0	0.013
Lead 210	Soil	EICHROM	pCi/g	10.0	0.45
Thorium 230	Soil	ESM4506	pCi/g	0.60	3.8
Uranium 234	Soil	EICHROM Mod	pCi/g	0.40	5
Uranium 238	Soil	EICHROM Mod	pCi/g	0.4	0.78

Notes:

(1) PQL may vary based on level of moisture present (dry weight correction), initial volume and possible matrix interferences.
(2) Tap Water Screening Level (EPA Region 9 PRG, HQ = 0.1)
(3) Residential Soil Screening Level (RAIS Residential PRGs)

P:\Mpls\26 MT\46\2646006\WorkFiles\QAPP Silver Bow\Silver Bow Plant QAPP 3.0\Table 1-3 rev_022609

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83111

Radiochemistry

WG286268 **U**

Sample	Date	SCN	URANIUM 234	URANIUM 235	URANIUM 238
WG285975PBW	07/16/10 09:00		X	X	X
WG285975LCSW	07/16/10 09:01		X	X	X
L82973-01	07/16/10 09:02		X	X	X
L82973-02	07/16/10 09:04		X	X	X
L83048-01	07/16/10 09:05		X	X	X
L83048-02	07/16/10 09:07		X	X	X
L83090-01	07/16/10 09:08		X	X	X
L83090-02	07/16/10 09:10		X	X	X
L83110-01	07/16/10 09:11		X	X	X
L83111-01	07/16/10 09:12		X	X	X
L83176-03	07/16/10 09:14		X	X	X
L83216-01	07/16/10 09:15		X	X	X
L83216-02	07/16/10 09:17		X	X	X
L83216-03	07/16/10 09:18		X	X	X
L83216-04	07/16/10 09:20		X	X	X
L83216-05	07/16/10 09:21		X	X	X
L82973-01DUP	07/16/10 09:23		X	X	X
L83216-04DUP	07/16/10 09:24		X	X	X
L83111-01MS	07/16/10 09:25		X	X	X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83111

Radiochemistry

WG286588 **ra226**

Sample	Date	SCN	RADIUM 226
WG286107PBW	07/22/10 15:10		X
WG286107LCSW	07/22/10 15:11		X
L82987-02	07/22/10 15:12		X
L83064-01	07/22/10 15:14		X
L83101-01	07/22/10 15:15		
L83110-01	07/22/10 15:17		X
L83111-01	07/22/10 15:18		X
L83168-01	07/22/10 15:20		X
L83254-06	07/22/10 15:21		X
L83254-07	07/22/10 15:22		X
L83111-01DUP	07/22/10 15:24		X
L83254-06MS	07/22/10 15:25		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83111

Radiochemistry

WG286821 **pb**

Sample	Date	SCN	LEAD 210
WG286182PBW	07/23/10 11:16		X
WG286182LCSW	07/23/10 11:16		X
L83111-01	07/23/10 11:16		X
L83111-01DUP	07/23/10 11:16		X
L83111-01MS	07/23/10 11:16		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83111

Radiochemistry

WG286828 **th**

Sample	Date	SCN	THORIUM 228	THORIUM 230	THORIUM 232
WG286339PBW	07/23/10 14:33		X	X	X
WG286339LCSW	07/23/10 14:34			X	
L83111-01	07/23/10 14:35		X	X	X
L83298-01	07/23/10 14:37			X	
L83298-02	07/23/10 14:38			X	
L83298-03	07/23/10 14:40			X	
L83298-04	07/23/10 14:41			X	
L83298-05	07/23/10 14:43			X	
L83298-06	07/23/10 14:44			X	
L83298-07	07/23/10 14:45			X	
L83298-08	07/23/10 14:47			X	
L83298-09	07/23/10 14:48			X	
L83298-10	07/23/10 14:50			X	
L83111-01DUP	07/23/10 14:51		X	X	X
L83298-10DUP	07/23/10 14:53		X	X	X
L83111-01MS	07/23/10 14:54			X	

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286821

Project:
SDG#:
SOP#: rc017

Instrument: PREP
Matrix Class: LIQUID
List Type: QC-PB-210
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/16/2010
Analysis Date: 7/23/2010
Start Time:
End Time:
Approved: MWM 7-28-10
Approved: MTB 7-28-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 pCi/L	Error (+ -)	LLD pCi/L
1	wg286182PBW		500	9.0719	9.0891	0.0172	0.771	0.8600	1.96	1.54	4.04
2	wg286182LCSW	rc100623-1	500	9.0687	9.0855	0.0168	0.753	0.8400	60.71	2.90	4.24
3	L83111-01	BG-120 COMP	500	9.0663	9.0834	0.0171	0.767	0.8550	0.75	1.50	4.04
4	L83111-01DUP		500	9.0882	9.1066	0.0184	0.825	0.9200	1.33	1.34	3.53
5	L83111-01MS	rc100623-1	500	9.0955	9.1126	0.0171	0.767	0.8550	60.24	2.79	3.83
									#DIV/0!		
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Comments:

FRMRC015.01.09.VER02

Template: pb-210-eichrom

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

KBJ 7/28/10

Seq #	ACZ Sample No.	GR CPM Beta	Det #	BG β	NET CPM β	ADJ CPM β	Start Ingrow	Analysis Time	Ingrow minutes	Efficiency Beta	Det #	Det BG β
1	*wg286182PBW*	2.25	1	1.92	0.33	0.33	7/16/2010 13:55	7/23/2010 11:16	9966	**0.3197**	1	1.92
2	*wg286182LCSW*	12.02	2	2.02	10.00	10.00	7/16/2010 13:55	7/23/2010 11:16	9966	**0.3197**	2	2.02
3	*L83111-01*	2.03	3	1.90	0.13	0.13	7/16/2010 13:55	7/23/2010 11:16	9966	**0.3197**	3	1.90
4	*L83111-01DUP*	1.92	4	1.68	0.24	0.24	7/16/2010 13:55	7/23/2010 11:16	9966	**0.3197**	4	1.68
5	*L83111-01MS*	11.81	5	1.71	10.10	10.10	7/16/2010 13:55	7/23/2010 11:16	9966	**0.3197**	5	1.71
		0.00								**0.3197**	6	2.02
		0.00								**0.3197**	7	1.64
		0.00								**0.3197**	8	1.78
		0.00								**0.3197**	9	1.92
		0.00								**0.3197**	10	2.00
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
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		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		

Decay Equation for Pb210:	Pb-210
Standard Preparation Date	4/1/2002
Initial True Value (pCi/mL)	100.00
Decayed Value (pCi/mL)	77.23

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-28-10

Approved: MTB
Date: 7-28-10

Work Group: WG286521
Sample Type: Liquid
Analysis Date: 7-23-10
Analyst: MWM
Prep Date: 7-16-10

Weekly background file: Back 4516
Daily background file: Back 4521

Alpha performance file: —
Beta performance file: Perb3261

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286821

Date Reported: 28-Jul-10
Run ID: R735779
Date Analyzed: 23-Jul-10
ICAL Workgroup:
Instrument ID: PREP

L83111-01

Tag: Measured: 7/23/2010 11:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	EICHROM	0.75	1		pCi/L	++	4	1.5		TB

L83111-01DUP

Tag: Measured: 7/23/2010 11:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	1.3	1		pCi/L	++	3.5	1.3		
SREV	LEAD 210	RER	0.28	1		%	++	4	5		
FAIL	LEAD 210	RPD	53.7	1		pCi/L	ALRT	3.5	1.3		

L83111-01MS

Tag: Measured: 7/23/2010 11:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	60	1		pCi/L	++	3.8	2.8	RC100623-1	
SREV	LEAD 210	REC	76.7	1		%	++	3.8	2.8	RC100623-1	
SREV	LEAD 210	TRUE	77.23446	1		pCi/L	++	3.8	2.8	RC100623-1	

WG286182LCSW

Tag: Measured: 7/23/2010 11:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	61	1		pCi/L	++	4.2	2.9	RC100623-1	
SREV	LEAD 210	REC	79	1		%	++	4.2	2.9	RC100623-1	
SREV	LEAD 210	TRUE	77.23446	1		pCi/L	++	4.2	2.9	RC100623-1	

WG286182PBW

Tag: Measured: 7/23/2010 11:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	2	1		pCi/L	++	4	1.5		

ACZ Laboratories, Inc. WQ286182

Lead 210 by Eichrom
Eichrom Industries, OTW01

Project:
SDG#:
SOP#:

Instrument: PREP
Matrix Class: LIQUID
List Type: QC-PB-210
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-16-07 7:45
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 pCi/L	Error (+ -)	LLD pCi/L
1	PBW		500						#DIV/0!		
2	LCSW								#DIV/0!		
3	L83111-01	BG-120 COMP							#DIV/0!		
4	DUP 11-01								#DIV/0!		
5	MS 11-01								#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
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									#DIV/0!		

Comments:

FRMRC015.01.09.VER02

Template: pb-210-eichrom

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

Radioactive Standards

LCS & MS 100623-1

Ingrow 7-16-10 13:55

Lead Carrier	100713-1	Sulfuric acid	34642
Iron Chloride	100701-1	Nitric Acid	35035
Nitric Acid 1N	33519	0.1N HNO_3	35035
NH_4OH	34092	2N HNO_3	—
		H_2O_2	—

COMMENTS:

LB770 Number 1 User File: Lead 210 Sample Data File: 0723-01
Sample Set: WG286182 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.122	0.267	0.189	0.156	0.233	0.256	0.167	0.267	0.244	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.92	2.02	1.90	1.68	1.71	2.02	1.54	1.78	1.92	2.00
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 07-23-110 Time 11:15:43
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1167

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	4709	WG286182PBW	0.211	> 100	1	0.23	0.330	> 100	1	0.74
2	4710	WG286182LCSW	0.033	> 100	1	0.31	10.0	11.9	1	0.76
3	4711	L83111-01	0.000	0.000	1	0.27	0.126	> 100	1	0.74
4	4712	L83111-01DUP	0.000	0.000	1	0.25	0.240	> 100	1	0.70
5	4713	L83111-01MS	0.000	0.000	1	0.30	10.1	11.5	1	0.70
6	4714		0.000	0.000	1	0.31	0.205	> 100	1	0.76
7	4715		0.000	0.000	1	0.26	0.370	> 100	1	0.67
8	4716		0.000	0.000	1	0.31	0.000	0.000	1	0.72
9	4717		0.000	0.000	1	0.30	0.007	> 100	1	0.74
10	4718		0.000	0.000	1	0.29	0.000	0.000	1	0.76

MDA = Minimum Detectable Activity [cpm]

ACZ Laboratories, Inc.
Thorium in Water
ESM 4506

WG286828

Analyst: jig
Dept: 55
Prep Date: 7/20/2010
Analysis Date: 7/23/2010
Start Time:
End Time:
Approved: MWM 7-28-10
Approved: KSB 7-28-10

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: ANALYTICAL

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230							Thorium 232			
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/L	Error (+ -)	LLD pCi/L	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/L	Error (+ -)	LLD pCi/L	Th 232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/L	Error (+ -)	LLD pCi/L
1	wg286339PB		500	1.0000	9.52	769	0.809	14.0000	11.7900	-2	-0.05	0.26	0.22	13.5891	44.9900	31	0.53	0.40	0.56	2.0000	3.1800	1	0.03	0.12	0.22
2	wg286339LCS	rc091215-1	500	1.0000	9.52	682	0.717			0	0.00	0.00	0.24	9.5891	6205.9400	6196	172.71	4.62	0.64			0	0.00	0.00	0.24
3	L83111-01	BG-120 CON	500	1.0000	9.52	766	0.805	9.0000	9.9100	1	0.02	0.23	0.22	17.0000	27.4100	10	0.01	0.35	0.57	6.8182	4.0000	-3	-0.07	0.17	0.22
4	L83298-01	31-61	500	1.0000	9.52	553	0.581			0	0.00	0.00	0.30	16.4175	27.3400	11	0.04	0.48	0.79			0	0.00	0.00	0.30
5	L83298-02	31-65	500	1.0000	9.52	673	0.708			0	0.00	0.00	0.25	12.0000	32.7500	21	0.31	0.40	0.65			0	0.00	0.00	0.25
6	L83298-03	32-59	500	1.0000	9.52	603	0.634			0	0.00	0.00	0.28	7.4042	13.5900	6	-0.12	0.30	0.72			0	0.00	0.00	0.28
7	L83298-04	5-04	500	1.0000	9.52	772	0.812			0	0.00	0.00	0.22	7.1716	9.9900	3	-0.17	0.21	0.56			0	0.00	0.00	0.22
8	L83298-05	5-09	500	1.0000	9.52	750	0.789			0	0.00	0.00	0.22	8.4175	22.4200	14	0.11	0.30	0.58			0	0.00	0.00	0.22
9	L83298-06	5-73	500	1.0000	9.52	649	0.682			0	0.00	0.00	0.26	19.4175	18.2500	-1	-0.32	0.38	0.67			0	0.00	0.00	0.26
10	L83298-07	5-03	500	1.0000	9.52	709	0.745			0	0.00	0.00	0.23	18.1716	27.0000	9	-0.03	0.38	0.61			0	0.00	0.00	0.23
11	L83298-08	31-67 TRB	500	1.0000	9.52	631	0.663			0	0.00	0.00	0.26	7.0000	39.5800	33	0.69	0.43	0.69			0	0.00	0.00	0.26
12	L83298-09	33-01 TRA	500	1.0000	9.52	775	0.815			0	0.00	0.00	0.21	11.4109	16.0000	5	-0.13	0.27	0.56			0	0.00	0.00	0.21
13	L83298-10	31-01 TRA	500	1.0000	9.52	768	0.808			0	0.00	0.00	0.22	6.0000	12.5800	7	-0.08	0.22	0.57			0	0.00	0.00	0.22
14	L83111-01DUP		500	1.0000	9.52	667	0.701	10.7944	4.0000	-7	-0.19	0.23	0.25	9.0000	34.8400	26	0.46	0.40	0.65	1.0000	2.0000	1	0.03	0.10	0.25
15	L83298-10DUP		500	1.0000	9.52	691	0.727			0	0.00	0.00	0.24	10.0000	26.0100	16	0.17	0.35	0.63			0	0.00	0.00	0.24
16	L83111-01MS	rc091215-1	500	1.0000	9.52	998	1.049			0	0.00	0.00	0.17	4.0000	8982.3600	8978	171.10	3.80	0.44			0	0.00	0.00	0.17
										0						0						0			
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Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: thorium-liquid

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC022.01.09.ver02

KSJ 7/28/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-28-10

Work Group: WG286828
Sample Type: Liquid
Analysis Date: 7-23-10
Analyst: JJG
Prep Date: 7-20-10

Approved: MTB
Date: 7-28-10

Weekly background file: 7-15-10
Daily background file: 7-15-10

Alpha performance file: 7-15-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓✓		
8) Are samples flagged for INSX, if applicable?			✓✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓✓
10) Are all calculations based on the correct matrix?	✓✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓✓		
13) Are all associated WG benchsheets locked for editing?	✓✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286828

Date Reported: 28-Jul-10
Run ID: R735782
Date Analyzed: 23-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286339PBW

Tag: Measured: 7/23/2010 2:33:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 228	FOUND	-0.05	1		pCi/L	++	0.22	0.26		
SREV	THORIUM 230	FOUND	0.53	1		pCi/L	++	0.56	0.4		
SREV	THORIUM 232	FOUND	0.03	1		pCi/L	++	0.22	0.12		

WG286339LCSW

Tag: Measured: 7/23/2010 2:34:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/L	++	0.64	4.6	RC091215-1	
SREV	THORIUM 230	REC	104.9	1		%	++	0.64	4.6	RC091215-1	
SREV	THORIUM 230	TRUE	162.11776	1		pCi/L	++	0.64	4.6	RC091215-1	

L83111-01

Tag: Measured: 7/23/2010 2:35:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 228	O-T-ESM	0.02	1		pCi/L	++	0.22	0.23		TB
SREV	THORIUM 230	O-T-ESM	0.01	1		pCi/L	++	0.57	0.35		TB
SREV	THORIUM 232	O-T-ESM	-0.07	1		pCi/L	++	0.22	0.17		TB

L83298-01

Tag: Measured: 7/23/2010 2:37:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.3	0		TB
SREV	THORIUM 230	30-D-ESM	0.04	1		pCi/L	++	0.79	0.48		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.3	0		TB

L83298-02

Tag: Measured: 7/23/2010 2:38:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.25	0		TB
SREV	THORIUM 230	30-D-ESM	0.31	1		pCi/L	++	0.65	0.4		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.25	0		TB

L83298-03

Tag: Measured: 7/23/2010 2:40:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.28	0		TB
SREV	THORIUM 230	30-D-ESM	-0.12	1		pCi/L	++	0.72	0.3		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.28	0		TB

L83298-04

Tag: Measured: 7/23/2010 2:41:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.22	0		TB
SREV	THORIUM 230	30-D-ESM	-0.17	1		pCi/L	++	0.56	0.21		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.22	0		TB

L83298-05 Tag: **Measured: 7/23/2010 2:43:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.22	0		TB
SREV	THORIUM 230	30-D-ESM	0.11	1		pCi/L	++	0.58	0.3		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.22	0		TB

L83298-06 Tag: **Measured: 7/23/2010 2:44:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.26	0		TB
SREV	THORIUM 230	30-D-ESM	-0.32	1		pCi/L	++	0.67	0.38		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.26	0		TB

L83298-07 Tag: **Measured: 7/23/2010 2:45:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.23	0		TB
SREV	THORIUM 230	30-D-ESM	-0.03	1		pCi/L	++	0.61	0.38		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.23	0		TB

L83298-08 Tag: **Measured: 7/23/2010 2:47:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.26	0		TB
SREV	THORIUM 230	30-D-ESM	0.69	1		pCi/L	++	0.69	0.43		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.26	0		TB

L83298-09 Tag: **Measured: 7/23/2010 2:48:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.21	0		TB
SREV	THORIUM 230	30-D-ESM	-0.13	1		pCi/L	++	0.56	0.27		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.21	0		TB

L83298-10 Tag: **Measured: 7/23/2010 2:50:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/L	++	0.22	0		TB
SREV	THORIUM 230	30-D-ESM	-0.08	1		pCi/L	++	0.57	0.22		TB
NEED	THORIUM 232	REG	0	1		pCi/L	++	0.22	0		TB

L83111-01DUP Tag: **Measured: 7/23/2010 2:51:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 228	FOUND	-0.19	1		pCi/L	++	0.25	0.23		
SREV	THORIUM 228	RER	0.65	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	247.1	1		pCi/L	ALRT	0.25	0.23		
SREV	THORIUM 230	FOUND	0.46	1		pCi/L	++	0.65	0.4		
SREV	THORIUM 230	RER	0.85	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	191.5	1		pCi/L	ALRT	0.65	0.4		
SREV	THORIUM 232	FOUND	0.03	1		pCi/L	++	0.25	0.1		
SREV	THORIUM 232	RER	0.51	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	500	1		pCi/L	ALRT	0.25	0.1		

L83298-10DUP Tag: **Measured: 7/23/2010 2:53:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/L	++	0.24	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/L	++	0.24	0		
SREV	THORIUM 230	FOUND	0.17	1		pCi/L	++	0.63	0.35		
SREV	THORIUM 230	RER	0.6	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	555.6	1		pCi/L	ALRT	0.63	0.35		
FAIL	THORIUM 232	FOUND	0	1		pCi/L	++	0.24	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/L	++	0.24	0		

L83111-01MS Tag: **Measured: 7/23/2010 2:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/L	++	0.44	3.8	RC091215-1	
SREV	THORIUM 230	REC	104.9	1		%	++	0.44	3.8	RC091215-1	
SREV	THORIUM 230	TRUE	162.11776	1		pCi/L	++	0.44	3.8	RC091215-1	

JJG 7/20/10
llam

ACZ Laboratories, Inc.
Thorium in Water
ESM 4506

WG286339

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: PREP

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228						Thorium 230					
								Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/L	Error (+ -)	LLD pCi/L	Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/L	Error (+ -)	LLD pCi/L
1	PBW		500		0.00					0						0			
2	LCSW				0.00					0						0			
3	L83111-01	BG-120 COM			0.00					0					XXX	0			
4	L83298-01	31-61			0.00					0					XXX	0			
5	L83298-02	31-65			0.00					0					XXX	0			
6	L83298-03	32-59			0.00					0					XXX	0			
7	L83298-04	5-04			0.00					0					XXX	0			
8	L83298-05	5-08			0.00					0					XXX	0			
9	L83298-06	5-73			0.00					0					XXX	0			
10	L83298-07	5-03			0.00					0					XXX	0			
11	L83298-08	31-67 TRB			0.00					0					XXX	0			
12	L83298-09	33-01 TRA			0.00					0					XXX	0			
13	L83298-10	31-01 TRA			0.00					0					XXX	0			
14	DUP	111-1	500		0.00					0						0			
15	DUP	298-10	500		0.00					0						0			
16	MS	111-1	500		0.00					0						0			
										0						0			
										0						0			
										0						0			
										0						0			
										0						0			
										0						0			
										0						0			
										0						0			
										0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: thorium-liquid

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

ACZ LABORATORIES, INC.
Standards/Reagents Information
Radium 226 903.1
Water

wg286339 7/20/2010 10:10 AM

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: _____

PROJECT/WG: _____
Method _____

INSTR: Octete

Approved: _____

Radioactive Standards

LCS & MS Rc091215-1

Tracer Rc100322-1

Reagents

Iron chloride	Rc100701-1	Nitric Acid	35035	Ammonium Hydroxide.	34804
HCl	35120	Nitric Acid (2N)	35035	Cerous Flouride substrate	Rc100527-3
TOPO	Rc100708-1	Sulfuric Acid 0.3N	32273	Ethanol	33769
Cerium solution	Rc100720-1	HF	33549		

33836 7/20/10

COMMENTS: Small amount of Sx lost from Dup 2 at step 11.9 while stirring.

rcthorw.xls

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:17PM 7/23/2010

Analyst: ORTEC

Sample

Sample: WG286339 PBW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

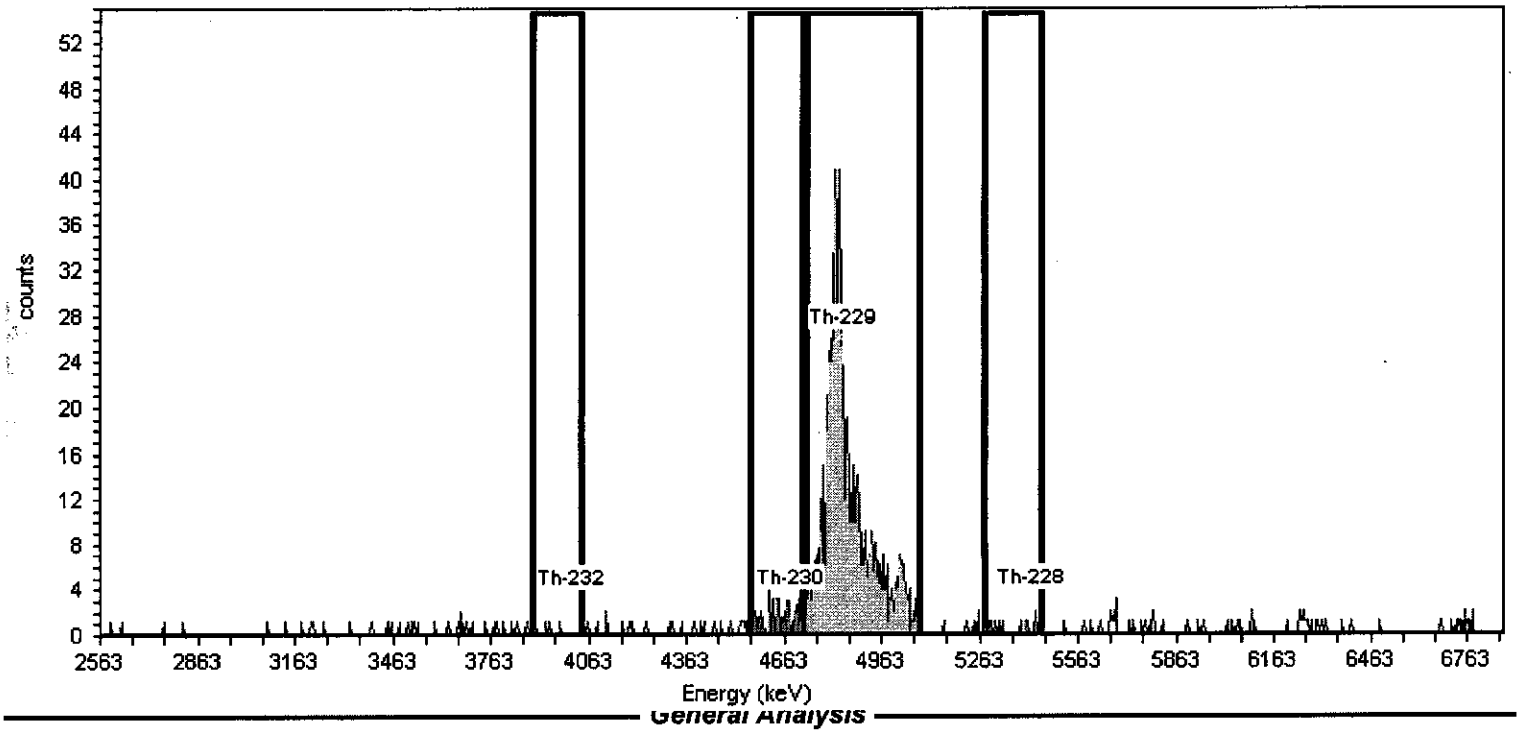
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 151.70%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/23/2010 2:32:53PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	10.382	100.0	3.18	2.0000	1	1.458E-002	8.430E-002	4.058E-002	1.145E-001
Th-230	4687.000	4561.000	4717.000	13.439	99.7	44.99	13.5891	31	3.885E-001	2.960E-001	1.061E-001	2.457E-001
Th-229	4845.000	4737.000	5080.000	50.821	99.6	781.65	13.0000	769	1.444E+001	1.685E+000	1.039E-001	2.413E-001
Th-228	5423.000	5280.000	5453.000	5.295	99.4	11.79	14.0000	-2	0.000E+000	1.892E-001	1.080E-001	2.496E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:20PM 7/23/2010

Analyst: ORTEC

Sample

Sample: WG286339 LCSW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

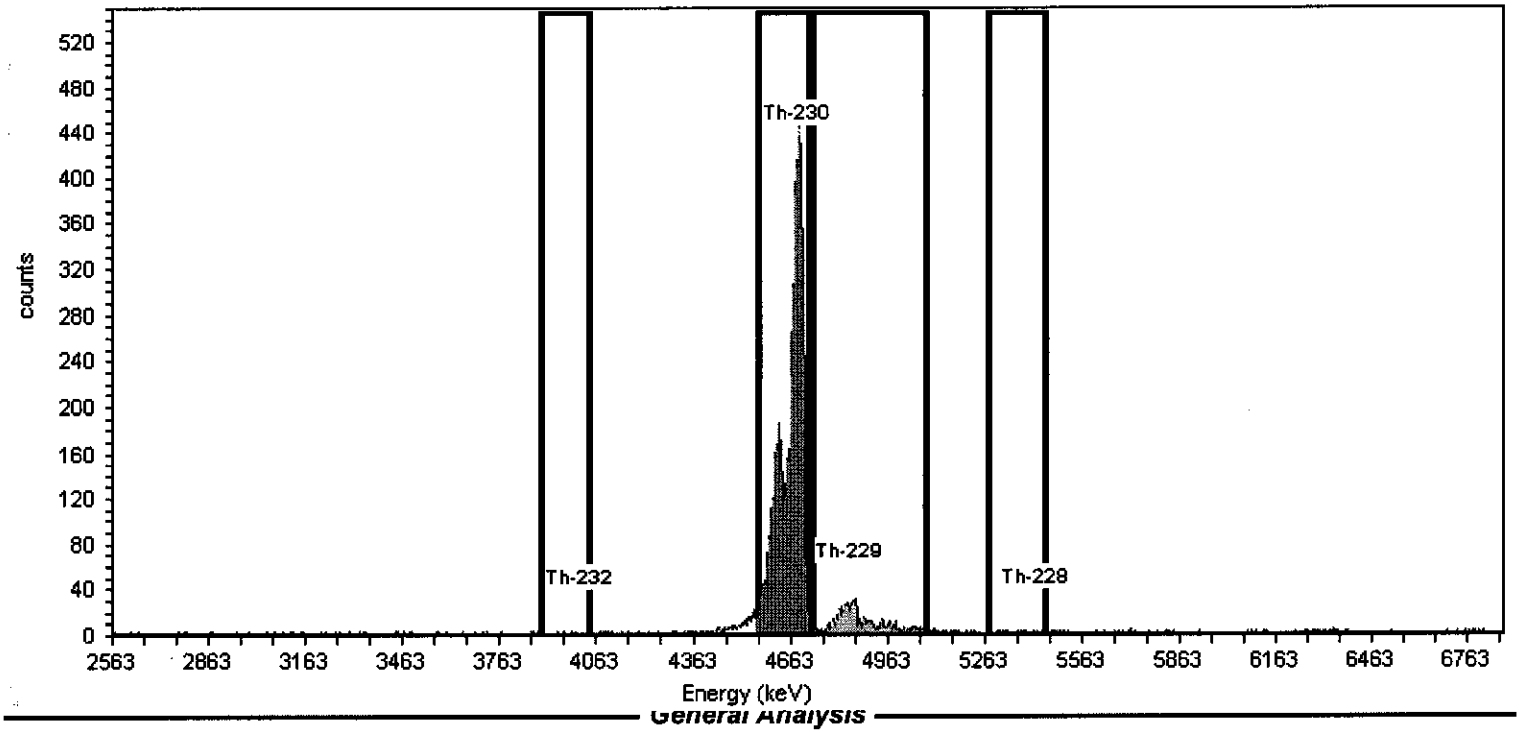
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 135.50%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/23/2010 2:32:55PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	.183	100.0	5.82	6.0409	0	0.000E+000	1.436E-001	7.949E-002	1.966E-001
Th-230	4687.000	4561.000	4717.000	19.020	99.7	6,205.94	9.5891	6,196	8.641E+001	1.907E+001	1.005E-001	2.387E-001
Th-229	4845.000	4737.000	5080.000	70.090	99.6	692.97	11.0000	682	1.290E+001	1.588E+000	1.077E-001	2.532E-001
Th-228	5423.000	5280.000	5453.000	6.295	99.4	16.00	4.0000	12	1.678E-001	1.912E-001	6.508E-002	1.680E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

7:33:24PM 7/23/2010

Sample

Sample: L83111-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

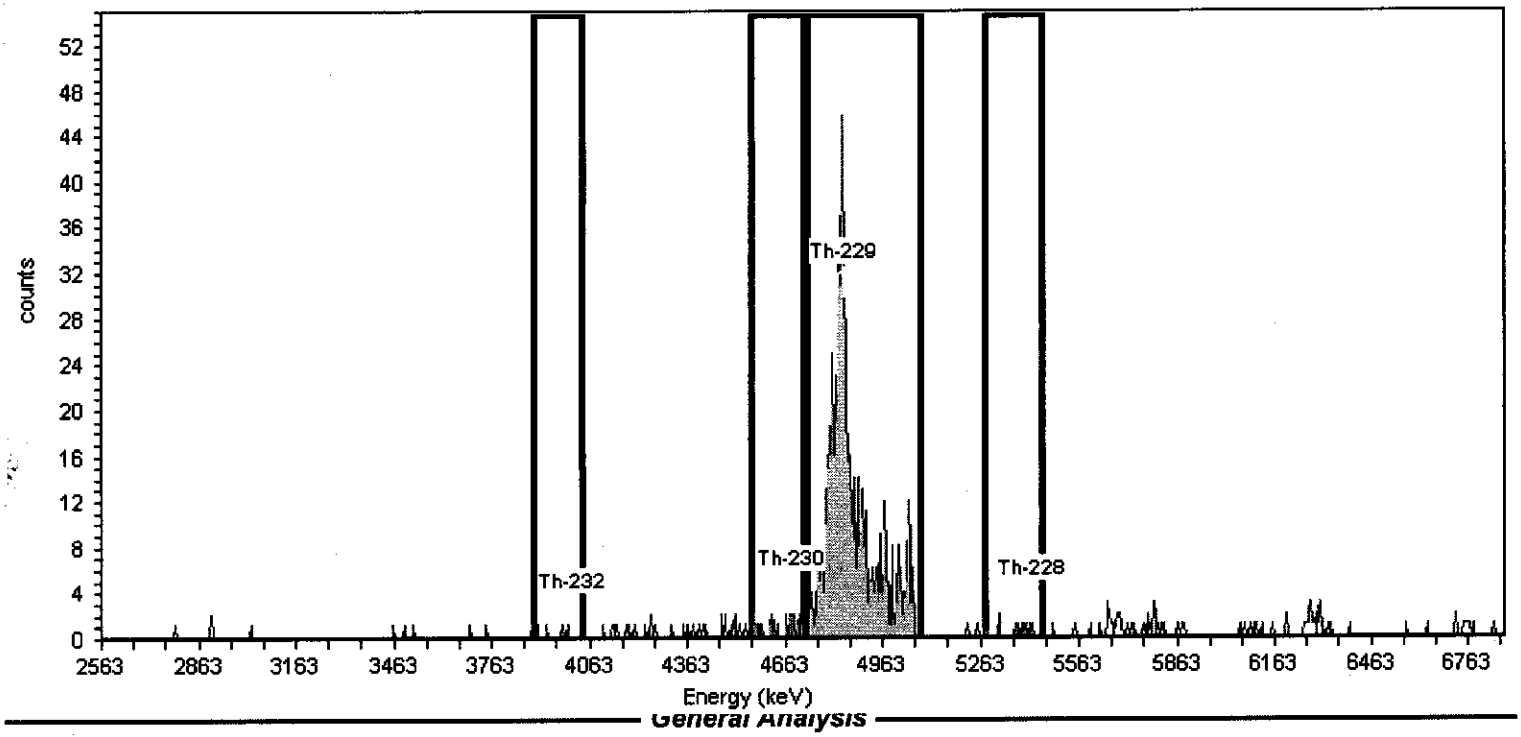
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 145.79%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/23/2010 2:32:58PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	12.269	100.0	4.00	6.8182	-3	0.000E+000	1.224E-001	7.519E-002	1.839E-001
Th-230	4687.000	4561.000	4717.000	17.113	99.7	27.41	17.0000	10	1.293E-001	2.497E-001	1.191E-001	2.718E-001
Th-229	4845.000	4737.000	5080.000	49.060	99.6	775.98	10.0000	766	1.388E+001	1.614E+000	9.143E-002	2.165E-001
Th-228	5423.000	5280.000	5453.000	.000	99.4	9.91	9.0000	1	1.133E-002	1.625E-001	8.691E-002	2.075E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:28PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

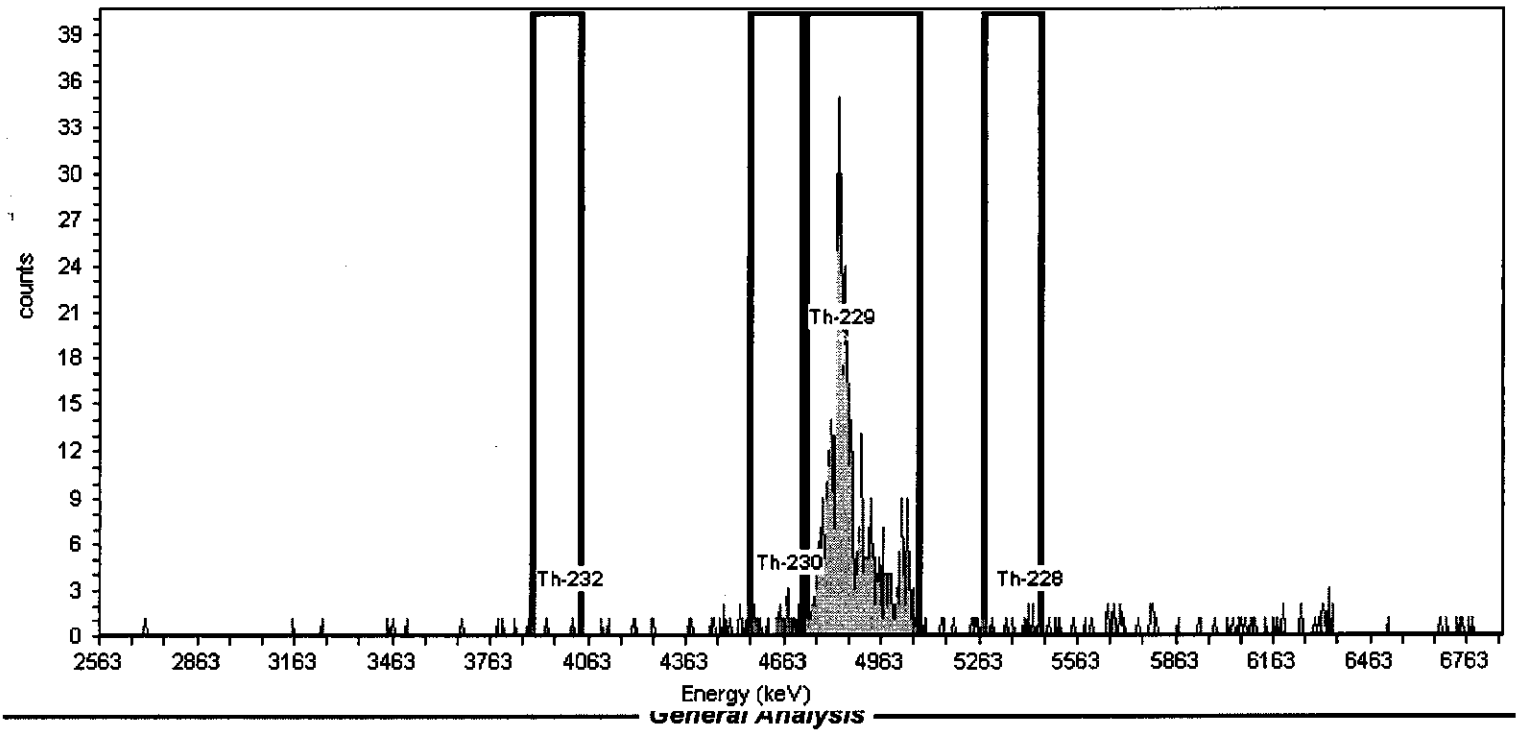
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 109.44%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/23/2010 2:32:41PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.501	100.0	3.78	3.0000	1	1.333E-002	1.339E-001	6.909E-002	1.846E-001
Th-230	4687.000	4561.000	4717.000	30.694	99.7	27.34	16.4175	11	1.878E-001	3.439E-001	1.621E-001	3.707E-001
Th-229	4845.000	4737.000	5080.000	53.298	99.6	567.00	14.0000	553	1.042E+001	1.422E+000	1.498E-001	3.463E-001
Th-228	5423.000	5280.000	5453.000	16.011	99.4	11.00	14.9095	-4	0.000E+000	2.638E-001	1.549E-001	3.566E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:36PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-02 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
Description:

Client Name: Undefined
Client Contact:

Tracer

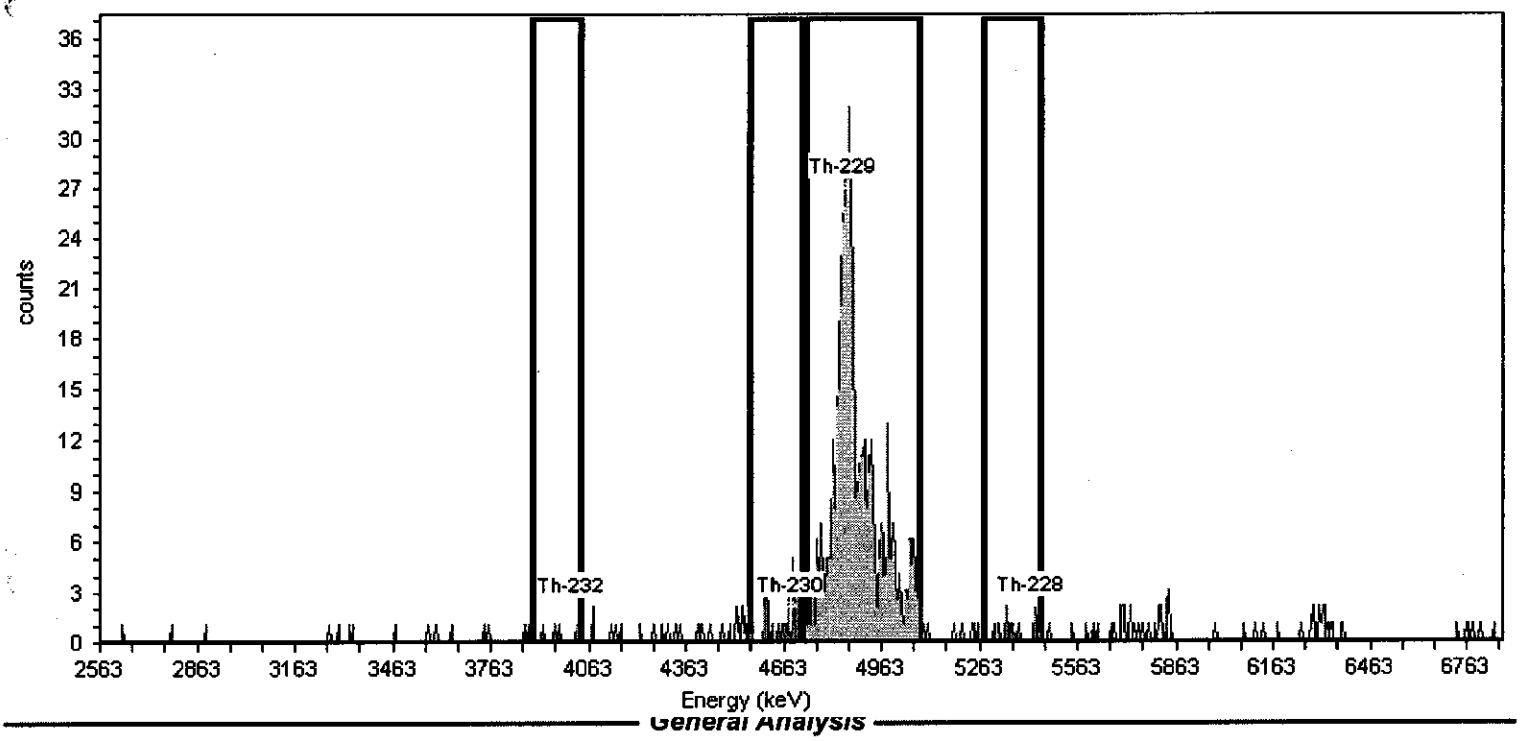
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 130.54%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/23/2010 2:32:44PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	8.769	100.0	6.96	3.0000	4	5.578E-002	1.339E-001	5.677E-002	1.517E-001
Th-230	4687.000	4561.000	4717.000	18.436	99.7	32.75	12.0000	21	2.933E-001	2.907E-001	1.139E-001	2.660E-001
Th-229	4845.000	4737.000	5080.000	52.978	99.6	687.34	14.3369	673	1.243E+001	1.544E+000	1.246E-001	2.875E-001
Th-228	5423.000	5280.000	5453.000	8.172	99.4	11.00	12.7944	-2	0.000E+000	2.075E-001	1.179E-001	2.742E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:39PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

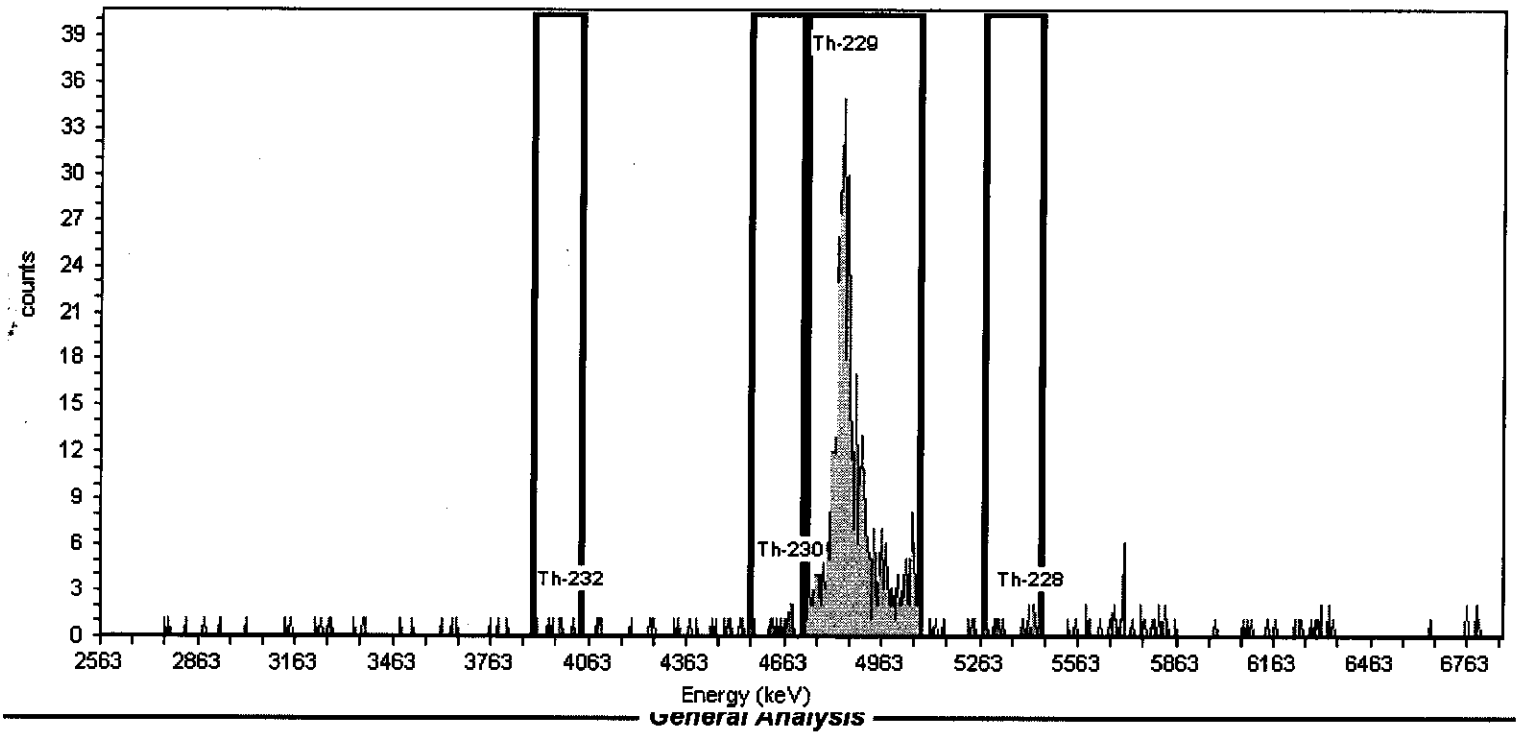
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 118.00%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/23/2010 2:32:46PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.502	100.0	6.96	4.9591	2	3.147E-002	1.631E-001	8.151E-002	2.056E-001
Th-230	4687.000	4561.000	4717.000	8.305	99.7	13.59	7.4042	6	9.760E-002	2.180E-001	9.989E-002	2.425E-001
Th-229	4845.000	4737.000	5080.000	48.238	99.6	612.65	10.0000	603	1.123E+001	1.462E+000	1.162E-001	2.752E-001
Th-228	5423.000	5280.000	5453.000	7.922	99.4	14.91	9.8849	5	7.953E-002	2.371E-001	1.158E-001	2.744E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:43PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

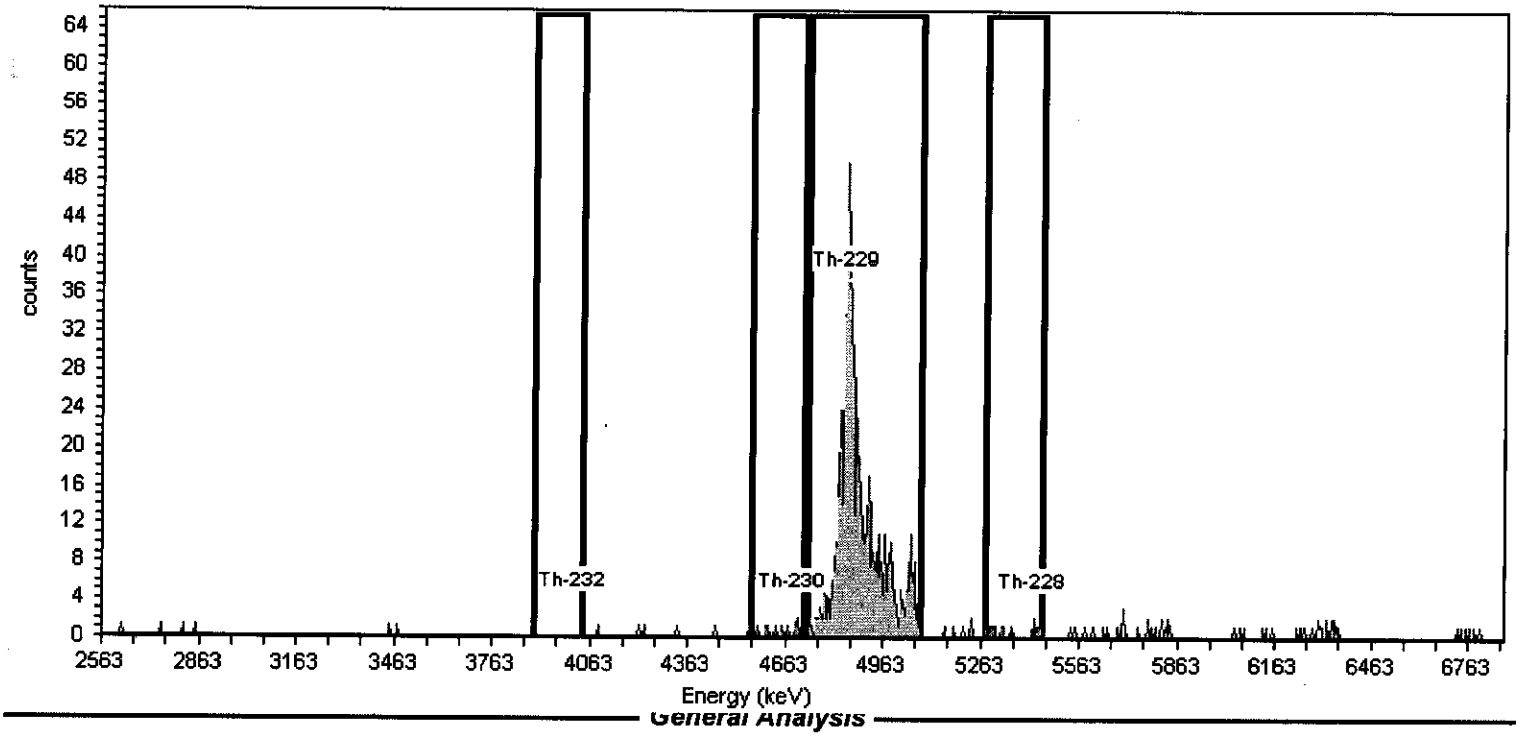
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 156.18%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/23/2010 2:32:48PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	.000	100.0	0.00	0.9591	-1	0.000E+000	5.166E-002	2.799E-002	8.924E-002
Th-230	4687.000	4561.000	4717.000	8.167	99.7	9.99	7.1716	3	3.478E-002	1.534E-001	7.678E-002	1.869E-001
Th-229	4845.000	4737.000	5080.000	44.118	99.6	780.32	8.6631	772	1.487E+001	1.726E+000	8.448E-002	2.023E-001
Th-228	5423.000	5280.000	5453.000	65.817	99.4	13.88	9.0000	5	6.038E-002	1.779E-001	8.627E-002	2.060E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:47PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

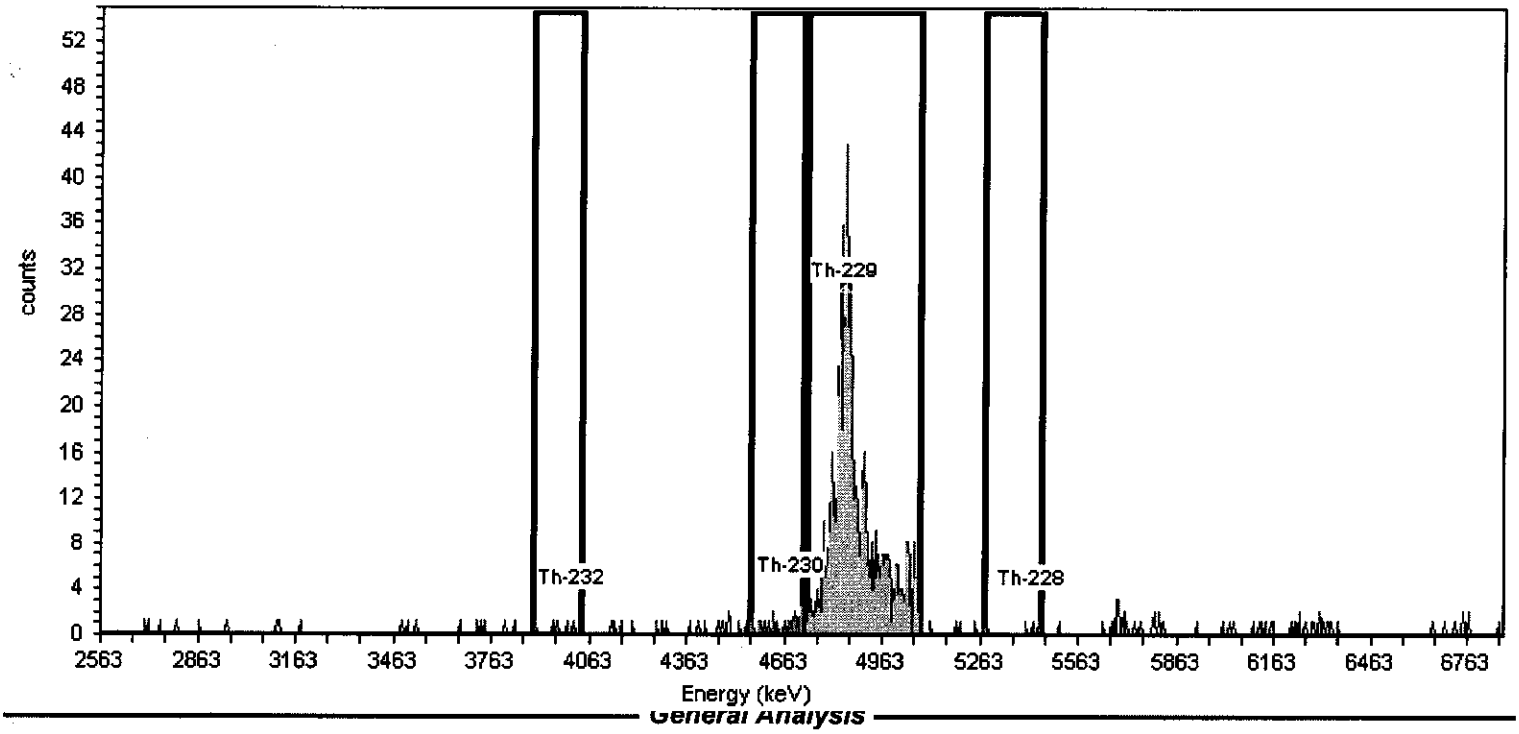
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 145.54%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/23/2010 2:32:50PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.585	100.0	4.18	1.0000	3	4.024E-002	8.680E-002	2.942E-002	9.307E-002
Th-230	4687.000	4561.000	4717.000	11.592	99.7	22.42	8.4175	14	1.776E-001	2.147E-001	8.562E-002	2.056E-001
Th-229	4845.000	4737.000	5080.000	52.933	99.6	765.67	16.0000	750	1.386E+001	1.640E+000	1.182E-001	2.707E-001
Th-228	5423.000	5280.000	5453.000	5.565	99.4	4.91	9.0000	-4	0.000E+000	1.428E-001	8.880E-002	2.120E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:32PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

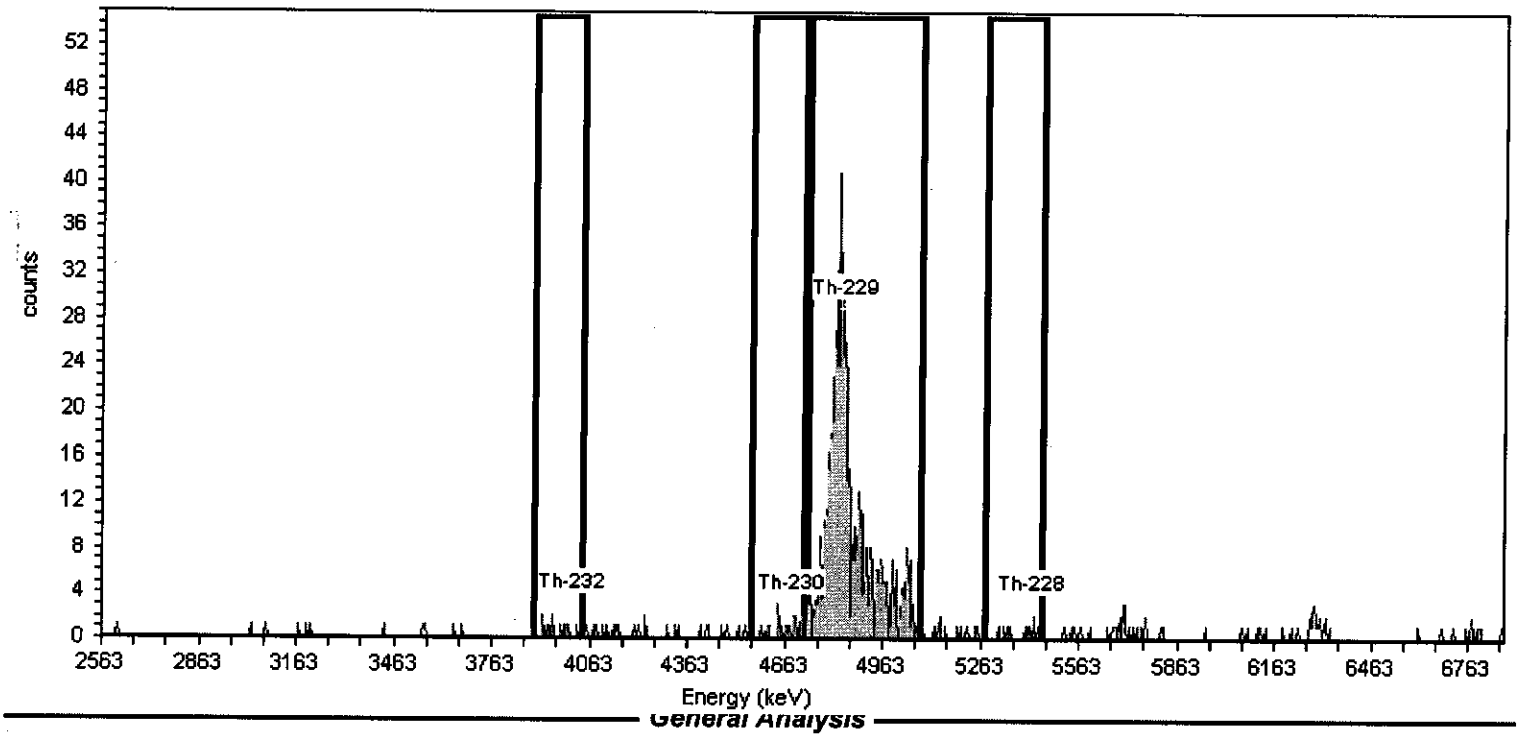
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 131.20%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/23/2010 2:32:51PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	45.047	100.0	11.00	5.0000	6	8.766E-002	1.764E-001	7.600E-002	1.915E-001
Th-230	4687.000	4561.000	4717.000	9.190	99.7	18.25	19.4175	-1	0.000E+000	2.698E-001	1.502E-001	3.401E-001
Th-229	4845.000	4737.000	5080.000	51.564	99.6	664.00	15.0000	649	1.249E+001	1.583E+000	1.322E-001	3.040E-001
Th-228	5423.000	5280.000	5453.000	8.187	99.4	12.00	15.0000	-3	0.000E+000	2.293E-001	1.324E-001	3.046E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:32:45PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

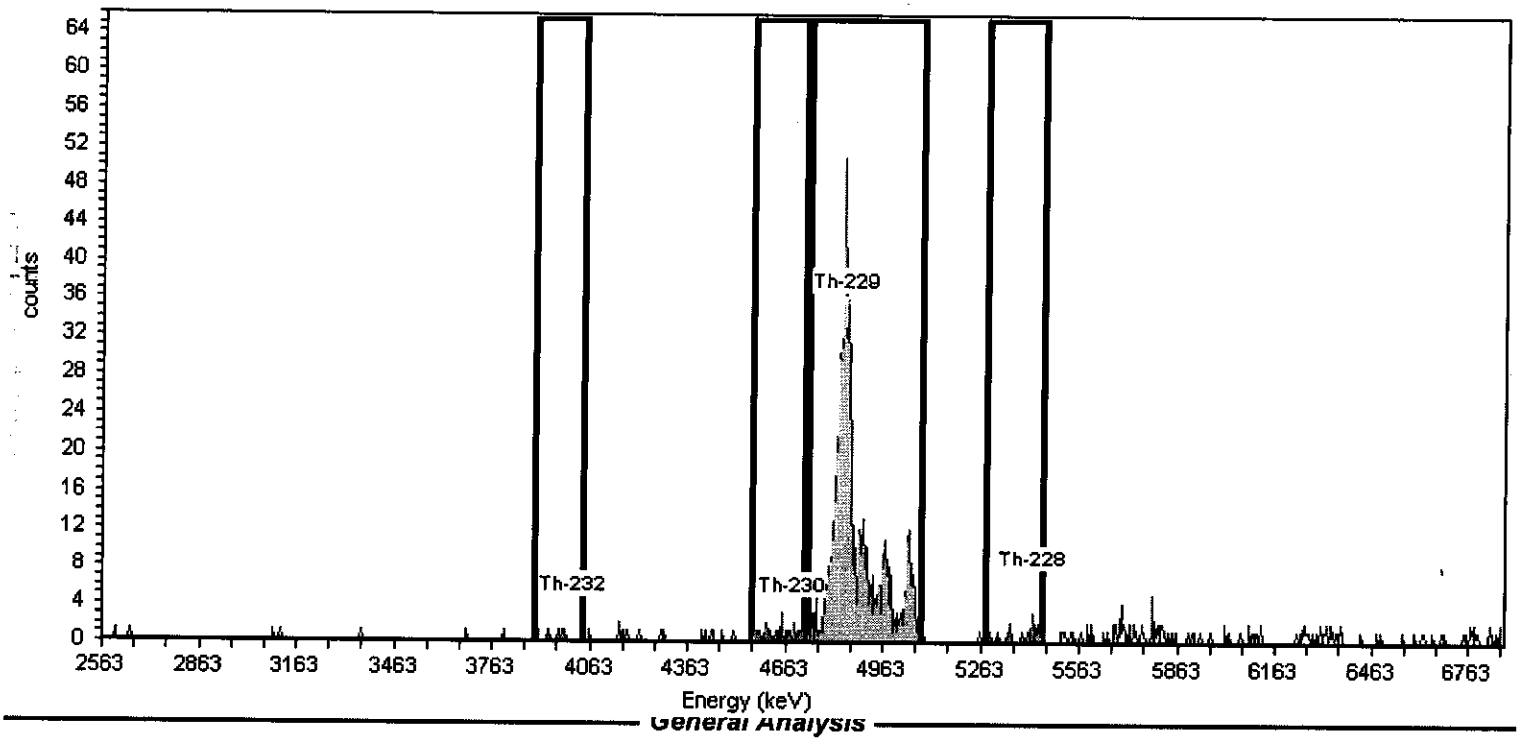
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 149.99%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/23/2010 2:32:52PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	97.215	100.0	5.00	4.0000	1	1.338E-002	1.204E-001	6.225E-002	1.607E-001
Th-230	4687.000	4561.000	4717.000	5.636	99.7	27.00	18.1716	9	1.185E-001	2.718E-001	1.331E-001	3.025E-001
Th-229	4845.000	4737.000	5080.000	41.759	99.6	724.67	16.0000	709	1.428E+001	1.743E+000	1.250E-001	2.864E-001
Th-228	5423.000	5280.000	5453.000	16.424	99.4	17.12	14.0000	3	4.193E-002	2.254E-001	1.172E-001	2.708E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:32:50PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

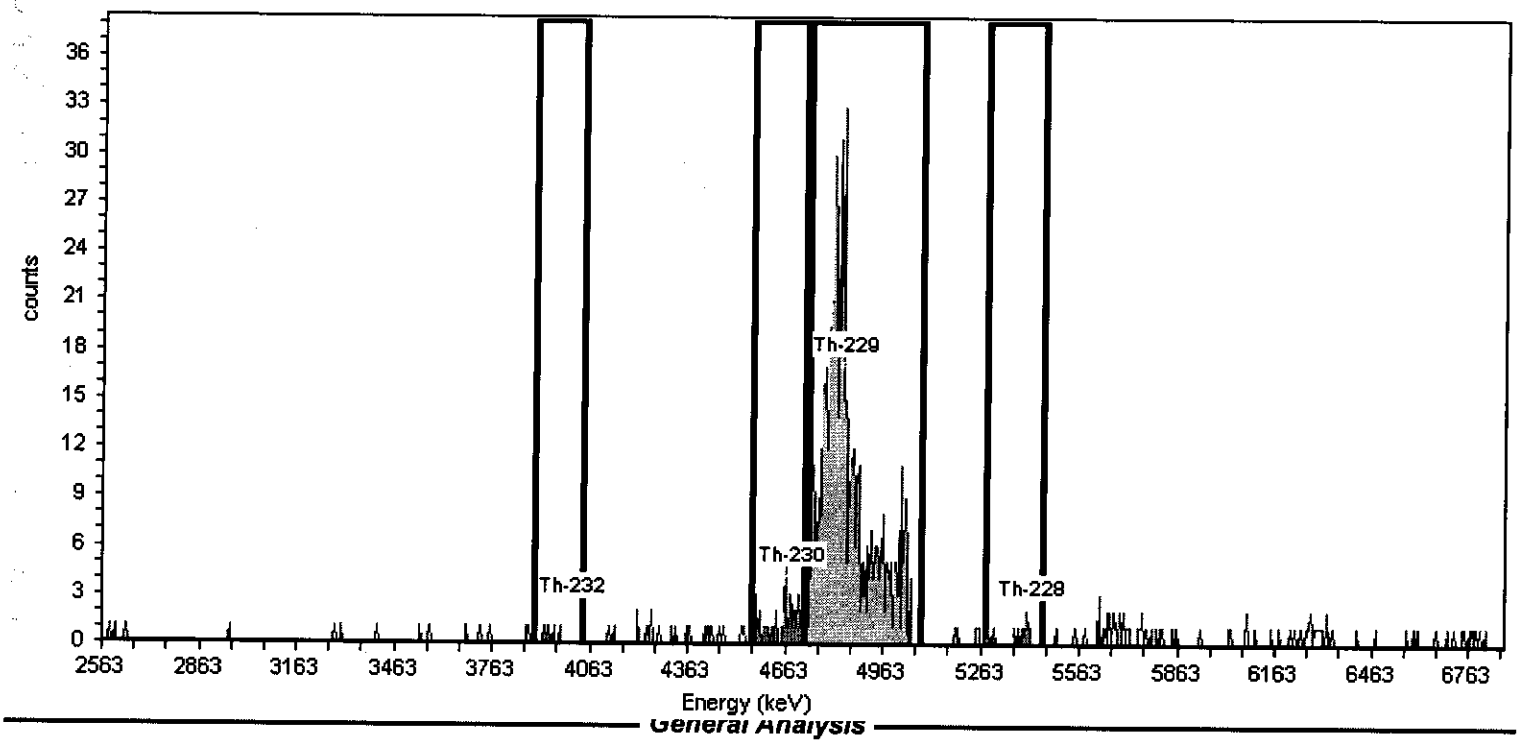
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 127.35%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/23/2010 2:32:43PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	53.110	100.0	4.00	0.0000	4	6.014E-002	1.017E-001	0.000E+000	4.068E-002
Th-230	4687.000	4561.000	4717.000	30.195	99.7	39.58	7.0000	33	4.913E-001	3.272E-001	9.282E-002	2.264E-001
Th-229	4845.000	4737.000	5080.000	73.541	99.6	645.98	15.3369	631	1.212E+001	1.558E+000	1.375E-001	3.159E-001
Th-228	5423.000	5280.000	5453.000	26.279	99.4	10.91	18.1151	-7	0.000E+000	2.456E-001	1.498E-001	3.405E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:32:57PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

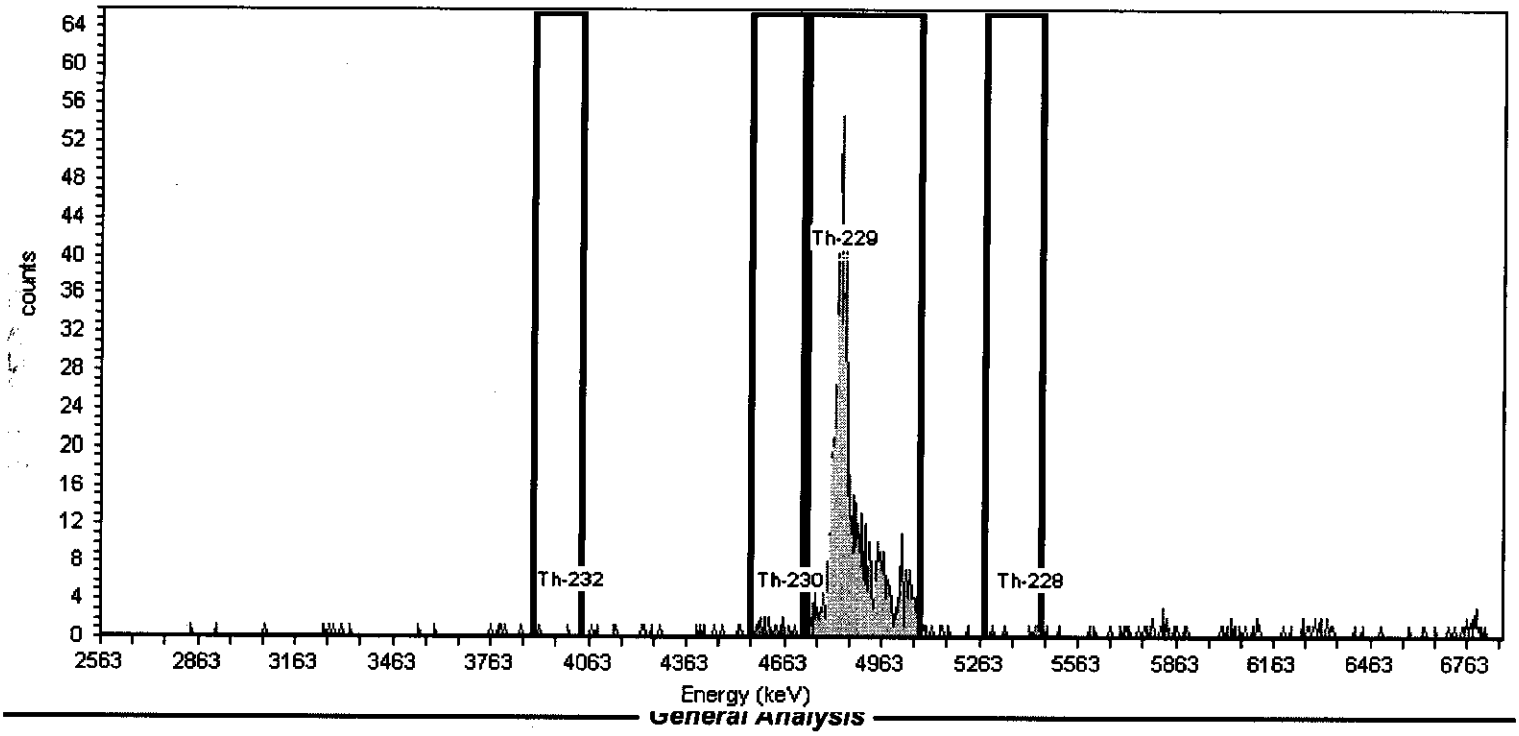
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 155.30%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/23/2010 2:32:44PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	19.570	100.0	2.96	3.0000	0	0.000E+000	8.956E-002	4.928E-002	1.316E-001
Th-230	4687.000	4561.000	4717.000	117.532	99.7	16.00	11.4109	5	5.629E-002	1.930E-001	9.639E-002	2.260E-001
Th-229	4845.000	4737.000	5080.000	42.196	99.6	790.00	14.6748	775	1.478E+001	1.723E+000	1.094E-001	2.521E-001
Th-228	5423.000	5280.000	5453.000	17.117	99.4	7.23	18.1809	-11	0.000E+000	1.883E-001	1.220E-001	2.774E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:01PM 7/23/2010

Analyst: ORTEC

Sample

Sample: L83298-010 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

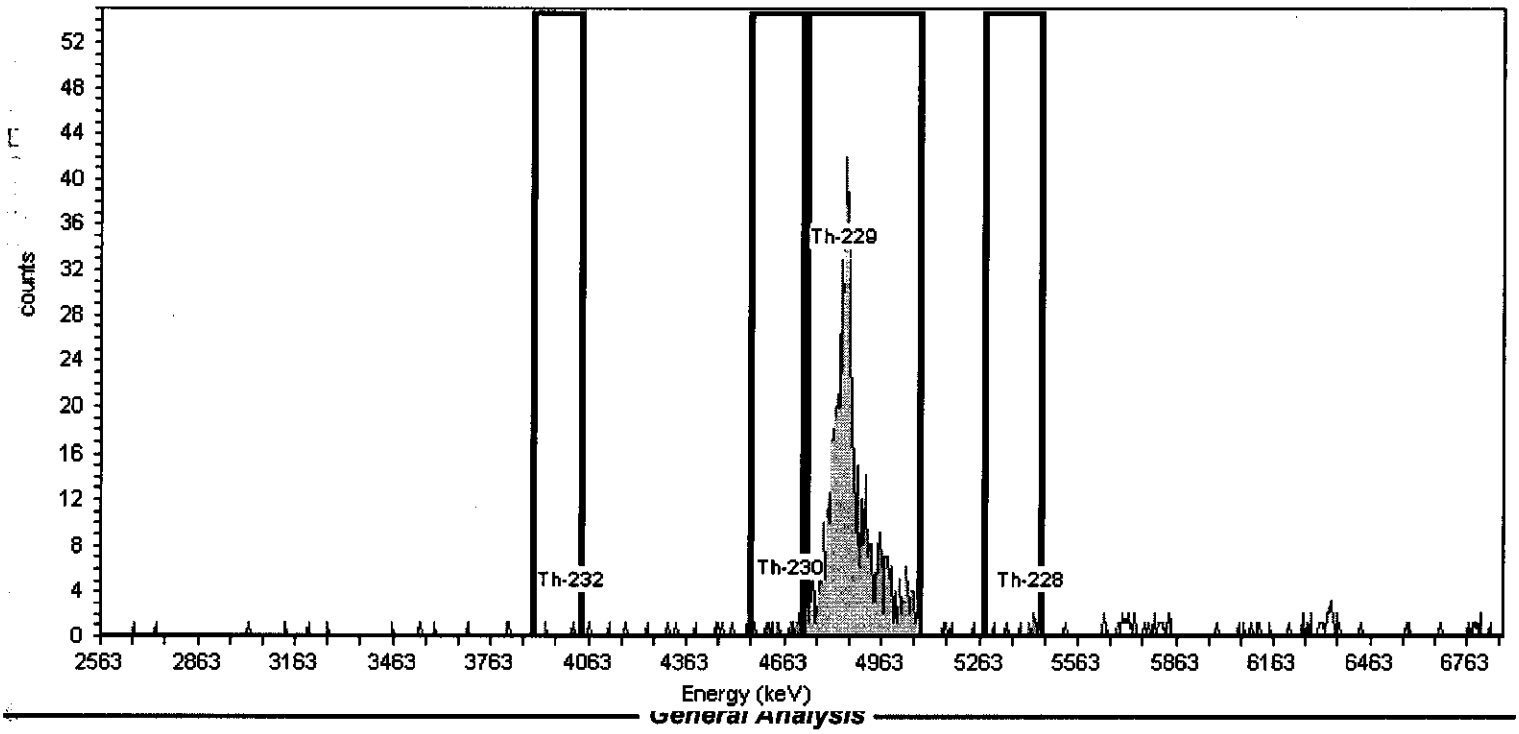
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 165.97%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/23/2010 2:32:46PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.501	100.0	2.00	1.0000	1	1.235E-002	6.423E-002	2.873E-002	9.089E-002
Th-230	4687.000	4561.000	4717.000	2.345	99.7	12.58	6.0000	7	8.154E-002	1.612E-001	7.059E-002	1.747E-001
Th-229	4845.000	4737.000	5080.000	53.728	99.6	775.69	8.0000	768	1.580E+001	1.844E+000	8.160E-002	1.968E-001
Th-228	5423.000	5280.000	5453.000	12.731	99.4	10.00	9.0000	1	1.243E-002	1.625E-001	8.672E-002	2.071E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:05PM 7/23/2010

Analyst: ORTEC

Sample

Sample: dup 1 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

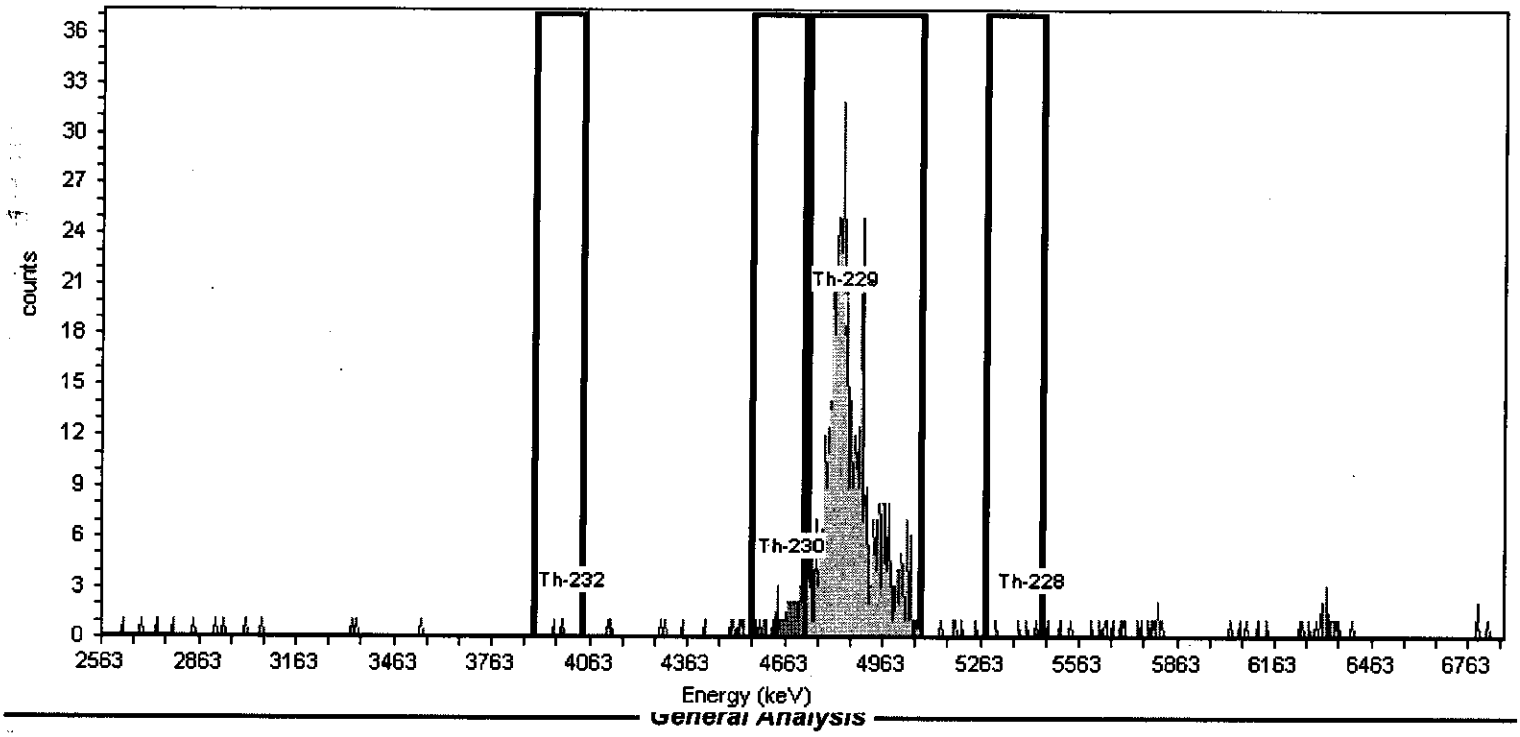
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 131.87%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/23/2010 2:32:48PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	49.810	100.0	2.00	1.0000	1	1.421E-002	7.393E-002	3.307E-002	1.046E-001
Th-230	4687.000	4561.000	4717.000	23.513	99.7	34.84	9.0000	26	3.683E-001	2.943E-001	9.951E-002	2.376E-001
Th-229	4845.000	4737.000	5080.000	58.619	99.6	672.01	5.0000	667	1.255E+001	1.548E+000	7.425E-002	1.871E-001
Th-228	5423.000	5280.000	5453.000	5.569	99.4	4.00	10.7944	-7	0.000E+000	1.664E-001	1.093E-001	2.573E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:09PM 7/23/2010

Analyst: ORTEC

Sample

Sample: dup 2 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
Description:

Client Name: Undefined
Client Contact:

Tracer

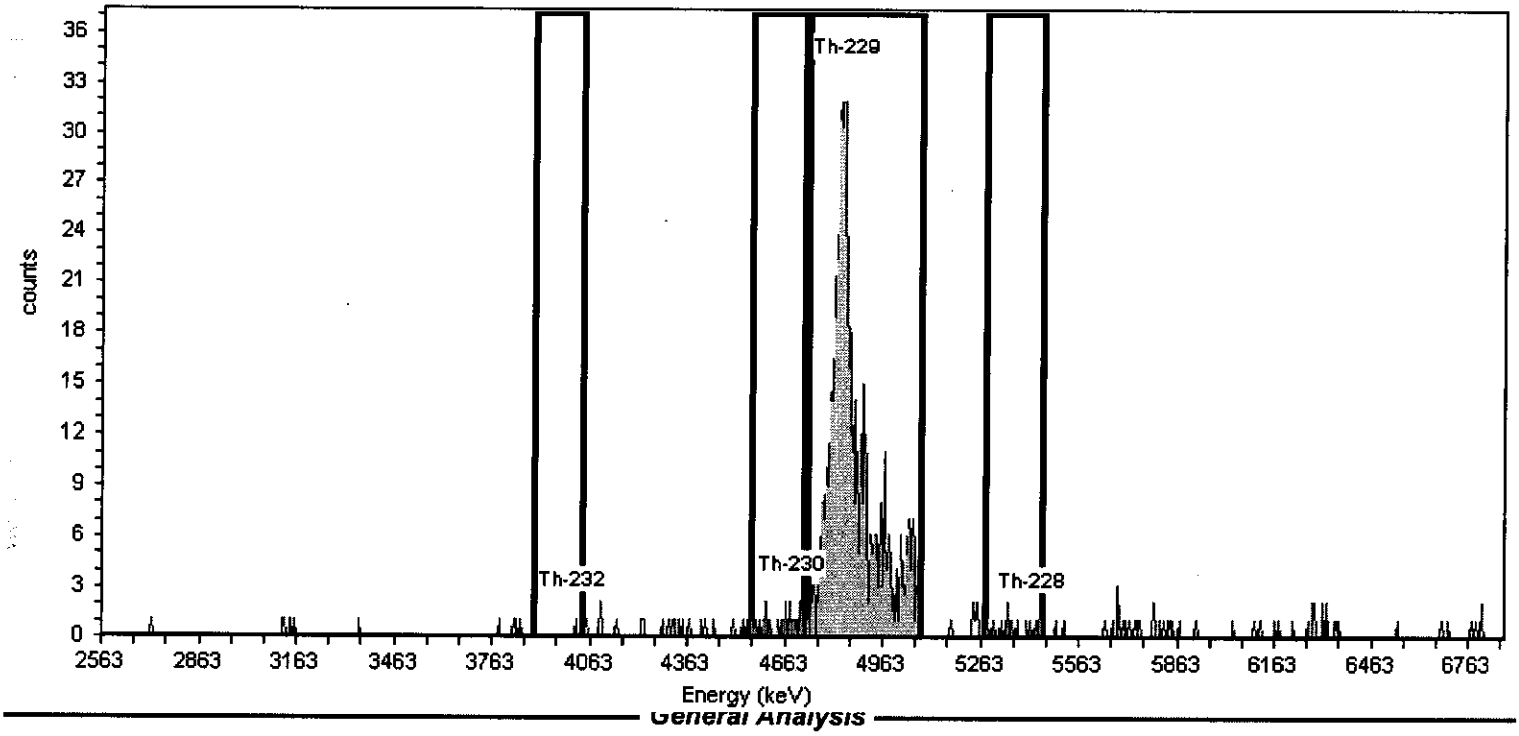
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 141.70%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/23/2010 2:32:50PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.543	100.0	1.00	5.0409	-4	0.000E+000	1.018E-001	7.163E-002	1.804E-001
Th-230	4687.000	4561.000	4717.000	24.613	99.7	26.01	10.0000	16	2.202E-001	2.522E-001	1.012E-001	2.396E-001
Th-229	4845.000	4737.000	5080.000	50.983	99.6	699.35	8.0000	691	1.349E+001	1.646E+000	9.061E-002	2.185E-001
Th-228	5423.000	5280.000	5453.000	6.052	99.4	12.09	12.8849	-1	0.000E+000	2.069E-001	1.152E-001	2.678E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:33:13PM 7/23/2010

Analyst: ORTEC

Sample

Sample: ms Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.23 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

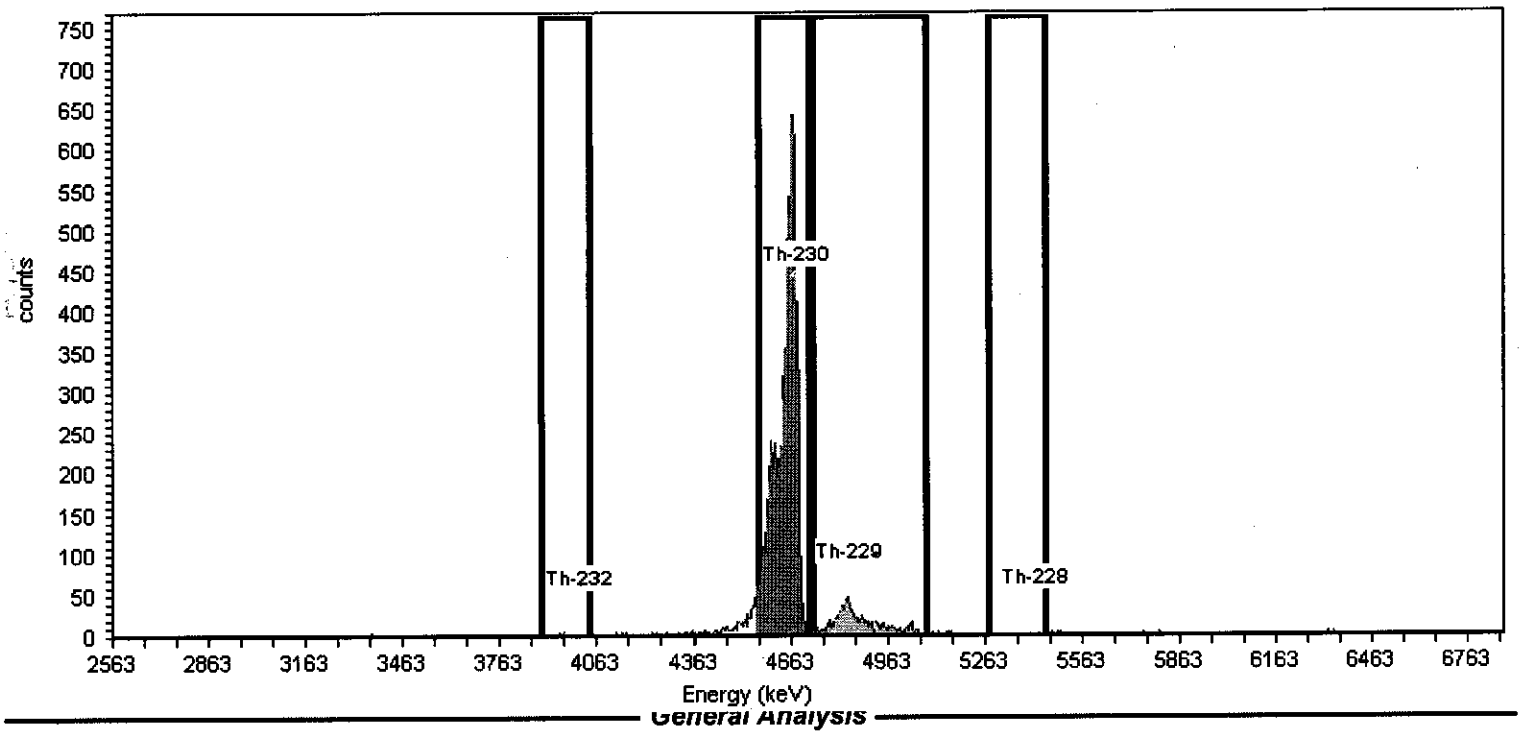
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 196.59%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/23/2010 2:32:51PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/23/2010 2:10:04PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	73.322	100.0	14.00	0.0000	14	1.330E-001	1.137E-001	0.000E+000	2.570E-002
Th-230	4687.000	4561.000	4717.000	48.506	99.7	8,982.36	4.0000	8,978	8.552E+001	1.789E+001	4.432E-002	1.144E-001
Th-229	4845.000	4737.000	5080.000	63.044	99.6	1,004.36	6.0000	998	1.872E+001	1.930E+000	5.434E-002	1.345E-001
Th-228	5423.000	5280.000	5453.000	5.847	99.4	7.12	1.1151	6	5.733E-002	8.308E-002	2.347E-002	7.280E-002

ACZ Laboratories, Inc.
Uranium by Eichrom
Eichrom Industries, ACW02

WG286268

Project:
SDG#:
SOP#: RC020

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/14/2010
Analysis Date: 7/16/2010
Start Time:
End Time:
Approved: MWM 7-21-10
Approved: MTB 7-20-10

MWM
50.00

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235							Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/L	Error (+ -)	LLD pCi/L	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/L	Error (+ -)	LLD pCi/L	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/L	Error (+ -)	LLD pCi/L
1	WG285975PBW		100	1	10.30	861	0.837	12.3488	17.2300	4.881	0.58	1.37	1.05	6.0000	5.9600	-0.040	0.00	0.87	1.05	3.0000	10.0000	7.000	0.84	0.91	1.05
2	WG285975LCSW	RC100223-2	100	1	10.30	524	0.509	14.0000	928.1700	914.170	179.69	12.67	1.72	7.0000	47.9200	40.920	8.04	3.06	1.72	6.0000	895.6700	889.670	174.88	12.40	1.72
3	L82973-01	BG-121 COMP	100	1	10.30	899	0.864	21.1193	19.2900	-1.829	-0.21	1.55	1.01	7.9784	5.0200	-2.958	-0.34	0.88	1.01	10.0000	7.0000	-3.000	-0.35	1.00	1.01
4	L82973-02	BG-122 COMP	100	1	10.30	854	0.830	23.1700	22.0000	-1.170	-0.14	1.70	1.05	8.0216	2.0000	-6.022	-0.73	0.80	1.05	3.0000	9.6700	6.670	0.80	0.90	1.05
5	L83048-01	RESE-1003157	100	1	10.30	678	0.851	18.1700	87.0000	68.830	9.09	2.53	1.03	1.0000	7.0000	6.000	0.71	0.70	1.03	4.0000	64.8600	60.860	7.16	2.05	1.03
6	L83048-02	RESE-1003158	100	1	10.30	880	0.855	11.0000	33.9400	22.940	2.69	1.65	1.02	2.0000	3.0000	1.000	0.12	0.55	1.02	5.9006	9.0000	3.099	0.36	0.95	1.02
7	L83090-01	LPS	100	1	10.30	310	0.301	14.0000	2013.8200	1999.820	664.46	31.42	2.90	7.0000	94.0400	87.040	28.92	7.01	2.90	6.0000	2086.4300	2080.430	691.24	31.92	2.90
8	L83090-02	UTW	100	1	10.30	317	0.308	9.0596	1854.8200	1845.760	599.73	29.46	2.84	4.0000	92.0800	88.080	28.62	6.69	2.84	1.0000	1981.3300	1980.330	643.45	30.38	2.84
9	L83110-01	RESE-1003156	100	1	10.30	907	0.881	8.2296	36.0000	27.770	3.15	1.59	0.99	5.0000	1.9800	-3.020	-0.34	0.63	0.99	5.0000	17.4300	12.430	1.41	1.13	0.99
10	L83111-01	BG-120 COMP	100	1	10.30	821	0.798	27.0000	22.4600	-4.540	-0.57	1.85	1.10	5.0000	4.0000	-1.000	-0.13	0.79	1.10	5.0000	26.0000	21.000	2.63	1.47	1.10
11	L83176-03	31-67 TRB	100	1	10.30	503	0.489	24.0000	84.0000	60.000	12.29	4.47	1.79	4.0216	8.0200	3.998	0.82	1.49	1.79	8.0000	48.0000	40.000	8.19	3.22	1.79
12	L83216-01	CC-301	100	1	10.30	841	0.817	14.0596	18.8300	4.770	0.58	1.47	1.07	5.9649	3.0000	-2.965	-0.36	0.77	1.07	6.0000	19.0000	13.000	1.59	1.29	1.07
13	L83216-02	CC-304	100	1	10.30	849	0.825	9.0000	127.2300	118.230	14.34	2.97	1.06	1.0216	5.9600	4.938	0.60	0.67	1.06	4.0000	58.0000	54.000	6.55	2.01	1.06
14	L83216-03	CC-545	100	1	10.30	926	0.900	10.0000	31.6500	21.650	2.41	1.51	0.97	0.0000	4.0000	4.000	0.44	0.47	0.97	1.0000	15.0000	14.000	1.56	0.93	0.97
15	L83216-04	CC-793	100	1	10.30	824	0.801	13.0000	40.8300	27.830	3.48	1.93	1.09	0.0000	5.0000	5.000	0.63	0.59	1.09	2.0000	31.0000	29.000	3.63	1.51	1.09
16	L83216-05	CC-5000	100	1	10.30	609	0.592	3.0000	27.0000	24.000	4.06	1.95	1.48	2.0000	1.0000	-1.000	-0.17	0.62	1.48	2.0000	11.0000	9.000	1.52	1.28	1.48
17	L82973-01DUP		100	1	10.30	930	0.904	27.0000	24.5400	-2.460	-0.27	1.67	0.97	5.0000	5.0400	0.040	0.00	0.74	0.97	5.0000	13.0000	8.000	0.89	0.99	0.97
18	L83216-04DUP		100	1	10.30	684	0.859	24.0000	39.0600	15.060	1.75	1.94	1.02	4.0216	2.0000	-2.022	-0.24	0.60	1.02	8.0000	26.0000	18.000	2.10	1.43	1.02
19	L83111-01MS	RC100223-2	100	1	10.30	541	0.526	8.2296	840.8800	832.650	158.53	11.65	1.66	5.0000	35.0000	30.000	5.71	2.53	1.66	5.0000	889.0000	884.000	168.30	11.95	1.66
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				
										0.000						0.000						0.000				

Comments:

Template: uiso-eichrom

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC023.01.09.ver02

7.21.10 GK

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 7-19-10

Work Group: WG256268
Sample Type: Liquid
Analysis Date: 7-18-10
Analyst: MWM
Prep Date: 7-14-10

Approved: MDB
Date: 7-20-10

Weekly background file: 7-15-10
Daily background file: 7-15-10

Alpha performance file: 7-15-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:07:24AM 7/21/2010

Analyst: ORTEC

Sample

Sample: L83090-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.20 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

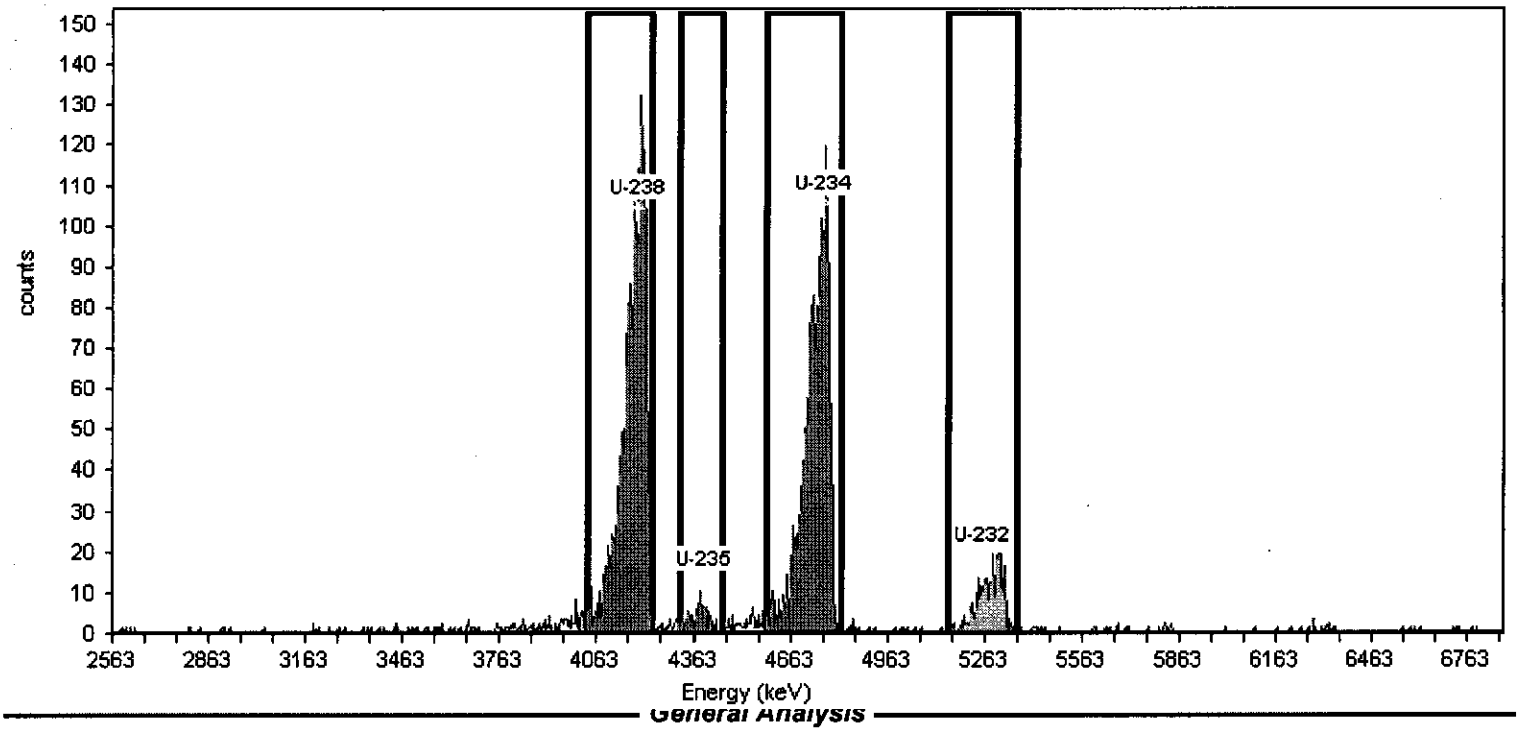
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 24.41%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/20/2010 10:22:04AM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: Interactive ROI Analysis
Decay Correction:7/20/2010 10:21:47AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4395.998	4318.000	4453.000	97.522	80.9	94.04	7.0000	87	3.741E+000	1.604E+000	2.645E-001	6.454E-001
U-234	4765.000	4592.000	4819.000	81.199	100.0	2,013.82	14.0000	2,000	6.951E+001	1.817E+001	3.025E-001	6.991E-001
U-232	5263.000	5153.109	5368.175	80.960	99.8	316.00	6.0000	310	2.880E+000	5.126E-001	2.169E-001	5.368E-001
U-238	4192.997	4037.000	4232.000	27.047	100.2	2,086.43	6.0000	2,080	7.217E+001	1.884E+001	1.977E-001	4.892E-001

ACZ Laboratories, Inc.
Uranium by Eichrom
Eichrom Industries, ACW02

WG295975

Analyst: MWM
Dept: 50
Prep Date: 7-14-10 7:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

MWM
50.00

Project:
SDG#:
SOP#:

Instrument: Octete
Matrix Class: LIQUID
List Type: QC-TH-230
List Function: PREP

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/L	Error (+ -)	LLD pCi/L	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/L	Error (+ -)	LLD pCi/L	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/L	Error (+ -)	LLD pCi/L
1	PBW		100	1	0.00					0.000						0.000						0.000			
2	LCSW				0.00					0.000						0.000						0.000			
3	L82973-01	BG-121 COMP			0.00					0.000						0.000						0.000			
4	L82973-02	BG-122 COMP			0.00					0.000						0.000						0.000			
5	L83048-01	RESE-1003157			0.00					0.000						0.000						0.000			
6	L83048-02	RESE-1003158			0.00					0.000						0.000						0.000			
7	L83090-01	LPS			0.00					0.000						0.000						0.000			
8	L83090-02	UTW			0.00					0.000						0.000						0.000			
9	L83111-01	BG-120 COMP			0.00					0.000						0.000						0.000			
10	L83176-03	31-67 TRB			0.00					0.000						0.000						0.000			
11	L83110-01				0.00					0.000						0.000						0.000			
12	L83216-01				0.00					0.000						0.000						0.000			
13	L83216-02				0.00					0.000						0.000						0.000			
14	L83216-03				0.00					0.000						0.000						0.000			
15	L83216-04				0.00					0.000						0.000						0.000			
16	L83216-05				0.00					0.000						0.000						0.000			
17	DUP 73-01				0.00					0.000						0.000						0.000			
18	DUP 16-04				0.00					0.000						0.000						0.000			
19	MS 11-01				0.00					0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments:

Template: uiso-eichrom

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC023.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Uranium iso
Water

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: wg285975 7/14/2010 7:12 AM

PROJECT/WG: _____
Method _____ INSTR: Octete

Radioactive Standards

LCS & MS 100223-2 Tracer: 100223-1

Reagents

3M Nitric Acid	34534	Aluminum nitrate / 3M nitric acid	100715-1
Nitric Acid (concentrated)	35035	HF	33549
0.05M oxalic acid / 5M HCl	100715-3	Titanium Choride	100629-1
0.01M Hydrochloric acid	35120	Cerium solution	090701-1
9M Hydrochloric acid	33927	Ethanol	33789

COMMENTS:

*12/29/08 MTB adjusted template to error using Gross cpm and specific backgrounds used to calculate net cpm

rcuiso.xls

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:57PM 7/16/2010

Analyst: ORTEC

Sample

Sample: WG285975 PBW Type: Sample
Spectrum #1 Analysis #1

Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001

Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

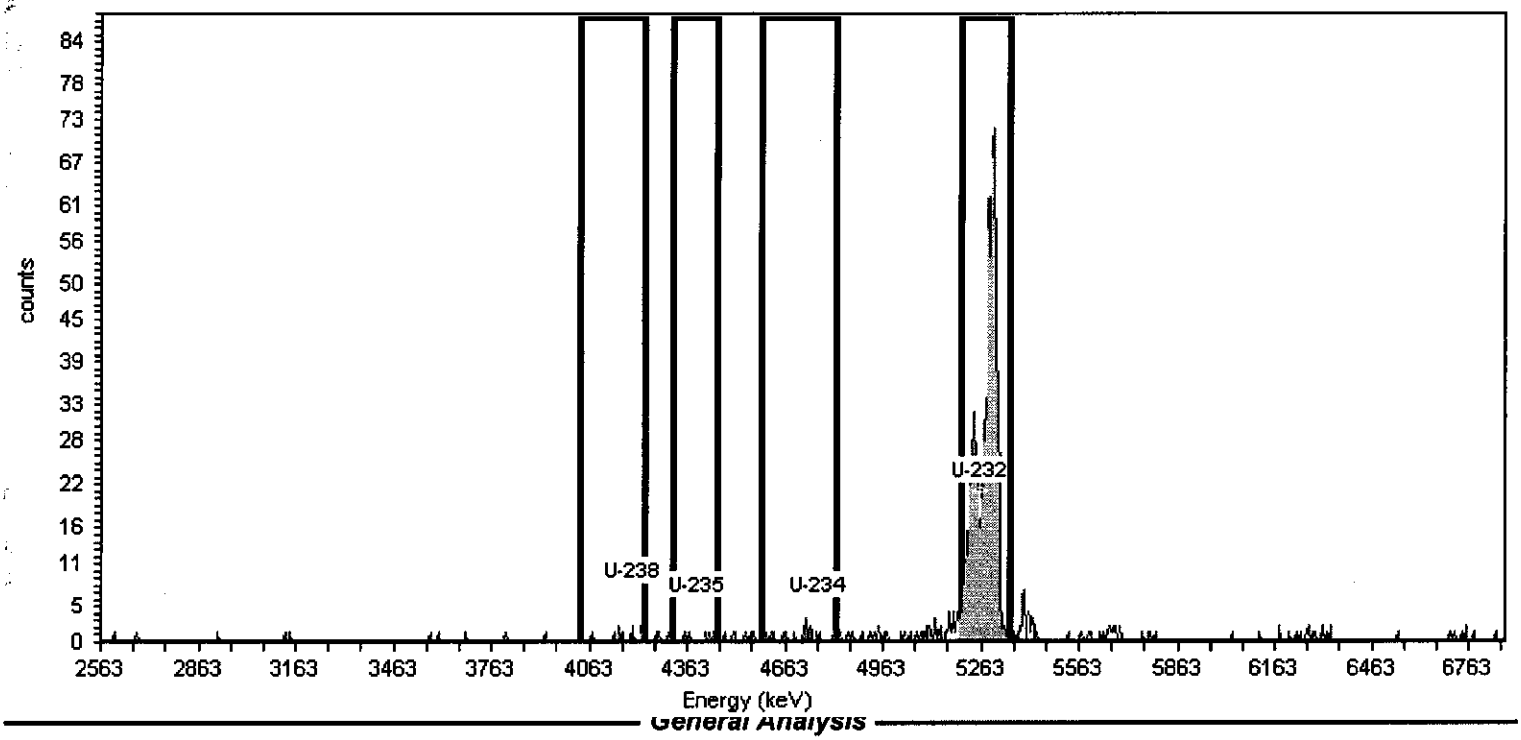
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.34%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/16/2010 8:59:54AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:28AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 001
Efficiency Calibration:2010.07.15 001
Calibration Date: 7/15/2010 9:47:41AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.81% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	6.042	100.2	10.00	3.0000	7	8.743E-002	1.363E-001	5.033E-002	1.344E-001
U-235	4396.000	4318.000	4453.000	6.099	80.9	5.96	6.0000	0	-5.432E-004	1.606E-001	8.818E-002	2.182E-001
U-234	4765.000	4592.000	4819.000	26.927	100.0	17.23	12.3488	5	6.107E-002	2.046E-001	1.023E-001	2.385E-001
U-232	5263.000	5203.000	5350.000	37.066	99.8	865.83	4.6900	861	7.946E+000	8.732E-001	6.904E-002	1.752E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:29PM 7/16/2010

Analyst: ORTEC

Sample

Sample: WG285975 LCSW Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

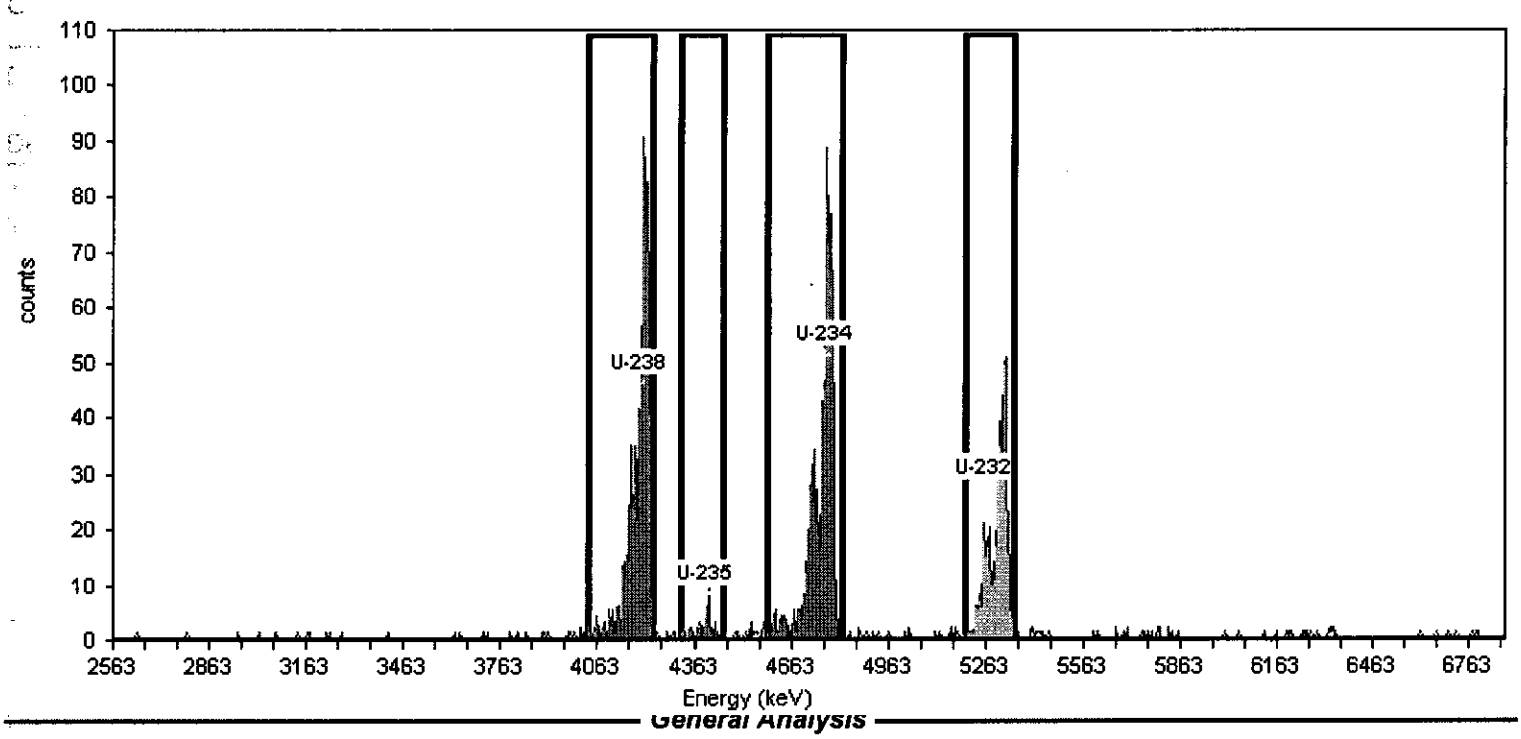
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 41.26%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/16/2010 8:59:56AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.617	100.2	895.67	6.0000	890	1.826E+001	4.522E+000	1.169E-001	2.894E-001
U-235	4396.000	4318.000	4453.000	29.718	80.9	47.92	7.0000	41	1.040E+000	6.122E-001	1.565E-001	3.818E-001
U-234	4765.000	4592.000	4819.000	29.127	100.0	928.17	14.0000	914	1.880E+001	4.651E+000	1.790E-001	4.136E-001
U-232	5263.000	5203.000	5350.000	14.381	99.8	528.10	4.0000	524	4.868E+000	6.703E-001	1.048E-001	2.704E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:37PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L82973-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

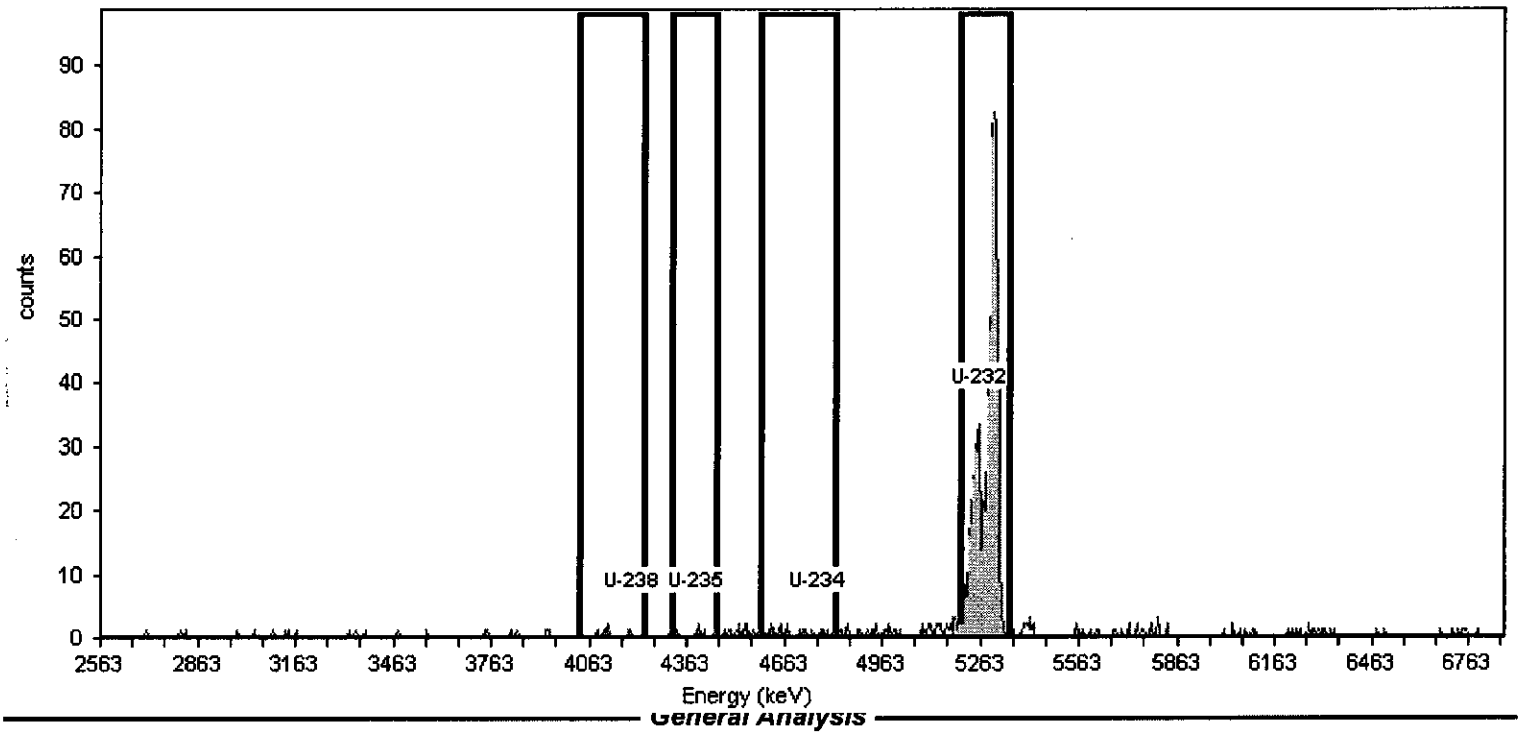
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.01%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/16/2010 8:59:59AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:35AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 003
Efficiency Calibration:2010.07.15 003
Calibration Date: 7/15/2010 9:49:57AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.47% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	23.887	100.2	7.00	10.0000	-3	-3.631E-002	1.499E-001	8.904E-002	2.108E-001
U-235	4396.000	4318.000	4453.000	.184	80.9	5.02	7.9784	-3	-4.433E-002	1.625E-001	9.853E-002	2.376E-001
U-234	4765.000	4592.000	4819.000	184.305	100.0	19.29	21.1193	-2	-2.219E-002	2.313E-001	1.296E-001	2.921E-001
U-232	5263.000	5203.000	5350.000	37.661	99.8	895.66	7.0000	889	7.907E+000	8.570E-001	8.173E-002	1.994E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:45PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L82973-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

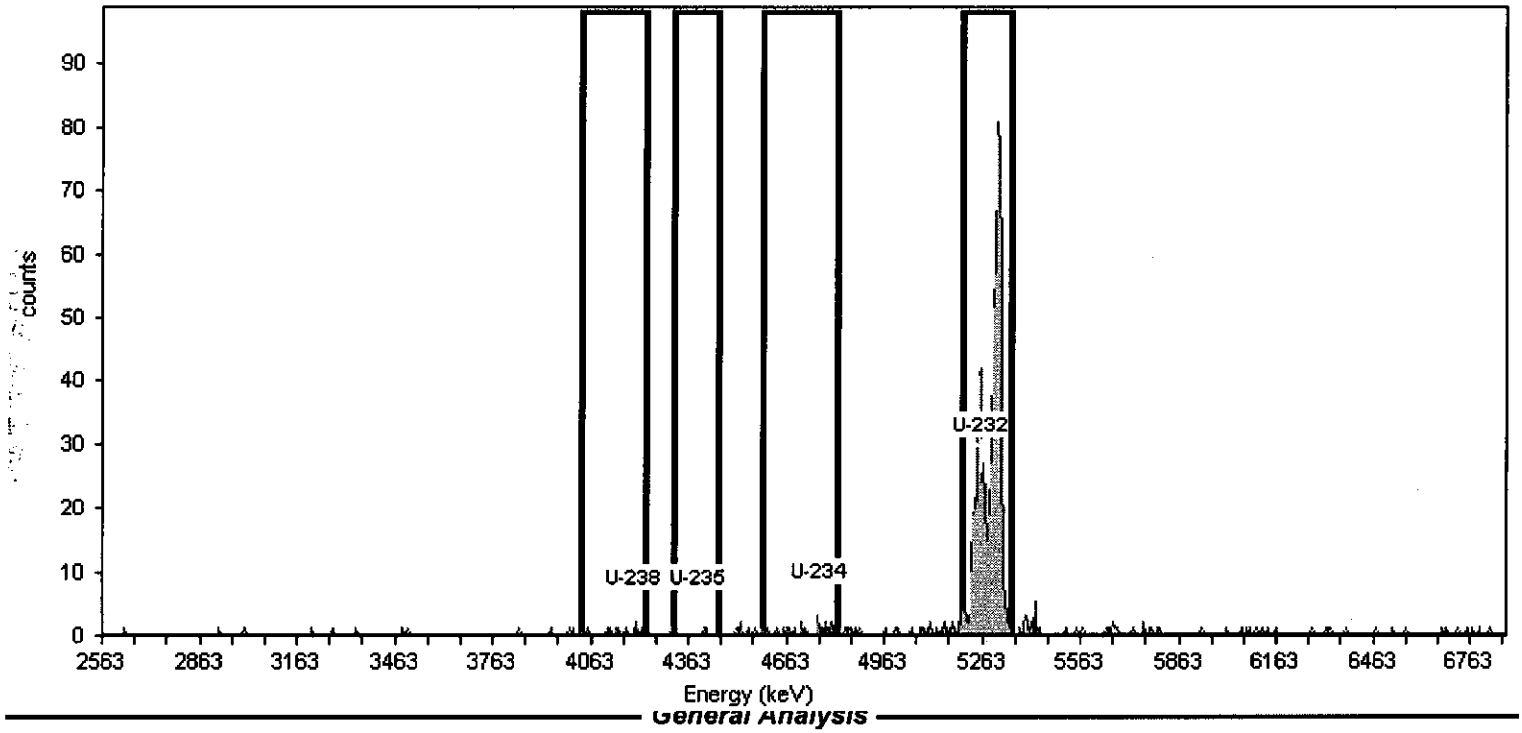
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.95%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/16/2010 9:00:02AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:22AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 004
Efficiency Calibration:2010.07.15 004
Calibration Date: 7/15/2010 9:50:58AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.76% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	6.509	100.2	9.67	3.0000	7	8.403E-002	1.357E-001	5.076E-002	1.356E-001
U-235	4396.000	4318.000	4453.000	25.244	80.9	2.00	8.0216	-6	-9.398E-002	1.495E-001	1.028E-001	2.479E-001
U-234	4765.000	4592.000	4819.000	17.810	100.0	22.00	23.1700	-1	-1.477E-002	2.545E-001	1.413E-001	3.168E-001
U-232	5263.000	5203.000	5350.000	26.426	99.8	860.79	7.0000	854	7.900E+000	8.737E-001	8.507E-002	2.075E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

2:00:53PM 7/16/2010

Sample

Sample: L83048-01 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

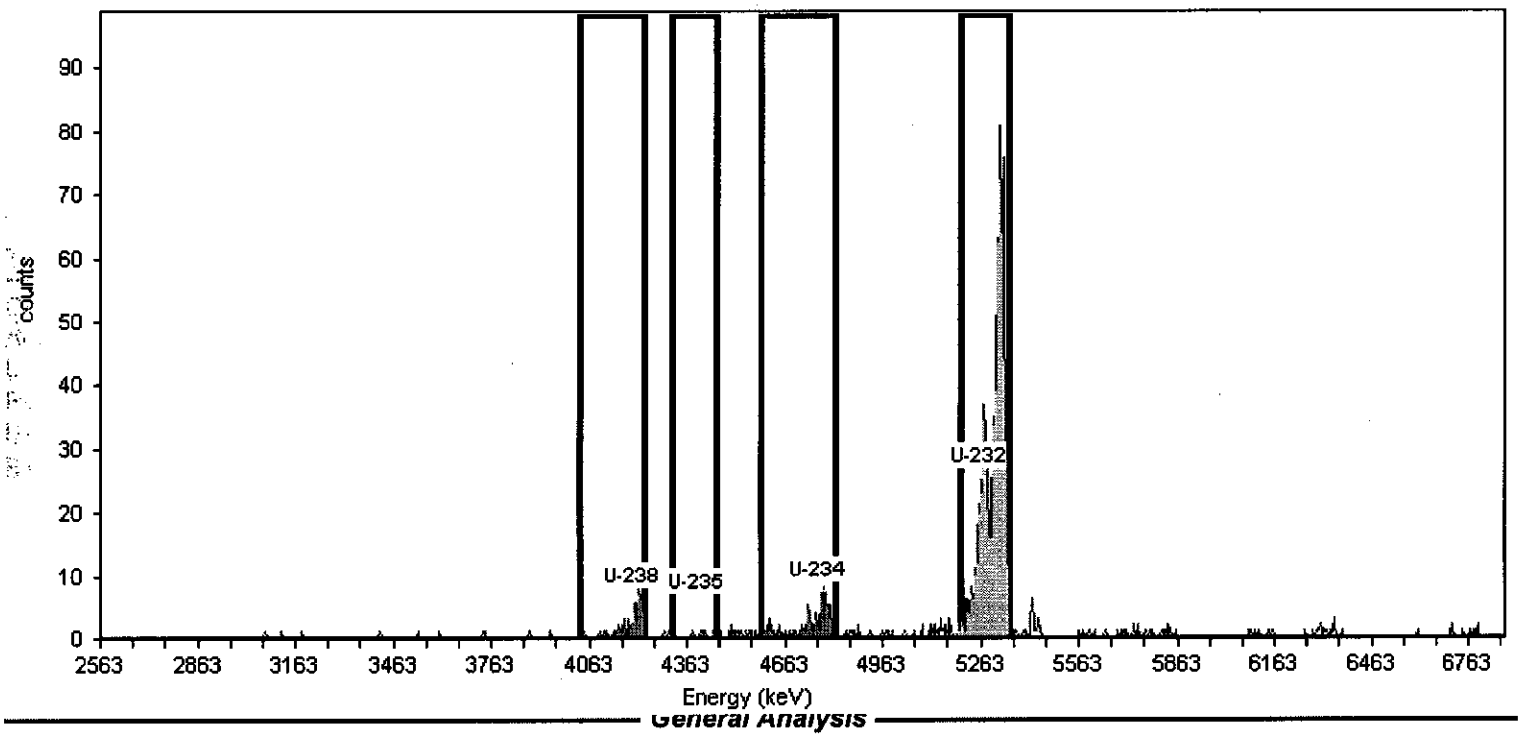
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 67.35%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/16/2010 8:59:41AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:24AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 005
Efficiency Calibration:2010.07.15 005
Calibration Date: 7/15/2010 9:51:59AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.12% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4396.000	4318.000	4453.000	43.209	80.9	7.00	1.0000	6	9.123E-002	1.304E-001	3.537E-002	1.119E-001
U-234	4765.000	4592.000	4819.000	18.419	100.0	87.00	18.1700	69	8.463E-001	4.179E-001	1.219E-001	2.771E-001
U-232	5263.000	5203.000	5350.000	24.225	99.8	884.07	7.6900	876	7.947E+000	8.683E-001	8.686E-002	2.102E-001
U-238	4193.000	4037.000	4232.000	20.841	100.2	64.86	4.0000	61	7.469E-001	3.434E-001	5.710E-002	1.474E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:01:01PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83048-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

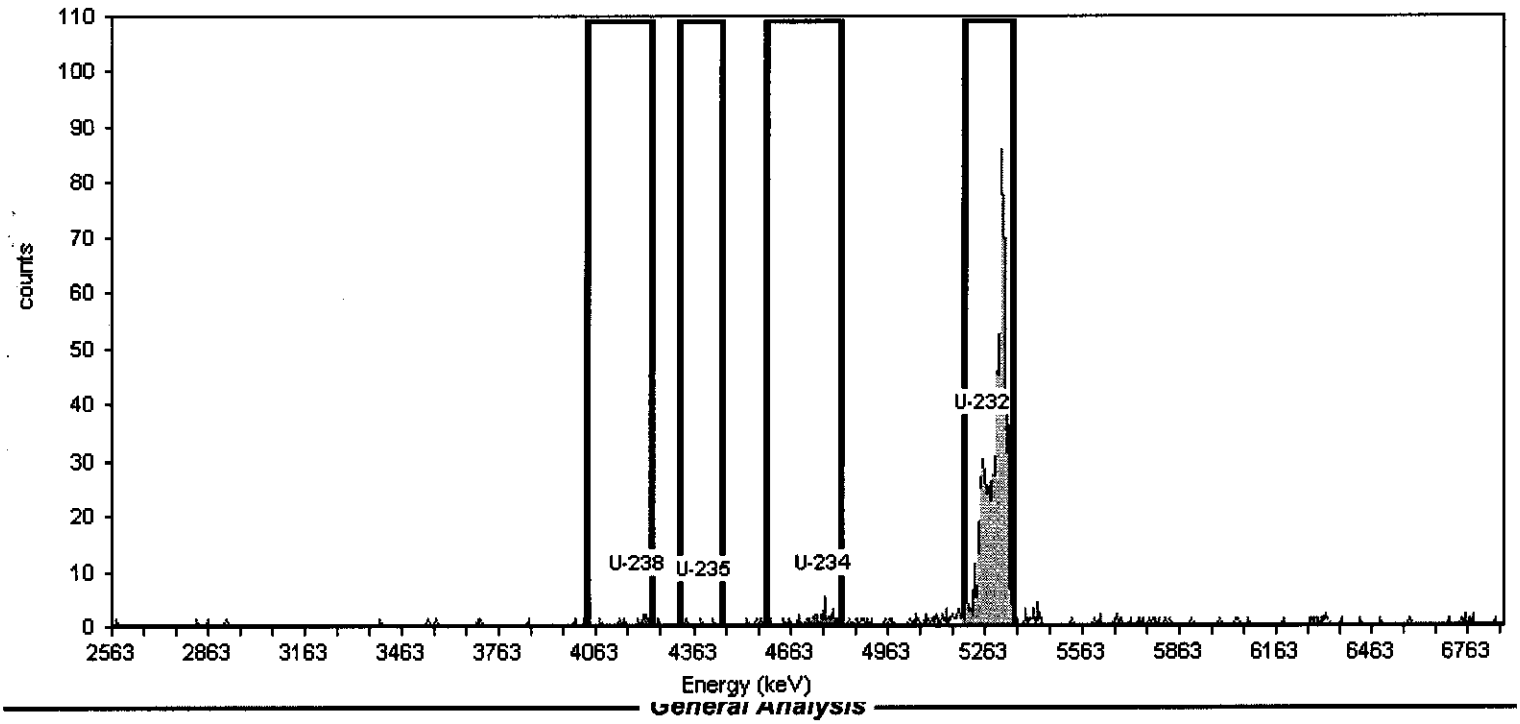
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 68.30%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/16/2010 8:59:41AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:27:37AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-15-2010 10:27

Energy Calibration: 2010.07.15 006
Efficiency Calibration:2010.07.15 006
Calibration Date: 7/15/2010 9:53:30AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.95% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.000	100.2	9.00	5.9006	3	3.786E-002	1.417E-001	6.903E-002	1.711E-001
U-235	4396.000	4318.000	4453.000	34.839	80.9	3.00	2.0000	1	1.513E-002	1.016E-001	4.979E-002	1.405E-001
U-234	4765.000	4592.000	4819.000	13.838	100.0	33.94	11.0000	23	2.808E-001	2.531E-001	9.443E-002	2.220E-001
U-232	5263.000	5203.000	5350.000	15.970	99.8	884.48	4.0000	880	8.060E+000	8.761E-001	6.236E-002	1.610E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
5:15:37PM 7/20/2010

Analyst: ORTEC

Sample

Sample: L83090-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.20 001
:
Description:

Client Name: Undefined
Client Contact:

Tracer

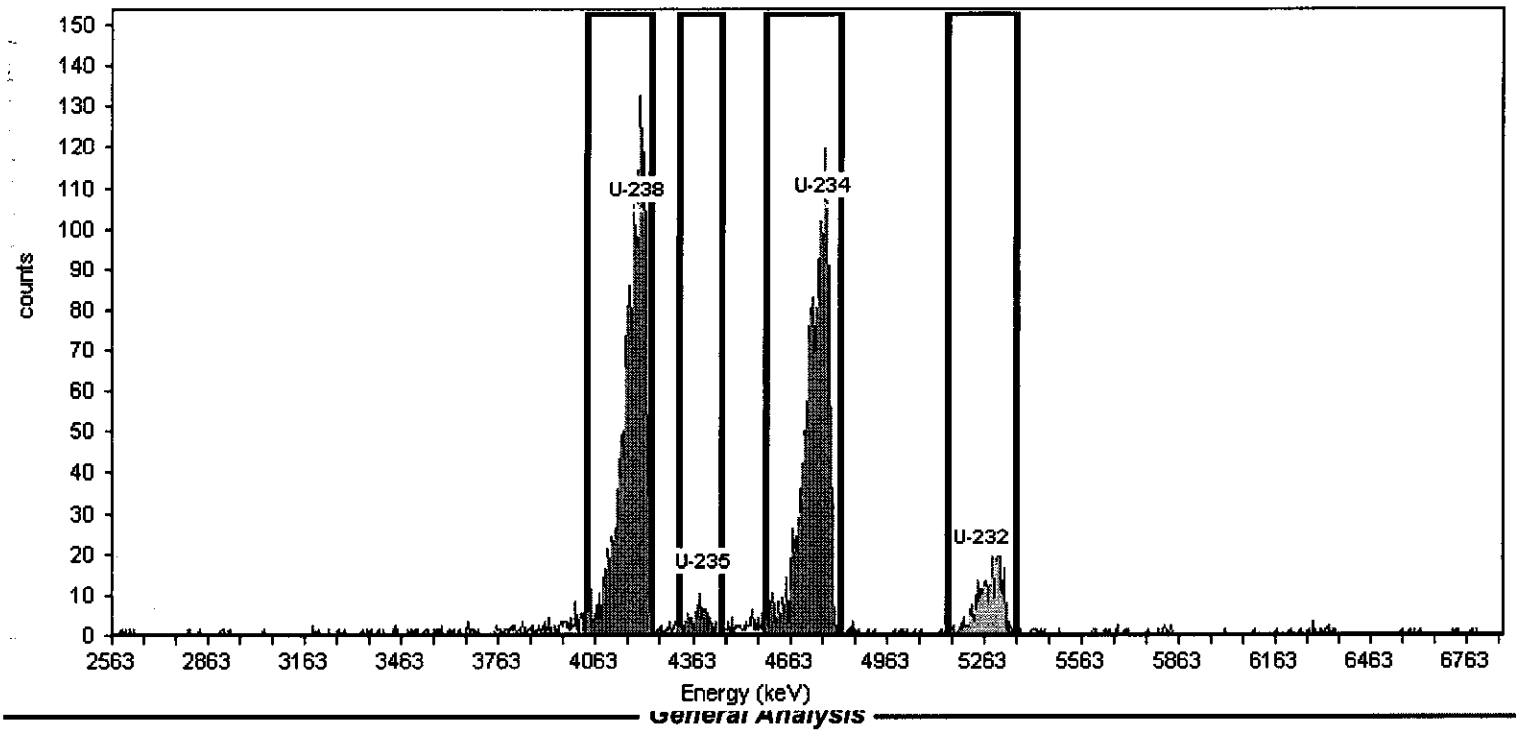
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 24.41%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/20/2010 10:22:04AM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:32AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 002
Efficiency Calibration:2010.07.15 002
Calibration Date: 7/15/2010 9:48:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.69% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: Interactive ROI Analysis
Decay Correction:7/20/2010 10:21:47AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4395.998	4318.000	4453.000	97.522	80.9	94.04	7.0000	87	3.741E+000	1.604E+000	2.645E-001	6.454E-001
U-234	4765.000	4592.000	4819.000	81.199	100.0	2,013.82	14.0000	2,000	6.951E+001	1.817E+001	3.025E-001	6.991E-001
U-232	5263.000	5153.109	5368.175	80.960	99.8	316.00	6.0000	310	2.880E+000	5.126E-001	2.169E-001	5.368E-001
U-238	4192.997	4037.000	4232.000	27.047	100.2	2,086.43	6.0000	2,080	7.217E+001	1.884E+001	1.977E-001	4.892E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:01:05PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83090-01 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

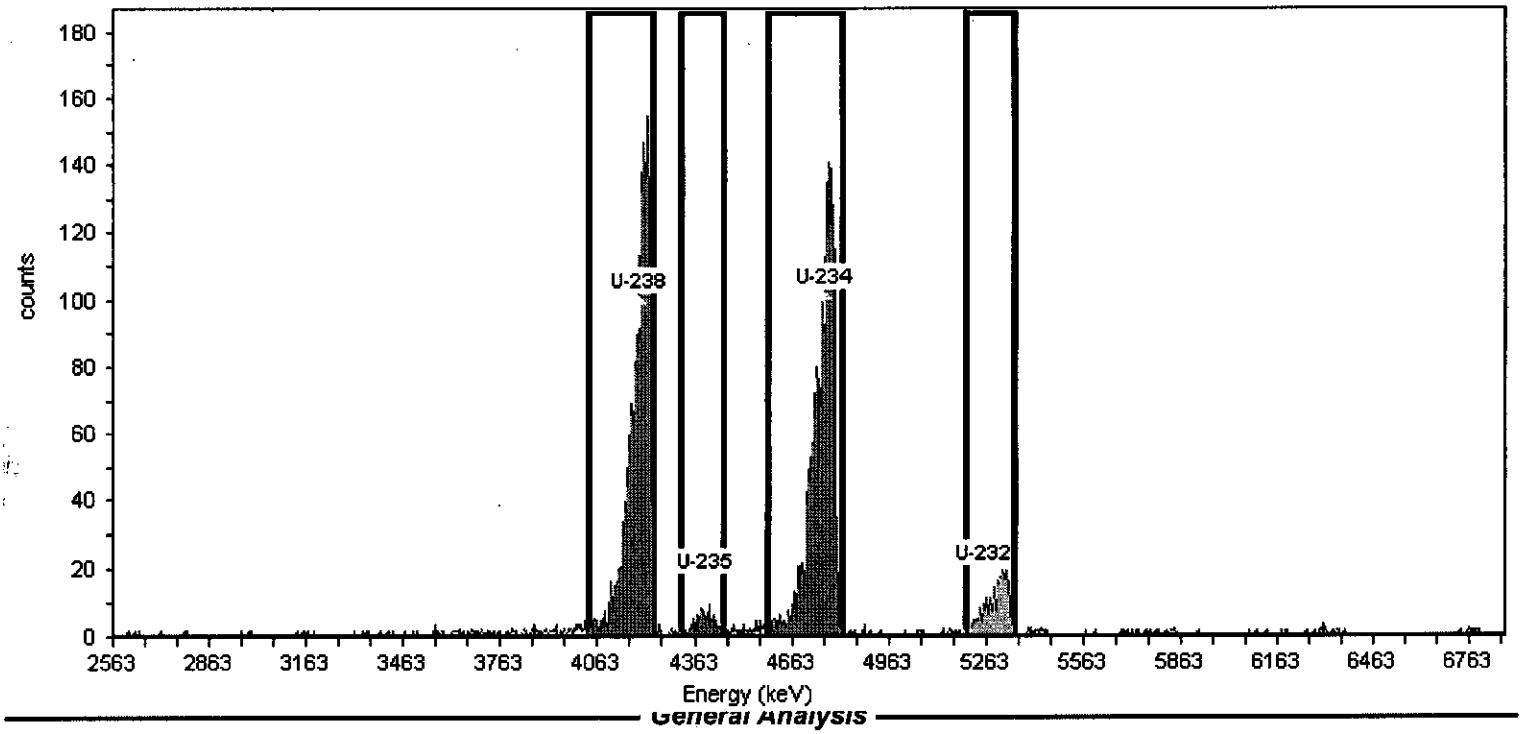
Tracer Nuclide: U-232
Tracer Recovery: 23.13%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/16/2010 8:59:43AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:30AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 007
Efficiency Calibration:2010.07.15 007
Calibration Date: 7/15/2010 9:59:19AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.37% +/- 0.46% TPU(2 sigma)

low tracer, will rerun



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-235	4396.000	4318.000	4453.000	79.294	80.9	103.06	2.0000	101	4.669E+000	1.860E+000	1.520E-001	4.290E-001
U-234	4765.000	4592.000	4819.000	26.927	100.0	2,058.23	10.0000	2,048	7.652E+001	2.034E+001	2.748E-001	6.508E-001
U-232	5263.000	5203.000	5350.000	22.967	99.8	294.44	6.0000	288	2.729E+000	5.036E-001	2.331E-001	5.770E-001
U-238	4193.000	4037.000	4232.000	22.568	100.2	2,094.48	4.3295	2,090	7.794E+001	2.070E+001	1.805E-001	4.619E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:01:09PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83090-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

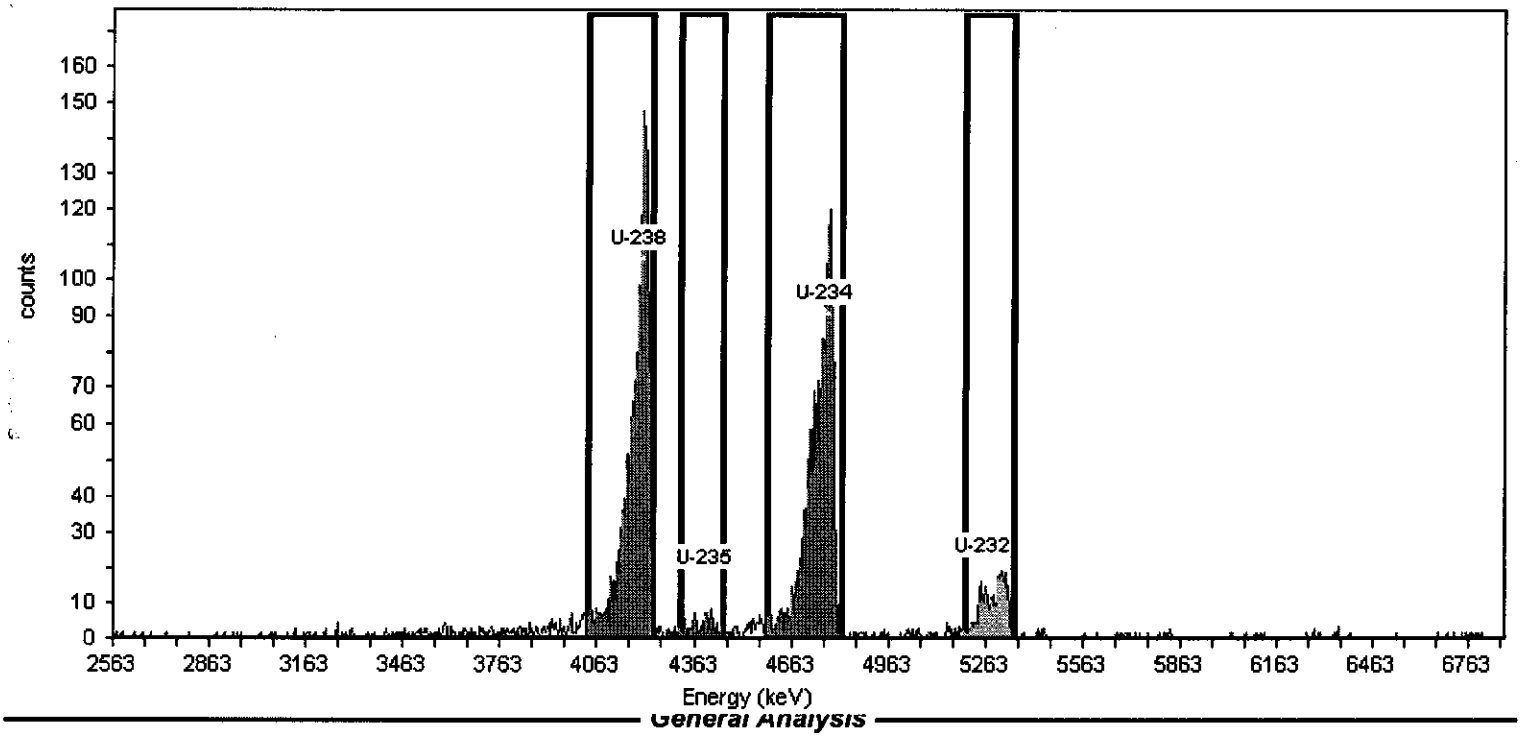
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 24.35%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/16/2010 8:59:45AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:33AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 008
Efficiency Calibration:2010.07.15 008
Calibration Date: 7/15/2010 10:06:24AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.11% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	19.059	100.2	1,981.33	1.0000	1,980	6.727E+001	1.744E+001	7.902E-002	2.500E-001
U-235	4396.000	4318.000	4453.000	86.347	80.9	92.08	4.0000	88	3.707E+000	1.547E+000	1.958E-001	5.055E-001
U-234	4765.000	4592.000	4819.000	34.797	100.0	1,854.82	9.0596	1,846	6.282E+001	1.633E+001	2.383E-001	5.687E-001
U-232	5263.000	5203.000	5350.000	20.552	99.8	320.31	3.6900	317	2.874E+000	5.025E-001	1.665E-001	4.339E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:25PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83110-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

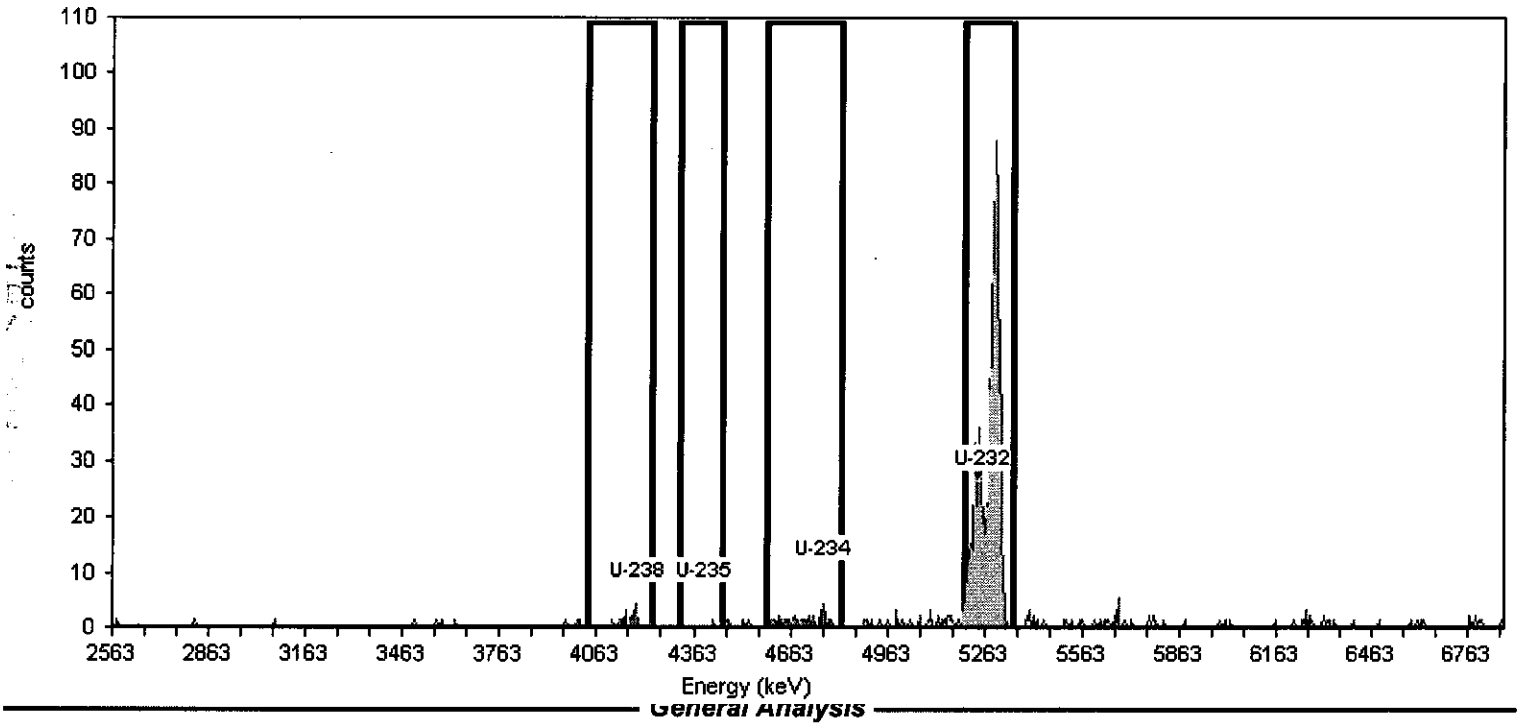
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.55%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/16/2010 8:59:47AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.576	100.2	17.43	5.0000	12	1.474E-001	1.713E-001	6.170E-002	1.555E-001
U-235	4396.000	4318.000	4453.000	22.479	80.9	1.98	5.0000	-3	-4.440E-002	1.168E-001	7.644E-002	1.926E-001
U-234	4765.000	4592.000	4819.000	164.467	100.0	36.00	8.2296	28	3.300E-001	2.469E-001	7.930E-002	1.908E-001
U-232	5263.000	5203.000	5350.000	33.964	99.8	910.49	3.6619	907	8.561E+000	9.202E-001	5.793E-002	1.511E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:13PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83111-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

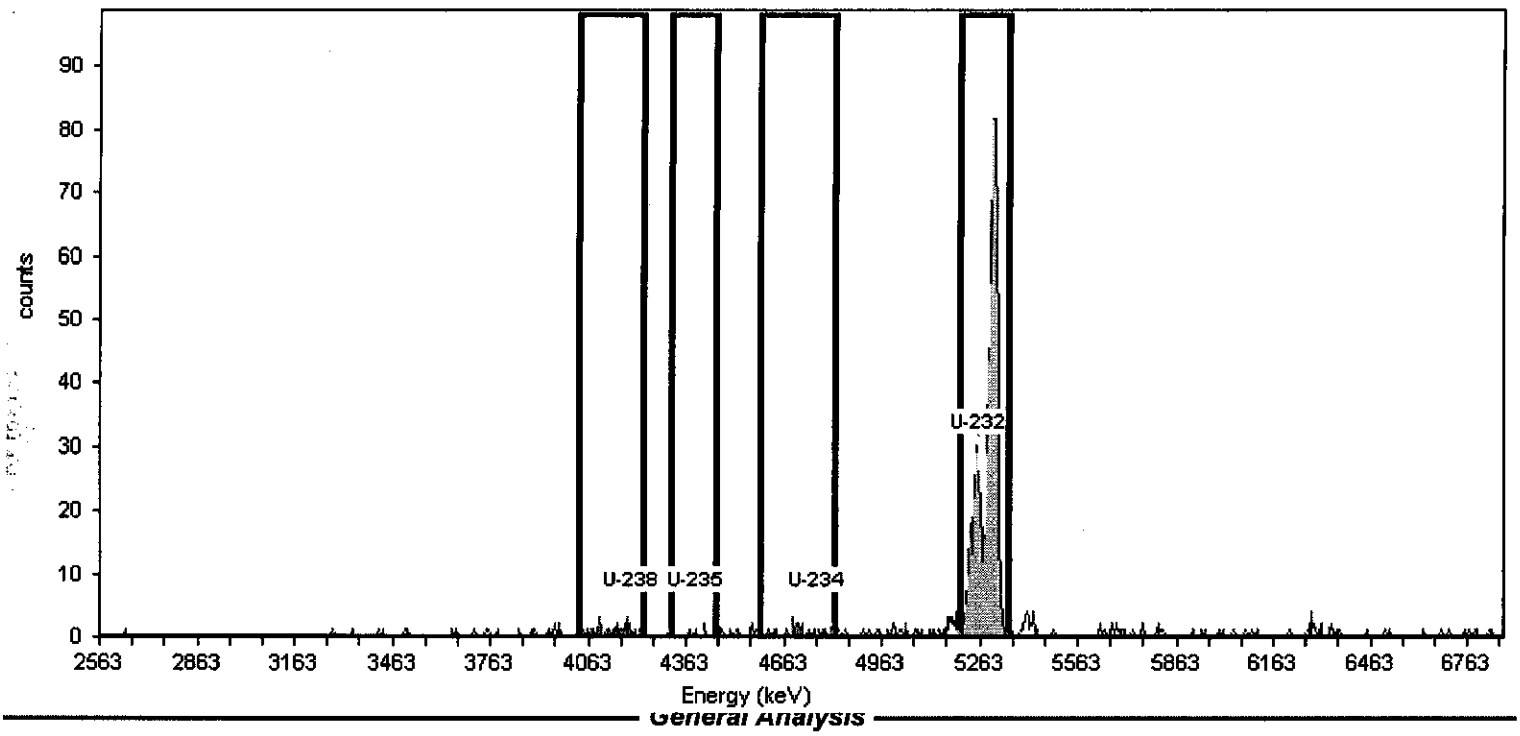
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.74%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/16/2010 8:59:46AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	110.665	100.2	26.00	5.0000	21	2.752E-001	2.265E-001	6.816E-002	1.718E-001
U-235	4396.000	4318.000	4453.000	58.299	80.9	4.00	5.0000	-1	-1.623E-002	1.461E-001	8.445E-002	2.128E-001
U-234	4765.000	4592.000	4819.000	28.605	100.0	22.46	27.0000	-5	-5.961E-002	2.773E-001	1.587E-001	3.529E-001
U-232	5263.000	5203.000	5350.000	32.814	99.8	827.97	7.1409	821	7.758E+000	8.745E-001	8.937E-002	2.176E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:21PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83176-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

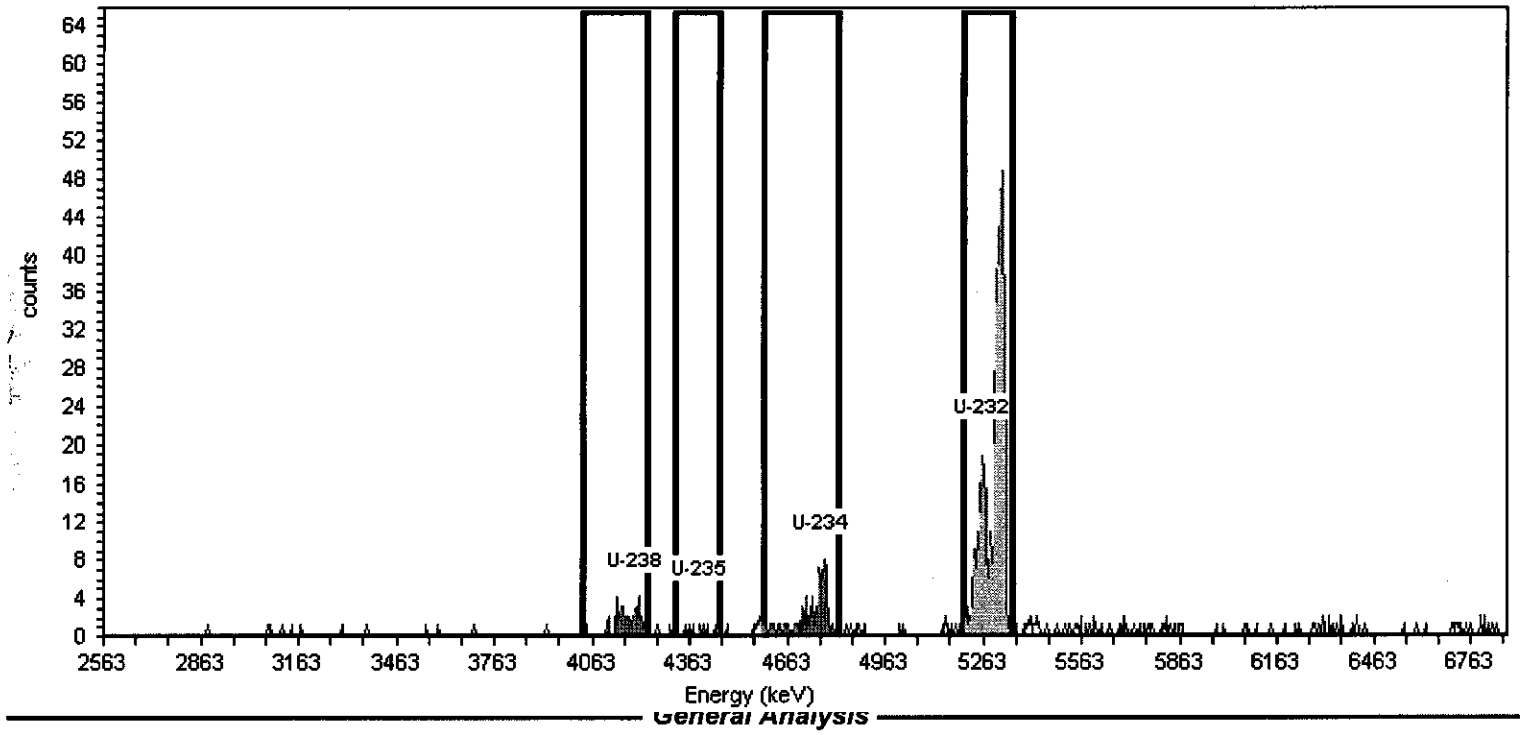
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 42.17%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/16/2010 8:59:46AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	75.084	100.2	48.00	8.0000	40	8.555E-001	5.185E-001	1.407E-001	3.393E-001
U-235	4396.000	4318.000	4453.000	8.579	80.9	8.02	4.0216	4	1.060E-001	2.769E-001	1.236E-001	3.190E-001
U-234	4765.000	4592.000	4819.000	36.898	100.0	84.00	24.0000	60	1.286E+000	7.299E-001	2.442E-001	5.464E-001
U-232	5263.000	5203.000	5350.000	14.504	99.8	510.83	7.9718	503	4.976E+000	7.052E-001	1.541E-001	3.718E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:33PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

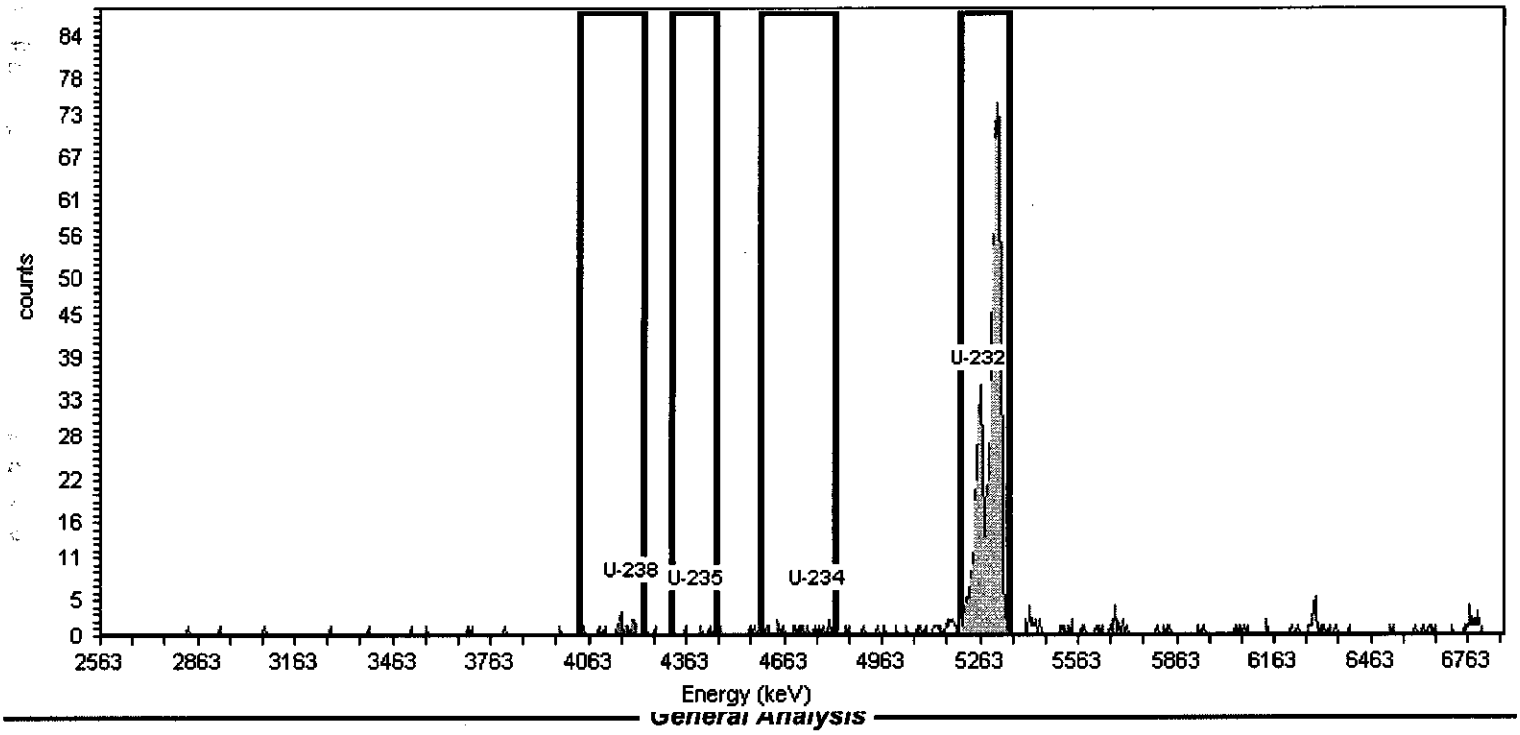
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.76%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/16/2010 8:59:48AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:42AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 012
Efficiency Calibration:2010.07.15 012
Calibration Date: 7/15/2010 10:10:22AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	26.284	100.2	19.00	6.0000	13	1.662E-001	1.950E-001	7.285E-002	1.803E-001
U-235	4396.000	4318.000	4453.000	5.791	80.9	3.00	5.9649	-3	-4.696E-002	1.426E-001	8.999E-002	2.228E-001
U-234	4765.000	4592.000	4819.000	6.115	100.0	18.83	14.0596	5	6.110E-002	2.207E-001	1.117E-001	2.581E-001
U-232	5263.000	5203.000	5350.000	13.703	99.8	855.31	14.0000	841	7.878E+000	8.840E-001	1.221E-001	2.821E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:41PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

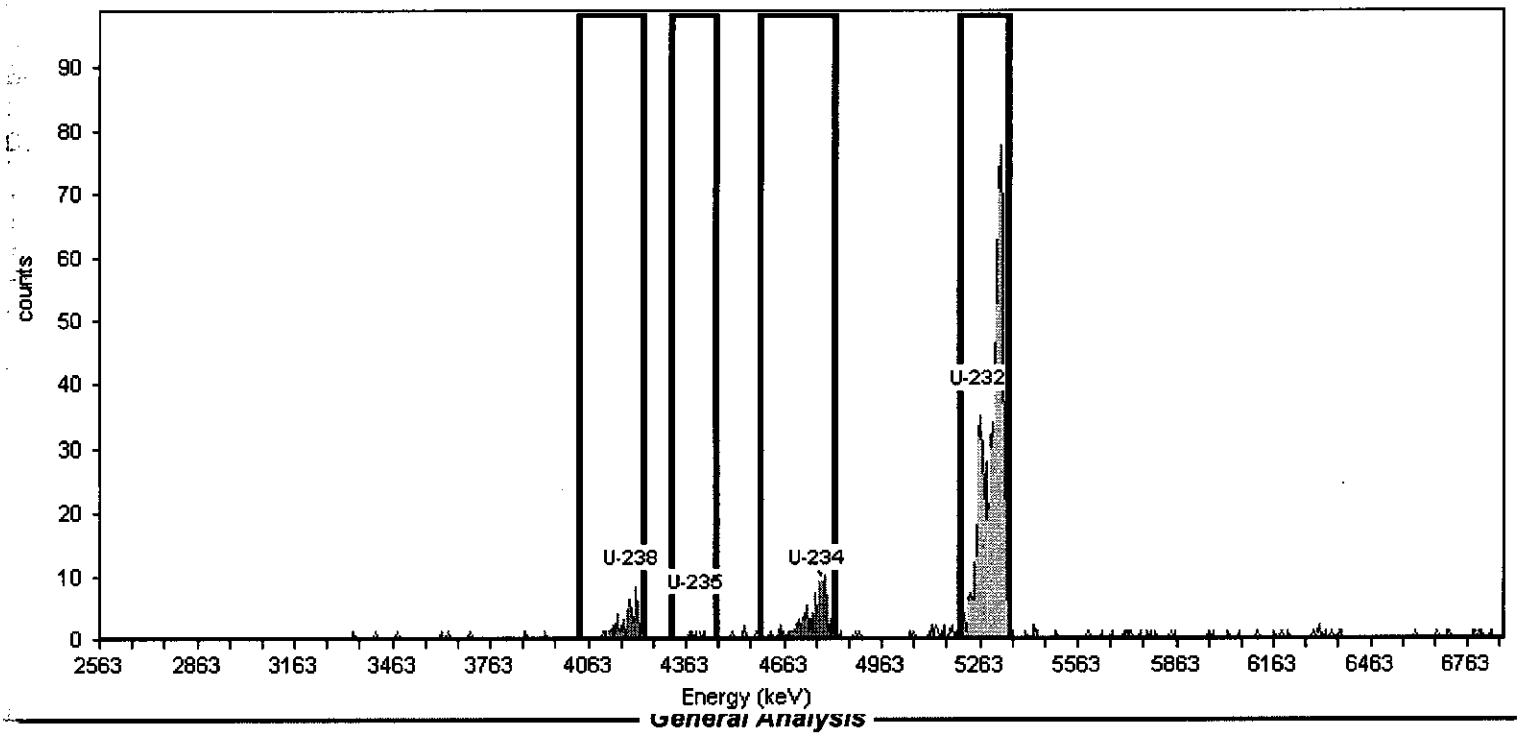
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.74%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/16/2010 8:59:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:44AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 013
Efficiency Calibration:2010.07.15 013
Calibration Date: 7/15/2010 10:11:21AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.26% +/- 0.44% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	8.619	100.2	58.00	4.0000	54	6.839E-001	3.322E-001	5.893E-002	1.521E-001
U-235	4396.000	4318.000	4453.000	77.448	80.9	5.96	1.0216	5	7.756E-002	1.255E-001	3.690E-002	1.162E-001
U-234	4765.000	4592.000	4819.000	24.189	100.0	127.23	9.0000	118	1.500E+000	5.457E-001	8.856E-002	2.114E-001
U-232	5263.000	5203.000	5350.000	22.364	99.8	853.24	4.0000	849	8.583E+000	9.541E-001	6.465E-002	1.669E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:49PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-03 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

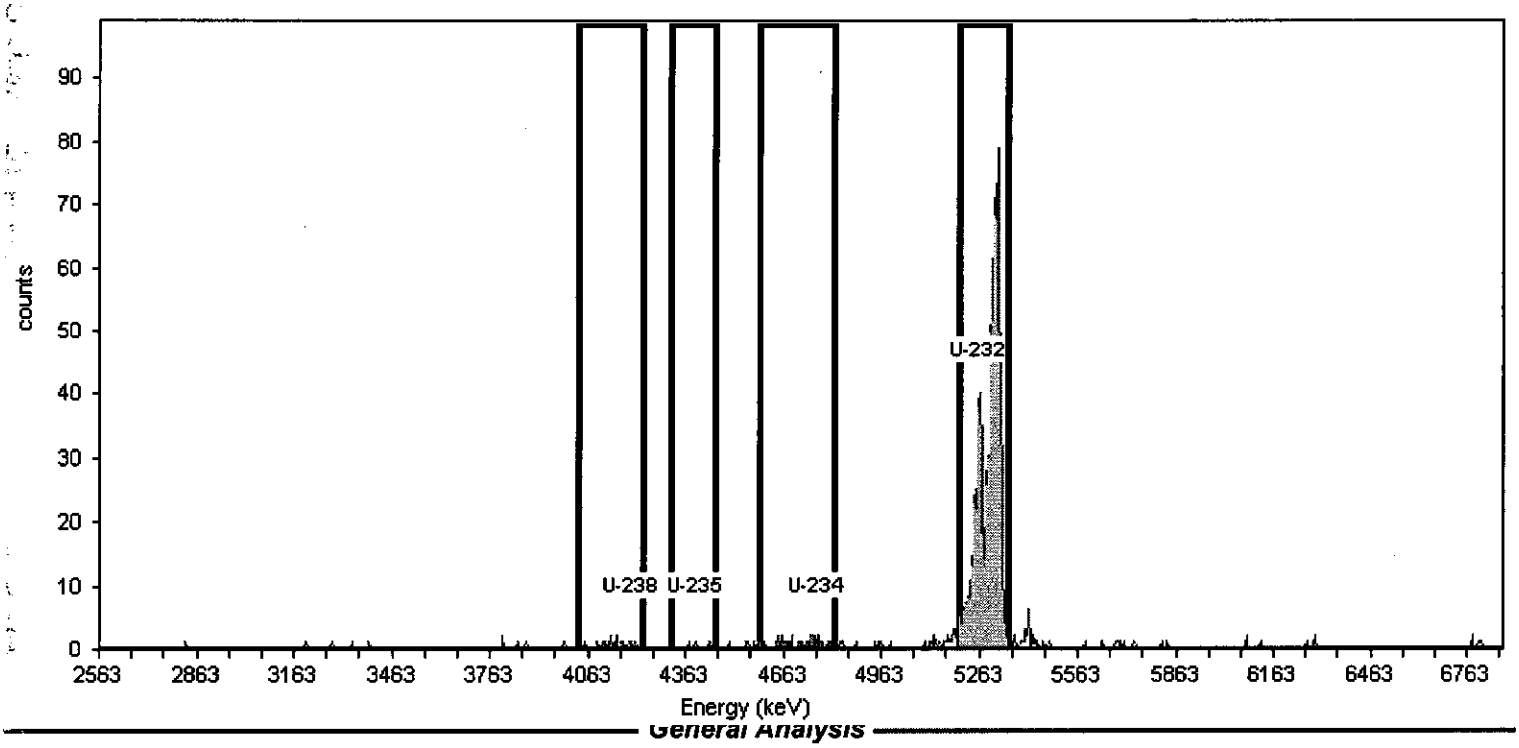
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 72.52%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/16/2010 8:59:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 014
Efficiency Calibration:2010.07.15 014
Calibration Date: 7/15/2010 10:12:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.78% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.020	100.2	15.00	1.0000	14	1.626E-001	1.435E-001	2.702E-002	8.548E-002
U-235	4396.000	4318.000	4453.000	5.764	80.9	4.00	0.0000	4	5.756E-002	9.728E-002	0.000E+000	3.894E-002
U-234	4765.000	4592.000	4819.000	215.494	100.0	31.65	10.0000	22	2.520E-001	2.314E-001	8.561E-002	2.027E-001
U-232	5263.000	5203.000	5350.000	13.883	99.8	936.93	11.0000	926	8.558E+000	9.164E-001	9.833E-002	2.311E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:09PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

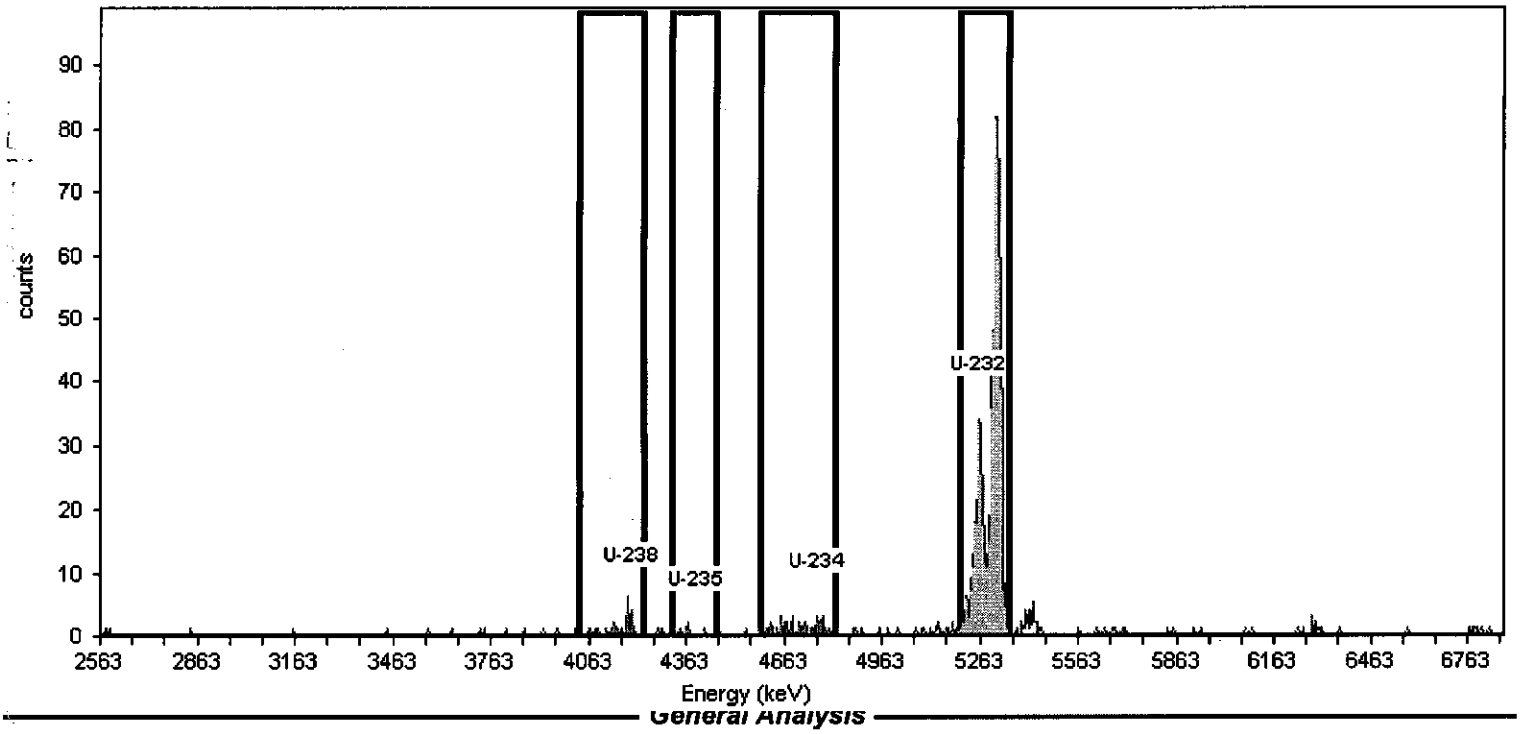
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 66.92%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/16/2010 8:59:50AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:47AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 015
Efficiency Calibration:2010.07.15 015
Calibration Date: 7/15/2010 10:15:49AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.15% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	24.741	100.2	31.00	2.0000	29	3.784E-001	2.387E-001	4.293E-002	1.212E-001
U-235	4396.000	4318.000	4453.000	27.996	80.9	5.00	0.0000	5	8.084E-002	1.200E-001	0.000E+000	4.375E-002
U-234	4765.000	4592.000	4819.000	139.235	100.0	40.83	13.0000	28	3.639E-001	2.979E-001	1.097E-001	2.547E-001
U-232	5263.000	5203.000	5350.000	15.172	99.8	828.86	4.6900	824	7.897E+000	8.870E-001	7.213E-002	1.830E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:00:17PM 7/16/2010

Analyst: ORTEC

Sample

Sample: L83216-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 001
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

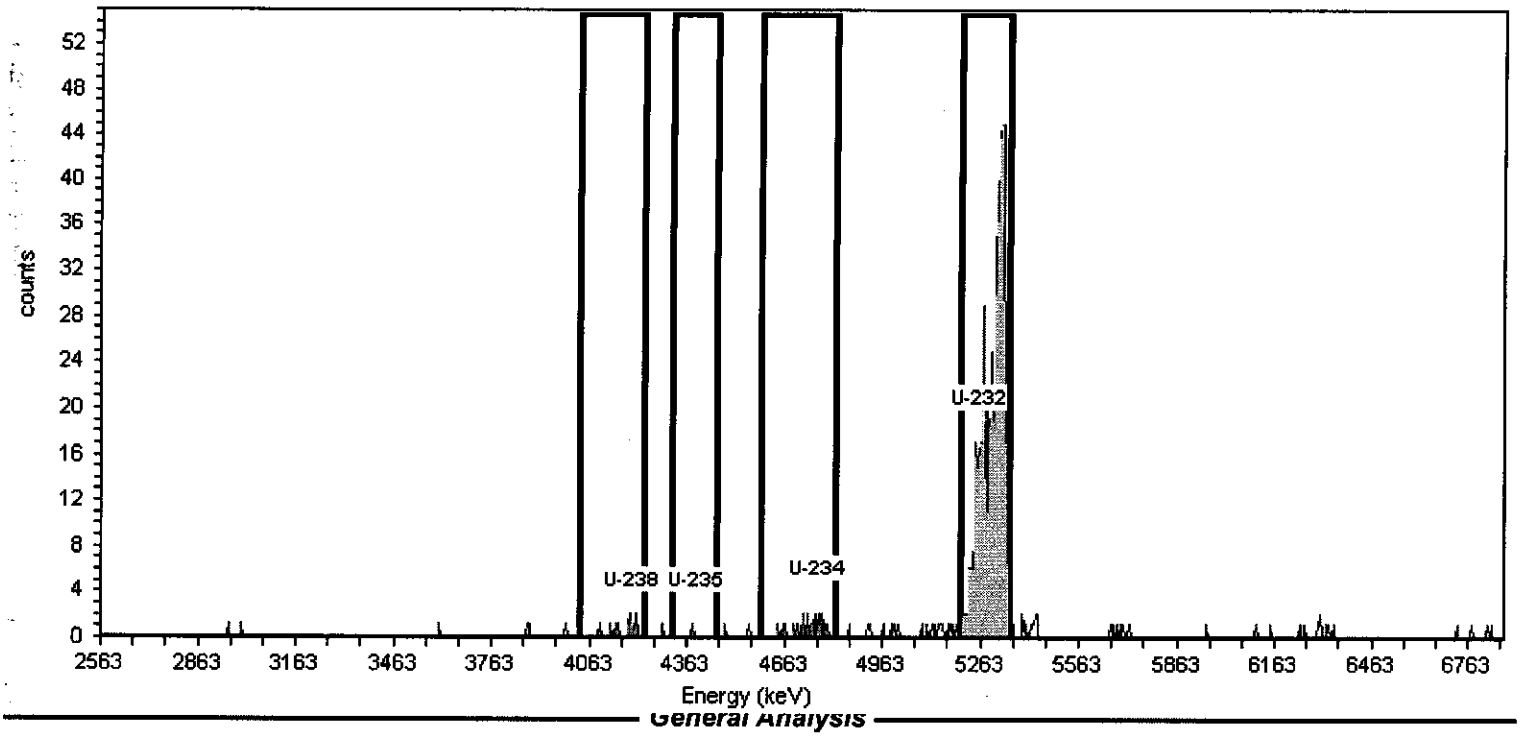
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 47.48%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/16/2010 8:59:51AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/15/2010 10:23:25AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 016
Efficiency Calibration:2010.07.15 016
Calibration Date: 7/15/2010 10:16:45AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.85% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 8:55:24AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	5.841	100.2	11.00	2.0000	9	1.591E-001	1.944E-001	5.815E-002	1.641E-001
U-235	4396.000	4318.000	4453.000	25.143	80.9	1.00	2.0000	-1	-2.190E-002	1.139E-001	7.204E-002	2.033E-001
U-234	4765.000	4592.000	4819.000	84.173	100.0	27.00	3.0000	24	4.250E-001	3.056E-001	7.135E-002	1.906E-001
U-232	5263.000	5203.000	5350.000	25.221	99.8	610.55	2.0000	609	5.602E+000	7.174E-001	6.379E-002	1.801E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

7:55:17PM 7/16/2010

Sample

Sample: DUP 1 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 003
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

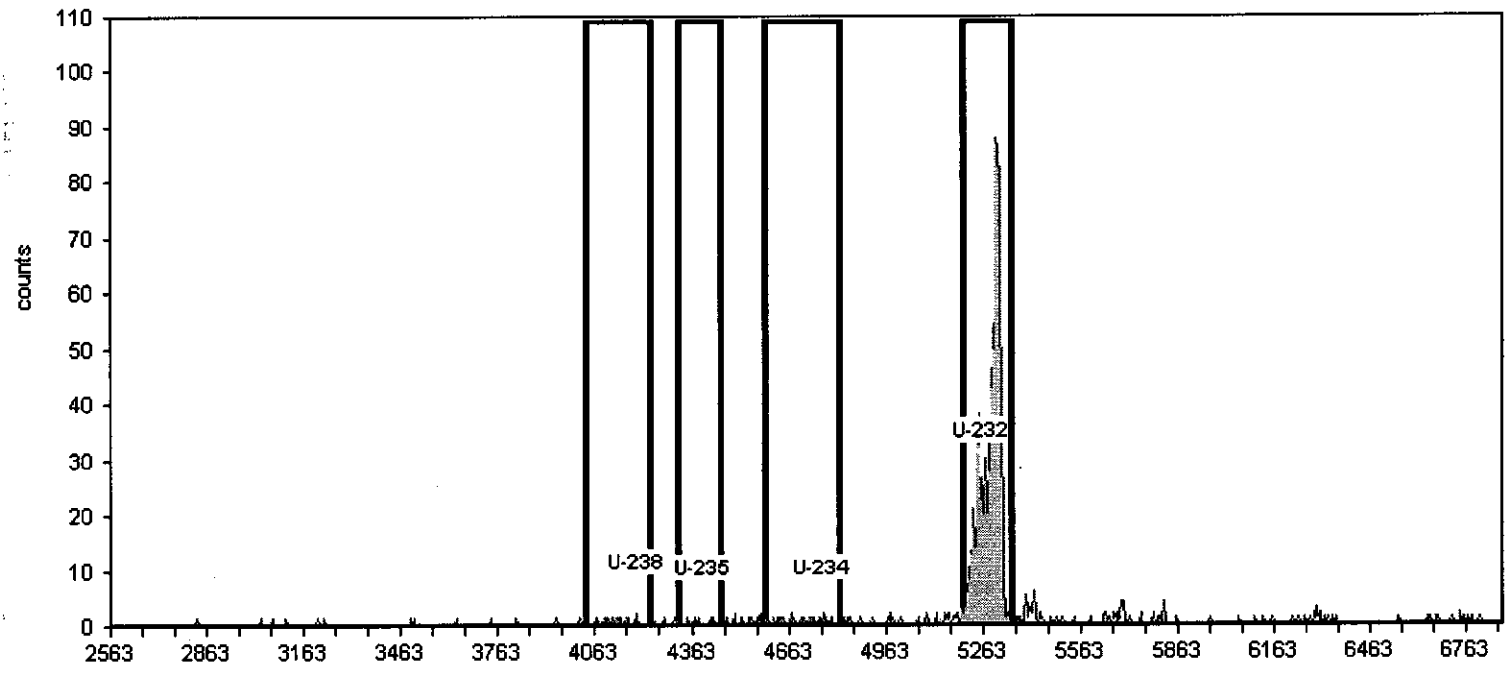
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 74.45%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/16/2010 2:55:24PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:36AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 009
Efficiency Calibration:2010.07.15 009
Calibration Date: 7/15/2010 10:07:27AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.39% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 2:54:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	60.832	100.2	13.00	5.0000	8	9.257E-002	1.485E-001	6.019E-002	1.517E-001
U-235	4396.000	4318.000	4453.000	5.928	80.9	5.04	5.0000	0	5.032E-004	1.362E-001	7.457E-002	1.879E-001
U-234	4765.000	4592.000	4819.000	168.000	100.0	24.54	27.0000	-2	-2.851E-002	2.498E-001	1.401E-001	3.116E-001
U-232	5263.000	5203.000	5350.000	37.229	99.8	936.65	7.1409	930	8.785E+000	9.372E-001	7.892E-002	1.922E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:55:21PM 7/16/2010

Analyst: ORTEC

Sample

Sample: DUP 2 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 003
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

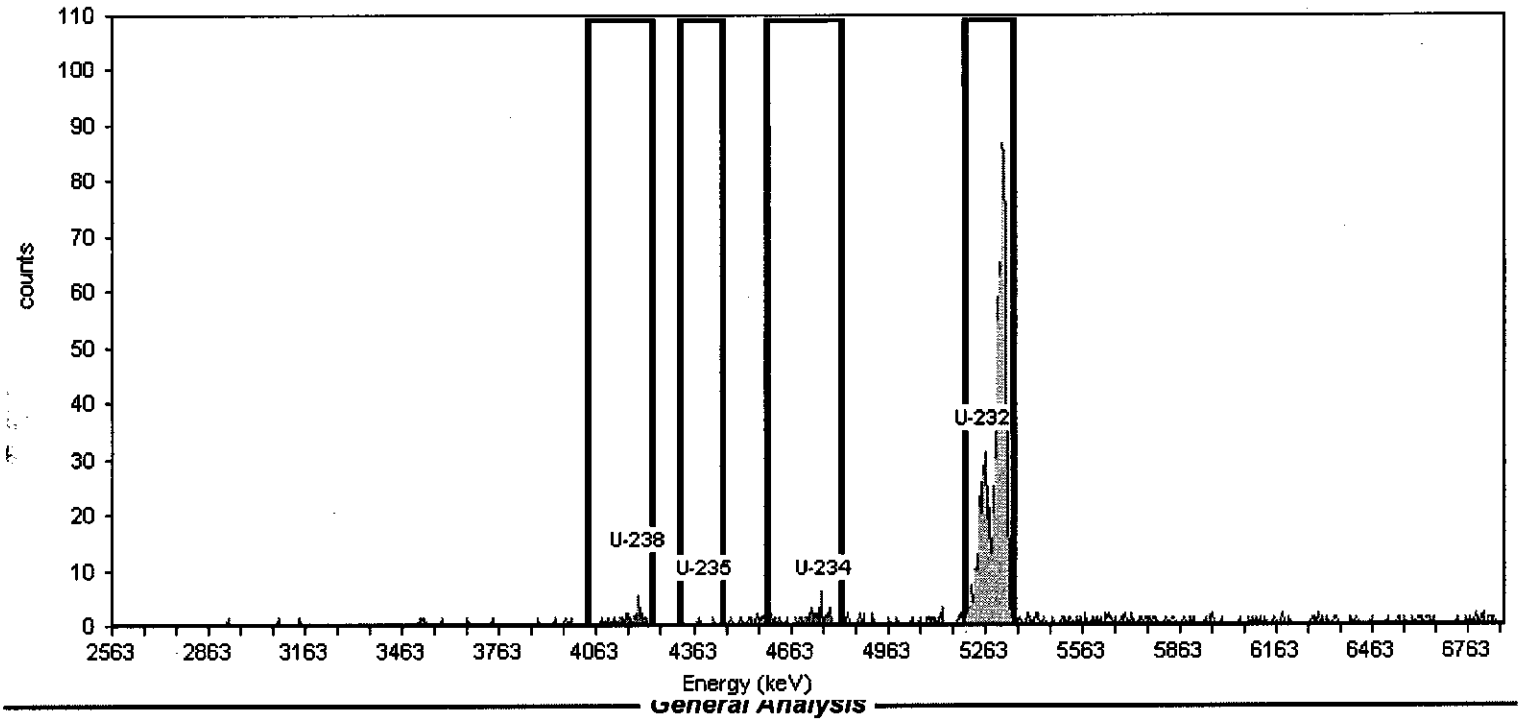
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 74.13%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/16/2010 2:55:26PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:38AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 010
Efficiency Calibration:2010.07.15 010
Calibration Date: 7/15/2010 10:08:25AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 16.61% +/- 0.45% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 2:54:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	69.829	100.2	26.00	8.0000	18	2.190E-001	2.177E-001	8.005E-002	1.930E-001
U-235	4396.000	4318.000	4453.000	25.147	80.9	2.00	4.0216	-2	-3.047E-002	1.111E-001	7.032E-002	1.814E-001
U-234	4765.000	4592.000	4819.000	53.666	100.0	39.06	24.0000	15	1.836E-001	2.929E-001	1.389E-001	3.108E-001
U-232	5263.000	5203.000	5350.000	14.397	99.8	892.00	7.9718	884	8.747E+000	9.577E-001	8.768E-002	2.115E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:55:25PM 7/16/2010

Analyst: ORTEC

Sample

Sample: MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.16 003
:
Description: WG285975

Client Name: Undefined
Client Contact:

Tracer

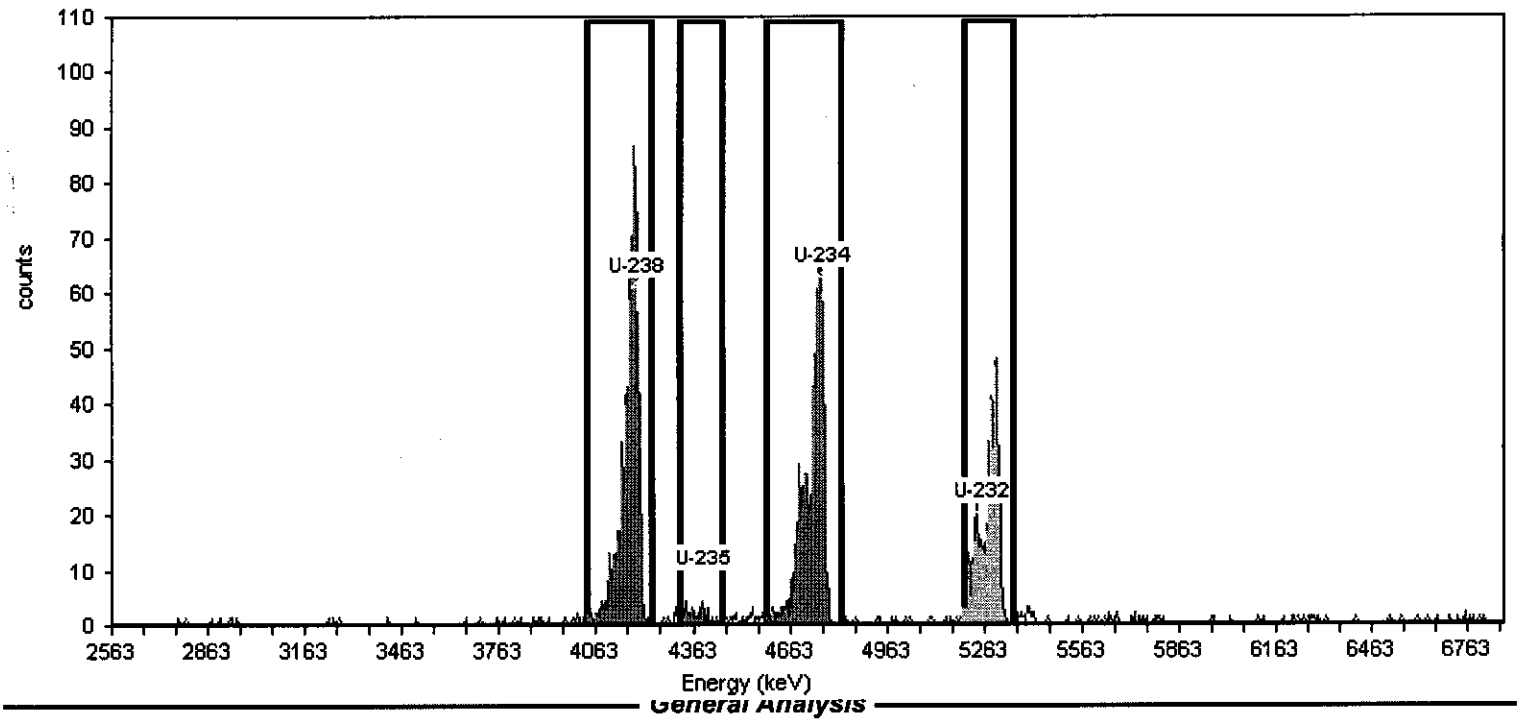
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 43.31%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/16/2010 2:55:28PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/15/2010 10:23:40AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-15-2010 10:23

Energy Calibration: 2010.07.15 011
Efficiency Calibration:2010.07.15 011
Calibration Date: 7/15/2010 10:09:20AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.41% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:7/16/2010 2:54:43PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	38.527	100.2	889.00	5.0000	884	1.756E+001	4.332E+000	1.034E-001	2.605E-001
U-235	4396.000	4318.000	4453.000	68.477	80.9	35.00	5.0000	30	7.384E-001	4.957E-001	1.280E-001	3.227E-001
U-234	4765.000	4592.000	4819.000	36.129	100.0	840.88	8.2296	833	1.657E+001	4.113E+000	1.328E-001	3.196E-001
U-232	5263.000	5203.000	5350.000	38.122	99.8	545.00	3.6619	541	5.111E+000	6.932E-001	9.704E-002	2.531E-001

ACZ Laboratories, Inc.
Radium by 903.1
EPA 903.1

WG286588

Analyst: jjg
Dept: 55
Prep Date: 7/15/2010
Analysis Date: 7/22/2010
Start Time:
End Time:
Approved: JJG 7/23/10
Approved: MTB 7-23-10

Project:

SOP# rc018

Instrument: Lucas Cell
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: ANALYTICAL

ACZ Sample Number	Sample ID	Client ID	CPM-bkg cpm	Ba Recovery factor	E	Radium 226 Activity pCi/L	Radium 226 Error	Radium 226 LLD	Hours
1	wg286107PBW		0.07	0.67	2.14	0.03	0.10	0.247	
2	wg286107LCSW	rc100624-2	62.31	0.65	2.41	26.67	0.67	0.225	
3	**L82987-02**	168 2ND QUA	13.99	0.29	1.74	19.64	1.07	0.739	
4	L83064-01	S HUNTING C	0.6	0.89	2.03	0.32	0.11	0.282	
5	**L83101-01**	SEATON WELL	0.57	0.82	2.46	0.19	0.08	0.173	
6	**L83110-01**	RESE-1003156	0.66	0.66	1.78	0.51	0.18	0.406	
7	L83111-01	BG-120 COMP	0.35	1.02	1.88	0.12	0.07	0.182	
8	**L83168-01**	WF12 SPILL	101.81	0.71	2.11	47.71	0.93	0.247	
9	L83254-06	LSW-17	1.22	0.75	2.09	0.55	0.12	0.235	
10	L83254-07	LSW-18	-0.01	0.80	2.42	0.00	0.06	0.190	
11	L83111-01DUP		0.02	0.46	1.80	0.02	0.11	0.446	
12	L83254-06MS	rc100624-2	52.11	0.70	1.65	31.62	0.86	0.320	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A		#N/A				

Rn222 Decay constant= 0.00755
Background subtracted

Cell#	CPM	DPM Ra226	Rn Ingrowth	Rn Decay	Count time	Ingrowth time	Decay Time	E=(cpm/dpm)
1	50.68	53.09	6/11/2010 9:40	6/14/2010 15:47	6/15/2010 7:05	78.12	15.30	2.40
2	44.45	53.09	6/11/2010 10:27	6/14/2010 17:05	6/15/2010 10:53	78.63	17.80	2.14
3	34.97	53.09	6/11/2010 10:54	6/14/2010 16:20	6/15/2010 13:05	77.43	20.75	1.74
4	42.04	53.09	6/11/2010 11:18	6/14/2010 16:50	6/15/2010 14:49	77.53	21.98	2.11
5	50.47	53.09	6/11/2010 9:47	6/14/2010 15:51	6/15/2010 7:05	78.07	15.23	2.39
6	49.19	53.09	6/11/2010 10:32	6/14/2010 16:03	6/15/2010 10:53	77.52	18.83	2.41
7	40.8	53.09	6/11/2010 10:59	6/14/2010 16:27	6/15/2010 13:05	77.47	20.63	2.03
8	41.56	53.09	6/11/2010 11:24	6/14/2010 16:54	6/15/2010 14:49	77.50	21.92	2.09
9	48.48	53.09	6/11/2010 10:07	6/14/2010 15:55	6/15/2010 7:05	77.80	15.17	2.30
10	50.32	53.09	6/11/2010 10:37	6/14/2010 16:12	6/15/2010 10:53	77.58	18.68	2.46
11	33.27	53.09	6/11/2010 11:04	6/14/2010 16:31	6/15/2010 13:05	77.45	20.57	1.65
12	61.75	53.09	6/11/2010 11:32	6/15/2010 8:30	6/15/2010 14:49	92.97	6.32	2.42
13	57.34	53.09	6/23/2010 13:21	6/30/2010 13:44	7/1/2010 8:11	168.38	18.45	1.73
14	58.34	53.09	6/23/2010 13:37	6/30/2010 13:48	7/1/2010 9:57	168.18	20.15	1.78
15	58.64	53.09	6/23/2010 13:49	6/30/2010 13:58	7/1/2010 12:32	168.15	22.57	1.82
16	57.08	53.09	6/23/2010 14:01	6/30/2010 14:02	7/1/2010 14:46	168.02	24.73	1.80
17	35.56	53.09	6/11/2010 10:20	6/14/2010 15:59	6/15/2010 7:05	77.65	15.10	1.69
18	38.35	53.09	6/11/2010 10:42	6/14/2010 16:16	6/15/2010 10:53	77.57	18.62	1.88
19	31.06	53.09	6/11/2010 11:09	6/14/2010 16:39	6/15/2010 13:05	77.50	20.43	1.54
20	41.99	53.09	6/11/2010 11:44	6/15/2010 8:34	6/15/2010 14:49	92.83	6.25	1.65

Template: ra-226-903.1

Rescan, Forgot WG review/approval printouts

WG286588

Bub#	Total ACZ Sample Number	Error Volume ml	tLLD Rn Ingrowth	Rn Decay	Alpha Rn Count	Alpha time	Decay Time	Cell#	Counts	ICP RESULT
	wg286107PBV	1000	7/15/2010 16:10	7/22/2010 10:08	7/22/2010 15:10	161.97	5.03	2	58	1.064
	wg286107LCS	1000	7/15/2010 16:15	7/22/2010 10:13	7/22/2010 15:10	161.97	4.95	6	6272	1.034
	L82987-02	1000	7/15/2010 17:25	7/22/2010 19:03	7/23/2010 10:57	169.63	15.90	3	1451	0.4636
	L83064-01	730	7/15/2010 17:30	7/22/2010 19:06	7/23/2010 10:57	169.60	15.85	7	85	1.4275
	L83101-01	1000	7/15/2010 16:21	7/22/2010 10:17	7/22/2010 15:10	161.93	4.88	10	103	1.3158
	L83110-01	730	7/15/2010 16:42	7/22/2010 10:41	7/22/2010 15:10	161.98	4.48	14	100	1.0611
	L83111-01	1000	7/15/2010 16:47	7/22/2010 10:45	7/22/2010 15:10	161.97	4.42	18	76	1.6391
	L83168-01	1000	7/15/2010 16:52	7/22/2010 18:46	7/23/2010 9:01	169.90	14.25	4	10207	1.1304
	L83254-06	1000	7/15/2010 17:01	7/22/2010 18:50	7/23/2010 9:01	169.82	14.18	8	157	1.1992
	L83254-07	1000	7/15/2010 17:06	7/22/2010 18:54	7/23/2010 9:01	169.80	14.12	12	30	1.28
	L83111-01DU	1000	7/15/2010 17:14	7/22/2010 18:57	7/23/2010 9:01	169.72	14.07	16	24	0.7318
	L83254-06MS	1000	7/15/2010 17:20	7/22/2010 19:00	7/23/2010 9:01	169.67	14.02	20	5248	1.1178
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			

Background taken

Bkg for Cell#1	
Bkg for Cell	0.51
Bkg for Cell	0.52
Bkg for Cell	0.28
Bkg for Cell#5	
Bkg for Cell	0.41
Bkg for Cell	0.25
Bkg for Cell	0.35
Bkg for Cell#9	
Bkg for Cell	0.46
Bkg for Cell	0.29
Bkg for Cell	0.31
Bkg for Cell#13	
Bkg for Cell	0.31
Bkg for Cell#15	
Bkg for Cell	0.22
Bkg for Cell#17	
Bkg for Cell	0.41
Bkg for Cell	0.66
Bkg for Cell	0.37

Lucas Cell calibration standards and ludlum counter standards

Lucas cells are calibrated with Ra226 SCN# RC090709-1

The performance of the Lucas cell is checked with ZnS paper and

Th230 PCN# 22288

FRMRC002.01.09.ver02

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: SJG
Date: 7/23/10

Work Group: WG286588
Sample Type: Liquid, GW
Analysis Date: 7/22/10
Analyst: SJG
Prep Date: 7/15/10

Approved: MMB
Date: 7-23-10

Weekly background file: 7/20/10
Daily background file: 7/22/10

Alpha performance file: 7/22/10, 7/25/10
Beta performance file: N/A

GAB dry date/time: N/A

	Yes	No	NA
1) **FOR SREV**: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?		✓	
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action
L82987-02	- Insufficient Sample for re-test, Sample already run twice, both instances resulted in low Barium recovery, likely due to matrix effects.	N/A
L83254-6MS	-MS recovery was high, but LCS recovery was acceptable.	N/A

Comments:
Sample is >20 X LLD, results in ~~both~~ analysis were similar, deemed in control
For first run, see WG 286121.

MMB 7-23-10

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286588

Date Reported: 23-Jul-10
Run ID: R735250
Date Analyzed: 22-Jul-10
ICAL Workgroup:
Instrument ID: LUCAS CELL

WG286107PBW

Tag: Measured: 7/22/2010 3:10:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	FOUND	0.03	1		pCi/L	++	0.25	0.1		

WG286107LCSW

Tag: Measured: 7/22/2010 3:11:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	FOUND	27	1		pCi/L	++	0.23	0.67	RC100624-2	
SREV	RADIUM 226	REC	112.9	1		%	++	0.23	0.67	RC100624-2	
SREV	RADIUM 226	TRUE	23.915	1		pCi/L	++	0.23	0.67	RC100624-2	

L82987-02

Tag: 1 Measured: 7/22/2010 3:12:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	226-903.1	20	1		pCi/L	++	0.74	1.1		M1 N1 TB

L83064-01

Tag: 1 Measured: 7/22/2010 3:14:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	6-T-903.1	0.32	1		pCi/L	++	0.28	0.11		M1

L83101-01

Tag: Measured: 7/22/2010 3:15:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	RADIUM 226	REG	0.19	1		pCi/L	++	0.17	0.08		

L83110-01

Tag: Measured: 7/22/2010 3:17:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	226-903.1	0.51	1		pCi/L	++	0.41	0.18		M1

L83111-01

Tag: Measured: 7/22/2010 3:18:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	6-T-903.1	0.12	1		pCi/L	++	0.18	0.07		M1

L83168-01

Tag: Measured: 7/22/2010 3:20:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	6-T-903.1	48	1		pCi/L	++	0.25	0.93		M1

L83254-06

Tag: Measured: 7/22/2010 3:21:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	226-903.1	0.55	1		pCi/L	++	0.24	0.12		M1

L83254-07 Tag: **Measured: 7/22/2010 3:22:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	226-903.1	0	1		pCi/L	++	0.19	0.06		M1

L83111-01DUP Tag: **Measured: 7/22/2010 3:24:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	FOUND	0.02	1		pCi/L	++	0.45	0.11		
SREV	RADIUM 226	RER	0.76	1		%	++	0.4	5		
FAIL	RADIUM 226	RPD	142.9	1		pCi/L	ALRT	0.45	0.11		

L83254-06MS Tag: **Measured: 7/22/2010 3:25:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 226	FOUND	32	1		pCi/L	++	0.32	0.86	RC100624-2	
SREV	RADIUM 226	REC	131.5	1		%	ALRT	0.32	0.86	RC100624-2	M1
SREV	RADIUM 226	TRUE	23.915	1		pCi/L	++	0.32	0.86	RC100624-2	

ACZ Laboratories, Inc.
Radium by 903.1
EPA 903.1

WG286107

Project: ____________

SOP# ____________

Instrument: Lucas Cell
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: PREP

Analyst: jjg
Dept: 50
Prep Date: 7/15/10 11am
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

ACZ Sample Number	Sample ID	Client ID	CPM-bkg cpm	Ba Recovery factor	E	Radium 226 Activity pCi/L	Radium 226 Error	Radium 226 LLD	Hours
1	PBW ✓		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
2	LCSW ✓		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
3	L83101-01 ✓	SEATON WELL	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
4	L83110-01 ✓	RESE-1003156	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
5	L83111-01 ✓	BG-120 COMP	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
6	L83168-01 ✓	WF12 SPILL	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
7	L83254-06 ✓		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
8	L83254-07 ✓		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
9	DUP 111-1 ✓		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
10	MS ~~111-1~~ JJG 7/15/10		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
	254-6		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
11	L82987-02		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
12	L83064-01		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A		#N/A				

Rn222 Decay constant= 0.00755
Background subtracted

Cell#	CPM	DPM Ra226	Rn Ingrowth	Rn Decay	Count time	Ingrowth time	Decay Time	E=(cpm/dpm)
1	50.68	53.09	6/11/2010 9:40	6/14/2010 15:47	6/15/2010 7:05	78.12	15.30	2.40
2	44.45	53.09	6/11/2010 10:27	6/14/2010 17:05	6/15/2010 10:53	78.63	17.80	2.14
3	34.97	53.09	6/11/2010 10:54	6/14/2010 16:20	6/15/2010 13:05	77.43	20.75	1.74
4	42.04	53.09	6/11/2010 11:18	6/14/2010 16:50	6/15/2010 14:49	77.53	21.98	2.11
5	50.47	53.09	6/11/2010 9:47	6/14/2010 15:51	6/15/2010 7:05	78.07	15.23	2.39
6	49.19	53.09	6/11/2010 10:32	6/14/2010 16:03	6/15/2010 10:53	77.52	18.83	2.41
7	40.8	53.09	6/11/2010 10:59	6/14/2010 16:27	6/15/2010 13:05	77.47	20.63	2.03
8	41.56	53.09	6/11/2010 11:24	6/14/2010 16:54	6/15/2010 14:49	77.50	21.92	2.09
9	48.48	53.09	6/11/2010 10:07	6/14/2010 15:55	6/15/2010 7:05	77.80	15.17	2.30
10	50.32	53.09	6/11/2010 10:37	6/14/2010 16:12	6/15/2010 10:53	77.58	18.68	2.46
11	33.27	53.09	6/11/2010 11:04	6/14/2010 16:31	6/15/2010 13:05	77.45	20.57	1.65
12	61.75	53.09	6/11/2010 11:32	6/15/2010 8:30	6/15/2010 14:49	92.97	6.32	2.42
13	57.34	53.09	6/23/2010 13:21	6/30/2010 13:44	7/1/2010 8:11	168.38	18.45	1.73
14	58.34	53.09	6/23/2010 13:37	6/30/2010 13:48	7/1/2010 9:57	168.18	20.15	1.78
15	58.64	53.09	6/23/2010 13:49	6/30/2010 13:58	7/1/2010 12:32	168.15	22.57	1.82
16	57.08	53.09	6/23/2010 14:01	6/30/2010 14:02	7/1/2010 14:46	168.02	24.73	1.80
17	35.56	53.09	6/11/2010 10:20	6/14/2010 15:59	6/15/2010 7:05	77.65	15.10	1.69
18	38.35	53.09	6/11/2010 10:42	6/14/2010 16:16	6/15/2010 10:53	77.57	18.62	1.88
19	31.06	53.09	6/11/2010 11:09	6/14/2010 16:39	6/15/2010 13:05	77.50	20.43	1.54
20	41.99	53.09	6/11/2010 11:44	6/15/2010 8:34	6/15/2010 14:49	92.83	6.25	1.65

Template: ra-226-903.1

286588
286589

0

7/22/10 7/22/10

Bub#	Total ACZ Sample Number	Error Volume ml	LLD 7/15/10 Rn Ingrowth	Rn Decay	Alpha Rn Count	Alpha time	Decay Time	Cell#	Counts	ICP RESULT
32	PBW	1000	16:10	10:08	15:10	0.00	0.00	2	58	
22	LCSW	"	16:15	10:13	"	0.00	0.00	6	6272	
151	L83101-01	"	16:21	10:17	"	0.00	7/22/10 0.00	10	103	
14	L83110-01	730	16:42	10:41	"	0.00	JSG 0.00	14/18	100	
29	L83111-01	1000	16:42 JSG 7/15/10	10:45	"	0.00	0.00	18	76	
70	L83168-01	"	16:52	14:46	7-23-10 901	0.00	0.00	4	10207	
Animal	L83254-06	"	17:01	14:50	"	0.00	0.00	8	157	
Lab	L83254-07	"	17:06	14:54	"	0.00	0.00	12	30	
8	L83111-1 DUP	"	17:14	14:57	"	0.00	0.00	16	24	
115	L83254-6 MS	"	17:20	19:00	"	0.00	0.00	20	5248	
112	L83298-2 0	1000	17:25	19:03	7/23/10 10:57	0.00	0.00	3	1451	
54	L83021-1 0	730	JSG 7/15/10 17:30	19:06	"	0.00	0.00	7	85	
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			
	0					0.00	0.00			

Background taken

Bkg for Cell#1	
Bkg for Cell#2	
Bkg for Cell#3	
Bkg for Cell#4	
Bkg for Cell#5	
Bkg for Cell#6	
Bkg for Cell#7	
Bkg for Cell#8	
Bkg for Cell#9	
Bkg for Cell#10	
Bkg for Cell#11	
Bkg for Cell#12	
Bkg for Cell#13	
Bkg for Cell#14	
Bkg for Cell#15	
Bkg for Cell#16	
Bkg for Cell#17	
Bkg for Cell#18	
Bkg for Cell#19	
Bkg for Cell#20	

Lucas Cell calibration standards and ludlum counter standards

Lucas cells are calibrated with Ra226 SCN# RC090709-1

The performance of the Lucas cell is checked with ZnS paper and

Th230 PCN# 22288

Alpha

Radioactive Standards

wg286107

LCS & MS Rclee624-2

Reagents

HCl 35120 Nitric Acid 35035

Barium Carrier: Rclee204-1 Sulfuric Acid: 34642

EDTA Rclee712-1 Sulfuric Acid 0.1N 34642

COMMENTS: -L63110-1: 730ml used, due to insufficient Sx
-L83064-1: 730 ml used, due to insufficient Sx
- L82987-02: low Barium recovery, likely due to Matrix effect, Soapy Matrix.

ACZ Laboratories, Inc.
Radium by 903.1
EPA 903.1

WG286107

Project:
SOP#

Instrument: Lucas Cell
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: PREP

Analyst: jjg
Dept: 50
Prep Date:
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

ACZ Sample Number	Sample ID	Client ID	CPM-bkg cpm	Ba Recovery factor	E	Radium 226 Activity pCi/L	Radium 226 Error	Radium 226 LLD	Hours
1	PBW		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
2	LCSW		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
3	**L82987-02**	168 2ND QUA	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
4	L83064-01	S HUNTING C	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
5	**L83101-01**	SEATON WELL	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
6	**L83110-01**	RESE-1003156	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
7	L83111-01	BG-120 COMP	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
8	**L83168-01**	WF12 SPILL	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
9	L83254-06	LSW-17	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
10	L83254-07	LSW-18	#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
11	DUP		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
12	MS		#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A		#N/A				

Rn222 Decay constant= 0.00755
Background subtracted

Cell#	CPM	DPM Ra226	Rn Ingrowth	Rn Decay	Count time	Ingrowth time	Decay Time	E=(cpm/dpm)
1	50.68	53.09	6/11/2010 9:40	6/14/2010 15:47	6/15/2010 7:05	78.12	15.30	2.40
2	44.45	53.09	6/11/2010 10:27	6/14/2010 17:05	6/15/2010 10:53	78.63	17.80	2.14
3	34.97	53.09	6/11/2010 10:54	6/14/2010 16:20	6/15/2010 13:05	77.43	20.75	1.74
4	42.04	53.09	6/11/2010 11:18	6/14/2010 16:50	6/15/2010 14:49	77.53	21.98	2.11
5	50.47	53.09	6/11/2010 9:47	6/14/2010 15:51	6/15/2010 7:05	78.07	15.23	2.39
6	49.19	53.09	6/11/2010 10:32	6/14/2010 16:03	6/15/2010 10:53	77.52	18.83	2.41
7	40.8	53.09	6/11/2010 10:59	6/14/2010 16:27	6/15/2010 13:05	77.47	20.63	2.03
8	41.56	53.09	6/11/2010 11:24	6/14/2010 16:54	6/15/2010 14:49	77.50	21.92	2.09
9	48.48	53.09	6/11/2010 10:07	6/14/2010 15:55	6/15/2010 7:05	77.80	15.17	2.30
10	50.32	53.09	6/11/2010 10:37	6/14/2010 16:12	6/15/2010 10:53	77.58	18.68	2.46
11	33.27	53.09	6/11/2010 11:04	6/14/2010 16:31	6/15/2010 13:05	77.45	20.57	1.65
12	61.75	53.09	6/11/2010 11:32	6/15/2010 8:30	6/15/2010 14:49	92.97	6.32	2.42
13	57.34	53.09	6/23/2010 13:21	6/30/2010 13:44	7/1/2010 8:11	168.38	18.45	1.73
14	58.34	53.09	6/23/2010 13:37	6/30/2010 13:48	7/1/2010 9:57	168.18	20.15	1.78
15	58.64	53.09	6/23/2010 13:49	6/30/2010 13:58	7/1/2010 12:32	168.15	22.57	1.82
16	57.08	53.09	6/23/2010 14:01	6/30/2010 14:02	7/1/2010 14:46	168.02	24.73	1.80
17	35.56	53.09	6/11/2010 10:20	6/14/2010 15:59	6/15/2010 7:05	77.65	15.10	1.69
18	38.35	53.09	6/11/2010 10:42	6/14/2010 16:16	6/15/2010 10:53	77.57	18.62	1.88
19	31.06	53.09	6/11/2010 11:09	6/14/2010 16:39	6/15/2010 13:05	77.50	20.43	1.54
20	41.99	53.09	6/11/2010 11:44	6/15/2010 8:34	6/15/2010 14:49	92.83	6.25	1.65

Template: ra-226-903.1

ACZ Laboratories, Inc.
Radium by 903.1
EPA 903.1

WG286121

1st run on 987-02

Project:
SOP#

Instrument: Lucas Cell
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: MWM
Dept: 55
Prep Date: 7/7/2010
Analysis Date: 7/14/2010
Start Time:
End Time:
Approved:
Approved:

ACZ Sample Number	Sample ID	Client ID	CPM-bkg cpm	Ba Recovery factor	E	Radium 226 Activity pCi/L	Radium 226 Error	Radium 226 LLD	Hours
1	WG285573PBW		0.3	0.78	1.74	0.18	0.13	0.316	
2	WG285573LCSW	RC100624-2	62.03	0.96	2.03	25.83	0.65	0.219	
3	**L82923-02**	AKE MCKNIGH	2.81	0.80	1.65	3.44	0.44	0.645	
4	L82987-02	168 2ND QUA	18.34	0.34	1.82	24.01	1.15	0.690	
5	**L83002-01**	WATER TAP 1	0.12	0.84	1.54	0.07	0.17	0.328	
6	**L83048-01**	RESE-1003157	13.46	0.92	2.11	6.26	0.35	0.245	
7	L83048-02	RESE-1003158	0.33	0.74	2.09	0.19	0.13	0.306	
8	**L83063-01**	S HUNTING CA	12.67	0.91	2.42	5.17	0.29	0.215	
9	L83063-02	WS CORRALL V	69.07	0.97	1.80	35.55	0.84	0.271	
10	L83063-03	ARDENAS WE	0.35	0.86	1.65	0.22	0.13	0.336	
11	L83064-01	S HUNTING C	0.52	0.38	2.14	0.57	0.26	0.582	
12	L83064-02	EWS LARGE P	1.2	0.66	2.41	0.67	0.16	0.296	
13	L83071-01	DE-A1006266-0	0.38	0.78	2.46	0.18	0.10	0.244	
14	L83072-01	RY POINT-A100	-0.03	1.01	1.78	-0.01	0.09	0.263	
15	L83073-01	PW-3	0.17	1.00	1.88	0.08	0.09	0.251	
16	L83002-01DUP		0.28	0.88	2.40	0.12	0.10	0.222	
17	L83073-01DUP		0.19	0.99	2.39	0.07	0.07	0.199	
18	L83071-01MS	RC100624-2	56.26	0.87	2.30	24.83	0.66	0.233	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A	0.00	#N/A	#N/A	#N/A	#N/A	
			#N/A		#N/A				

Rn222 Decay constant= 0.00755
Background subtracted

Cell#	CPM	DPM Ra226	Rn Ingrowth	Rn Decay	Count time	Ingrowth time	Decay Time	E=(cpm/dpm)
1	50.68	53.09	6/11/2010 9:40	6/14/2010 15:47	6/15/2010 7:05	78.12	15.30	2.40
2	44.45	53.09	6/11/2010 10:27	6/14/2010 17:05	6/15/2010 10:53	78.63	17.80	2.14
3	34.97	53.09	6/11/2010 10:54	6/14/2010 16:20	6/15/2010 13:05	77.43	20.75	1.74
4	42.04	53.09	6/11/2010 11:18	6/14/2010 16:50	6/15/2010 14:49	77.53	21.98	2.11
5	50.47	53.09	6/11/2010 9:47	6/14/2010 15:51	6/15/2010 7:05	78.07	15.23	2.39
6	49.19	53.09	6/11/2010 10:32	6/14/2010 16:03	6/15/2010 10:53	77.52	18.83	2.41
7	40.8	53.09	6/11/2010 10:59	6/14/2010 16:27	6/15/2010 13:05	77.47	20.63	2.03
8	41.56	53.09	6/11/2010 11:24	6/14/2010 16:54	6/15/2010 14:49	77.50	21.92	2.09
9	48.48	53.09	6/11/2010 10:07	6/14/2010 15:55	6/15/2010 7:05	77.80	15.17	2.30
10	50.32	53.09	6/11/2010 10:37	6/14/2010 16:12	6/15/2010 10:53	77.58	18.68	2.46
11	33.27	53.09	6/11/2010 11:04	6/14/2010 16:31	6/15/2010 13:05	77.45	20.57	1.65
12	61.75	53.09	6/11/2010 11:32	6/15/2010 8:30	6/15/2010 14:49	92.97	6.32	2.42
13	57.34	53.09	6/23/2010 13:21	6/30/2010 13:44	7/1/2010 8:11	168.38	18.45	1.73
14	58.34	53.09	6/23/2010 13:37	6/30/2010 13:48	7/1/2010 9:57	168.18	20.15	1.78
15	58.64	53.09	6/23/2010 13:49	6/30/2010 13:58	7/1/2010 12:32	168.15	22.57	1.82
16	57.08	53.09	6/23/2010 14:01	6/30/2010 14:02	7/1/2010 14:46	168.02	24.73	1.80
17	35.56	53.09	6/11/2010 10:20	6/14/2010 15:59	6/15/2010 7:05	77.65	15.10	1.69
18	38.35	53.09	6/11/2010 10:42	6/14/2010 16:16	6/15/2010 10:53	77.57	18.62	1.88
19	31.06	53.09	6/11/2010 11:09	6/14/2010 16:39	6/15/2010 13:05	77.50	20.43	1.54
20	41.99	53.09	6/11/2010 11:44	6/15/2010 8:34	6/15/2010 14:49	92.83	6.25	1.65

Template: ra-226-903.1

Rad Chem Ba 7/16/10

Method: EPA200.7/6010B-ICP5 Operator: Admin Date of Analysis: 16 Jul 2010 09:24:20

Sample ID	Line	Mean	Volume	Units	RSD	Dev.	Date Sample	Rho	Method
CalBlk	Ba 493.409 r	28669	1.0000	mg/L	0.5494	158	16 Jul 2010 19:13:33	-	EPA200.7/6010B-ICP5
CalStd1	Ba 493.409 r	2058011	1.0000	mg/L	0.3739	7696	16 Jul 2010 19:16:41	-	EPA200.7/6010B-ICP5
CalStd2	Ba 493.409 r	4153815	1.0000	mg/L	0.2293	9526	16 Jul 2010 19:19:47	-	EPA200.7/6010B-ICP5
CalStd3	Ba 493.409 r	31482	1.0000	mg/L	0.0508	16	16 Jul 2010 19:22:53	-	EPA200.7/6010B-ICP5
ICV	Ba 493.409 r	2.0379	1.0000	mg/L	0.5462	0.0111	16 Jul 2010 19:26:01	-	EPA200.7/6010B-ICP5
ICB	Ba 493.409 r	-0.0011	1.0000	mg/L	-14.7431	0.0002	16 Jul 2010 19:29:08	-	EPA200.7/6010B-ICP5
PBW	Ba 493.409 r	1.0640	1.0000	mg/L	0.3951	0.0042	16 Jul 2010 19:32:16	9.99996e-001	EPA200.7/6010B-ICP5
LCSW	Ba 493.409 r	1.0340	1.0000	mg/L	1.5360	0.0159	16 Jul 2010 19:35:22	9.99996e-001	EPA200.7/6010B-ICP5
101-1	Ba 493.409 r	1.3158	1.0000	mg/L	3.0867	0.0406	16 Jul 2010 19:38:28	9.99996e-001	EPA200.7/6010B-ICP5
110-1	Ba 493.409 r	1.0611	1.0000	mg/L	3.8732	0.0411	16 Jul 2010 19:41:35	9.99996e-001	EPA200.7/6010B-ICP5
111-1	Ba 493.409 r	1.6391	1.0000	mg/L	2.5109	0.0412	16 Jul 2010 19:44:42	9.99996e-001	EPA200.7/6010B-ICP5
168-1	Ba 493.409 r	1.1304	1.0000	mg/L	1.9462	0.0220	16 Jul 2010 19:47:48	9.99996e-001	EPA200.7/6010B-ICP5
254-6	Ba 493.409 r	1.1992	1.0000	mg/L	3.2308	0.0387	16 Jul 2010 19:50:55	9.99996e-001	EPA200.7/6010B-ICP5
254-7	Ba 493.409 r	1.2800	1.0000	mg/L	1.2908	0.0165	16 Jul 2010 19:54:03	9.99996e-001	EPA200.7/6010B-ICP5
987-2	Ba 493.409 r	0.4636	1.0000	mg/L	2.1105	0.0098	16 Jul 2010 19:57:10	9.99996e-001	EPA200.7/6010B-ICP5
064-1	Ba 493.409 r	1.4275	1.0000	mg/L	3.7277	0.0532	16 Jul 2010 20:00:17	9.99996e-001	EPA200.7/6010B-ICP5
DUP	Ba 493.409 r	0.7318	1.0000	mg/L	2.7437	0.0201	16 Jul 2010 20:03:22	9.99996e-001	EPA200.7/6010B-ICP5
MS	Ba 493.409 r	1.1178	1.0000	mg/L	2.8994	0.0324	16 Jul 2010 20:06:28	9.99996e-001	EPA200.7/6010B-ICP5
CCV	Ba 493.409 r	1.0095	2.0000	mg/L	0.3697	0.0037	16 Jul 2010 20:09:34	-	EPA200.7/6010B-ICP5
CCB	Ba 493.409 r	-0.0007	2.0000	mg/L	-43.3601	0.0003	16 Jul 2010 20:12:40	-	EPA200.7/6010B-ICP5

Radchem ba

Method: EPA200.7/6010B Operator: Admin Date of Analysis: 23 Jul 2010 09:13:29

Sample ID	Line	Mean	Volume	Units	RSD	Dev.	Date Sample	Rho	Method
CalBlk	Ba 493.409 r	10333	1.0000	mg/L	4.5536	47	23 Jul 2010 13:13:14		EPA200.7/6010B
Calstd 1	Ba 493.409 r	737932	1.0000	mg/L	0.5015	370	23 Jul 2010 13:15:59		EPA200.7/6010B
Calstd 2	Ba 493.409 r	1492255	1.0000	mg/L	0.0004	623	23 Jul 2010 13:18:42		EPA200.7/6010B
Calstd3	Ba 493.409 r	10920	1.0000	mg/L	3.0816	337	23 Jul 2010 13:21:25		EPA200.7/6010B
ICV	Ba 493.409 r	2.0054	1.0000	mg/L	0.1325	0.002	23 Jul 2010 13:24:10		EPA200.7/6010B
ICB	Ba 493.409 r	0.0009	1.0000	mg/L	132.1190	0.001	23 Jul 2010 13:26:53		EPA200.7/6010B
987-02	Ba 493.409 r	0.4151	1.0000	mg/L	0.1783	0.000	23 Jul 2010 13:29:38	1.00000e+000	EPA200.7/6010B
CCV	Ba 493.409 r	1.0250	1.0000	mg/L	1.0180	0.010	23 Jul 2010 13:32:21		EPA200.7/6010B
CCB	Ba 493.409 r	-0.0005	1.0000	mg/L	-107.0927	0.000	23 Jul 2010 13:35:31		EPA200.7/6010B

ACZ Laboratories, Inc.
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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83112

Soil Preparation

WG286308 **Air Dry**

Sample	Date	SCN	SP AIRDRY
L83112-01	07/19/10 15:00		X
L83112-02	07/19/10 15:04		X
L83112-03	07/19/10 15:08		X
L83112-04	07/19/10 15:12		X
L83112-05	07/19/10 15:16		X
L83112-06	07/19/10 15:20		X
L83112-07	07/19/10 15:24		X
L83112-08	07/19/10 15:28		X
L83112-09	07/19/10 15:32		X
L83112-10	07/19/10 15:36		X
L83112-11	07/19/10 15:40		X
L83112-12	07/19/10 15:44		X
L83112-13	07/19/10 15:48		X
L83112-14	07/19/10 15:52		X
L83112-15	07/19/10 15:56		X
L83112-16	07/19/10 16:00		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83112

Soil Preparation

WG286647 **Crush Pulverize**

Sample	Date	SCN	SP CRUSHPULV
L83112-01	07/26/10 10:00		X
L83112-02	07/26/10 10:08		X
L83112-03	07/26/10 10:16		X
L83112-04	07/26/10 10:24		X
L83112-05	07/26/10 10:32		X
L83112-06	07/26/10 10:40		X
L83112-07	07/26/10 10:48		X
L83112-08	07/26/10 10:56		X
L83112-09	07/26/10 11:04		X
L83112-10	07/26/10 11:12		X
L83112-11	07/26/10 11:20		X
L83112-12	07/26/10 11:28		X
L83112-13	07/26/10 11:36		X
L83112-14	07/26/10 11:44		X
L83112-15	07/26/10 11:52		X
L83112-16	07/26/10 12:00		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83112

Radiochemistry

WG287089 **th**

Sample	Date	SCN	THORIUM 228	THORIUM 230	THORIUM 232
WG286738PBS	07/29/10 07:54			X	X
WG286738LCSS	07/29/10 07:55			X	
L83112-01	07/29/10 07:56			X	
L83112-02	07/29/10 07:58			X	
L83112-03	07/29/10 07:59			X	
L83112-04	07/29/10 08:01			X	
L83112-05	07/29/10 08:02			X	
L83112-06	07/29/10 08:04			X	
L83112-07	07/29/10 08:05			X	
L83112-08	07/29/10 08:06			X	
L83112-09	07/29/10 08:08			X	
L83112-10	07/29/10 08:09			X	
L83112-11	07/29/10 08:11			X	
L83112-12	07/29/10 08:12			X	
L83112-13	07/29/10 08:14			X	
L83112-14	07/29/10 08:15			X	
L83112-15	07/29/10 08:17			X	
L83112-16	07/29/10 08:18			X	
L83112-01DUP	07/29/10 08:19		X	X	X
L83112-15DUP	07/29/10 08:21		X	X	X
L83112-16MS	07/29/10 08:22			X	

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83112

Radiochemistry

WG287330 **Pb**

Sample	Date	SCN	LEAD 210
L83112-03	08/03/10 12:43		X
WG286762PBS	08/03/10 12:43		X
WG286762LCSS	08/03/10 12:43		X
L83112-01	08/03/10 12:43		X
L83112-04	08/03/10 12:43		X
L83112-05	08/03/10 12:43		X
L83112-06	08/03/10 12:43		X
L83112-07	08/03/10 12:43		X
L83112-02	08/03/10 12:43		X
L83112-01DUP	08/03/10 14:16		X
L83112-08	08/03/10 14:16		X
L83112-09	08/03/10 14:16		X
L83112-10	08/03/10 14:16		X
L83112-11	08/03/10 14:16		X
L83112-12	08/03/10 14:16		X
L83112-13	08/03/10 14:16		X
L83112-14	08/03/10 14:16		X
L83112-15	08/03/10 14:16		X
L83112-16	08/03/10 14:16		X
L83112-16DUP	08/03/10 15:49		X
L83112-14MS	08/03/10 15:49		X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83112

Radiochemistry

WG287341 **U**

Sample	Date	SCN	URANIUM 234	URANIUM 235	URANIUM 238
WG286896PBS	08/02/10 09:24		X	X	X
WG286896LCSS	08/02/10 09:25		X	X	X
L83112-01	08/02/10 09:26		X	X	X
L83112-02	08/02/10 09:28		X	X	X
L83112-03	08/02/10 09:29		X	X	X
L83112-04	08/02/10 09:31		X	X	X
L83112-05	08/02/10 09:32		X	X	X
L83112-06	08/02/10 09:34		X	X	X
L83112-07	08/02/10 09:35		X	X	X
L83112-08	08/02/10 09:36		X	X	X
L83112-09	08/02/10 09:38		X	X	X
L83112-10	08/02/10 09:39		X	X	X
L83112-11	08/02/10 09:41		X	X	X
L83112-12	08/02/10 09:42		X	X	X
L83112-13	08/02/10 09:44		X	X	X
L83112-14	08/02/10 09:45		X	X	X
L83112-15	08/02/10 09:47		X	X	X
L83112-16	08/02/10 09:48		X	X	X
L83112-01DUP	08/02/10 09:49		X	X	X
L83112-16DUP	08/02/10 09:51		X	X	X
L83112-03MS	08/02/10 09:52		X	X	X

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Run Log by Workgroup

Columbia Analytical Services

Project ID: L83112

Radiochemistry

WG287344 **Ra226**

Sample	Date	SCN	WITTING RADIUM I
WG286917PBS	08/02/10 09:37		X
WG286917LCSS	08/02/10 09:38		X
L83112-01	08/02/10 09:39		X
L83112-02	08/02/10 09:41		X
L83112-03	08/02/10 09:42		X
L83112-04	08/02/10 09:44		X
L83112-05	08/02/10 09:45		X
L83112-06	08/02/10 09:47		X
L83112-07	08/02/10 09:48		X
L83112-08	08/02/10 09:49		X
L83112-09	08/02/10 09:51		X
L83112-10	08/02/10 09:52		X
L83112-11	08/02/10 09:54		X
L83112-12	08/02/10 09:55		X
L83112-13	08/02/10 09:57		X
L83112-14	08/02/10 09:58		X
L83112-15	08/02/10 10:00		X
L83112-16	08/02/10 10:01		X
L83112-01DUP	08/02/10 10:02		X
L83112-16DUP	08/02/10 10:04		X
L83112-02MS	08/02/10 10:05		X

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286308

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/19/2010 14:28
Start Date/Time: 07/19/2010 15:00
End Date/Time: 07/19/2010 16:00

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L83112-01	BG-1 0-2 COMP	As Rec			07/19/10 15:00	7/19/2010	
2	L83112-02	BG-1 2-12 COMP	As Rec			07/19/10 15:04	7/19/2010	
3	L83112-03	BG-1 12-18 COMP	As Rec			07/19/10 15:08	7/19/2010	
4	L83112-04	BG-2 0-2 COMP	As Rec			07/19/10 15:12	7/19/2010	
5	L83112-05	BG-2 2-12 COMP	As Rec			07/19/10 15:16	7/19/2010	
6	L83112-06	BG-2 12-18 COMP	As Rec			07/19/10 15:20	7/19/2010	
7	L83112-07	BG-100 0-2 COMP	As Rec			07/19/10 15:24	7/19/2010	
8	L83112-08	BG-3 0-2 COMP	As Rec			07/19/10 15:28	7/19/2010	
9	L83112-09	BG-3 2-12 COMP	As Rec			07/19/10 15:32	7/19/2010	
10	L83112-10	BG-3 12-18 COMP	As Rec			07/19/10 15:36	7/19/2010	
11	L83112-11	BG-4 0-2 COMP	As Rec			07/19/10 15:40	7/19/2010	
12	L83112-12	BG-4 2-12 COMP	As Rec			07/19/10 15:44	7/19/2010	
13	L83112-13	BG-4 12-18 COMP	As Rec			07/19/10 15:48	7/19/2010	
14	L83112-14	BG-6 0-2 COMP	As Rec			07/19/10 15:52	7/19/2010	
15	L83112-15	BG-6 2-12 COMP	As Rec			07/19/10 15:56	7/19/2010	
16	L83112-16	BG-6 12-18 COMP	As Rec			07/19/10 16:00	7/19/2010	

Report Comments:

Internal Comments

AREV: MEG 7/19/2010
Initials, Date

SREV: BRD 7/20/10
Initials, Date

7/19/2010 6:09:14 PM 73010

KBJ 7/21/10

Air Dry

WG286308

ACZ Laboratories, Inc

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/19/2010 14:28
Start Date/Time: 07/19/2010 15:00
End Date/Time: 07/19/2010 16:00

Sample	Login Comments
L83112-01	SJ ||
L83112-02	SJ ||
L83112-03	SJ ||
L83112-04	SJ ||
L83112-05	SJ(3) || MS/MSD
L83112-06	SJ ||
L83112-07	SJ ||
L83112-08	SJ ||
L83112-09	SJ ||
L83112-10	SJ ||
L83112-11	SJ ||
L83112-12	SJ ||
L83112-13	SJ ||
L83112-14	SJ ||
L83112-15	SJ ||
L83112-16	SJ ||

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/19/2010 6:09:14 PM 73010

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: MEG
Date: 7/19/2010

Approved: JRD
Date: 7/20/10

Analyst: MEG

Workgroup: 286308

Analysis Date: 7/19/2010

Sample type used: As REC

Extraction / Digestion / Analysis (Prep) Calc: DRY

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?			✓
3. Were proper volumes of reagents used per final volume?			✓
4. Was the proper sub-sample used (as received, <2000, <500, <250, dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?			✓
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments:

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286308

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: MEG
ACZ Dept: 20
Create Date: 07/19/2010 14:28
Start Date/Time: 7/19/2010 15:00
End Date/Time: 7/19/2010 16:20

SEQ	ACZ ID	Client ID	SubSX	Pri	ASRECEIVED	Analysis Date	SP AirDry	Comments
1	L83112-01 ✓	BG-1 0-2 COMP	As Rec			7/19/2010	7/19/2010	
2	L83112-02 ✓	BG-1 2-12 COMP						
3	L83112-03 ✓	BG-1 12-18 COMP						
4	L83112-04 ✓	BG-2 0-2 COMP						
5	L83112-05 ✓	BG-2 2-12 COMP						
6	L83112-06 ✓	BG-2 12-18 COMP						
7	L83112-07 ✓	BG-100 0-2 COMP						
8	L83112-08 ✓	BG-3 0-2 COMP						
9	L83112-09 ✓	BG-3 2-12 COMP						
10	L83112-10 ✓	BG-3 12-18 COMP						
11	L83112-11 ✓	BG-4 0-2 COMP						
12	L83112-12 ✓	BG-4 2-12 COMP						
13	L83112-13 ✓	BG-4 12-18 COMP						
14	L83112-14 ✓	BG-6 0-2 COMP						
15	L83112-15 ✓	BG-6 2-12 COMP						
16	L83112-16 ✓	BG-6 12-18 COMP						

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/19/2010 2:28:44 PM 73010

Air Dry

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-SP-AIRDRY
QC Ref: NOQC
Group ID: SP-G-DRY-AIR
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286308

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/19/2010 14:28
Start Date/Time:
End Date/Time:

Sample	Login Comments
L83112-01	SJ ||
L83112-02	SJ ||
L83112-03	SJ ||
L83112-04	SJ ||
L83112-05	SJ(3) || MS/MSD
L83112-06	SJ ||
L83112-07	SJ ||
L83112-08	SJ ||
L83112-09	SJ ||
L83112-10	SJ ||
L83112-11	SJ ||
L83112-12	SJ ||
L83112-13	SJ ||
L83112-14	SJ ||
L83112-15	SJ ||
L83112-16	SJ ||

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/19/2010 2:28:44 PM 73010

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286308

Date Reported: 20-Jul-10
Run ID: R734229
Date Analyzed: 19-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L83112-01

Tag:

Measured: 7/19/2010 3:00:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-02

Tag:

Measured: 7/19/2010 3:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-03

Tag:

Measured: 7/19/2010 3:08:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-04

Tag:

Measured: 7/19/2010 3:12:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-05

Tag:

Measured: 7/19/2010 3:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-06

Tag:

Measured: 7/19/2010 3:20:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-07

Tag:

Measured: 7/19/2010 3:24:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-08

Tag:

Measured: 7/19/2010 3:28:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-09

Tag:

Measured: 7/19/2010 3:32:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-10

Tag:

Measured: 7/19/2010 3:36:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-11 **Tag:** **Measured: 7/19/2010 3:40:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-12 **Tag:** **Measured: 7/19/2010 3:44:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-13 **Tag:** **Measured: 7/19/2010 3:48:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-14 **Tag:** **Measured: 7/19/2010 3:52:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-15 **Tag:** **Measured: 7/19/2010 3:56:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

L83112-16 **Tag:** **Measured: 7/19/2010 4:00:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP AIRDRY	DRY-AIR		1			NEED				

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286647

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 9:55
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/26/2010 12:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L83112-01	BG-1 0-2 COMP	dry		07/26/10 10:00	7/26/2010	7/26/10
2	L83112-02	BG-1 2-12 COMP	dry		07/26/10 10:08	7/26/2010	7/26/10
3	L83112-03	BG-1 12-18 COMP	dry		07/26/10 10:16	7/26/2010	7/26/10
4	L83112-04	BG-2 0-2 COMP	dry		07/26/10 10:24	7/26/2010	7/26/10
5	L83112-05	BG-2 2-12 COMP	dry		07/26/10 10:32	7/26/2010	7/26/10
6	L83112-06	BG-2 12-18 COMP	dry		07/26/10 10:40	7/26/2010	7/26/10
7	L83112-07	BG-100 0-2 COMP	dry		07/26/10 10:48	7/26/2010	7/26/10
8	L83112-08	BG-3 0-2 COMP	dry		07/26/10 10:56	7/26/2010	7/26/10
9	L83112-09	BG-3 2-12 COMP	dry		07/26/10 11:04	7/26/2010	7/26/10
10	L83112-10	BG-3 12-18 COMP	dry		07/26/10 11:12	7/26/2010	7/26/10
11	L83112-11	BG-4 0-2 COMP	dry		07/26/10 11:20	7/26/2010	7/26/10
12	L83112-12	BG-4 2-12 COMP	dry		07/26/10 11:28	7/26/2010	7/26/10
13	L83112-13	BG-4 12-18 COMP	dry		07/26/10 11:36	7/26/2010	7/26/10
14	L83112-14	BG-6 0-2 COMP	dry		07/26/10 11:44	7/26/2010	7/26/10
15	L83112-15	BG-6 2-12 COMP	dry		07/26/10 11:52	7/26/2010	7/26/10
16	L83112-16	BG-6 12-18 COMP	dry		07/26/10 12:00	7/26/2010	7/26/10

Report Comments: _____

Internal Comments _____

AREV: NRE 7/27/10
Initials, Date

SREV: BEO 7/28/10
Initials, Date

7/27/2010 6:07:17 PM 73010 HIB

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286647

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 9:55
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/26/2010 12:00

Sample	Login Comments
L83112-01	SJ ||
L83112-02	SJ ||
L83112-03	SJ ||
L83112-04	SJ ||
L83112-05	SJ(3) || MS/MSD
L83112-06	SJ ||
L83112-07	SJ ||
L83112-08	SJ ||
L83112-09	SJ ||
L83112-10	SJ ||
L83112-11	SJ ||
L83112-12	SJ ||
L83112-13	SJ ||
L83112-14	SJ ||
L83112-15	SJ ||
L83112-16	SJ ||

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/27/2010 6:07:17 PM 73010

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: NRe
Date: 7/27/10

Approved: BRD
Date: 7/28/10

Analyst: NEO Cremin

Workgroup: 286647

Analysis Date: 7/27/10

Sample type used: SOIL

Extraction / Digestion / Analysis / Prep / Calc:

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓		
2. Is the %solid or TS attached for dilution factors?			✓
3. Were proper volumes of reagents used per final volume?			✓
4. Was the proper sub-sample used (as received, <2000, <500, <250 dry)?	✓		
5.Were the dilution factor calculation checked (final volume, weight, %solid)?			✓
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?			✓
8. Is the appropriate spike in the computer-designated line?			✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓		
10. Is the standard/reagent information complete and current?	✓		
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

Standard/Reagent	PCN/SCN	Expiration Date

Comments:

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286647

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst: NLR
ACZ Dept: 20
Create Date: 07/26/2010 9:55
Start Date/Time: 7/26/10 10 AM
End Date/Time: 7/26/10 12 pm

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	SP CrushPulv	Comments
1	L83112-01 ✓	BG-1 0-2 COMP	DLH		7/26/10	7/26/10	
2	L83112-02	BG-1 2-12 COMP					
3	L83112-03	BG-1 12-18 COMP					
4	L83112-04	BG-2 0-2 COMP					
5	L83112-05	BG-2 2-12 COMP					
6	L83112-06	BG-2 12-18 COMP					
7	L83112-07	BG-100 0-2 COMP					
8	L83112-08	BG-3 0-2 COMP					
9	L83112-09	BG-3 2-12 COMP					
10	L83112-10	BG-3 12-18 COMP					
11	L83112-11	BG-4 0-2 COMP					
12	L83112-12	BG-4 2-12 COMP					
13	L83112-13	BG-4 12-18 COMP					
14	L83112-14	BG-6 0-2 COMP					
15	L83112-15	BG-6 2-12 COMP					
16	L83112-16	BG-6 12-18 COMP					

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/26/2010 9:55:44 AM 73010

Crush Pulverize

QC List Type: I-SP-AIRDRY
QCListMatClass: SOLID
Bench Sheet List: I-ICPMS-D-200
QC Ref: NOQC
Group ID: SP-G-CP
Method Ref: No 1 1972
SOP Ref: SOPSO001

WG286647

ACZ Laboratories, Inc

Instrument ID: SOILSPREP
Analyst:
ACZ Dept: 20
Create Date: 07/26/2010 9:55
Start Date/Time:
End Date/Time:

Sample	Login Comments
L83112-01	SJ ||
L83112-02	SJ ||
L83112-03	SJ ||
L83112-04	SJ ||
L83112-05	SJ(3) || MS/MSD
L83112-06	SJ ||
L83112-07	SJ ||
L83112-08	SJ ||
L83112-09	SJ ||
L83112-10	SJ ||
L83112-11	SJ ||
L83112-12	SJ ||
L83112-13	SJ ||
L83112-14	SJ ||
L83112-15	SJ ||
L83112-16	SJ ||

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/26/2010 9:55:44 AM 73010

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286647

Date Reported: 28-Jul-10
Run ID: R735738
Date Analyzed: 26-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

L83112-01

Tag:

Measured: 7/26/2010 10:00:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-02

Tag:

Measured: 7/26/2010 10:08:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-03

Tag:

Measured: 7/26/2010 10:16:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-04

Tag:

Measured: 7/26/2010 10:24:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-05

Tag:

Measured: 7/26/2010 10:32:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-06

Tag:

Measured: 7/26/2010 10:40:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-07

Tag:

Measured: 7/26/2010 10:48:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-08

Tag:

Measured: 7/26/2010 10:56:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-09

Tag:

Measured: 7/26/2010 11:04:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-10

Tag:

Measured: 7/26/2010 11:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-11 **Tag:** **Measured: 7/26/2010 11:20:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-12 **Tag:** **Measured: 7/26/2010 11:28:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-13 **Tag:** **Measured: 7/26/2010 11:36:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-14 **Tag:** **Measured: 7/26/2010 11:44:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-15 **Tag:** **Measured: 7/26/2010 11:52:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

L83112-16 **Tag:** **Measured: 7/26/2010 12:00:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	SP CRUSHPULV	SP-CP		1			NEED				

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/27/2010 9:59

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286651PBS1	NONE	<2000		07/26/10 10:00	0	7.5	5	5	50		0		
2	WG286651PBS2	NONE	<2000		07/26/10 11:15	0	7.5	5	5	50		0		
3	L83112-01	BG-1 0-2 COMP	<2000		07/26/10 12:31	0.5	7.5	5	5	50		98.76		
4	L83112-01DUP	NONE	<2000		07/26/10 13:47	0.5	7.5	5	5	50		98.76		
5	L83112-02	BG-1 2-12 COMP	<2000		07/26/10 15:03	0.5	7.5	5	5	50		98.87		
6	L83112-03	BG-1 12-18 COMP	<2000		07/26/10 16:18	0.5	7.5	5	5	50		97.85		
7	L83112-04	BG-2 0-2 COMP	<2000		07/26/10 17:34	0.5	7.5	5	5	50		98.22		
8	L83112-05	BG-2 2-12 COMP	<2000		07/26/10 18:50	0.5	7.5	5	5	50		97.74		
9	L83112-06	BG-2 12-18 COMP	<2000		07/26/10 20:06	0.5	7.5	5	5	50		97.84		
10	L83112-07	BG-100 0-2 COMP	<2000		07/26/10 21:22	0.5	7.5	5	5	50		98.94		
11	L83112-08	BG-3 0-2 COMP	<2000		07/26/10 22:37	0.5	7.5	5	5	50		98.37		
12	L83112-09	BG-3 2-12 COMP	<2000		07/26/10 23:53	0.5	7.5	5	5	50		98.07		
13	L83112-10	BG-3 12-18 COMP	<2000		07/27/10 1:09	0.5	7.5	5	5	50		97.69		
14	L83112-11	BG-4 0-2 COMP	<2000		07/27/10 2:25	0.5	7.5	5	5	50		98.87		
15	L83112-12	BG-4 2-12 COMP	<2000		07/27/10 3:40	0.5	7.5	5	5	50		99.05		
16	L83112-13	BG-4 12-18 COMP	<2000		07/27/10 4:56	0.5	7.5	5	5	50		99.11		
17	L83112-14	BG-6 0-2 COMP	<2000		07/27/10 6:12	0.5	7.5	5	5	50		99.17		
18	L83112-15	BG-6 2-12 COMP	<2000		07/27/10 7:28	0.5	7.5	5	5	50		98.86		
19	L83112-16	BG-6 12-18 COMP	<2000		07/27/10 8:44	0.5	7.5	5	5	50		98.7		
20	L83112-16DUP	NONE	<2000		07/27/10 9:59	0.5	7.5	5	5	50		98.73		

Report Comments: _____

Internal Comments _____

AREV: NRC 7/30/10
Initials, Date

SREV: BRD 8/2/10
Initials, Date

7/30/2010 3:35:43 PM 73010

KBS 8/4/10

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/27/2010 9:59

Sample	Login Comments
L83112-01	SJ ||
L83112-02	SJ ||
L83112-03	SJ ||
L83112-04	SJ ||
L83112-05	SJ(3) || MS/MSD
L83112-06	SJ ||
L83112-07	SJ ||
L83112-08	SJ ||
L83112-09	SJ ||
L83112-10	SJ ||
L83112-11	SJ ||
L83112-12	SJ ||
L83112-13	SJ ||
L83112-14	SJ ||
L83112-15	SJ ||
L83112-16	SJ ||

Report Comments: _____

Internal Comments _____

AREV: _____
Initials, Date

SREV: _____
Initials, Date

7/30/2010 3:35:43 PM 73010

ACZ Laboratories, Inc.
Geochemistry Department
Data Review and Reagents

Data Reviewer: NRC
Date: 7/27/10

Approved: BRD
Date: 8/2/10

Analyst: NED Chem.n

Workgroup: WG 286651

Analysis Date: 7/26/10

Sample type used: SOILS

Extraction / Digestion / Analysis / Prep / Calc:

	Yes	No	N/A
1. Is the raw data checked to the computer printout for transcription errors?	✓	✓	
2. Is the %solid or TS attached for dilution factors?	✓	✓	
3. Were proper volumes of reagents used per final volume?	✓	✓	
4. Was the proper sub-sample used (as received, <2000, <500, <250, dry)?	✓	✓	
5.Were the dilution factor calculation checked (final volume, weight, %solid)?	✓	✓	
6. Did the RPD pass?			✓
7. Does all the spike information correlate with each other?	✓		✓
8. Is the appropriate spike in the computer-designated line?	✓		✓
9. Are all errors properly corrected (single-line crossout, dated & initialed)?	✓	✓	
10. Is the standard/reagent information complete and current?	✓	✓	
FOR SREV: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		

ok BRD 8/2/10

Standard/Reagent	PCN/SCN	Expiration Date
HNO3	35177	2/28/13
H2O2	35027	6/25/11
H2O2	35029	6/25/11
[illegible]	BLM 7/26/10 ~~34028~~ 34820	11/30/12

Comments:

FRMSO010.05.07.06

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG#: 286651

Analyst: NRC
Date:
Time In:
Time Out:

	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.265	17.893	1.265	0	0.5	50	#DIV/0!
83112-1	1.265	16.293	16.106	0.987556561	0.5	50	101
83112-2	1.280	15.418	15.258	0.988682982	0.5	50	101
83112-3	1.279	16.094	15.776	0.978535268	0.5	50	102
83112-4	1.280	16.272	16.005	0.982190502	0.5	50	102
83112-5	1.276	19.887	19.466	0.977378969	0.5	50	102
83112-6	1.277	20.467	20.053	0.978426264	0.5	50	102
83112-7	1.278	21.143	20.933	0.989428643	0.5	50	101
83112-8	1.283	21.067	20.745	0.983724222	0.5	50	102
83112-9	1.274	21.514	21.123	0.980681818	0.5	50	102
83112-10	1.286	23.258	22.75	0.976879665	0.5	50	102
83112-11	1.265	19.724	19.516	0.988731784	0.5	50	101
83112-12	1.264	24.860	24.636	0.990506866	0.5	50	101
83112-13	1.271	22.158	21.973	0.991142816	0.5	50	101
83112-14	1.268	19.394	19.243	0.991669425	0.5	50	101
83112-15	1.279	21.758	21.524	0.988573661	0.5	50	101
83112-16	1.274	25.11	24.8	0.986994462	0.5	50	101
83112-16 DUP	1.274	20.526	20.281	0.987274049	0.5	50	101

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG#: 286651

Analyst: NAE
Date: 6/26/10
Time In:
Time Out:

Sample #	Air Dried Solids						
	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.265	17.893	2/22/10 1.265	#DIV/0!			#DIV/0!
83112-1	1.265	16.293	~~16.106 1.265~~ NAE	16.106 #DIV/0!			#DIV/0!
2	1.280	15.918	15.258	#DIV/0!			#DIV/0!
3	1.279	16.094	15.776	#DIV/0!			#DIV/0!
4	1.280	16.272	16.005	#DIV/0!			#DIV/0!
matrix spike 5	~~1.280~~/1.276	19.887	19.466	#DIV/0!			#DIV/0!
6	1.277	20.467	20.053	#DIV/0!			#DIV/0!
7	1.278	21.143	20.933	#DIV/0!			#DIV/0!
8	1.283	21.067	20.745	#DIV/0!			#DIV/0!
9	1.274	21.517	21.123	#DIV/0!			#DIV/0!
10	1.286	23.258	22.750	#DIV/0!			#DIV/0!
11	1.265	19.724	19.516	#DIV/0!			#DIV/0!
12	1.264	24.860	24.636	#DIV/0!			#DIV/0!
13	1.271	22.158	21.973	#DIV/0!			#DIV/0!
14	1.268	19.394	19.243	#DIV/0!			#DIV/0!
15	1.279	21.758	21.584	#DIV/0!			#DIV/0!
16	1.274	25.110	24.900	#DIV/0!			#DIV/0!
16 DUP	1.274	20.526	20.291	#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#DIV/0!
				#DIV/0!			#VALUE!
				#DIV/0!			#VALUE!

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: NRC
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 7/26/10 10AM
End Date/Time: 7/27/10 AM

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286651PBS1	NONE	DI-1		7/26/10		7.5	1	5	50				
2	WG286651PBS2	NONE												
3	L83112-01	BG-1 0-2 COMP												
4	L83112-01DUP	NONE												
5	L83112-02	BG-1 2-12 COMP												
6	L83112-03	BG-1 12-18 COMP												
7	L83112-04	BG-2 0-2 COMP												
8	L83112-05	BG-2 2-12 COMP												
9	L83112-06	BG-2 12-18 COMP												
10	L83112-07	BG-100 0-2 COMP												
11	L83112-08	BG-3 0-2 COMP												
12	L83112-09	BG-3 2-12 COMP												
13	L83112-10	BG-3 12-18 COMP												
14	L83112-11	BG-4 0-2 COMP												
15	L83112-12	BG-4 2-12 COMP												
16	L83112-13	BG-4 12-18 COMP												
17	L83112-14	BG-6 0-2 COMP												
18	L83112-15	BG-6 2-12 COMP												
19	L83112-16	BG-6 12-18 COMP												
20	L83112-16DUP	NONE												

WRITE IN DUPS ON BOTTOM

14 Dup
02 Dup
15 Dup

33177
HNO3 2/28/13

Report Comments:

Internal Comments

AREV: Initials, Date

SREV: Initials, Date

7/26/2010 10:22:48 AM 73010

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG286651

Date Reported: 02-Aug-10
Run ID: R735653
Date Analyzed: 26-Jul-10
ICAL Workgroup:
Instrument ID: SOILSPREP

WG286651PBS1

Tag:

Measured: 7/26/2010 10:00:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	0	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

WG286651PBS2

Tag:

Measured: 7/26/2010 11:15:47 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	0	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0	1		g	++				

L83112-01

Tag:

Measured: 7/26/2010 12:31:34 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.76	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-01DUP

Tag:

Measured: 7/26/2010 1:47:21 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	98.76	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

L83112-02

Tag:

Measured: 7/26/2010 3:03:08 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.87	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-03

Tag:

Measured: 7/26/2010 4:18:55 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	97.85	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-04

Tag:

Measured: 7/26/2010 5:34:42 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.22	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-05

Tag:

Measured: 7/26/2010 6:50:29 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	97.74	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-06

Tag:

Measured: 7/26/2010 8:06:16 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	97.84	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-07

Tag:

Measured: 7/26/2010 9:22:03 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.94	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-08

Tag:

Measured: 7/26/2010 10:37:50 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.37	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-09

Tag:

Measured: 7/26/2010 11:53:37 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.07	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-10

Tag:

Measured: 7/27/2010 1:09:24 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	97.69	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-11

Tag:

Measured: 7/27/2010 2:25:11 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.87	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-12

Tag:

Measured: 7/27/2010 3:40:58 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.05	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-13

Tag:

Measured: 7/27/2010 4:56:45 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.11	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-14

Tag:

Measured: 7/27/2010 6:12:32 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	99.17	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-15

Tag:

Measured: 7/27/2010 7:28:19 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.86	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-16

Tag:

Measured: 7/27/2010 8:44:06 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	:-3050-RC	5	1		mL	++				
SREV	HCL	:-3050-RC	5	1		mL	++				
SREV	HNO3	:-3050-RC	7.5	1		mL	++				
SREV	PERCENT SOLID	:-3050-RC	98.7	1		%	++				
SREV	VOLUME, SOIL EXTRACT	:-3050-RC	50	1		mL	++				
SREV	WEIGHT, SAMPLE	:-3050-RC	0.5	1		g	++				

L83112-16DUP

Tag:

Measured: 7/27/2010 9:59:53 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	H2O2	PREP	5	1		mL	++				
SREV	HCL	PREP	5	1		mL	++				
SREV	HNO3	PREP	7.5	1		mL	++				
SREV	PERCENT SOLID	PREP	98.73	1		%	++				
SREV	VOLUME, SOIL EXTRACT	PREP	50	1		mL	++				
SREV	WEIGHT, SAMPLE	PREP	0.5	1		g	++				

ACZ Laboratories, Inc.
Thorium in Soil
ESM 4506

WG287089

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: ANALYTICAL

Analyst: jjg
Dept: 55
Prep Date: 7/27/2010
Analysis Date: 7/29/2010
Start Time:
End Time:
Approved: MWM 8-3-10
Approved: MWB 8-5-10

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228 Th228 Background	Gr Alpha Counts	Net Alpha Counts	Th228 pCi/g	Error (+ -)	LLD pCi/g	Thorium 230 Th230 Background	Gr Alpha Counts	Net Alpha Counts	Th230 pCi/g	Error (+ -)	LLD pCi/g	Thorium 232 Th232 Background	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
1	wg286738PBS		0.5	1.0000	9.52	690	0.726			0				25.0000	40.2400	15	0.15	0.47	0.63			0			
2	wg286738LCS	rc091215-1	0.5	1.0000	9.52	491	0.516			0				24.4109	4405.0100	4381	169.49	5.42	0.88			0			
3	L83112-01	BG-1 0-2 CO	0.493778	1.0000	9.52	680	0.715			0				25.5891	78.4200	53	1.22	0.61	0.65			0			
4	L83112-02	BG-1 2-12 C	0.494341	1.0000	9.52	698	0.734			0				14.2393	81.0100	67	1.57	0.57	0.63			0			
5	L83112-03	BG-1 12-18 (	0.489266	1.0000	9.52	686	0.721			0				7.0000	137.4100	130	3.42	0.72	0.65			0			
6	L83112-04	BG-2 0-2 CO	0.491095	1.0000	9.52	753	0.792			0				13.4175	99.2500	86	1.96	0.57	0.59			0			
7	L83112-05	BG-2 2-12 C	0.488689	1.0000	9.52	678	0.713			0				17.0000	65.2400	48	1.10	0.55	0.66			0			
8	L83112-06	BG-2 12-18 (	0.489213	1.0000	9.52	737	0.775			0				22.1716	72.1700	50	1.06	0.54	0.60			0			
9	L83112-07	BG-100 0-2 (	0.494714	1.0000	9.52	660	0.694			0				16.0000	143.8400	128	3.44	0.77	0.66			0			
10	L83112-08	BG-3 0-2 CO	0.491862	1.0000	9.52	653	0.687			0				12.4175	45.0000	33	0.67	0.47	0.68			0			
11	L83112-09	BG-3 2-12 C	0.490341	1.0000	9.52	664	0.698			0				11.0000	47.0000	36	0.76	0.47	0.67			0			
12	L83112-10	BG-3 12-18 (	0.48844	1.0000	9.52	616	0.648			0				14.0000	44.5800	31	0.66	0.51	0.72			0			
13	L83112-11	BG-4 0-2 CO	0.494366	1.0000	9.52	654	0.688			0				18.0000	60.4100	42	0.96	0.55	0.67			0			
14	L83112-12	BG-4 2-12 C	0.495253	1.0000	9.52	745	0.783			0				16.0000	68.5800	53	1.10	0.50	0.59			0			
15	L83112-13	BG-4 12-18 (	0.495571	1.0000	9.52	770	0.810			0				21.4109	58.1600	37	0.67	0.47	0.57			0			
16	L83112-14	BG-6 0-2 CO	0.495635	1.0000	9.52	799	0.840			0				31.4109	64.0000	33	0.55	0.49	0.55			0			
17	L83112-15	BG-6 2-12 C	0.494287	1.0000	9.52	646	0.679			0				25.0000	49.0000	24	0.42	0.54	0.68			0			
18	L83112-16	BG-6 12-18 (	0.493497	1.0000	9.52	776	0.816			0				24.4109	46.8400	22	0.31	0.44	0.57			0			
19	L83112-01DUP		0.493778	1.0000	9.52	678	0.713			0				25.5891	72.0000	46	1.04	0.59	0.65			0			
20	L83112-15DUP		0.494287	1.0000	9.52	739	0.777			0				14.2393	43.4100	29	0.50	0.42	0.59			0			
21	L83112-16MS	rc091215-1	0.493497	1.0000	9.52	770	0.810			0				7.0000	6959.7300	6953	173.94	4.39	0.57			0			
										0						0						0			
										0						0						0			
										0						0						0			
										0						0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Template: th-sol

Count Time (seconds): 18000
Thorium Standard and Tracer Concentration (pCi/mL): 10

FRMRC021.01.09.ver02

KSS 8/6/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 8-3-10

Approved: MWB
Date: 8-5-10

Work Group: WG287089
Sample Type: SOIL
Analysis Date: 7-29-10
Analyst: JJG
Prep Date: 7-27-10

Weekly background file: 7-26-10
Daily background file: 7-26-10

Alpha performance file: 7-26-10
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?		✓	
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	PBW	LCS & MS
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287089

Date Reported: 05-Aug-10
Run ID: R736655
Date Analyzed: 29-Jul-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286738PBS

Tag: Measured: 7/29/2010 7:54:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	0.15	1		pCi/g	++	0.63	0.47		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0	0		

WG286738LCSS

Tag: Measured: 7/29/2010 7:55:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	0.88	5.4	RC091215-1	
SREV	THORIUM 230	REC	104.9	1		%	++	0.88	5.4	RC091215-1	
SREV	THORIUM 230	TRUE	162.12	1		pCi/g	++	0.88	5.4	RC091215-1	

L83112-01

Tag: Measured: 7/29/2010 7:56:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	1.2	1		pCi/g	++	0.65	0.61		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-02

Tag: Measured: 7/29/2010 7:58:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	1.6	1		pCi/g	++	0.63	0.57		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-03

Tag: Measured: 7/29/2010 7:59:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	3.4	1		pCi/g	++	0.65	0.72		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-04

Tag: Measured: 7/29/2010 8:01:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	2	1		pCi/g	++	0.59	0.57		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-05

Tag: Measured: 7/29/2010 8:02:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	1.1	1		pCi/g	++	0.66	0.55		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-06

Tag: Measured: 7/29/2010 8:04:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	1.1	1		pCi/g	++	0.6	0.54		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-07

Tag: Measured: 7/29/2010 8:05:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	3.4	1		pCi/g	++	0.66	0.77		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-08

Tag: Measured: 7/29/2010 8:06:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.67	1		pCi/g	++	0.68	0.47		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-09

Tag: Measured: 7/29/2010 8:08:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.76	1		pCi/g	++	0.67	0.47		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-10

Tag: Measured: 7/29/2010 8:09:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.66	1		pCi/g	++	0.72	0.51		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-11

Tag: Measured: 7/29/2010 8:11:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.96	1		pCi/g	++	0.67	0.55		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-12

Tag: Measured: 7/29/2010 8:12:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	1.1	1		pCi/g	++	0.59	0.5		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-13

Tag: Measured: 7/29/2010 8:14:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.67	1		pCi/g	++	0.57	0.47		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-14

Tag: Measured: 7/29/2010 8:15:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.55	1		pCi/g	++	0.55	0.49		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-15

Tag: Measured: 7/29/2010 8:17:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.42	1		pCi/g	++	0.68	0.54		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-16

Tag: Measured: 7/29/2010 8:18:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	THORIUM 228	REG	0	1		pCi/g	++	0	0		TB
SREV	THORIUM 230	ESM-3050	0.31	1		pCi/g	++	0.57	0.44		TB
NEED	THORIUM 232	REG	0	1		pCi/g	++	0	0		TB

L83112-01DUP

Tag: Measured: 7/29/2010 8:19:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0	0		
SREV	THORIUM 230	FOUND	1	1		pCi/g	++	0.65	0.59		
SREV	THORIUM 230	RER	0.24	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	18.2	1		pCi/g	++	0.65	0.59		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0	0		

L83112-15DUP

Tag: Measured: 7/29/2010 8:21:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
FAIL	THORIUM 228	FOUND	0	1		pCi/g	++	0	0		
FAIL	THORIUM 228	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 228	RPD	0	1		pCi/g	++	0	0		
SREV	THORIUM 230	FOUND	0.5	1		pCi/g	++	0.59	0.42		
SREV	THORIUM 230	RER	0.12	1		%	++	0.6	5		
FAIL	THORIUM 230	RPD	17.4	1		pCi/g	++	0.59	0.42		
FAIL	THORIUM 232	FOUND	0	1		pCi/g	++	0	0		
FAIL	THORIUM 232	RER	0	1		%	++	0.3	5		
FAIL	THORIUM 232	RPD	0	1		pCi/g	++	0	0		

L83112-16MS

Tag: Measured: 7/29/2010 8:22:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	THORIUM 230	FOUND	170	1		pCi/g	++	0.57	4.4	RC091215-1	
SREV	THORIUM 230	REC	102.6	1		%	++	0.57	4.4	RC091215-1	
SREV	THORIUM 230	TRUE	165.43	1		pCi/g	++	0.57	4.4	RC091215-1	

ACZ Laboratories, Inc. WG286738
Thorium in Soil
ESM 4506

Project:
SDG#:
SOP#: SOPRC006

Instrument: Octete
Matrix Class: SOLID
List Type: QC-TH-230
List Function: PREP

356 7/27/10 11:10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. 1 ml 7/27/10 356	Tracer Volume mL	Tracer Conc. pCi/Ml	Tracer Counts counts	Tracer Yield %	Thorium 228 Th228 Background	Thorium 228 Gr Alpha Counts	Thorium 228 Net Alpha Counts	Thorium 228 Th228 pCi/g	Thorium 228 Error (+ -)	Thorium 228 LLD pCi/g	Thorium 230 Th230 Background	Thorium 230 Gr Alpha Counts	Thorium 230 Net Alpha Counts	Thorium 230 Th230 pCi/g	Thorium 230 Error (+ -)	Thorium 230 LLD pCi/g
1	PBS		50	1	0.00					0						0			
2	LCSS				0.00					0						0			
3	L83112-01	BG-1 0-2 COMP			0.00					0						0			
4	L83112-02	BG-1 2-12 C(			0.00					0						0			
5	L83112-03	BG-1 12-18 COMP			0.00					0						0			
6	L83112-04	BG-2 0-2 COMP			0.00					0						0			
7	L83112-05	BG-2 2-12 COMP			0.00					0						0			
8	L83112-06	BG-2 12-18 COMP			0.00					0						0			
9	L83112-07	BG-100 0-2 COMP			0.00					0						0			
10	L83112-08	BG-3 0-2 COMP			0.00					0						0			
11	L83112-09	BG-3 2-12 COMP			0.00					0						0			
12	L83112-10	BG-3 12-18 COMP			0.00					0						0			
13	L83112-11	BG-4 0-2 COMP			0.00					0						0			
14	L83112-12	BG-4 2-12 COMP			0.00					0						0			
15	L83112-13	BG-4 12-18 COMP			0.00					0						0			
16	L83112-14	BG-6 0-2 COMP			0.00					0						0			
17	L83112-15	BG-6 2-12 COMP			0.00					0						0			
18	L83112-16	BG-6 12-18 COMP			0.00					0						0			
19	DUP	12-1 Dup			0.00					0						0			
20	DUP	12-15 Dup			0.00					0						0			
21	MS	12-16 Dup			0.00					0						0			
										0						0			
										0						0			
										0						0			
										0						0			

Comments: * When Th229 is used as a tracer use the SD(bkg) of 2.61 and 9.86cts th230/th229 correction used for peak straggling.

Count Time (seconds) 18000
Thorium Standard and Tracer Concentration (pCi/mL) 10

Template: th-sol - LCSS filtered more quickly than other SRS at step 11.21, No hole was seen in filter, however.

280089

Analyst: jjg
Dept: 50
rep Date:
/sis Date:
tart Time:
:nd Time:
\pproved:
\pproved:

Thorium 232					
Th232 Backgroun	Gr Alpha Counts	Net Alpha Counts	Th232 pCi/g	Error (+ -)	LLD pCi/g
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			
		0			

Radioactive Standa

LCS & MS Rc091215-1

Reagents

Iron chloride Rc100701-1

HCl 35120

TOPO Rc100708-1

Cerium solution Rc100720-1

COMMENTS:

FRMRC021.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Radium 226 903.1
Water

ANALYST:
Second analyst:
wg286738 7/27/2010 DATE/TIME of prep start:

PROJECT/WG:
Method

INSTR: Octete

Approved:

rds

Tracer Rc100322-1

Nitric Acid	35036	Ammonium Hydroxide.	348043 JJG 7/27/10
Nitric Acid (2N)	35036	Cerous Flouride substrate	Rc100527-3
Sulfuric Acid 0.3N	34189	Ethanol	33789
HF	33549		

RCTHOR-S.xls

Calculations for dry weight:

Login #
L83112-01
L83112-02
L83112-03
L83112-04
L83112-05
L83112-06
L83112-07
L83112-08
L83112-09
L83112-10
L83112-11
L83112-12
L83112-13
L83112-14
L83112-15
L83112-16

air dried solid(g)	soils sx wt (g)
0.987556561	0.5
0.988682982	0.5
0.978535268	0.5
0.982190502	0.5
0.977378969	0.5
0.978426264	0.5
0.989428643	0.5
0.983724222	0.5
0.980681818	0.5
0.976879665	0.5
0.988731784	0.5
0.990506866	0.5
0.991142816	0.5
0.991669425	0.5
0.988573661	0.5
0.986994462	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.49378	50	50	0.493778
0.49434	50	50	0.494341
0.48927	50	50	0.489268
0.49110	50	50	0.491095
0.48869	50	50	0.488689
0.48921	50	50	0.489213
0.49471	50	50	0.494714
0.49186	50	50	0.491862
0.49034	50	50	0.490341
0.48844	50	50	0.488440
0.49437	50	50	0.494366
0.49525	50	50	0.495253
0.49557	50	50	0.495571
0.49583	50	50	0.495835
0.49429	50	50	0.494287
0.49350	50	50	0.493497
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

ACZ Laboratories, Inc.
2773 Downhill Drive
Steamboat Spgs, CO 80487

AIR DRIED SOLIDS

WG# :_____

Analyst:_____
Date:_____
Time In:_____
Time Out:_____

	Pan wt	pan & sx wt	dried pan & sx	air dried solid	sample wt.	extract volume	dilution
BLANK	1.265	17.893	1.265	0	0.5	50	#DIV/0!
83112-1	1.265	16.293	16.106	0.987556561	0.5	50	101
83112-2	1.280	15.418	15.258	0.988682982	0.5	50	101
83112-3	1.279	16.094	15.776	0.978535268	0.5	50	102
83112-4	1.280	16.272	16.005	0.982190502	0.5	50	102
83112-5	1.276	19.887	19.466	0.977378969	0.5	50	102
83112-6	1.277	20.467	20.053	0.978426264	0.5	50	102
83112-7	1.278	21.143	20.933	0.989428643	0.5	50	101
83112-8	1.283	21.067	20.745	0.983724222	0.5	50	102
83112-9	1.274	21.514	21.123	0.980681818	0.5	50	102
83112-10	1.286	23.258	22.75	0.976879665	0.5	50	102
83112-11	1.265	19.724	19.516	0.988731784	0.5	50	101
83112-12	1.264	24.860	24.636	0.990506866	0.5	50	101
83112-13	1.271	22.158	21.973	0.991142816	0.5	50	101
83112-14	1.268	19.394	19.243	0.991669425	0.5	50	101
83112-15	1.279	21.758	21.524	0.988573661	0.5	50	101
83112-16	1.274	25.11	24.8	0.986994462	0.5	50	101
83112-16 DUP	1.274	20.526	20.281	0.987274049	0.5	50	101

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/27/2010 9:59

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286651PBS1	NONE	<2000		07/26/10 10:00	0	7.5	5	5	50		0		
2	WG286651PBS2	NONE	<2000		07/26/10 11:15	0	7.5	5	5	50		0		
3	L83112-01	BG-1 0-2 COMP	<2000		07/26/10 12:31	0.5	7.5	5	5	50		98.75		
4	L83112-01DUP	NONE	<2000		07/26/10 13:47	0.5	7.5	5	5	50		98.75		
5	L83112-02	BG-1 2-12 COMP	<2000		07/26/10 15:03	0.5	7.5	5	5	50		98.87		
6	L83112-03	BG-1 12-18 COMP	<2000		07/26/10 16:18	0.5	7.5	5	5	50		97.85		
7	L83112-04	BG-2 0-2 COMP	<2000		07/26/10 17:34	0.5	7.5	5	5	50		98.22		
8	L83112-05	BG-2 2-12 COMP	<2000		07/26/10 18:50	0.5	7.5	5	5	50		97.74		
9	L83112-06	BG-2 12-18 COMP	<2000		07/26/10 20:06	0.5	7.5	5	5	50		97.84		
10	L83112-07	BG-100 0-2 COMP	<2000		07/26/10 21:22	0.5	7.5	5	5	50		98.94		
11	L83112-08	BG-3 0-2 COMP	<2000		07/26/10 22:37	0.5	7.5	5	5	50		98.37		
12	L83112-09	BG-3 2-12 COMP	<2000		07/26/10 23:53	0.5	7.5	5	5	50		98.07		
13	L83112-10	BG-3 12-18 COMP	<2000		07/27/10 1:09	0.5	7.5	5	5	50		97.69		
14	L83112-11	BG-4 0-2 COMP	<2000		07/27/10 2:25	0.5	7.5	5	5	50		98.87		
15	L83112-12	BG-4 2-12 COMP	<2000		07/27/10 3:40	0.5	7.5	5	5	50		99.05		
16	L83112-13	BG-4 12-18 COMP	<2000		07/27/10 4:56	0.5	7.5	5	5	50		99.11		
17	L83112-14	BG-6 0-2 COMP	<2000		07/27/10 6:12	0.5	7.5	5	5	50		99.17		
18	L83112-15	BG-6 2-12 COMP	<2000		07/27/10 7:28	0.5	7.5	5	5	50		98.86		X-TRA DUP
19	L83112-16	BG-6 12-18 COMP	<2000		07/27/10 8:44	0.5	7.5	5	5	50		98.7		
20	L83112-16DUP	NONE	<2000		07/27/10 9:59	0.5	7.5	5	5	50		98.7		

~~83112~~ NRC 7/27/10

TH 230 X-TRA DUP on 15

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/27/2010 11:22:20 AM 73010

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:32PM 7/29/2010

Analyst: ORTEC

Sample

Sample: WG286738 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

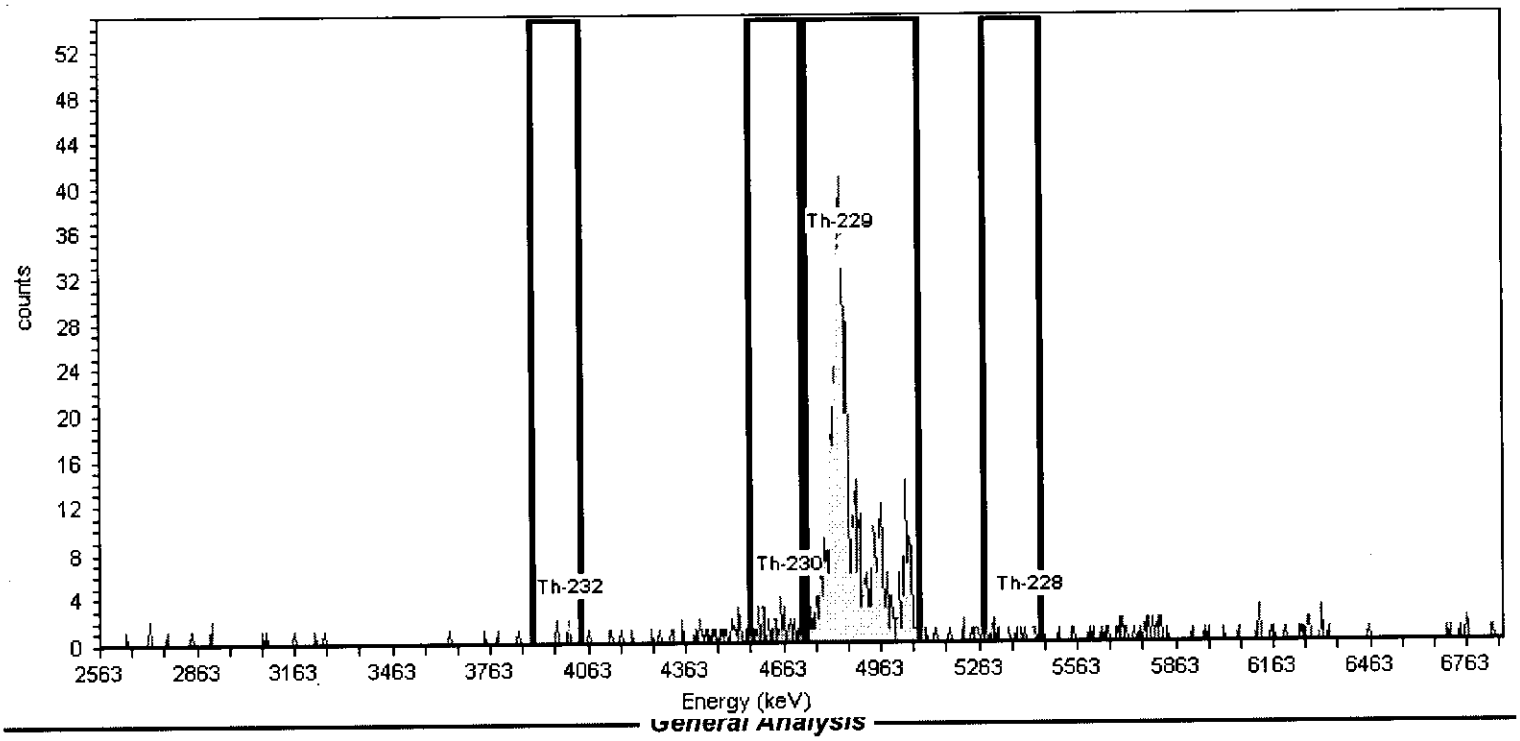
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 131.20%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/29/2010 7:53:42AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	60.503	100.0	5.00	1.0000	4	5.494E-002	1.016E-001	3.195E-002	1.011E-001
Th-230	4687.000	4561.000	4717.000	.000	99.7	40.24	25.0000	15	2.099E-001	3.369E-001	1.602E-001	3.578E-001
Th-229	4845.000	4737.000	5080.000	45.237	99.6	707.00	16.6748	690	1.249E+001	1.536E+000	1.310E-001	2.993E-001
Th-228	5423.000	5280.000	5453.000	8.673	99.4	12.00	8.0000	4	5.527E-002	1.858E-001	9.092E-002	2.192E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:36PM 7/29/2010

Analyst: ORTEC

Sample

Sample: WG286738 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

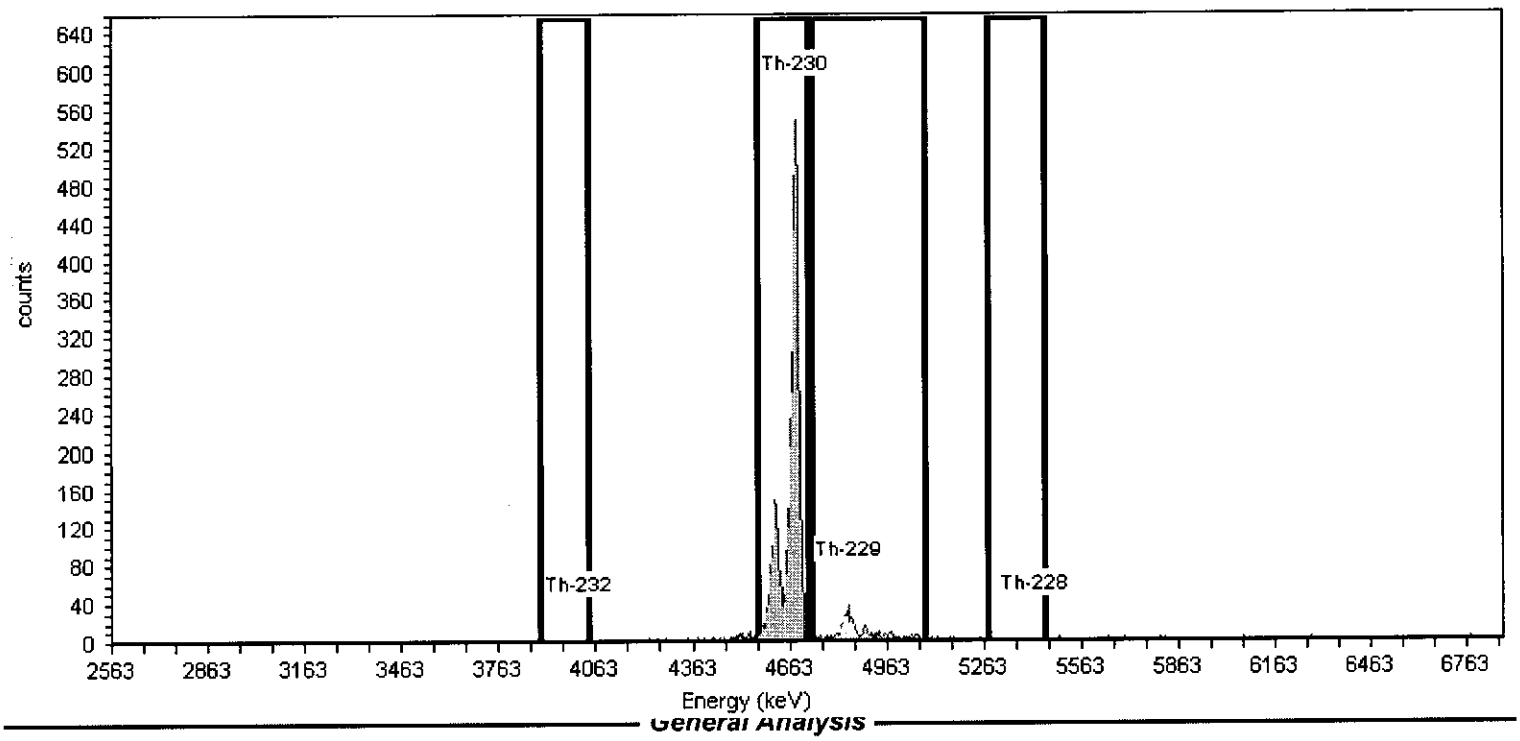
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 94.09%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/29/2010 7:53:28AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	5.630	100.0	7.82	3.8182	4	7.729E-002	1.985E-001	8.784E-002	2.280E-001
Th-230	4687.000	4561.000	4717.000	11.675	99.7	4,405.01	24.4109	4,381	8.490E+001	1.991E+001	2.228E-001	4.980E-001
Th-229	4845.000	4737.000	5080.000	40.644	99.6	504.34	13.6631	491	8.958E+000	1.293E+000	1.668E-001	3.862E-001
Th-228	5423.000	5280.000	5453.000	.188	99.4	5.77	5.1151	1	1.273E-002	1.924E-001	1.023E-001	2.572E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:40PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

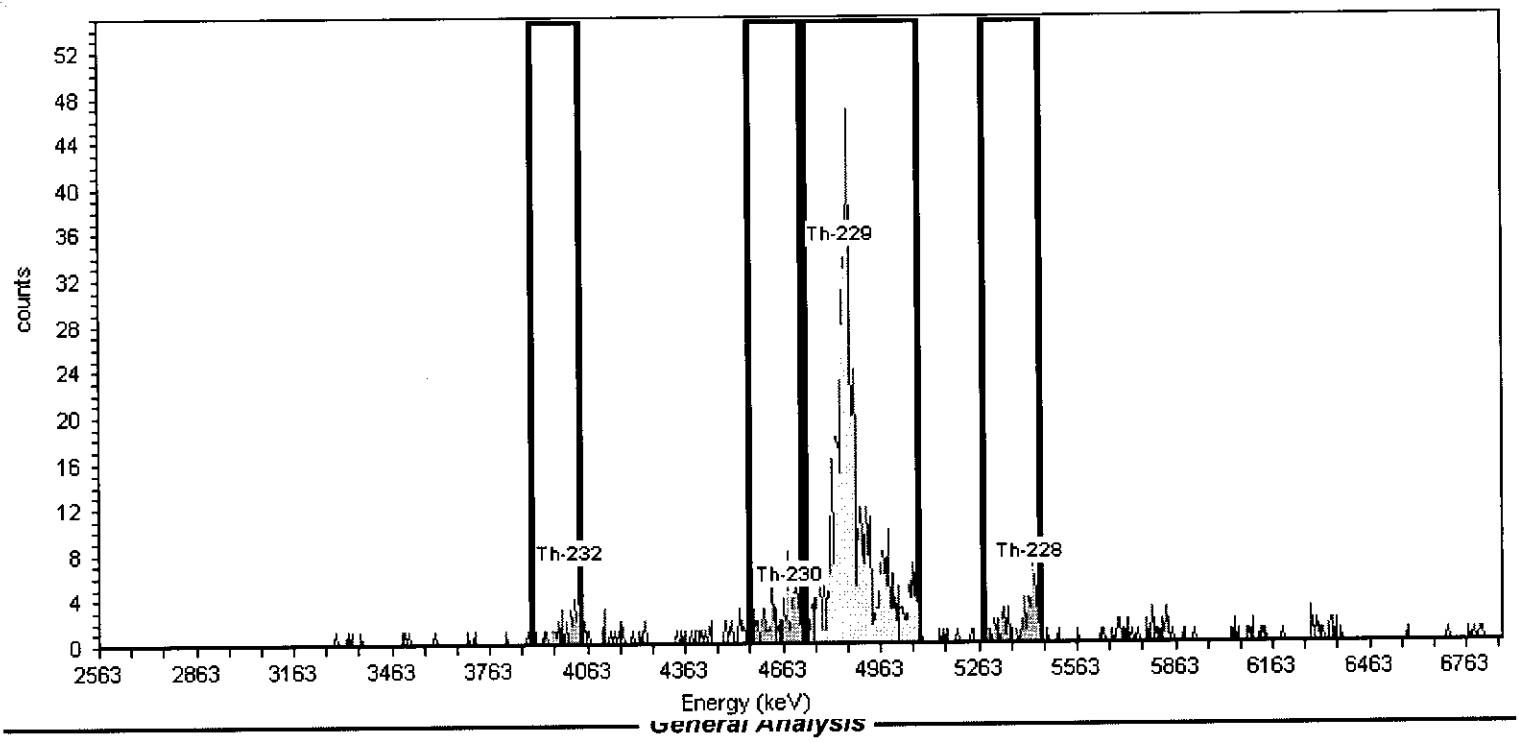
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 128.40%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/29/2010 7:53:30AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	43.734	100.0	40.04	5.2226	35	4.857E-001	3.008E-001	7.416E-002	1.861E-001
Th-230	4687.000	4561.000	4717.000	35.396	99.7	78.42	25.5891	53	7.392E-001	4.574E-001	1.647E-001	3.672E-001
Th-229	4845.000	4737.000	5080.000	43.293	99.6	697.68	18.0000	680	1.222E+001	1.517E+000	1.382E-001	3.144E-001
Th-228	5423.000	5280.000	5453.000	15.159	99.4	68.00	15.0905	53	7.425E-001	4.165E-001	1.268E-001	2.916E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:51PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

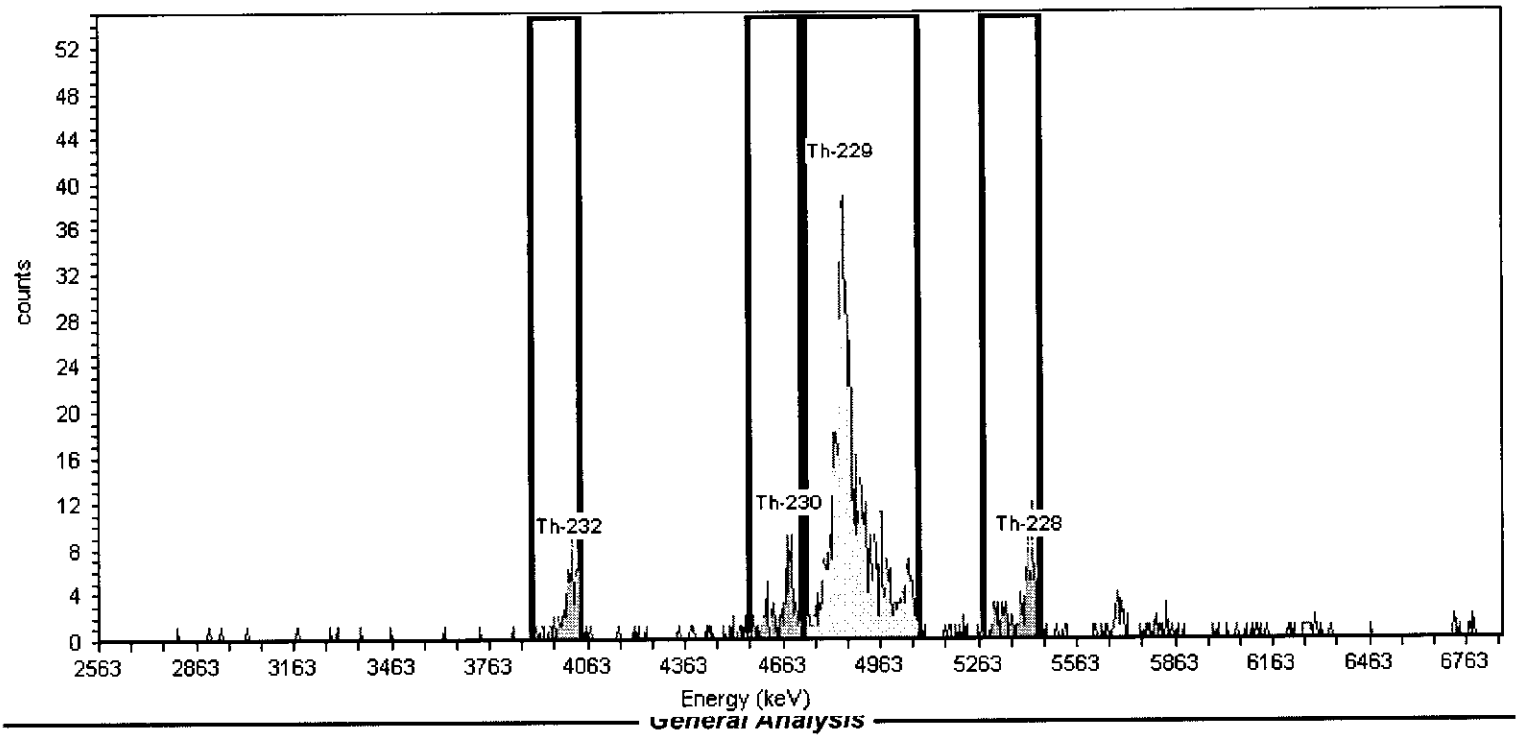
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 134.69%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/29/2010 7:53:32AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	18.628	100.0	71.88	3.0000	69	9.356E-001	4.072E-001	5.474E-002	1.462E-001
Th-230	4687.000	4561.000	4717.000	10.448	99.7	81.01	14.2393	67	9.097E-001	4.453E-001	1.196E-001	2.761E-001
Th-229	4845.000	4737.000	5080.000	46.734	99.6	721.99	24.0000	698	1.282E+001	1.584E+000	1.554E-001	3.478E-001
Th-228	5423.000	5280.000	5453.000	21.599	99.4	93.12	8.1151	85	1.162E+000	4.838E-001	9.057E-002	2.181E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:47PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

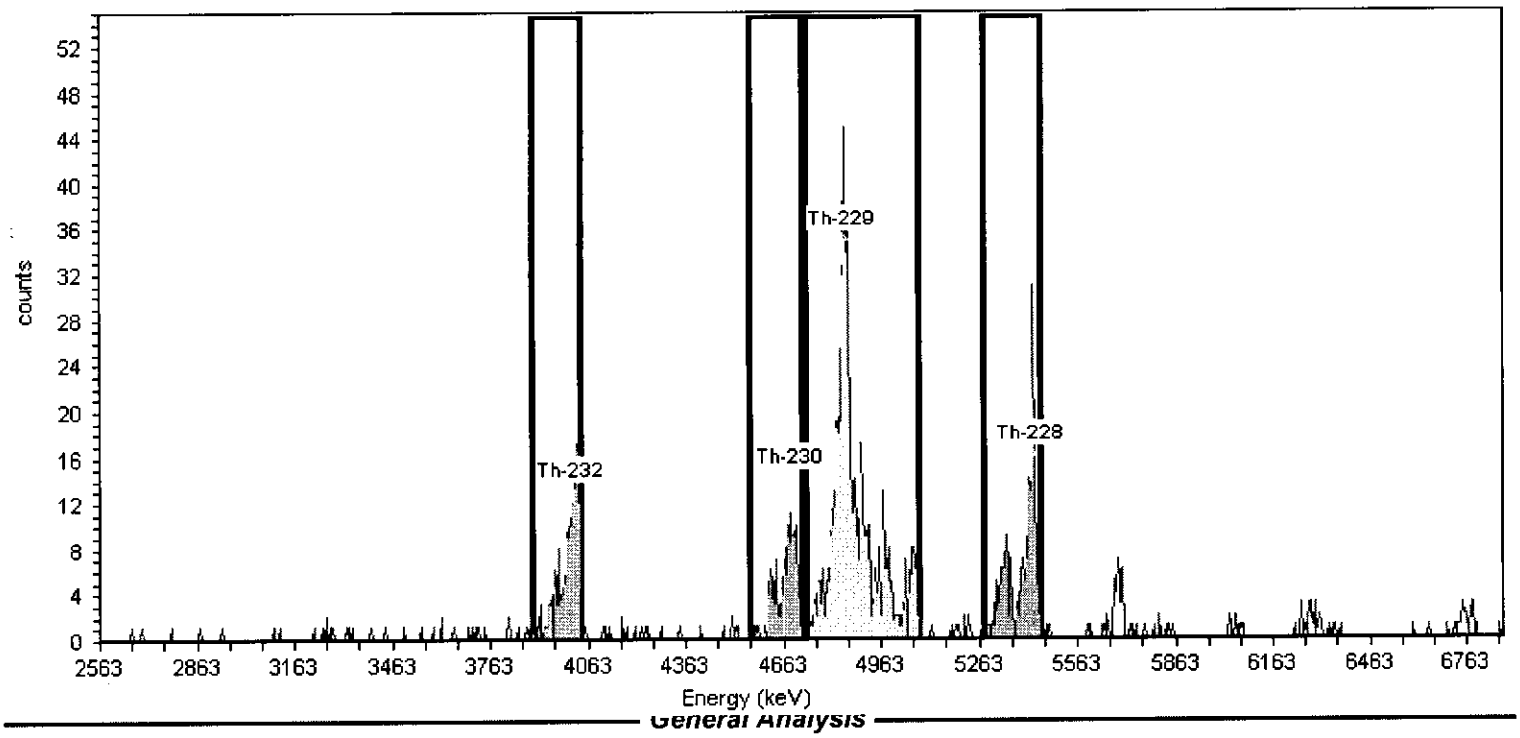
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 131.59%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/29/2010 7:53:35AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	.000	100.0	192.61	1.0000	192	2.648E+000	8.145E-001	3.215E-002	1.017E-001
Th-230	4687.000	4561.000	4717.000	27.752	99.7	137.41	7.0000	130	1.808E+000	6.354E-001	8.533E-002	2.082E-001
Th-229	4845.000	4737.000	5080.000	39.668	99.6	698.00	12.0000	686	1.253E+001	1.537E+000	1.118E-001	2.612E-001
Th-228	5423.000	5280.000	5453.000	8.184	99.4	221.88	12.0000	210	2.918E+000	8.991E-001	1.121E-001	2.617E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:43PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-04 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

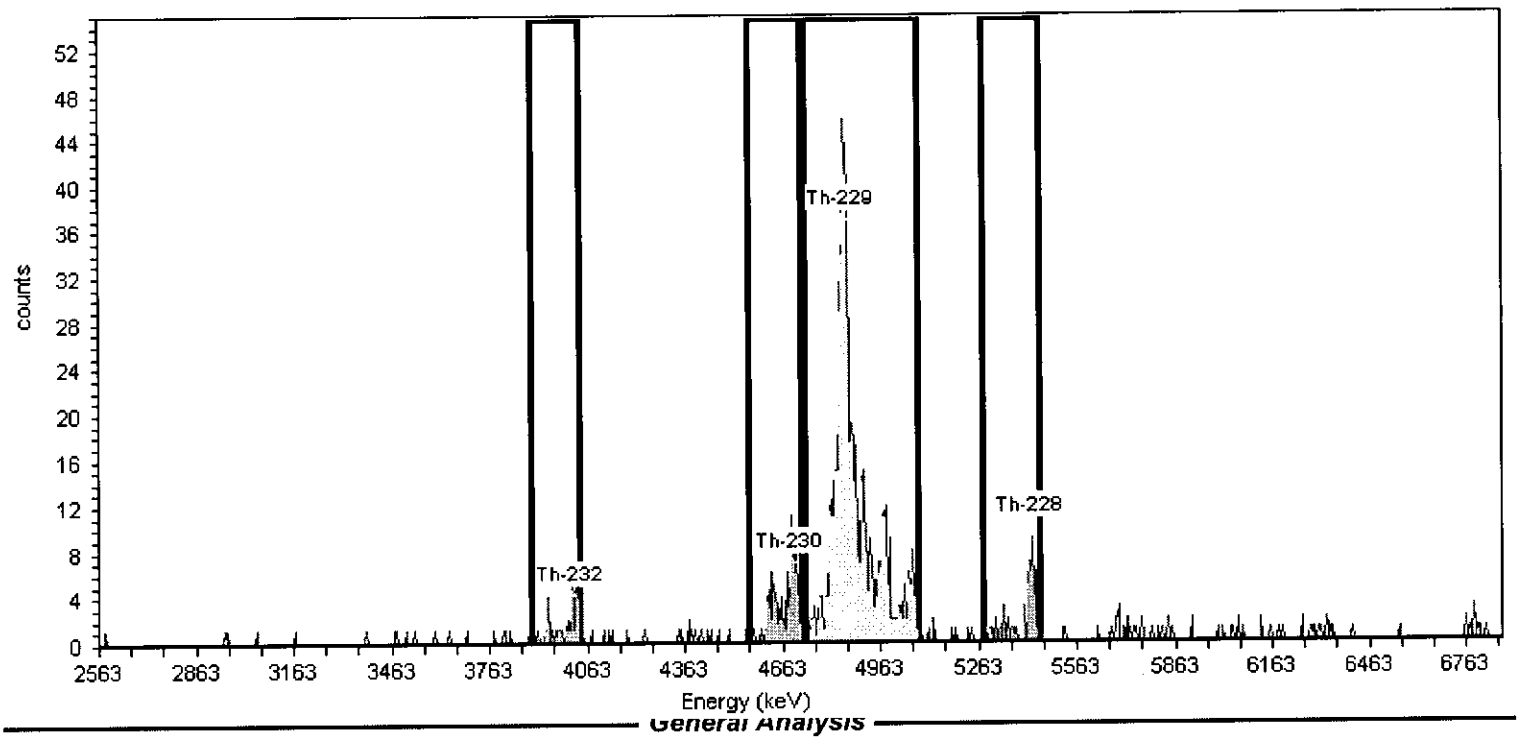
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 144.63%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 7/29/2010 7:53:38AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	19.368	100.0	44.08	5.0000	39	4.921E-001	2.849E-001	6.550E-002	1.651E-001
Th-230	4687.000	4561.000	4717.000	18.027	99.7	99.25	13.4175	86	1.084E+000	4.644E-001	1.076E-001	2.494E-001
Th-229	4845.000	4737.000	5080.000	38.734	99.6	765.67	12.6748	753	1.377E+001	1.619E+000	1.047E-001	2.436E-001
Th-228	5423.000	5280.000	5453.000	14.255	99.4	59.98	13.9753	46	5.827E-001	3.498E-001	1.102E-001	2.546E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:53:57PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

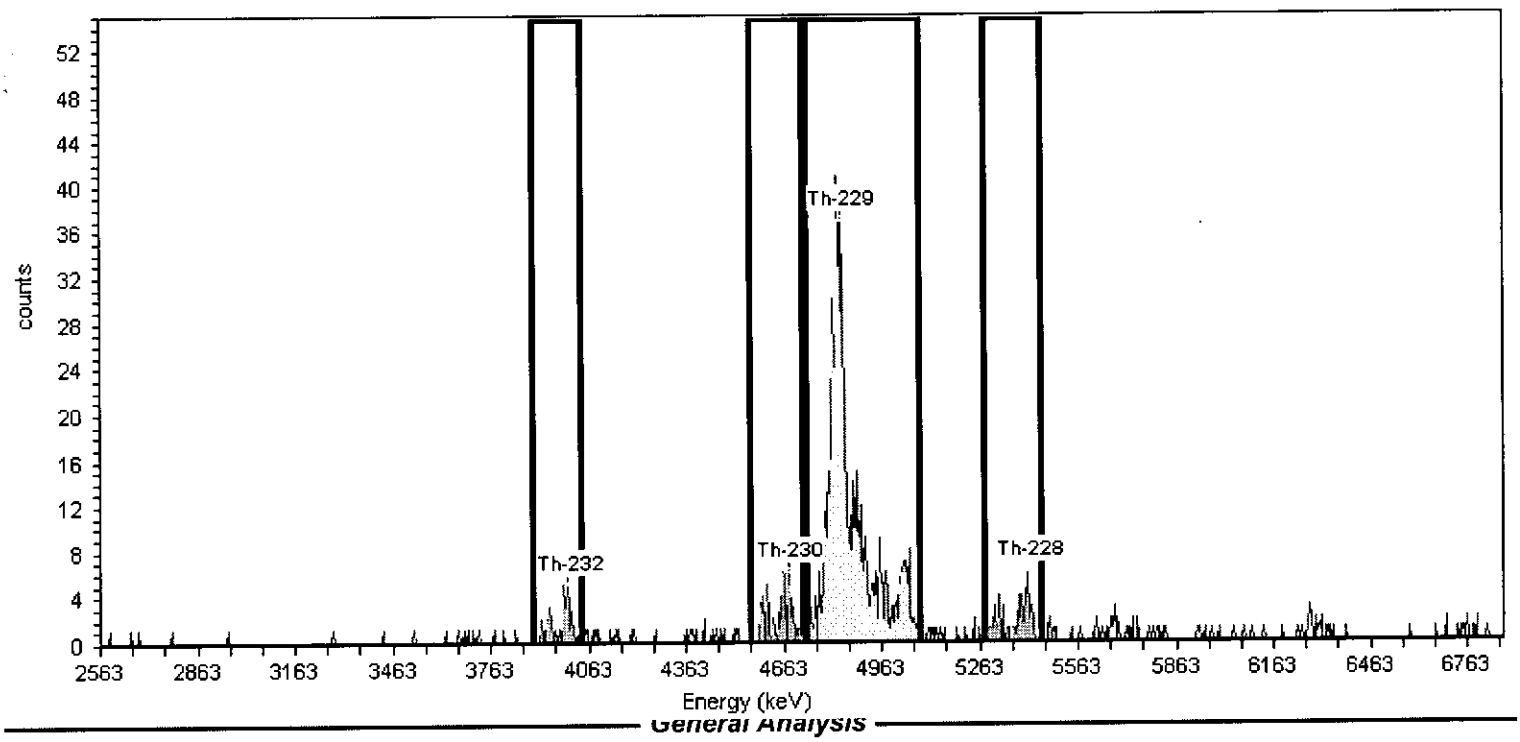
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 130.92%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 7/29/2010 7:53:41AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	29.348	100.0	45.96	4.0000	42	5.868E-001	3.228E-001	6.507E-002	1.680E-001
Th-230	4687.000	4561.000	4717.000	94.036	99.7	65.24	17.0000	48	6.766E-001	4.089E-001	1.345E-001	3.070E-001
Th-229	4845.000	4737.000	5080.000	43.597	99.6	686.00	8.0117	678	1.246E+001	1.530E+000	9.246E-002	2.229E-001
Th-228	5423.000	5280.000	5453.000	120.220	99.4	54.00	16.0000	38	5.346E-001	3.717E-001	1.309E-001	2.999E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:05PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

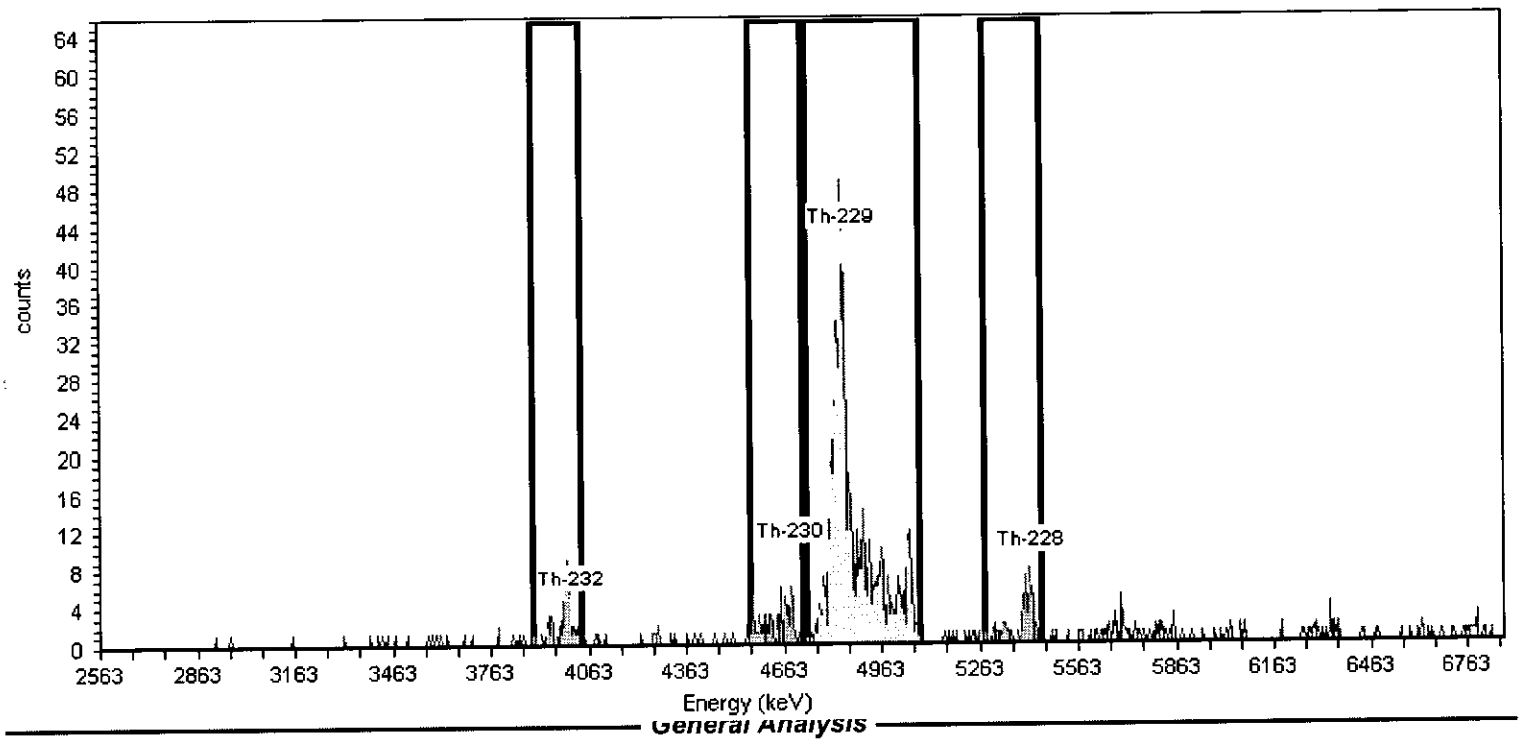
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 138.84%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 7/29/2010 7:53:43AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	28.472	100.0	62.64	3.8591	59	7.562E-001	3.544E-001	5.879E-002	1.524E-001
Th-230	4687.000	4561.000	4717.000	39.700	99.7	72.17	22.1716	50	6.452E-001	4.009E-001	1.413E-001	3.176E-001
Th-229	4845.000	4737.000	5080.000	45.862	99.6	760.01	23.0010	737	1.322E+001	1.587E+000	1.441E-001	3.232E-001
Th-228	5423.000	5280.000	5453.000	38.356	99.4	58.82	19.0000	40	5.154E-001	3.601E-001	1.312E-001	2.975E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:09PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

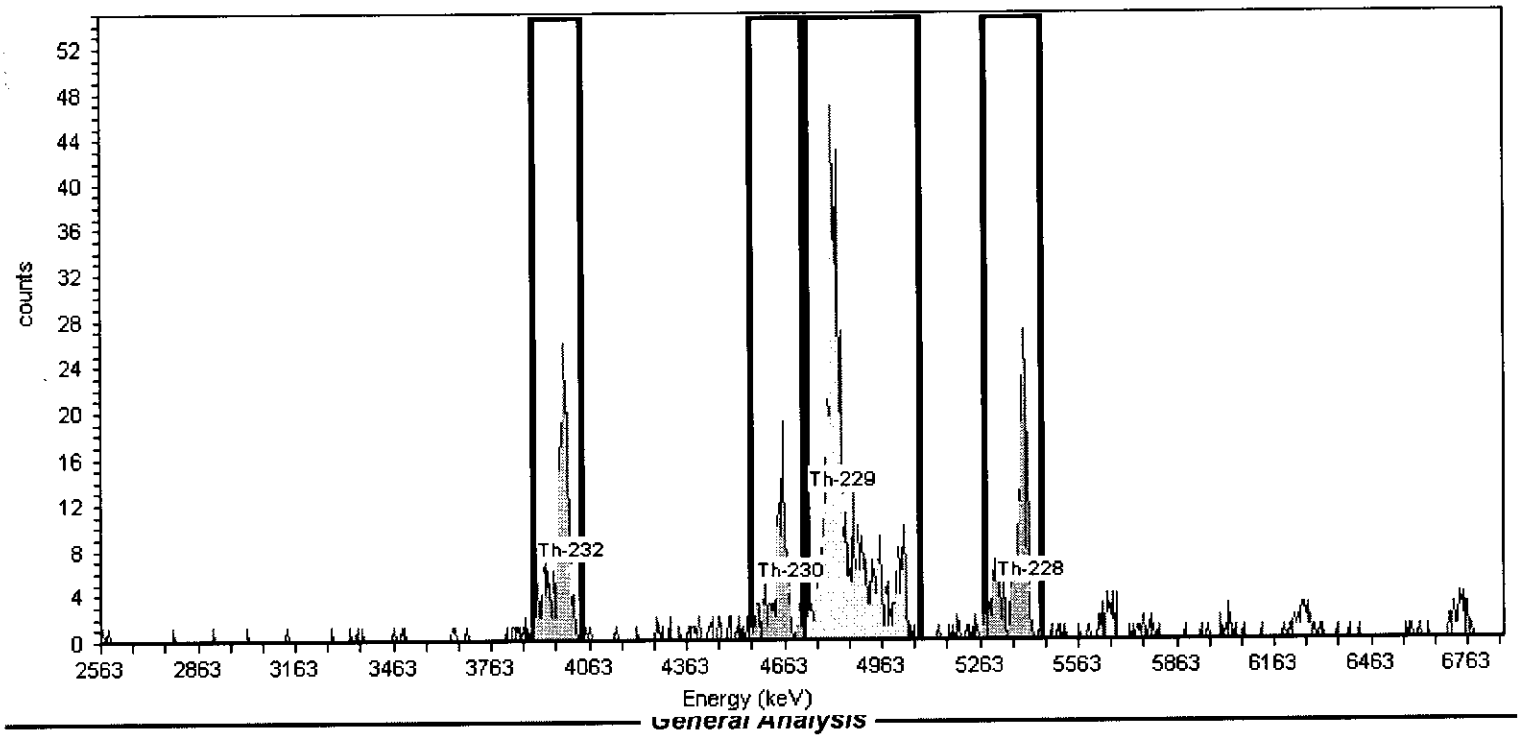
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 132.11%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 7/29/2010 7:53:45AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	35.567	100.0	233.40	4.0000	229	3.297E+000	9.813E-001	6.688E-002	1.726E-001
Th-230	4687.000	4561.000	4717.000	36.675	99.7	143.84	16.0000	128	1.843E+000	6.796E-001	1.342E-001	3.073E-001
Th-229	4845.000	4737.000	5080.000	43.237	99.6	675.33	15.6631	660	1.258E+001	1.582E+000	1.329E-001	3.048E-001
Th-228	5423.000	5280.000	5453.000	31.562	99.4	218.82	5.0000	214	3.092E+000	9.379E-001	7.522E-002	1.896E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 12:54:13PM 7/29/2010

Sample

Sample: L83112-08 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

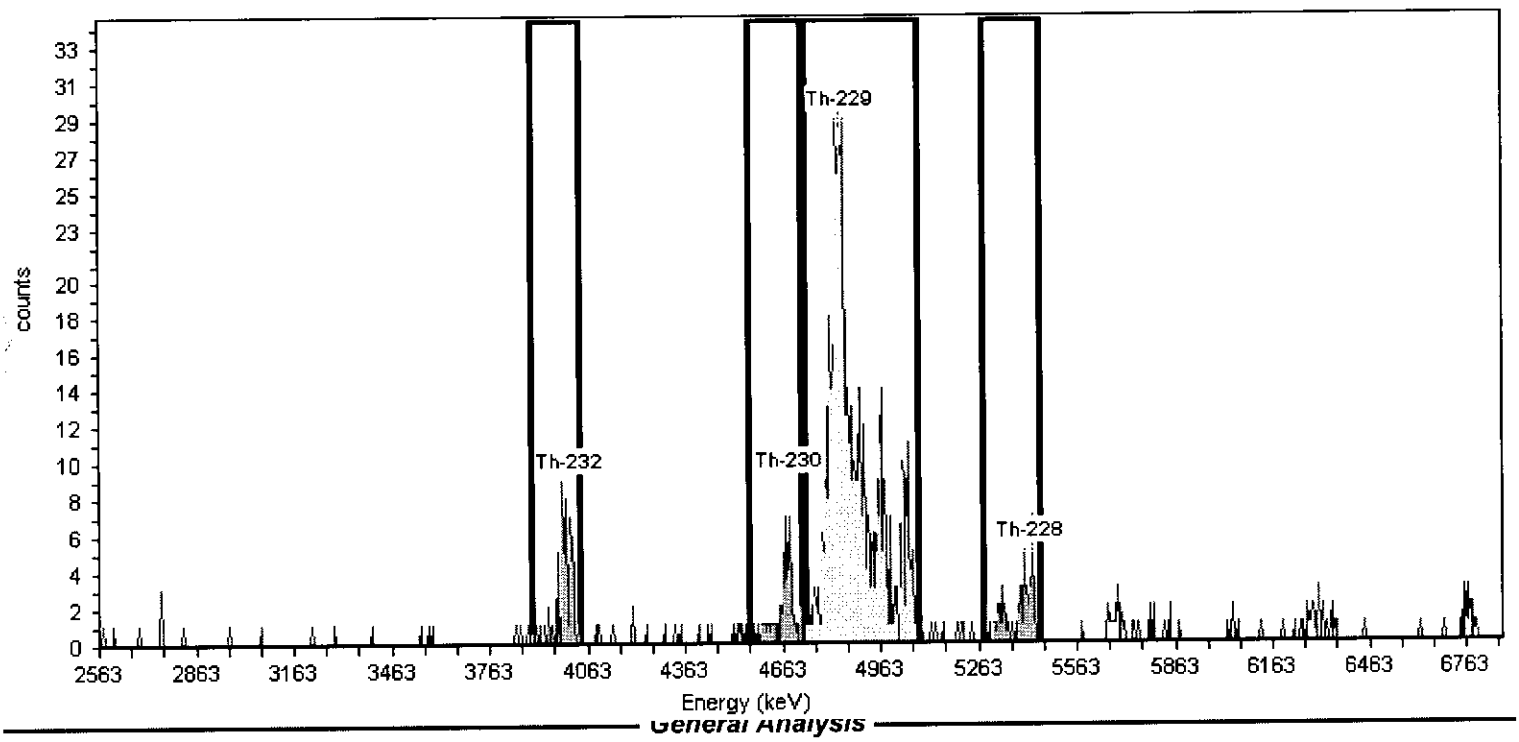
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 129.66%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 7/29/2010 7:53:47AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	40.661	100.0	67.82	2.0409	66	9.556E-001	4.202E-001	4.828E-002	1.359E-001
Th-230	4687.000	4561.000	4717.000	30.712	99.7	45.00	12.4175	33	4.748E-001	3.472E-001	1.194E-001	2.783E-001
Th-229	4845.000	4737.000	5080.000	49.659	99.6	667.00	14.3252	653	1.234E+001	1.557E+000	1.284E-001	2.963E-001
Th-228	5423.000	5280.000	5453.000	8.392	99.4	54.18	7.7944	46	6.779E-001	3.758E-001	9.492E-002	2.294E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:17PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

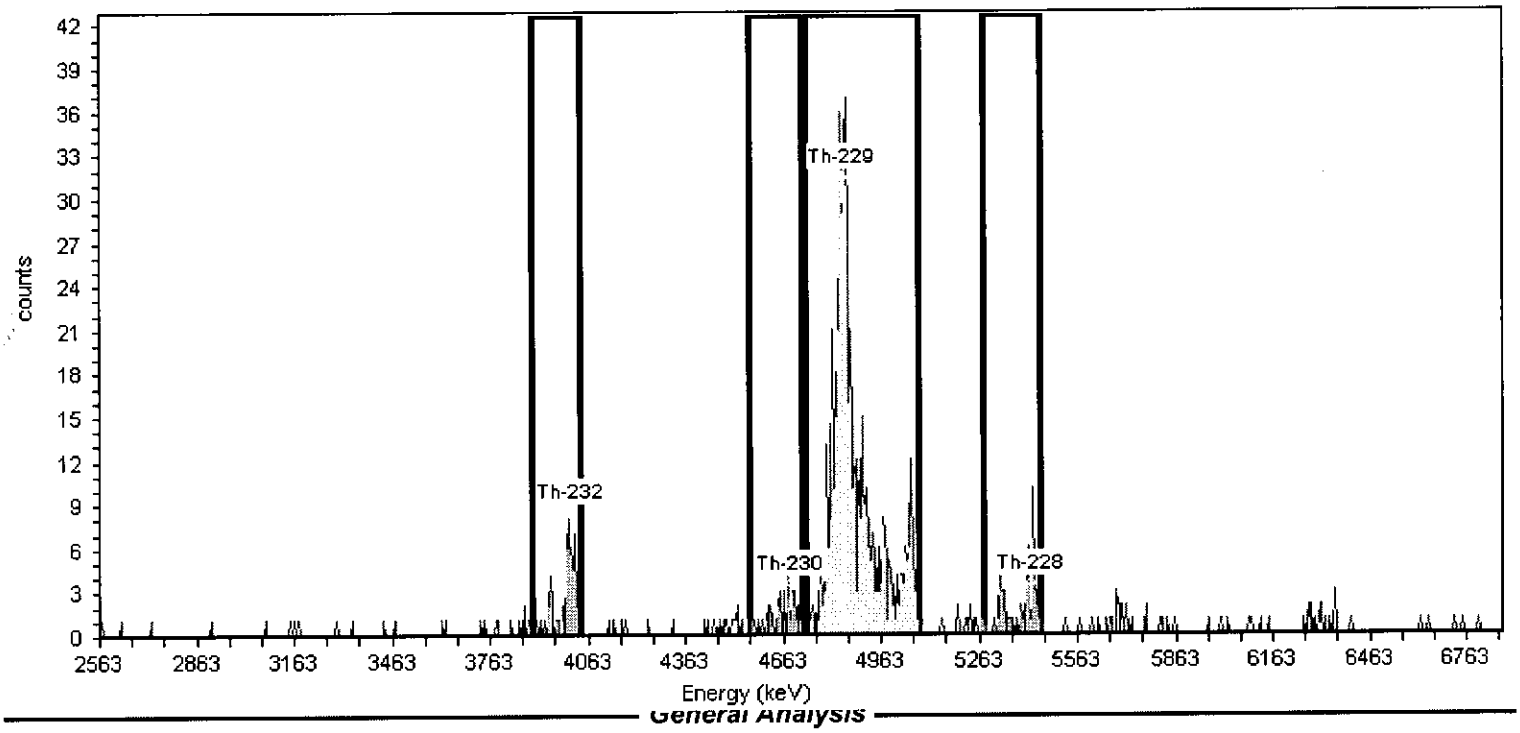
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 133.10%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 7/29/2010 7:53:49AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	23.406	100.0	65.00	4.0409	61	8.709E-001	4.038E-001	6.681E-002	1.723E-001
Th-230	4687.000	4561.000	4717.000	19.912	99.7	47.00	11.0000	36	5.159E-001	3.463E-001	1.106E-001	2.599E-001
Th-229	4845.000	4737.000	5080.000	47.223	99.6	678.00	14.3252	664	1.267E+001	1.587E+000	1.263E-001	2.914E-001
Th-228	5423.000	5280.000	5453.000	7.715	99.4	66.79	9.7039	57	8.205E-001	4.176E-001	1.042E-001	2.472E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:21PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-10 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

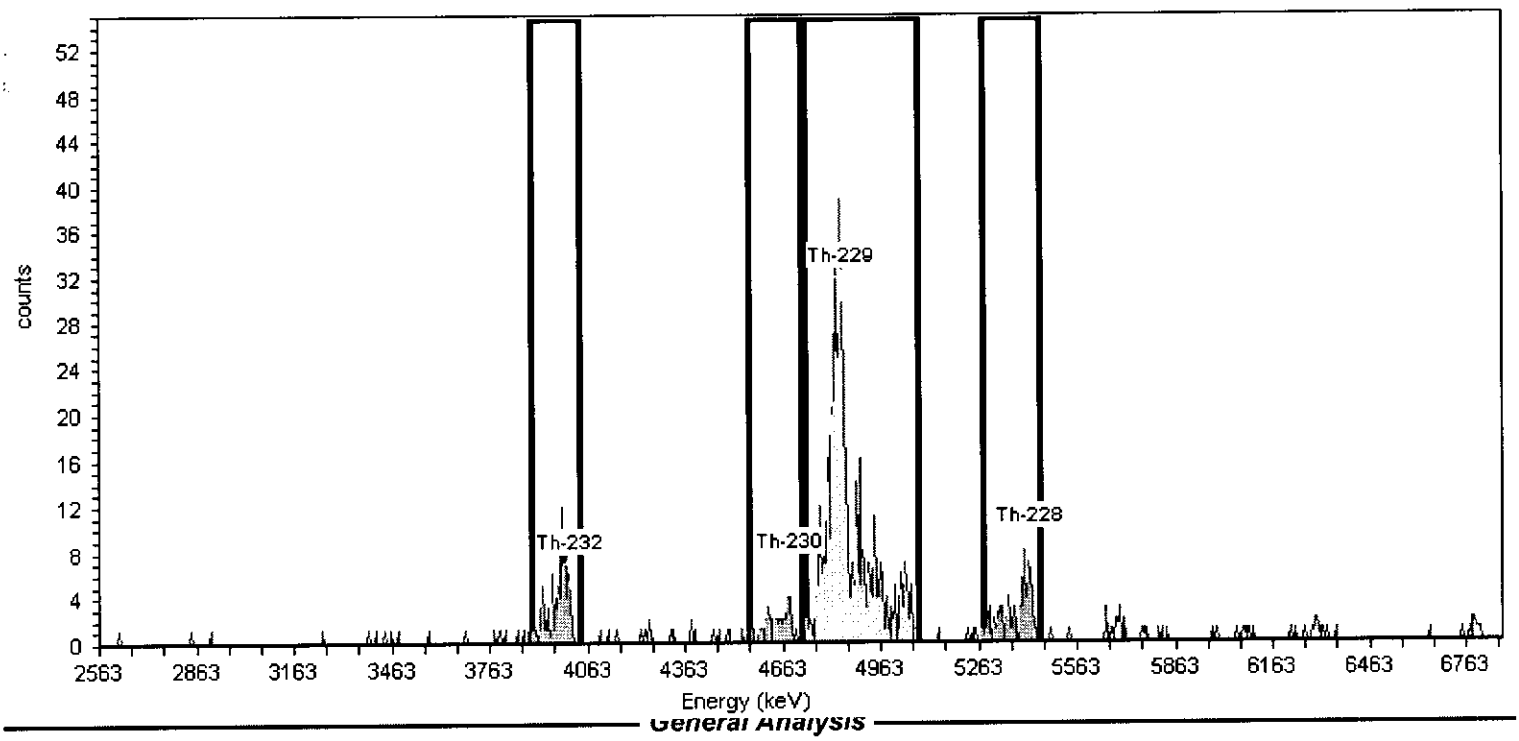
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 120.43%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 7/29/2010 7:53:29AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	40.242	100.0	96.18	7.0000	89	1.372E+000	5.585E-001	9.468E-002	2.310E-001
Th-230	4687.000	4561.000	4717.000	88.372	99.7	44.58	14.0000	31	4.719E-001	3.694E-001	1.343E-001	3.104E-001
Th-229	4845.000	4737.000	5080.000	47.789	99.6	632.35	16.0000	616	1.147E+001	1.489E+000	1.437E-001	3.293E-001
Th-228	5423.000	5280.000	5453.000	39.444	99.4	92.91	13.8849	79	1.223E+000	5.509E-001	1.342E-001	3.102E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:24PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-11 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

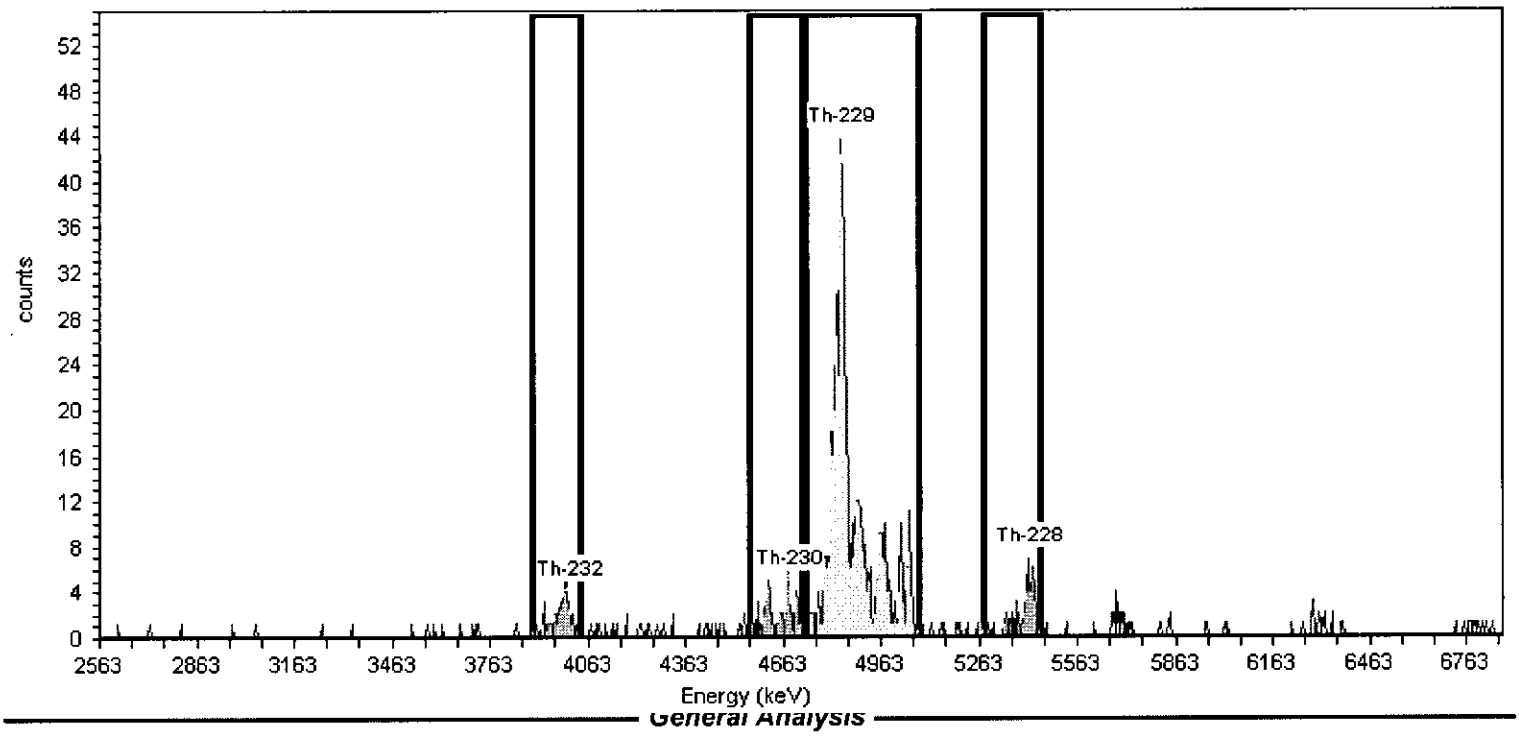
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 127.21%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 7/29/2010 7:53:31AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	32.147	100.0	47.82	3.0000	45	6.498E-001	3.413E-001	5.842E-002	1.561E-001
Th-230	4687.000	4561.000	4717.000	21.724	99.7	60.41	18.0000	42	6.167E-001	4.093E-001	1.435E-001	3.264E-001
Th-229	4845.000	4737.000	5080.000	40.235	99.6	674.34	20.3496	654	1.211E+001	1.537E+000	1.528E-001	3.449E-001
Th-228	5423.000	5280.000	5453.000	20.379	99.4	57.09	8.0000	49	7.160E-001	3.864E-001	9.597E-002	2.314E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
12:54:28PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-12 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 002
:
Description: WG286738

Client Name: Undefined
Client Contact:

Tracer

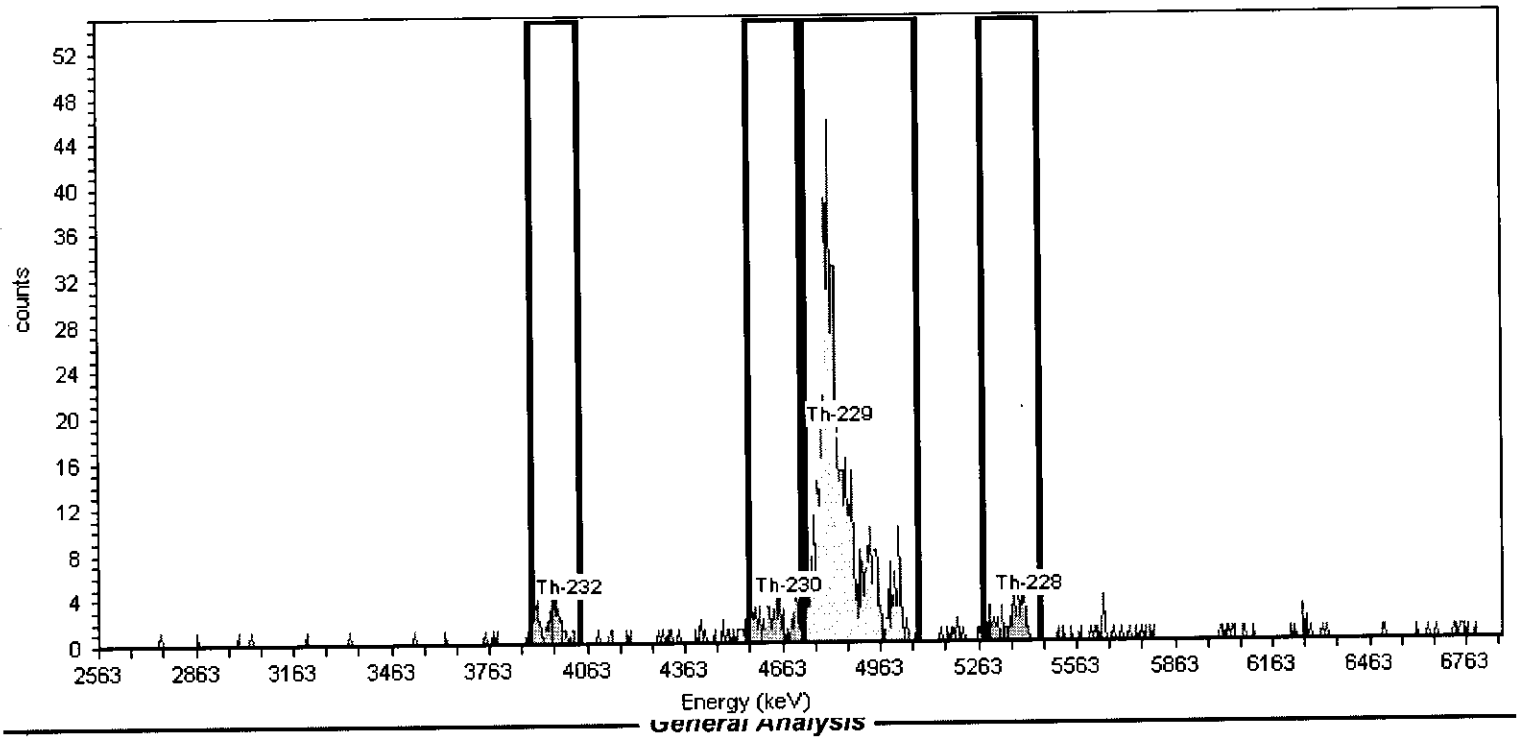
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.39%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 7/29/2010 7:53:33AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 017
Efficiency Calibration:2010.07.26 017
Calibration Date: 7/26/2010 10:20:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.77% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 7:49:35AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	21.487	100.0	42.36	2.0000	40	5.137E-001	2.772E-001	4.187E-002	1.182E-001
Th-230	4687.000	4561.000	4717.000	66.114	99.7	68.58	16.0000	53	6.712E-001	3.806E-001	1.188E-001	2.721E-001
Th-229	4845.000	4737.000	5080.000	43.905	99.6	757.64	12.6748	745	1.403E+001	1.661E+000	1.058E-001	2.463E-001
Th-228	5423.000	5280.000	5453.000	103.633	99.4	53.00	6.0905	47	6.006E-001	3.222E-001	7.351E-002	1.817E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:00:24PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-13 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

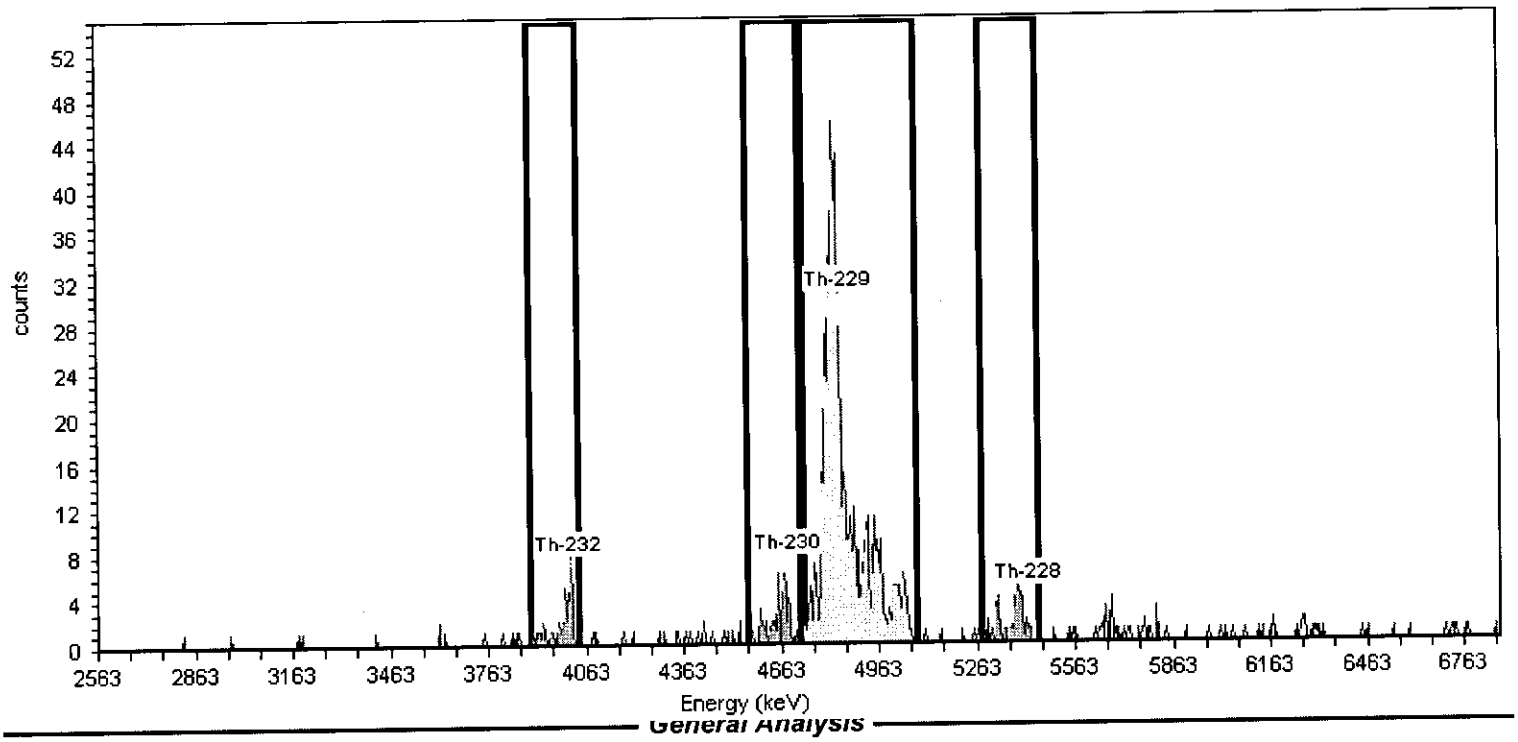
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 148.20%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 7/29/2010 2:00:12PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	7.574	100.0	43.22	1.0000	42	5.201E-001	2.697E-001	2.866E-002	9.065E-002
Th-230	4687.000	4561.000	4717.000	37.209	99.7	58.16	21.4109	37	4.541E-001	3.446E-001	1.330E-001	2.994E-001
Th-229	4845.000	4737.000	5080.000	44.084	99.6	783.67	14.0000	770	1.411E+001	1.645E+000	1.077E-001	2.488E-001
Th-228	5423.000	5280.000	5453.000	29.676	99.4	52.00	12.0000	40	4.957E-001	3.157E-001	9.987E-002	2.333E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:00:27PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-14 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

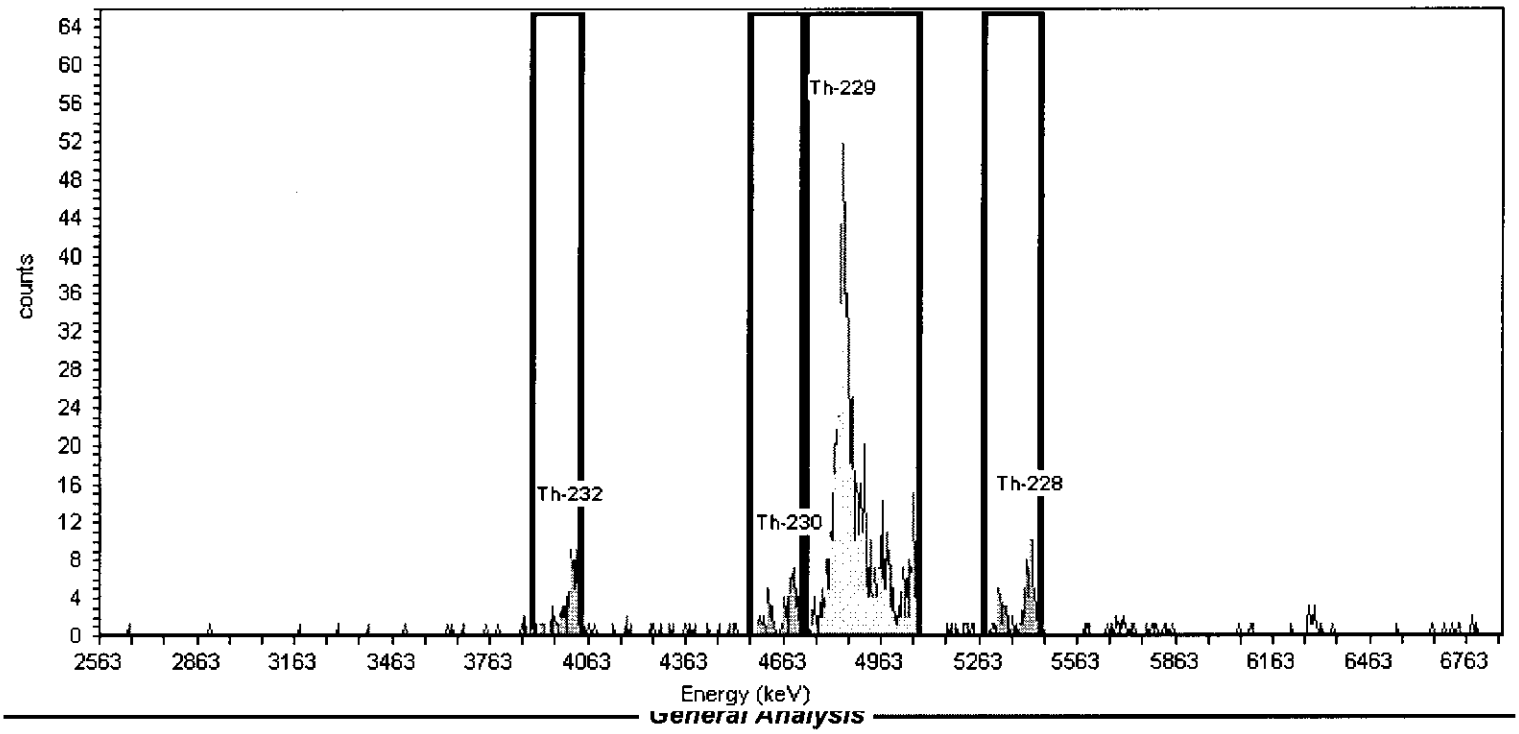
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 148.60%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 7/29/2010 2:00:01PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	19.126	100.0	77.70	3.0000	75	8.864E-001	3.714E-001	4.782E-002	1.277E-001
Th-230	4687.000	4561.000	4717.000	22.088	99.7	64.00	31.4109	33	3.879E-001	3.584E-001	1.552E-001	3.426E-001
Th-229	4845.000	4737.000	5080.000	46.197	99.6	823.00	24.0000	799	1.415E+001	1.636E+000	1.358E-001	3.038E-001
Th-228	5423.000	5280.000	5453.000	26.648	99.4	91.12	9.8849	81	9.698E-001	4.150E-001	8.732E-002	2.069E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:00:34PM 7/29/2010

Analyst: ORTEC

Sample

Sample: L83112-15 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

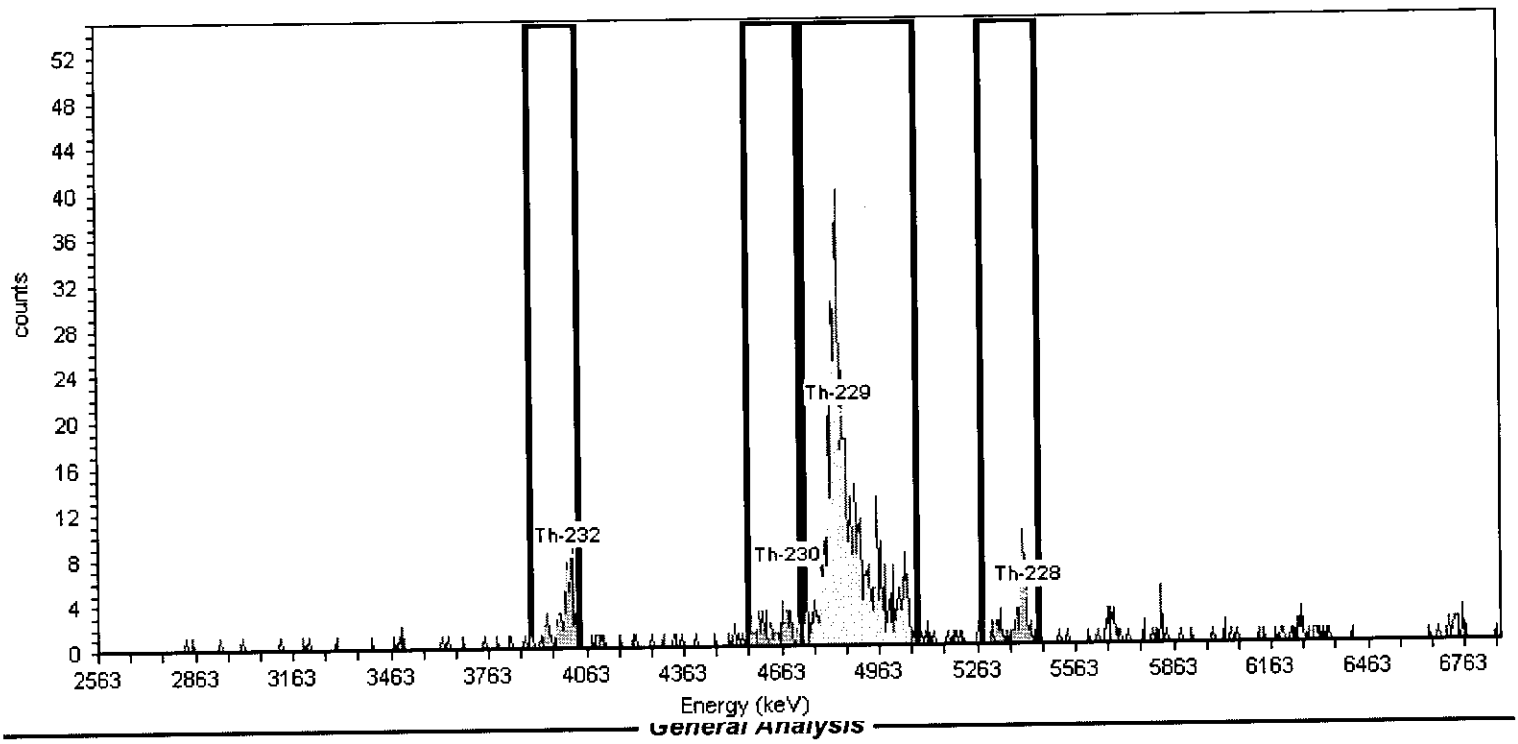
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 122.77%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 7/29/2010 2:00:03PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	10.468	100.0	73.00	1.0000	72	1.057E+000	4.442E-001	3.415E-002	1.080E-001
Th-230	4687.000	4561.000	4717.000	30.266	99.7	49.00	25.0000	24	3.533E-001	3.878E-001	1.712E-001	3.823E-001
Th-229	4845.000	4737.000	5080.000	45.196	99.6	662.65	16.6748	646	1.169E+001	1.483E+000	1.400E-001	3.199E-001
Th-228	5423.000	5280.000	5453.000	30.015	99.4	61.18	8.0000	53	7.853E-001	4.068E-001	9.716E-002	2.343E-001

AlphaVision v5.3

Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

7:00:38PM 7/29/2010

Sample

Sample: L83112-16 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

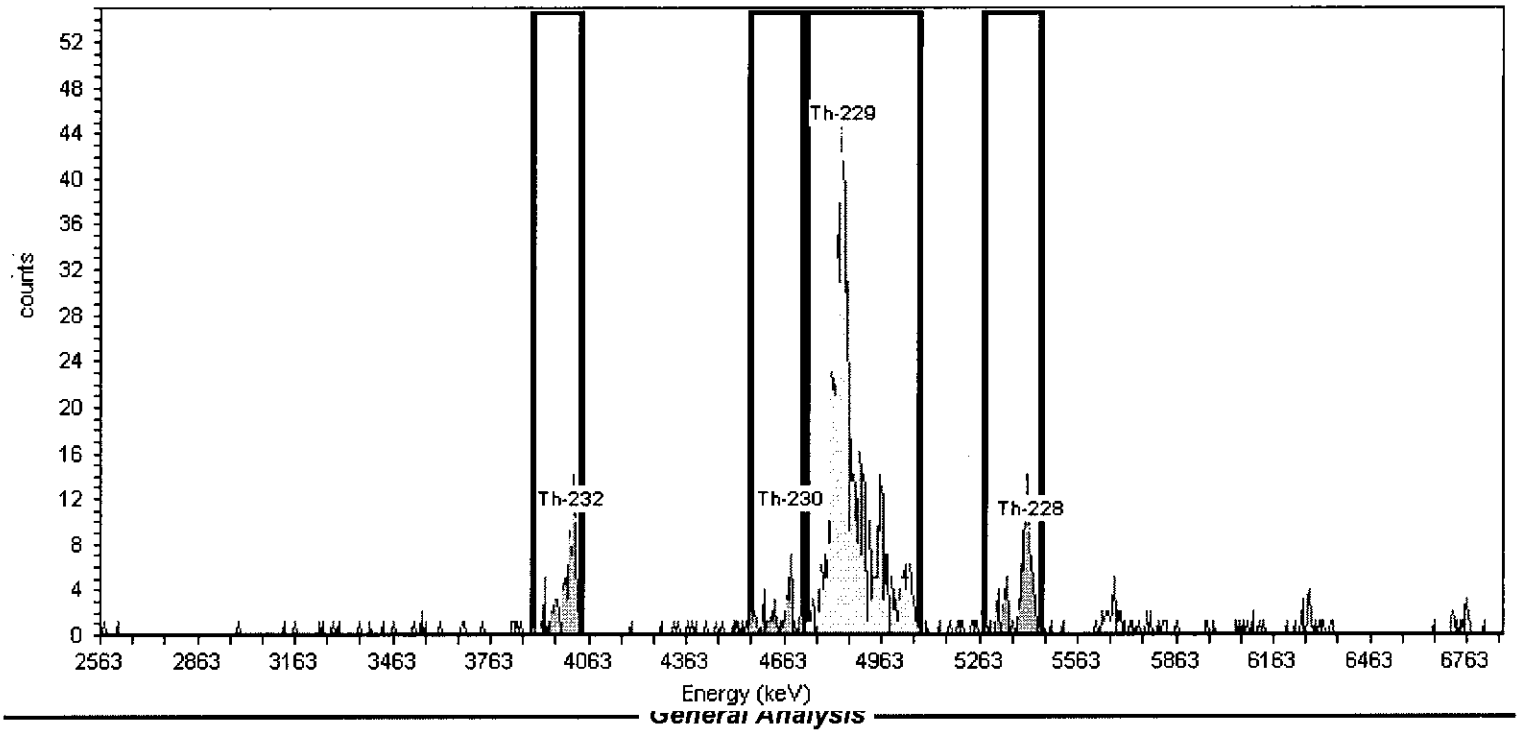
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 148.75%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 7/29/2010 2:00:05PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	12.677	100.0	96.82	3.8182	93	1.137E+000	4.407E-001	5.557E-002	1.442E-001
Th-230	4687.000	4561.000	4717.000	19.174	99.7	46.84	24.4109	22	2.750E-001	3.160E-001	1.409E-001	3.150E-001
Th-229	4845.000	4737.000	5080.000	44.172	99.6	789.34	13.6631	776	1.416E+001	1.644E+000	1.055E-001	2.443E-001
Th-228	5423.000	5280.000	5453.000	41.371	99.4	100.09	5.1151	95	1.168E+000	4.531E-001	6.470E-002	1.627E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 7:00:42PM 7/29/2010

Sample

Sample: dup 1 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

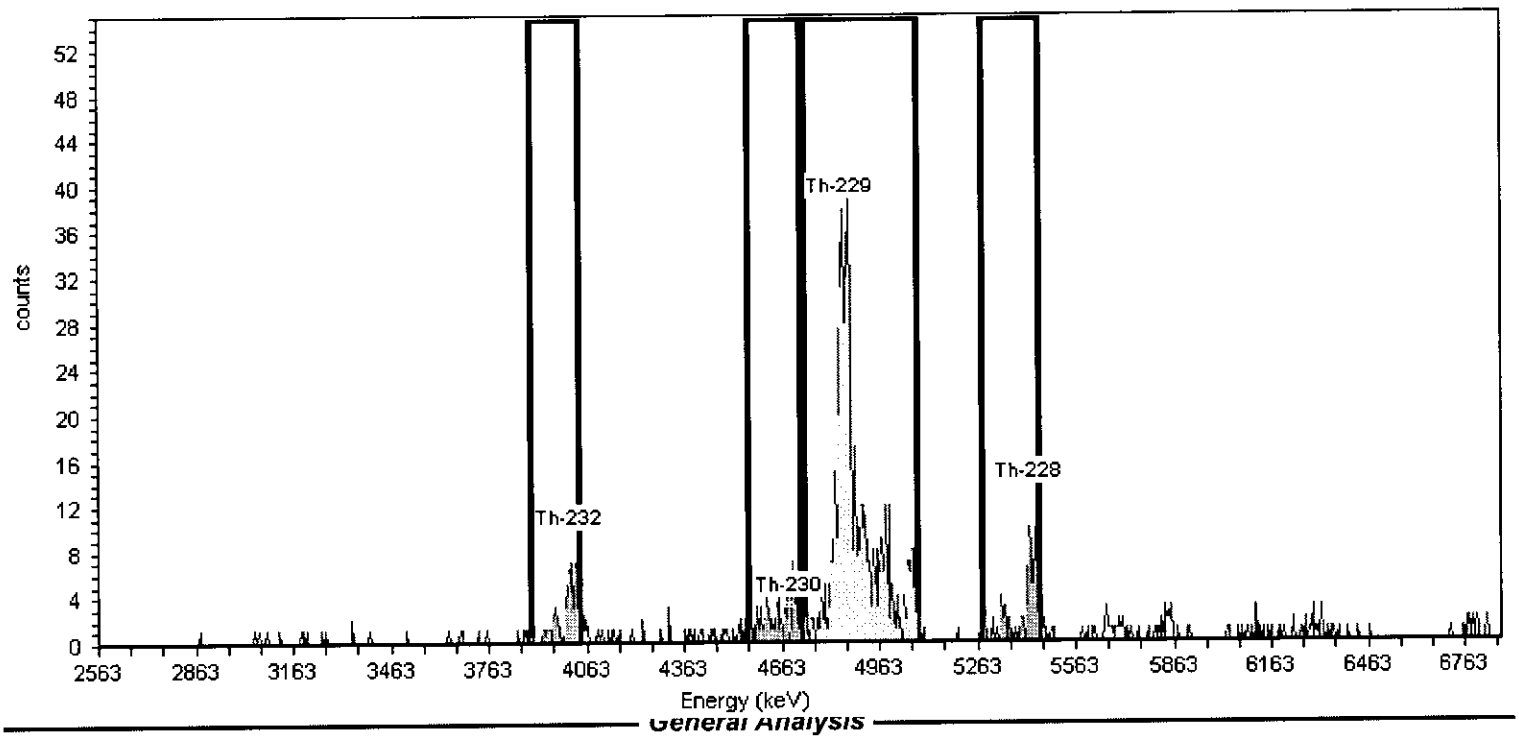
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 128.03%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 7/29/2010 2:00:07PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	24.065	100.0	68.74	5.2226	64	8.886E-001	4.096E-001	7.438E-002	1.866E-001
Th-230	4687.000	4561.000	4717.000	21.402	99.7	72.00	25.5891	46	6.513E-001	4.394E-001	1.651E-001	3.683E-001
Th-229	4845.000	4737.000	5080.000	46.178	99.6	695.69	18.0000	678	1.219E+001	1.514E+000	1.387E-001	3.153E-001
Th-228	5423.000	5280.000	5453.000	19.927	99.4	84.88	15.0905	70	9.824E-001	4.734E-001	1.272E-001	2.925E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:00:11PM 7/29/2010

Analyst: ORTEC

Sample

Sample: dup 2 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

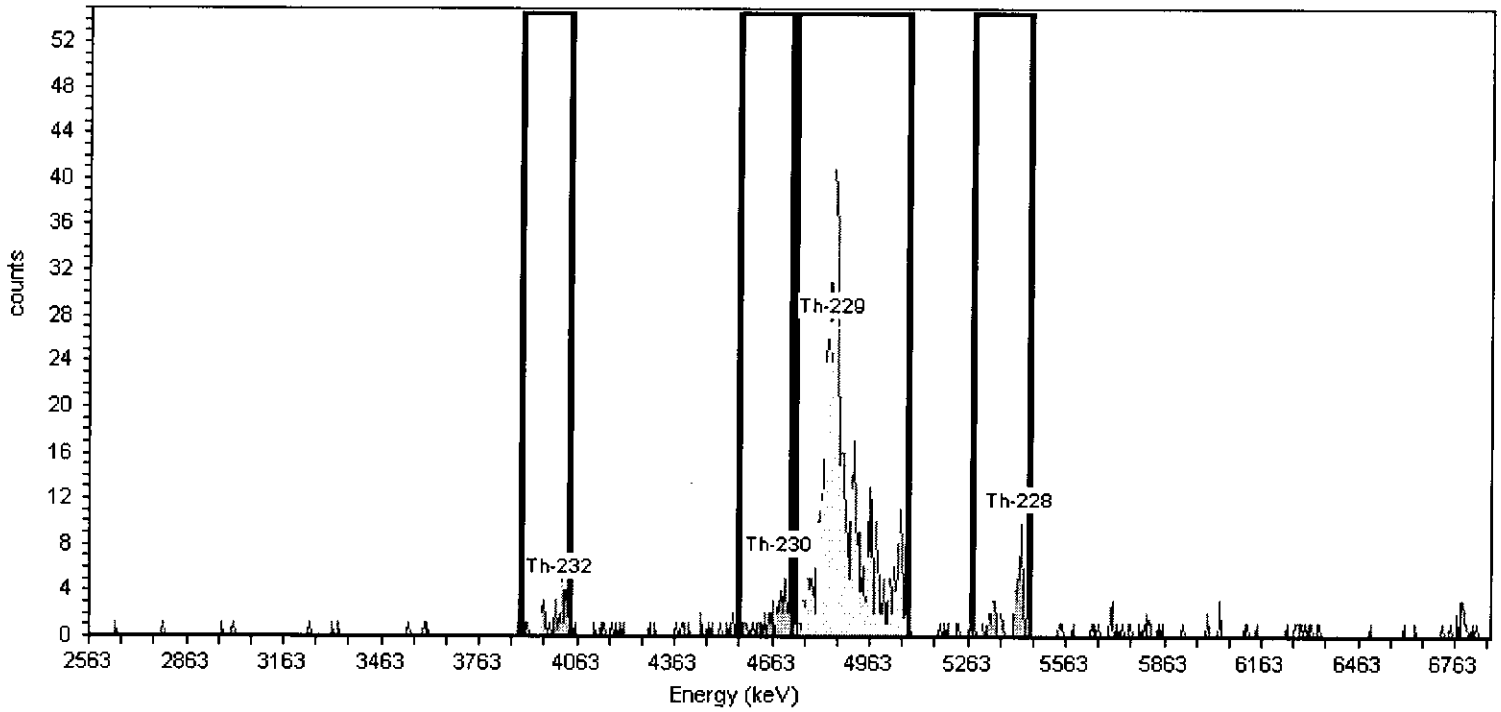
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 142.60%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 7/29/2010 2:00:09PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	25.688	100.0	36.96	3.0000	34	4.357E-001	2.608E-001	5.170E-002	1.381E-001
Th-230	4687.000	4561.000	4717.000	16.334	99.7	43.41	14.2393	29	3.754E-001	3.041E-001	1.130E-001	2.608E-001
Th-229	4845.000	4737.000	5080.000	50.776	99.6	763.01	24.0000	739	1.358E+001	1.632E+000	1.468E-001	3.285E-001
Th-228	5423.000	5280.000	5453.000	6.856	99.4	53.07	8.1151	45	5.802E-001	3.277E-001	8.554E-002	2.060E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:00:15PM 7/29/2010

Analyst: ORTEC

Sample

Sample: ms Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.07.29 003
:
Description: wg286738

Client Name: Undefined
Client Contact:

Tracer

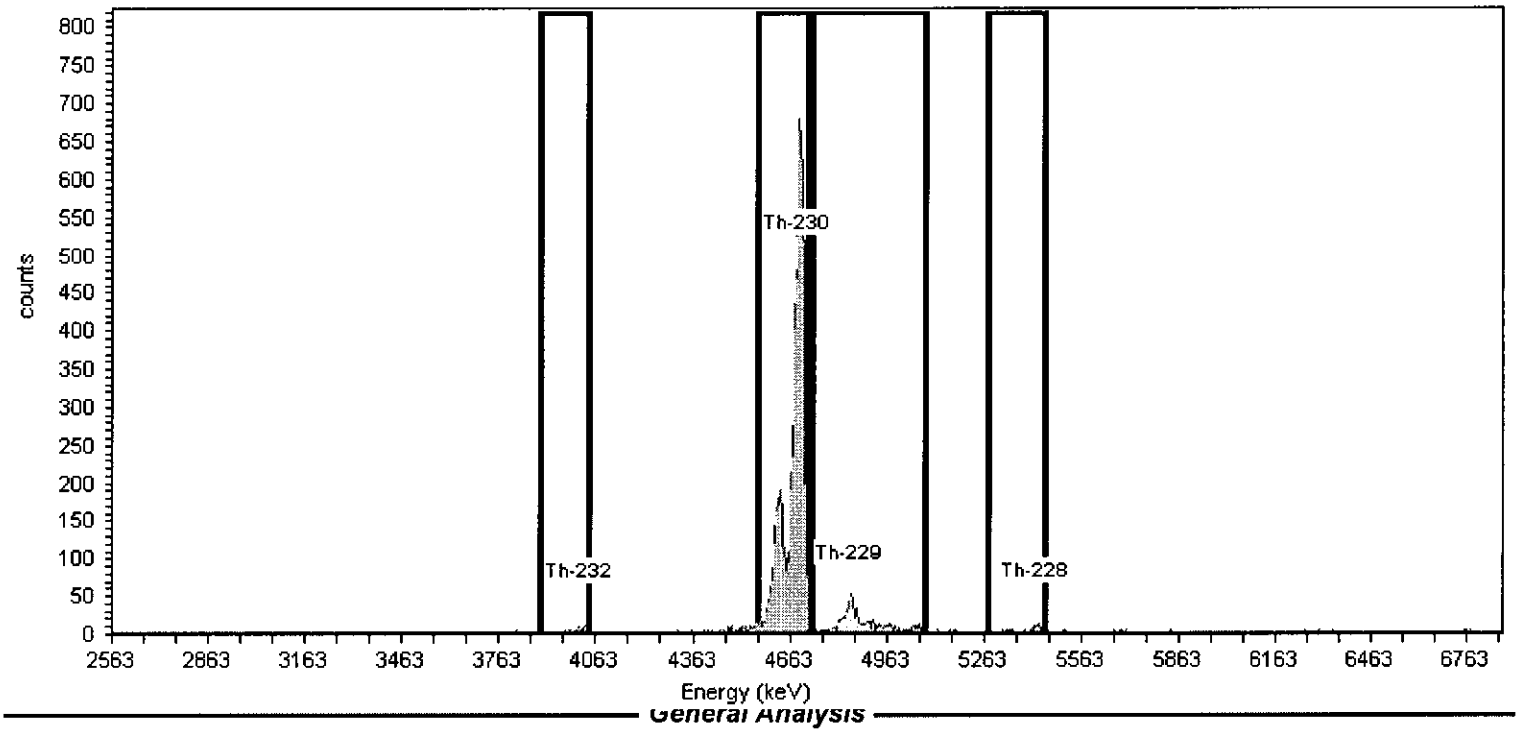
Tracer Name: RCO61002-1
Tracer Activity: 9.52 DPM/mL x (Vol.)1.00 mL = 9.52 DPM
Tracer Ref. Date: 2/1/2005 12:09:33PM

Tracer Nuclide: Th-229
Tracer Recovery: 147.64%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 7/29/2010 2:00:11PM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = thorium 229
Decay Correction:7/29/2010 1:58:12PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: thorium 229
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity DPM	3.00Sigma TPU DPM	Critical Level DPM	MDA DPM
Th-232	4010.000	3893.000	4040.000	21.910	100.0	64.04	1.0000	63	7.766E-001	3.411E-001	2.866E-002	9.065E-002
Th-230	4687.000	4561.000	4717.000	22.734	99.7	6,959.73	7.0000	6,953	8.591E+001	1.860E+001	7.605E-002	1.855E-001
Th-229	4845.000	4737.000	5080.000	42.283	99.6	781.66	12.0000	770	1.406E+001	1.635E+000	9.968E-002	2.328E-001
Th-228	5423.000	5280.000	5453.000	14.472	99.4	69.00	12.0000	57	7.064E-001	3.671E-001	9.988E-002	2.333E-001

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG287330

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: ANALYTICAL

Project:
SDG#:
SOP#: SOPRC017

Analyst: MWM
Dept: 55
Prep Date: 7/27/2010
Analysis Date: 8/3/2010
Start Time:
End Time:
Approved: MWM 8-5 10
Approved:

Seq #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 Error pCi/g	LLD (+ -)	LLD pCi/g
1	WG286762PBS		0.5000	8.9993	9.0172	**0.0179**	**0.803**	**0.8950**	1.02	1.40	4.07
2	WG286762LCSS	RC100623-1	0.5000	9.0348	9.0524	**0.0176**	**0.789**	**0.8800**	59.70	2.71	4.37
3	L83112-01	BG-1 0-2 COMP	0.4938	9.0767	9.0939	**0.0172**	**0.771**	**0.8600**	3.27	1.45	4.01
4	L83112-02	BG-1 2-12 COMP	0.4943	9.0256	9.0434	**0.0178**	**0.798**	**0.8900**	0.00	1.64	4.87
5	L83112-03	BG-1 12-18 COMP	0.4893	9.0129	9.0328	**0.0199**	**0.892**	**0.9950**	2.40	1.40	3.95
6	L83112-04	BG-2 0-2 COMP	0.4911	9.0358	9.0542	**0.0184**	**0.825**	**0.9200**	1.86	1.35	3.83
7	L83112-05	BG-2 2-12 COMP	0.4887	9.017	9.0356	**0.0186**	**0.834**	**0.9300**	0.57	1.32	3.86
8	L83112-06	BG-2 12-18 COMP	0.4892	9.0072	9.0246	**0.0174**	**0.780**	**0.8700**	0.00	1.46	4.34
9	L83112-07	BG-100 0-2 COMP	0.4947	9.0029	9.0211	**0.0182**	**0.816**	**0.9100**	0.96	1.46	4.25
10	L83112-08	BG-3 0-2 COMP	0.4919	8.9852	9.003	**0.0178**	**0.798**	**0.8900**	0.00	1.57	4.63
11	L83112-09	BG-3 2-12 COMP	0.4903	9.0406	9.0591	**0.0185**	**0.830**	**0.9250**	0.12	1.36	3.99
12	L83112-10	BG-3 12-18 COMP	0.4884	8.9989	9.0174	**0.0185**	**0.830**	**0.9250**	0.00	1.43	4.23
13	L83112-11	BG-4 0-2 COMP	0.4944	8.9684	8.989	**0.0206**	**0.924**	**1.0300**	0.48	1.14	3.32
14	L83112-12	BG-4 2-12 COMP	0.4953	9.0085	9.0261	**0.0176**	**0.789**	**0.8800**	0.00	1.66	4.88
15	L83112-13	BG-4 12-18 COMP	0.4956	9.0254	9.0422	**0.0168**	**0.753**	**0.8400**	1.30	1.59	4.59
16	L83112-14	BG-6 0-2 COMP	0.4958	9.015	9.034	**0.0190**	**0.852**	**0.9500**	0.54	1.25	3.65
17	L83112-15	BG-6 2-12 COMP	0.4943	9.0515	9.068	**0.0165**	**0.740**	**0.8250**	0.95	1.48	4.28
18	L83112-16	BG-6 12-18 COMP	0.4935	9.0157	9.0347	**0.0190**	**0.852**	**0.9500**	0.12	1.33	3.92
19	L83112-01DUP		0.4938	8.9791	8.9972	**0.0181**	**0.812**	**0.9050**	0.00	1.44	4.25
20	L83112-16DUP		0.4935	9.0187	9.0359	**0.0172**	**0.771**	**0.8600**	0.00	1.62	4.74
21	L83112-14MS	RC100623-1	0.4958	8.9958	9.0137	**0.0179**	**0.803**	**0.8950**	54.82	2.58	4.05
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

MWM 8/6/10

Seq #	ACZ Sample No.	GR CPM Beta	Det #	BG β	NET CPM β	ADJ CPM β	Start Ingrow	Analysis Time	Ingrow minutes	Efficiency Beta	Det #	Det BG β
1	*WG286762PBS*	1.95	2	1.79	0.164	0.16	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	1	2.24
2	*WG286762LCSS*	11.46	3	1.99	9.47	9.47	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	2	1.79
3	*L83112-01*	2.06	4	1.56	0.5	0.50	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	3	1.99
4	*L83112-02*	2.47	5	2.47	0	0.00	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	4	1.56
5	*L83112-03*	2.41	6	1.99	0.422	0.42	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	5	2.47
6	*L83112-04*	1.91	7	1.61	0.303	0.30	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	6	1.99
7	*L83112-05*	1.75	8	1.66	0.094	0.09	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	7	1.61
8	*L83112-06*	1.84	9	1.84	0	0.00	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	8	1.66
9	*L83112-07*	2.13	10	1.97	0.156	0.16	7/28/2010 12:30	8/3/2010 12:43	8698	**0.3197**	9	1.84
10	*L83112-08*	2.24	1	2.24	0	0.00	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**	10	1.97
11	*L83112-09*	1.81	2	1.79	0.02	0.02	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
12	*L83112-10*	1.99	3	1.99	0	0.00	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
13	*L83112-11*	1.65	4	1.56	0.089	0.09	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
14	*L83112-12*	2.47	5	2.47	0	0.00	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
15	*L83112-13*	2.19	6	1.99	0.196	0.20	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
16	*L83112-14*	1.70	7	1.61	0.092	0.09	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
17	*L83112-15*	1.80	8	1.66	0.14	0.14	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
18	*L83112-16*	1.86	9	1.84	0.02	0.02	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
19	*L83112-01DUP*	1.97	10	1.97	0	0.00	7/28/2010 12:30	8/3/2010 14:16	8791	**0.3197**		
20	*L83112-16DUP*	2.24	1	2.24	0	0.00	7/28/2010 12:30	8/3/2010 15:49	8884	**0.3197**		
21	*L83112-14MS*	10.68	2	1.79	8.89	8.89	7/28/2010 12:30	8/3/2010 15:49	8884	**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		
		0.00								**0.3197**		

Decay Equation for Pb210:	Pb-210
Standard Preparation Date	4/1/2002
Initial True Value (pCi/mL)	100.00
Decayed Value (pCi/mL)	77.16

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 8-5-10

Approved: [signature]
Date: 8-5-10

Work Group:	WG287330
Sample Type:	Soil
Analysis Date:	4-3-10
Analyst:	MWM
Prep Date:	3-27-10

Weekly background file: Back4530
Daily background file: Back4533

Alpha performance file: —
Beta performance file: Perb2268

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?			
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287330

Date Reported: 05-Aug-10
Run ID: R737442
Date Analyzed: 03-Aug-10
ICAL Workgroup:
Instrument ID: PREP

L83112-01

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	3.3	1		pCi/g	++	4	1.5		TB

L83112-02

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	4.9	1.6		TB

L83112-03

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	2.4	1		pCi/g	++	4	1.4		TB

L83112-04

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.9	1		pCi/g	++	3.8	1.4		TB

L83112-05

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.57	1		pCi/g	++	3.9	1.3		TB

L83112-06

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	4.3	1.5		TB

L83112-07

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.96	1		pCi/g	++	4.3	1.5		TB

WG286762LCSS

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	60	1		pCi/g	++	4.4	2.7	RC100623-1	
SREV	LEAD 210	REC	77.8	1		%	++	4.4	2.7	RC100623-1	
SREV	LEAD 210	TRUE	77.16	1		pCi/g	++	4.4	2.7	RC100623-1	

WG286762PBS

Tag: Measured: 8/3/2010 12:43:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	1	1		pCi/g	++	4.1	1.4		

L83112-01DUP

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0	1		pCi/g	++	4.3	1.4		
SREV	LEAD 210	RER	1.61	1		%	++	10	5		
FAIL	LEAD 210	RPD	200	1		pCi/g	ALRT	4.3	1.4		

L83112-08

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	4.6	1.6		TB

L83112-09

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.12	1		pCi/g	++	4	1.4		TB

L83112-10

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	4.2	1.4		TB

L83112-11

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.48	1		pCi/g	++	3.3	1.1		TB

L83112-12

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0	1		pCi/g	++	4.9	1.7		TB

L83112-13

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	1.3	1		pCi/g	++	4.6	1.6		TB

L83112-14

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.54	1		pCi/g	++	3.7	1.3		TB

L83112-15

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.95	1		pCi/g	++	4.3	1.5		TB

L83112-16

Tag: Measured: 8/3/2010 2:16:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	OM-3050	0.12	1		pCi/g	++	3.9	1.3		TB

L83112-14MS

Tag: Measured: 8/3/2010 3:49:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	55	1		pCi/g	++	4.1	2.6	RC100623-1	
SREV	LEAD 210	REC	70.6	1		%	++	4.1	2.6	RC100623-1	
SREV	LEAD 210	TRUE	77.16	1		pCi/g	++	4.1	2.6	RC100623-1	

L83112-16DUP Tag: **Measured: 8/3/2010 3:49:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	LEAD 210	FOUND	0	1		pCi/g	++	4.7	1.6		
SREV	LEAD 210	RER	0.06	1		%	++	10	5		
FAIL	LEAD 210	RPD	200	1		pCi/g	ALRT	4.7	1.6		

ACZ Laboratories, Inc.
Lead 210 by Eichrom
Eichrom Industries, OTW01

WG286762

Project:
SDG#:
SOP#:

Instrument: PREP
Matrix Class: SOLID
List Type: QC-PB-210
List Function: PREP

Analyst: MWM
Dept: 50
Prep Date: 7-27-10 13:09
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Recovery %	Pb210 Density mg/cm(sq)	lead 210 Error pCi/g	LLD (+ -)	LLD pCi/g
1	PBS		50mL						#DIV/0!		
2	LCSS								#DIV/0!		
3	L83112-01	BG-1 0-2 COMP							#DIV/0!		
4	L83112-02	BG-1 2-12 COMP							#DIV/0!		
5	L83112-03	BG-1 12-18 COMP							#DIV/0!		
6	L83112-04	BG-2 0-2 COMP							#DIV/0!		
7	L83112-05	BG-2 2-12 COMP							#DIV/0!		
8	L83112-06	BG-2 12-18 COMP							#DIV/0!		
9	L83112-07	BG-100 0-2 COMP							#DIV/0!		
10	L83112-08	BG-3 0-2 COMP							#DIV/0!		
11	L83112-09	BG-3 2-12 COMP							#DIV/0!		
12	L83112-10	BG-3 12-18 COMP							#DIV/0!		
13	L83112-11	BG-4 0-2 COMP							#DIV/0!		
14	L83112-12	BG-4 2-12 COMP							#DIV/0!		
15	L83112-13	BG-4 12-18 COMP							#DIV/0!		
16	L83112-14	BG-6 0-2 COMP							#DIV/0!		
17	L83112-15	BG-6 2-12 COMP							#DIV/0!		
18	L83112-16	BG-6 12-18 COMP							#DIV/0!		
19	DUP 1								#DIV/0!		
20	DUP 16								#DIV/0!		
21	MS 14								#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		
									#DIV/0!		

Comments:

FRMRC013.01.09.ver02

Template: pb-sol

Beta Efficiency Equation: Y = MX + B

blank filter beta contribution= 0.00

Radioactive Standards

LCS & MS 100623-1

Ingrow 7-28-10 12:30

Lead Carrier	100713-1	Sulfuric acid	35105
Iron Chloride	100701-1	Nitric Acid	34903
Nitric Acid 1N	34903	0.1N HNO_3	34903
NH_4OH	34803	2N HNO_3	—
		H_2O_2	—

COMMENTS:

Calculations for dry weight:

Login #	air dried solid(g)	soils sx wt (g)	dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
83112-1	0.987556561	0.5	0.49378	50	50	0.493778
83112-2	0.988682982	0.5	0.49434	50	50	0.494341
83112-3	0.978535268	0.5	0.48927	50	50	0.489268
83112-4	0.982190502	0.5	0.49110	50	50	0.491095
83112-5	0.977378969	0.5	0.48869	50	50	0.488689
83112-6	0.978426264	0.5	0.48921	50	50	0.489213
83112-7	0.989428643	0.5	0.49471	50	50	0.494714
83112-8	0.983724222	0.5	0.49186	50	50	0.491862
83112-9	0.980681818	0.5	0.49034	50	50	0.490341
83112-10	0.976879665	0.5	0.48844	50	50	0.488440
83112-11	0.988731784	0.5	0.49437	50	50	0.494366
83112-12	0.990506866	0.5	0.49525	50	50	0.495253
83112-13	0.991142816	0.5	0.49557	50	50	0.495571
83112-14	0.991669425	0.5	0.49583	50	50	0.495835
83112-15	0.988573661	0.5	0.49429	50	50	0.494287
83112-16	0.986994462	0.5	0.49350	50	50	0.493497
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!
			0.00000			#DIV/0!

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/27/2010 9:59

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286651PBS1	NONE	<2000		07/26/10 10:00	0	7.5	5	5	50		0		
2	WG286651PBS2	NONE	<2000		07/26/10 11:15	0	7.5	5	5	50		0		
3	L83112-01	BG-1 0-2 COMP	<2000		07/26/10 12:31	0.5	7.5	5	5	50		98.75		
4	L83112-01DUP	NONE	<2000		07/26/10 13:47	0.5	7.5	5	5	50		98.75		
5	L83112-02	BG-1 2-12 COMP	<2000		07/26/10 15:03	0.5	7.5	5	5	50		98.87		
6	L83112-03	BG-1 12-18 COMP	<2000		07/26/10 16:18	0.5	7.5	5	5	50		97.85		
7	L83112-04	BG-2 0-2 COMP	<2000		07/26/10 17:34	0.5	7.5	5	5	50		98.22		
8	L83112-05	BG-2 2-12 COMP	<2000		07/26/10 18:50	0.5	7.5	5	5	50		97.74		
9	L83112-06	BG-2 12-18 COMP	<2000		07/26/10 20:06	0.5	7.5	5	5	50		97.84		
10	L83112-07	BG-100 0-2 COMP	<2000		07/26/10 21:22	0.5	7.5	5	5	50		98.94		
11	L83112-08	BG-3 0-2 COMP	<2000		07/26/10 22:37	0.5	7.5	5	5	50		98.37		
12	L83112-09	BG-3 2-12 COMP	<2000		07/26/10 23:53	0.5	7.5	5	5	50		98.07		
13	L83112-10	BG-3 12-18 COMP	<2000		07/27/10 1:09	0.5	7.5	5	5	50		97.69		
14	L83112-11	BG-4 0-2 COMP	<2000		07/27/10 2:25	0.5	7.5	5	5	50		98.87		X-TRA DUP
15	L83112-12	BG-4 2-12 COMP	<2000		07/27/10 3:40	0.5	7.5	5	5	50		99.05		
16	L83112-13	BG-4 12-18 COMP	<2000		07/27/10 4:56	0.5	7.5	5	5	50		99.11		
17	L83112-14	BG-6 0-2 COMP	<2000		07/27/10 6:12	0.5	7.5	5	5	50		99.17		
18	L83112-15	BG-6 2-12 COMP	<2000		07/27/10 7:28	0.5	7.5	5	5	50		98.86		
19	L83112-16	BG-6 12-18 COMP	<2000		07/27/10 8:44	0.5	7.5	5	5	50		98.7		
20	L83112-16DUP	NONE	<2000		07/27/10 9:59	0.5	7.5	5	5	50		98.7		

PB 210 X-TRA DUP ON 14

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/27/2010 11:22:25 AM 73010

LB770 Number 1 User File: Lead 210 Sample Data File: 0803-02
Sample Set: WG286946/WG286762 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.333	0.278	0.200	0.322	0.378	0.133	0.136	0.278	0.189	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.24	1.79	1.99	1.56	2.47	1.99	1.61	1.66	1.84	1.97
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 08-03-110 Time 12:43:12
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1162

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	4779	L82878-02MS	0.000	0.000	1	0.34	3.16	27.7	1	0.80
2	4780	WG286762PBS	0.000	0.000	1	0.32	0.164	> 100	1	0.72
3	4781	WG286762LCSS	0.000	0.000	1	0.28	9.47	12.3	1	0.75
4	4782	L83112-01	0.000	0.000	1	0.34	0.500	> 100	1	0.67
5	4783	L83112-02	0.000	0.000	1	0.36	0.000	0.000	1	0.83
6	4784	L83112-03	0.000	0.000	1	0.24	0.422	> 100	1	0.75
7	4785	L83112-04	0.000	0.000	1	0.24	0.303	> 100	1	0.68
8	4786	L83112-05	0.000	0.000	1	0.32	0.094	> 100	1	0.69
9	4787	L83112-06	0.000	0.000	1	0.27	0.000	0.000	1	0.73
10	4788	L83112-07	0.000	0.000	1	0.29	0.156	> 100	1	0.75

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Lead 210 Sample Data File: 0803-03
Sample Set: WG286762 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.333	0.278	0.200	0.322	0.378	0.133	0.136	0.278	0.189	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.24	1.79	1.99	1.56	2.47	1.99	1.61	1.66	1.84	1.97
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 08-03-110 Time 14:15:52
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1152

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	4789	L83112-08	0.000	0.000	1	0.34	0.000	0.000	1	0.80
2	4790	L83112-09	0.000	0.000	1	0.32	0.020	> 100	1	0.72
3	4791	L83112-10	0.000	0.000	1	0.28	0.000	0.000	1	0.75
4	4792	L83112-11	0.000	0.000	1	0.34	0.089	> 100	1	0.67
5	4793	L83112-12	0.000	0.000	1	0.36	0.000	0.000	1	0.83
6	4794	L83112-13	0.067	> 100	1	0.24	0.196	> 100	1	0.75
7	4795	L83112-14	0.000	0.000	1	0.24	0.092	> 100	1	0.68
8	4796	L83112-15	0.000	0.000	1	0.32	0.140	> 100	1	0.69
9	4797	L83112-16	0.000	0.000	1	0.27	0.020	> 100	1	0.73
10	4798	L83112-01DUP	0.000	0.000	1	0.29	0.000	0.000	1	0.75

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Lead 210
Sample Set: WG286762/WG286474
HV-Meas.Counter [V] = 1550
Sample Data File: 0803-04
Mode: Alpha/Beta
HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

Category	Alpha Low	Alpha High	Beta Low	Beta High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.333	0.278	0.200	0.322	0.378	0.133	0.136	0.278	0.189	0.211
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	2.24	1.79	1.99	1.56	2.47	1.99	1.61	1.66	1.84	1.97
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 08-03-110 Time 15:48:41
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/3
Guard [cpm] 1158

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	4799	L83112-16DUP	0.000	0.000	1	0.34	0.000	0.000	1	0.80
2	4800	L83112-14MS	0.000	0.000	1	0.32	8.89	12.6	1	0.72
3	4801	L83298-05	0.000	0.000	1	0.28	0.020	> 100	1	0.75
4	4802	L83298-06	0.000	0.000	1	0.34	0.614	99.2	1	0.67
5	4803	L83298-07	0.000	0.000	1	0.36	0.000	0.000	1	0.83
6	4804	L83298-08	0.000	0.000	1	0.24	0.525	> 100	1	0.75
7	4805	L83298-09	0.042	> 100	1	0.24	0.246	> 100	1	0.68
8	4806	L83298-10	0.000	0.000	1	0.32	0.376	> 100	1	0.69
9	4807	L83298-08DUP	0.022	> 100	1	0.27	0.118	> 100	1	0.73
10	4808	L83298-10MS	0.000	0.000	1	0.29	10.8	11.2	1	0.75

MDA = Minimum Detectable Activity [cpm]

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG287341

Analyst: MWM
Dept: 55
Prep Date: 7/29/2010
Analysis Date: 8/2/2010
Start Time:
End Time:
Approved: MWM 8-5-10
Approved: MB 8-5-10

MWM
50.00

Project:
SDG#:
SOP#: SOPRC020

Instrument: Octete
Matrix Class: SOLID
List Type: UISO
List Function: ANALYTICAL

Seq #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235						Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	WG286896PBS		0.5	1	10.30	859	0.835	24.000	15.170	-8.830	-0.21	0.32	0.21	4.04	4.98	0.945	0.02	0.15	0.21	8.00	10.67	2.670	0.06	0.22	0.21
2	WG286896LCSS	RC100223-2	0.5	1	10.30	554	0.538	30.459	984.060	953.601	35.46	2.49	0.32	12.00	50.98	38.980	1.45	0.62	0.32	8.00	963.58	955.580	35.53	2.43	0.32
3	L83112-01	BG-1 0-2 COMP	0.49378	1	10.30	840	0.816	30.770	52.820	22.050	0.55	0.48	0.22	14.04	6.04	-7.995	-0.20	0.23	0.22	4.43	39.57	35.141	0.87	0.35	0.22
4	L83112-02	BG-1 2-12 COMP	0.49434	1	10.30	715	0.695	25.711	58.060	32.349	0.94	0.56	0.25	11.00	6.00	-5.000	-0.15	0.25	0.25	7.57	38.00	30.429	0.89	0.41	0.25
5	L83112-03	BG-1 12-18 COMP	0.48927	1	10.30	705	0.685	29.339	65.000	35.661	1.06	0.61	0.26	4.00	8.02	4.020	0.12	0.22	0.26	12.00	52.43	40.430	1.21	0.50	0.26
6	L83112-04	BG-2 0-2 COMP	0.4911	1	10.30	585	0.569	21.000	40.000	19.000	0.68	0.59	0.31	4.06	4.96	0.903	0.03	0.23	0.31	5.00	32.57	27.570	0.99	0.46	0.31
7	L83112-05	BG-2 2-12 COMP	0.48869	1	10.30	508	0.494	10.060	31.710	21.650	0.90	0.56	0.36	3.01	5.00	1.987	0.08	0.25	0.36	6.00	23.43	17.430	0.72	0.47	0.36
8	L83112-06	BG-2 12-18 COMP	0.48921	1	10.30	760	0.739	18.000	37.230	19.230	0.53	0.43	0.24	4.00	7.00	3.000	0.08	0.19	0.24	7.00	19.33	12.330	0.34	0.30	0.24
9	L83112-07	BG-100 0-2 COMP	0.49471	1	10.30	587	0.570	17.940	56.710	38.770	1.38	0.64	0.31	5.00	5.00	0.000	0.00	0.24	0.31	11.00	45.00	34.000	1.21	0.56	0.31
10	L83112-08	BG-3 0-2 COMP	0.49186	1	10.30	707	0.687	29.000	34.230	5.230	0.15	0.49	0.26	7.00	8.98	1.980	0.06	0.25	0.26	3.00	26.00	23.000	0.68	0.33	0.26
11	L83112-09	BG-3 2-12 COMP	0.49034	1	10.30	629	0.611	21.770	38.000	16.230	0.54	0.54	0.29	11.02	5.04	-5.982	-0.20	0.28	0.29	8.00	23.57	15.570	0.52	0.39	0.29
12	L83112-10	BG-3 12-18 COMP	0.48844	1	10.30	559	0.543	14.230	34.060	19.830	0.75	0.55	0.33	2.02	9.00	6.978	0.26	0.26	0.33	3.00	24.00	21.000	0.79	0.41	0.33
13	L83112-11	BG-4 0-2 COMP	0.49437	1	10.30	701	0.681	15.060	50.170	35.110	1.04	0.50	0.26	9.00	11.98	2.980	0.09	0.29	0.26	6.57	30.00	23.429	0.70	0.38	0.26
14	L83112-12	BG-4 2-12 COMP	0.49525	1	10.30	483	0.469	23.000	40.000	17.000	0.73	0.72	0.38	3.00	2.00	-1.000	-0.04	0.20	0.38	4.00	26.00	22.000	0.95	0.50	0.38
15	L83112-13	BG-4 12-18 COMP	0.49557	1	10.30	561	0.545	25.060	52.000	26.940	1.00	0.68	0.32	1.00	7.96	6.960	0.26	0.23	0.32	8.00	23.00	15.000	0.56	0.43	0.32
16	L83112-14	BG-6 0-2 COMP	0.49583	1	10.30	615	0.598	18.000	31.940	13.940	0.47	0.50	0.30	5.96	3.02	-2.945	-0.10	0.21	0.30	1.00	21.00	20.000	0.68	0.33	0.30
17	L83112-15	BG-6 2-12 COMP	0.49429	1	10.30	697	0.677	24.000	36.710	12.710	0.38	0.49	0.26	4.04	5.96	1.925	0.06	0.20	0.26	8.00	17.00	9.000	0.27	0.31	0.26
18	L83112-16	BG-6 12-18 COMP	0.4935	1	10.30	626	0.608	30.459	28.290	-2.169	-0.07	0.54	0.29	12.00	6.02	-5.980	-0.20	0.30	0.29	8.00	31.33	23.330	0.78	0.44	0.29
19	L83112-01DUP		0.49378	1	10.30	706	0.686	30.770	132.890	102.120	3.02	0.79	0.26	14.04	14.01	-0.025	0.00	0.33	0.26	4.43	101.33	96.901	2.86	0.64	0.26
20	L83112-16DUP		0.4935	1	10.30	816	0.793	25.711	51.000	25.289	0.65	0.47	0.22	11.00	14.02	3.020	0.08	0.27	0.22	7.57	25.00	17.429	0.45	0.31	0.22
21	L83112-03MS	RC100223-2	0.48927	1	10.30	408	0.397	29.340	716.540	687.200	35.46	2.96	0.45	4.00	31.93	27.930	1.44	0.65	0.45	12.00	738.15	726.150	37.47	2.97	0.45
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments:

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

KSJ 8/6/10

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 8-5-10

Approved: MTB
Date: 8-5-10

Work Group: WG287341
Sample Type: Solid
Analysis Date: 8-2-10
Analyst: MWM
Prep Date: 7-29-10

Weekly background file: 7-26-10
Daily background file: 7-26-10

Alpha performance file: 7-26-10
Beta performance file: -

GAB dry date/time: -

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	-		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?		✓	
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	**Performance Check**	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action
LB3112-01DUP(234)	RER exceeded control limit due to non-homogeneity of Sx	RC
LB3112-01DUP(238)	"	"

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

FRMRC010.07.10.21

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287341

Date Reported: 05-Aug-10
Run ID: R737449
Date Analyzed: 02-Aug-10
ICAL Workgroup:
Instrument ID: OCTETE

WG286896PBS

Tag: Measured: 8/2/2010 9:24:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	-0.21	1		pCi/g	++	0.21	0.32		
SREV	URANIUM 235	FOUND	0.02	1		pCi/g	++	0.21	0.15		
SREV	URANIUM 238	FOUND	0.06	1		pCi/g	++	0.21	0.22		

WG286896LCSS

Tag: Measured: 8/2/2010 9:25:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	35	1		pCi/g	++	0.32	2.5	RC100223-2	
SREV	URANIUM 234	REC	105.6	1		%	++	0.32	2.5	RC100223-2	
SREV	URANIUM 234	TRUE	33.13	1		pCi/g	++	0.32	2.5	RC100223-2	
SREV	URANIUM 235	FOUND	1.5	1		pCi/g	++	0.32	0.62	RC100223-2	
SREV	URANIUM 235	REC	94.9	1		%	++	0.32	0.62	RC100223-2	
SREV	URANIUM 235	TRUE	1.58	1		pCi/g	++	0.32	0.62	RC100223-2	
SREV	URANIUM 238	FOUND	35.5	1		pCi/g	++	0.32	2.4	RC100223-2	
SREV	URANIUM 238	REC	103.2	1		%	++	0.32	2.4	RC100223-2	
SREV	URANIUM 238	TRUE	34.39	1		pCi/g	++	0.32	2.4	RC100223-2	

L83112-01

Tag: Measured: 8/2/2010 9:26:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.55	1		pCi/g	++	0.22	0.48		RC TB
SREV	URANIUM 235	OM-3050	-0.2	1		pCi/g	++	0.22	0.23		TB
SREV	URANIUM 238	OM-3050	0.87	1		pCi/g	++	0.22	0.35		RC TB

L83112-02

Tag: Measured: 8/2/2010 9:28:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.94	1		pCi/g	++	0.25	0.56		RC TB
SREV	URANIUM 235	OM-3050	-0.15	1		pCi/g	++	0.25	0.25		TB
SREV	URANIUM 238	OM-3050	0.89	1		pCi/g	++	0.25	0.41		RC TB

L83112-03

Tag: Measured: 8/2/2010 9:29:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1.1	1		pCi/g	++	0.26	0.61		RC TB
SREV	URANIUM 235	OM-3050	0.12	1		pCi/g	++	0.26	0.22		TB
SREV	URANIUM 238	OM-3050	1.21	1		pCi/g	++	0.26	0.5		RC TB

L83112-04

Tag: Measured: 8/2/2010 9:31:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.68	1		pCi/g	++	0.31	0.59		RC TB
SREV	URANIUM 235	OM-3050	0.03	1		pCi/g	++	0.31	0.23		TB
SREV	URANIUM 238	OM-3050	0.99	1		pCi/g	++	0.31	0.46		RC TB

L83112-05

Tag: Measured: 8/2/2010 9:32:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.9	1		pCi/g	++	0.36	0.56		RC TB
SREV	URANIUM 235	OM-3050	0.08	1		pCi/g	++	0.36	0.25		TB
SREV	URANIUM 238	OM-3050	0.72	1		pCi/g	++	0.36	0.47		RC TB

L83112-06

Tag: Measured: 8/2/2010 9:34:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.53	1		pCi/g	++	0.24	0.43		RC TB
SREV	URANIUM 235	OM-3050	0.08	1		pCi/g	++	0.24	0.19		TB
SREV	URANIUM 238	OM-3050	0.34	1		pCi/g	++	0.24	0.3		RC TB

L83112-07

Tag: Measured: 8/2/2010 9:35:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1.4	1		pCi/g	++	0.31	0.64		RC TB
SREV	URANIUM 235	OM-3050	0	1		pCi/g	++	0.31	0.24		TB
SREV	URANIUM 238	OM-3050	1.21	1		pCi/g	++	0.31	0.56		RC TB

L83112-08

Tag: Measured: 8/2/2010 9:36:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.15	1		pCi/g	++	0.26	0.49		RC TB
SREV	URANIUM 235	OM-3050	0.06	1		pCi/g	++	0.26	0.25		TB
SREV	URANIUM 238	OM-3050	0.68	1		pCi/g	++	0.26	0.33		RC TB

L83112-09

Tag: Measured: 8/2/2010 9:38:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.54	1		pCi/g	++	0.29	0.54		RC TB
SREV	URANIUM 235	OM-3050	-0.2	1		pCi/g	++	0.29	0.28		TB
SREV	URANIUM 238	OM-3050	0.52	1		pCi/g	++	0.29	0.39		RC TB

L83112-10

Tag: Measured: 8/2/2010 9:39:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.75	1		pCi/g	++	0.33	0.55		RC TB
SREV	URANIUM 235	OM-3050	0.26	1		pCi/g	++	0.33	0.26		TB
SREV	URANIUM 238	OM-3050	0.79	1		pCi/g	++	0.33	0.41		RC TB

L83112-11

Tag: Measured: 8/2/2010 9:41:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1	1		pCi/g	++	0.26	0.5		TB
SREV	URANIUM 235	OM-3050	0.09	1		pCi/g	++	0.26	0.29		TB
SREV	URANIUM 238	OM-3050	0.7	1		pCi/g	++	0.26	0.38		TB

L83112-12

Tag: Measured: 8/2/2010 9:42:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.73	1		pCi/g	++	0.38	0.72		TB
SREV	URANIUM 235	OM-3050	-0.04	1		pCi/g	++	0.38	0.2		TB
SREV	URANIUM 238	OM-3050	0.95	1		pCi/g	++	0.38	0.5		TB

L83112-13

Tag: Measured: 8/2/2010 9:44:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	1	1		pCi/g	++	0.32	0.68		TB
SREV	URANIUM 235	OM-3050	0.26	1		pCi/g	++	0.32	0.23		TB
SREV	URANIUM 238	OM-3050	0.56	1		pCi/g	++	0.32	0.43		TB

L83112-14

Tag: Measured: 8/2/2010 9:45:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.47	1		pCi/g	++	0.3	0.5		TB
SREV	URANIUM 235	OM-3050	-0.1	1		pCi/g	++	0.3	0.21		TB
SREV	URANIUM 238	OM-3050	0.68	1		pCi/g	++	0.3	0.33		TB

L83112-15

Tag: Measured: 8/2/2010 9:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	0.38	1		pCi/g	++	0.26	0.49		TB
SREV	URANIUM 235	OM-3050	0.06	1		pCi/g	++	0.26	0.2		TB
SREV	URANIUM 238	OM-3050	0.27	1		pCi/g	++	0.26	0.31		TB

L83112-16

Tag: Measured: 8/2/2010 9:48:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	OM-3050	-0.07	1		pCi/g	++	0.29	0.54		TB
SREV	URANIUM 235	OM-3050	-0.2	1		pCi/g	++	0.29	0.3		TB
SREV	URANIUM 238	OM-3050	0.78	1		pCi/g	++	0.29	0.44		TB

L83112-01DUP

Tag: Measured: 8/2/2010 9:49:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	3	1		pCi/g	++	0.26	0.79		
SREV	URANIUM 234	RER	2.65	1		%	ALRT				RC
FAIL	URANIUM 234	RPD	138	1		pCi/g	ALRT	0.26	0.79		
SREV	URANIUM 235	FOUND	0	1		pCi/g	++	0.26	0.33		
SREV	URANIUM 235	RER	0.5	1		%	++				
FAIL	URANIUM 235	RPD	200	1		pCi/g	ALRT	0.26	0.33		
SREV	URANIUM 238	FOUND	2.86	1		pCi/g	++	0.26	0.64		
SREV	URANIUM 238	RER	2.73	1		%	ALRT				RC
FAIL	URANIUM 238	RPD	106.7	1		pCi/g	ALRT	0.26	0.64		

L83112-16DUP

Tag: Measured: 8/2/2010 9:51:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	0.65	1		pCi/g	++	0.22	0.47		
SREV	URANIUM 234	RER	1.01	1		%	++				
FAIL	URANIUM 234	RPD	248.3	1		pCi/g	ALRT	0.22	0.47		
SREV	URANIUM 235	FOUND	0.08	1		pCi/g	++	0.22	0.27		
SREV	URANIUM 235	RER	0.69	1		%	++				
FAIL	URANIUM 235	RPD	466.7	1		pCi/g	ALRT	0.22	0.27		
SREV	URANIUM 238	FOUND	0.45	1		pCi/g	++	0.22	0.31		
SREV	URANIUM 238	RER	0.61	1		%	++				
FAIL	URANIUM 238	RPD	53.7	1		pCi/g	ALRT	0.22	0.31		

L83112-03MS Tag: **Measured: 8/2/2010 9:52:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	URANIUM 234	FOUND	35	1		pCi/g	++	0.45	3	RC100223-2	
SREV	URANIUM 234	REC	100.3	1		%	++	0.45	3	RC100223-2	
SREV	URANIUM 234	TRUE	33.8	1		pCi/g	++	0.45	3	RC100223-2	
SREV	URANIUM 235	FOUND	1.4	1		pCi/g	++	0.45	0.65	RC100223-2	
SREV	URANIUM 235	REC	79.5	1		%	++	0.45	0.65	RC100223-2	
SREV	URANIUM 235	TRUE	1.61	1		pCi/g	++	0.45	0.65	RC100223-2	
SREV	URANIUM 238	FOUND	37.5	1		pCi/g	++	0.45	3	RC100223-2	
SREV	URANIUM 238	REC	103.4	1		%	++	0.45	3	RC100223-2	
SREV	URANIUM 238	TRUE	35.09	1		pCi/g	++	0.45	3	RC100223-2	

ACZ Laboratories, Inc.
Uranium by Eichrom in Soil
Eichrom Industries, ACW02

WG286896

Analyst: MWM
Dept: 50
Prep Date: 7-29-10 7:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

MWM
50.00

Project:
SDG#:
SOP#: SOPRC020.04.10.07

Instrument: Octete
Matrix Class: SOLID
List Type: UISO
List Function: PREP

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. g	Tracer Volume mL	Tracer Conc. pCi/mL	Tracer Counts counts	Tracer Yield %	Uranium 234						Uranium 235							Uranium 238					
								U234 Background	Gr Alpha Counts	Net Alpha Counts	U234 pCi/g	Error (+ -)	LLD pCi/g	U235 Background	Gr Alpha Counts	Net Alpha Counts	U235 pCi/g	Error (+ -)	LLD pCi/g	U238 Background	Gr Alpha Counts	Net Alpha Counts	U238 pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50mL	1	0.00					0.000						0.000						0.000			
2	LCSS				0.00					0.000						0.000						0.000			
3	L83112-01	BG-1 0-2 COMP			0.00					0.000						0.000						0.000			
4	L83112-02	BG-1 2-12 COMP			0.00					0.000						0.000						0.000			
5	L83112-03	BG-1 12-18 COMP			0.00					0.000						0.000						0.000			
6	L83112-04	BG-2 0-2 COMP			0.00					0.000						0.000						0.000			
7	L83112-05	BG-2 2-12 COMP			0.00					0.000						0.000						0.000			
8	L83112-06	BG-2 12-18 COMP			0.00					0.000						0.000						0.000			
9	L83112-07	BG-100 0-2 COMP			0.00					0.000						0.000						0.000			
10	L83112-08	BG-3 0-2 COMP			0.00					0.000						0.000						0.000			
11	L83112-09	BG-3 2-12 COMP			0.00					0.000						0.000						0.000			
12	L83112-10	BG-3 12-18 COMP			0.00					0.000						0.000						0.000			
13	L83112-11	BG-4 0-2 COMP			0.00					0.000						0.000						0.000			
14	L83112-12	BG-4 2-12 COMP			0.00					0.000						0.000						0.000			
15	L83112-13	BG-4 12-18 COMP			0.00					0.000						0.000						0.000			
16	L83112-14	BG-6 0-2 COMP			0.00					0.000						0.000						0.000			
17	L83112-15	BG-6 2-12 COMP			0.00					0.000						0.000						0.000			
18	L83112-16	BG-6 12-18 COMP			0.00					0.000						0.000						0.000			
19	DUP 01				0.00					0.000						0.000						0.000			
20	DUP 16				0.00					0.000						0.000						0.000			
21	MS 03				0.00					0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			
										0.000						0.000						0.000			

Comments:

Template: uiso-sol

Count Time (seconds): 18000
Uranium Standard and Tracer Concentration (pCi/mL): 10.3

FRMRC024.01.09.ver02

ACZ LABORATORIES, INC.
Standards/Reagents Information
Uranium iso
Water

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: wg286896 7/29/2010 8:24 AM

PROJECT/WG: _____
Method _____ INSTR: Octete

Radioactive Standards

LCS & MS 100223-2 Tracer: 100223-1

Reagents

3M Nitric Acid	34903	Aluminum nitrate / 3M nitric acid	100715-1
Nitric Acid (concentrated)	34903	HF	33549
0.05M oxalic acid / 5M HCl	100715-2	Titanium Choride	100629-1
0.01M Hydrochloric acid	35120	Cerium solution	100720-1
9M Hydrochloric acid	33927	Ethanol	33789

COMMENTS:

*12/29/08 MTB adjusted template to error using Gross cpm and specific backgrounds used to calculate net cpm

RSUISO-S.xls

Calculations for dry weight:

Login #
83112-1
83112-2
83112-3
83112-4
83112-5
83112-6
83112-7
83112-8
83112-9
83112-10
83112-11
83112-12
83112-13
83112-14
83112-15
83112-16

air dried solid(g)	soils sx wt (g)
0.987556561	0.5
0.988682982	0.5
0.978535268	0.5
0.982190502	0.5
0.977378969	0.5
0.978426264	0.5
0.989428643	0.5
0.983724222	0.5
0.980681818	0.5
0.976879665	0.5
0.988731784	0.5
0.990506866	0.5
0.991142816	0.5
0.991669425	0.5
0.988573661	0.5
0.986994462	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.49378	50	50	0.493778
0.49434	50	50	0.494341
0.48927	50	50	0.489268
0.49110	50	50	0.491095
0.48869	50	50	0.488689
0.48921	50	50	0.489213
0.49471	50	50	0.494714
0.49186	50	50	0.491862
0.49034	50	50	0.490341
0.48844	50	50	0.488440
0.49437	50	50	0.494366
0.49525	50	50	0.495253
0.49557	50	50	0.495571
0.49583	50	50	0.495835
0.49429	50	50	0.494287
0.49350	50	50	0.493497
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/27/2010 10:00

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight	HNO3	H2O2	HCl	Soil Extract Volume	SCN Volume	Percent Solid	Air Dry Moisture	Comments
						(g)	(mL)	(mL)	(mL)	(mL)	(mL)	(%)	(%)	
1	WG286651PBS1	NONE	<2000		07/26/10 10:00	0	7.5	5	5	50		0		
2	WG286651PBS2	NONE	<2000		07/26/10 11:15	0	7.5	5	5	50		0		
3	L83112-01	BG-1 0-2 COMP	<2000		07/26/10 12:31	0.5	7.5	5	5	50		98.75		
4	L83112-01DUP	NONE	<2000		07/26/10 13:47	0.5	7.5	5	5	50		98.75		
5	L83112-02	BG-1 2-12 COMP	<2000		07/26/10 15:03	0.5	7.5	5	5	50		98.87		
6	L83112-03	BG-1 12-18 COMP	<2000		07/26/10 16:18	0.5	7.5	5	5	50		97.85		[redacted]
7	L83112-04	BG-2 0-2 COMP	<2000		07/26/10 17:34	0.5	7.5	5	5	50		98.22		
8	L83112-05	BG-2 2-12 COMP	<2000		07/26/10 18:50	0.5	7.5	5	5	50		97.74		
9	L83112-06	BG-2 12-18 COMP	<2000		07/26/10 20:06	0.5	7.5	5	5	50		97.84		
10	L83112-07	BG-100 0-2 COMP	<2000		07/26/10 21:22	0.5	7.5	5	5	50		98.94		
11	L83112-08	BG-3 0-2 COMP	<2000		07/26/10 22:37	0.5	7.5	5	5	50		98.37		
12	L83112-09	BG-3 2-12 COMP	<2000		07/26/10 23:53	0.5	7.5	5	5	50		98.07		
13	L83112-10	BG-3 12-18 COMP	<2000		07/27/10 1:09	0.5	7.5	5	5	50		97.69		
14	L83112-11	BG-4 0-2 COMP	<2000		07/27/10 2:25	0.5	7.5	5	5	50		98.87		
15	L83112-12	BG-4 2-12 COMP	<2000		07/27/10 3:40	0.5	7.5	5	5	50		99.05		
16	L83112-13	BG-4 12-18 COMP	<2000		07/27/10 4:56	0.5	7.5	5	5	50		99.11		
17	L83112-14	BG-6 0-2 COMP	<2000		07/27/10 6:12	0.5	7.5	5	5	50		99.17		
18	L83112-15	BG-6 2-12 COMP	<2000		07/27/10 7:28	0.5	7.5	5	5	50		98.86		
19	L83112-16	BG-6 12-18 COMP	<2000		07/27/10 8:44	0.5	7.5	5	5	50		98.7		
20	L83112-16DUP	NONE	<2000		07/27/10 9:59	0.5	7.5	5	5	50		98.73		

[redacted]

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/27/2010 11:11:48 AM 73010

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:07PM 8/2/2010

Analyst: ORTEC

Sample

Sample: WG286896 PBS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

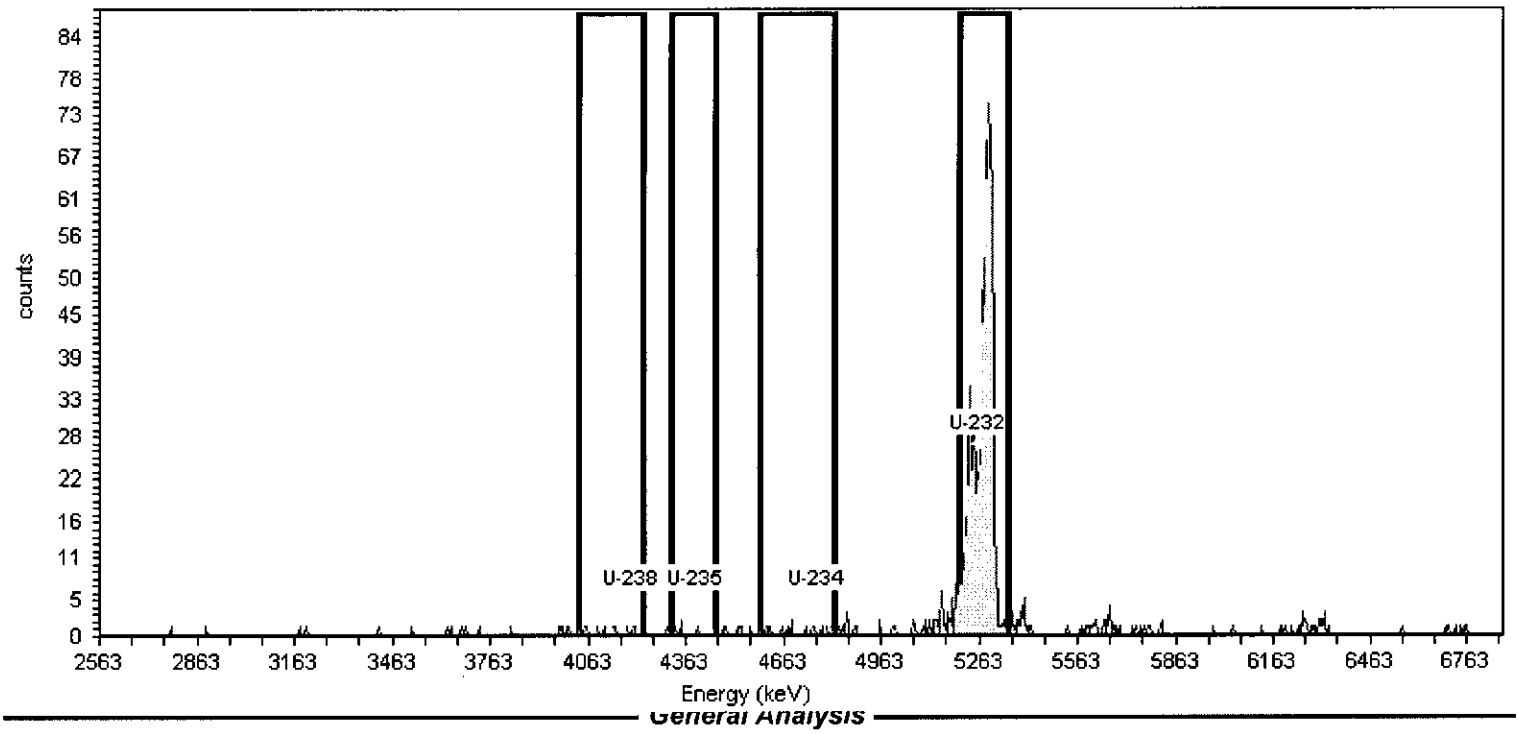
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 65.55%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 8/2/2010 9:24:15AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	.000	100.2	10.67	8.0000	3	3.343E-002	1.624E-001	8.237E-002	1.986E-001
U-235	4396.000	4318.000	4453.000	27.943	80.9	4.98	4.0351	1	1.463E-002	1.397E-001	7.247E-002	1.869E-001
U-234	4765.000	4592.000	4819.000	12.152	100.0	15.17	24.0000	-9	-1.107E-001	2.366E-001	1.429E-001	3.198E-001
U-232	5263.000	5203.000	5350.000	36.588	99.8	864.51	5.6900	859	7.734E+000	8.506E-001	7.625E-002	1.897E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:15PM 8/2/2010

Analyst: ORTEC

Sample

Sample: WG286896 LCSS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

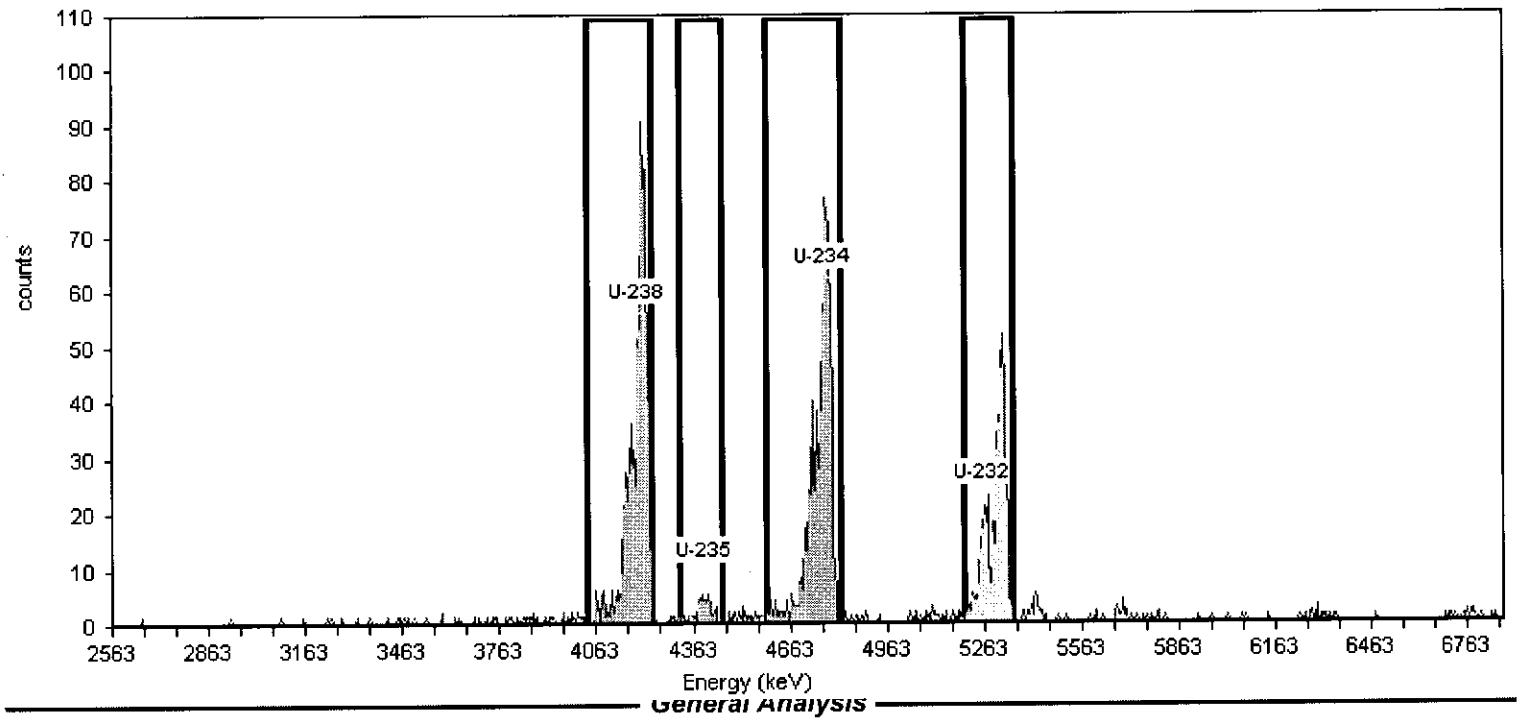
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 40.81%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 8/2/2010 9:24:17AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.161	100.2	963.58	8.0000	956	1.856E+001	4.534E+000	1.278E-001	3.081E-001
U-235	4396.000	4318.000	4453.000	45.166	80.9	50.98	12.0000	39	9.378E-001	6.100E-001	1.939E-001	4.529E-001
U-234	4765.000	4592.000	4819.000	31.426	100.0	984.06	30.4592	954	1.855E+001	4.551E+000	2.498E-001	5.522E-001
U-232	5263.000	5203.000	5350.000	16.191	99.8	560.79	7.1691	554	4.816E+000	6.480E-001	1.328E-001	3.232E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:19PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-01 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

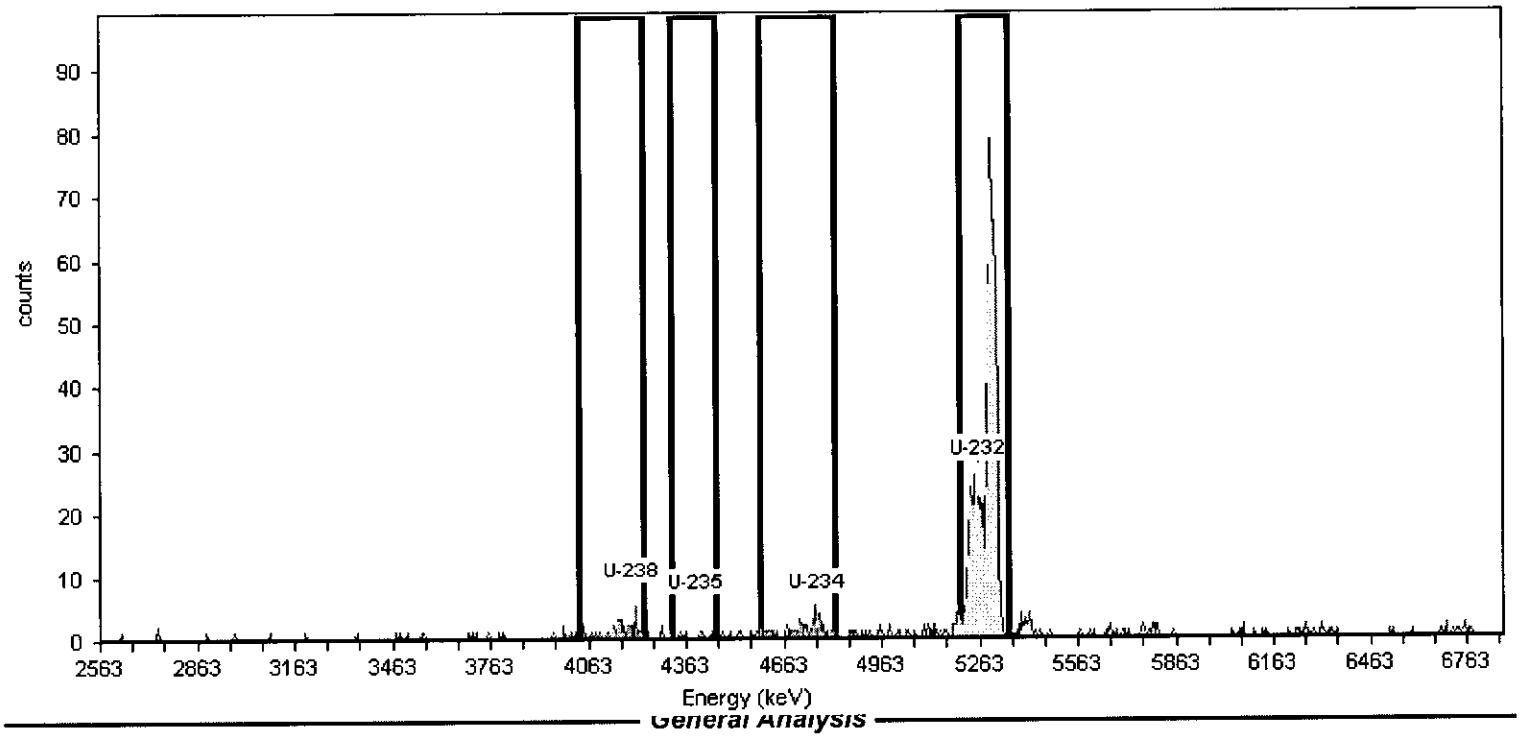
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 63.27%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 8/2/2010 9:24:19AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	64.273	100.2	39.57	4.4289	35	4.498E-001	2.718E-001	6.267E-002	1.600E-001
U-235	4396.000	4318.000	4453.000	6.034	80.9	6.04	14.0351	-8	-1.269E-001	2.148E-001	1.382E-001	3.193E-001
U-234	4765.000	4592.000	4819.000	70.078	100.0	52.82	30.7704	22	2.828E-001	3.568E-001	1.655E-001	3.657E-001
U-232	5263.000	5203.000	5350.000	38.790	99.8	847.20	7.3100	840	7.466E+000	8.301E-001	8.837E-002	2.148E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:24:40PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-02 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

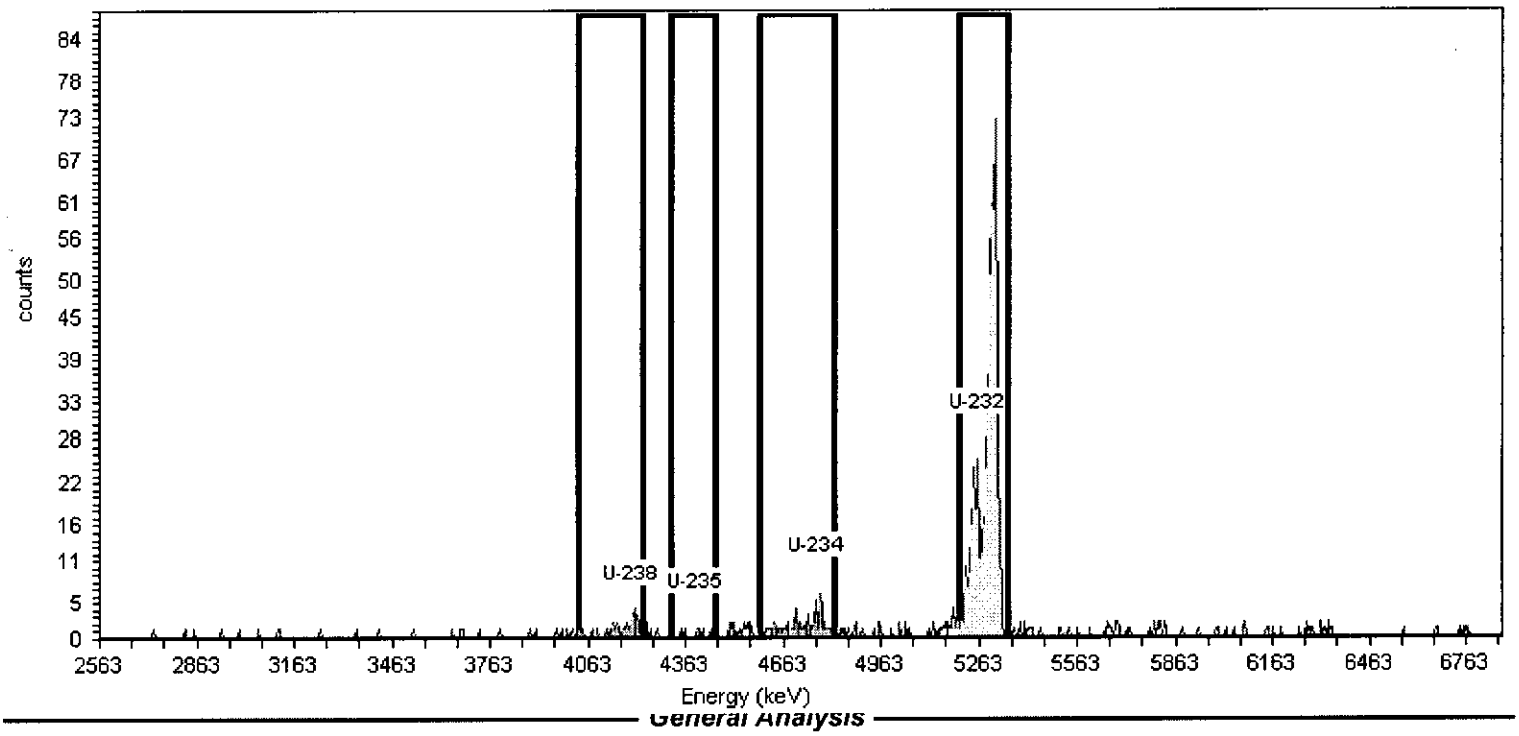
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 54.35%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 8/2/2010 9:23:59AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	20.487	100.2	38.00	7.5711	30	4.575E-001	3.200E-001	9.624E-002	2.332E-001
U-235	4396.000	4318.000	4453.000	6.031	80.9	6.00	11.0000	-5	-9.314E-002	2.313E-001	1.437E-001	3.379E-001
U-234	4765.000	4592.000	4819.000	31.385	100.0	58.06	25.7108	32	4.873E-001	4.267E-001	1.777E-001	3.961E-001
U-232	5263.000	5203.000	5350.000	34.108	99.8	719.34	4.3100	715	6.413E+000	7.645E-001	7.970E-002	2.041E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 2:24:48PM 8/2/2010

Sample

Sample: L83112-03 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

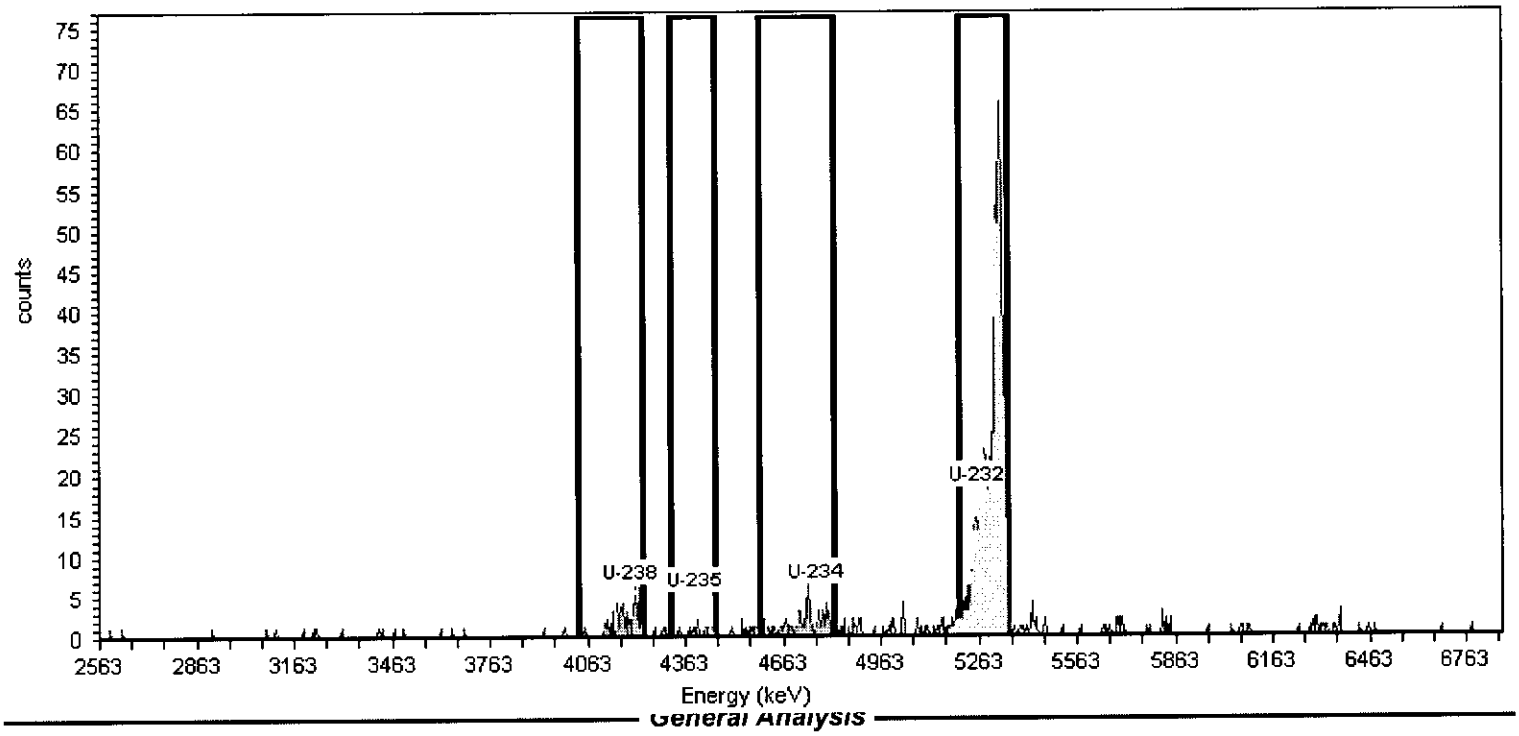
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 52.77%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 8/2/2010 9:24:02AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	15.266	100.2	52.43	12.0000	40	6.168E-001	3.908E-001	1.229E-001	2.872E-001
U-235	4396.000	4318.000	4453.000	.000	80.9	8.02	4.0000	4	7.601E-002	1.973E-001	8.794E-002	2.270E-001
U-234	4765.000	4592.000	4819.000	16.326	100.0	65.00	29.3399	36	5.451E-001	4.607E-001	1.926E-001	4.266E-001
U-232	5263.000	5203.000	5350.000	26.769	99.8	718.99	14.3100	705	6.226E+000	7.559E-001	1.474E-001	3.400E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:24:56PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-04 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

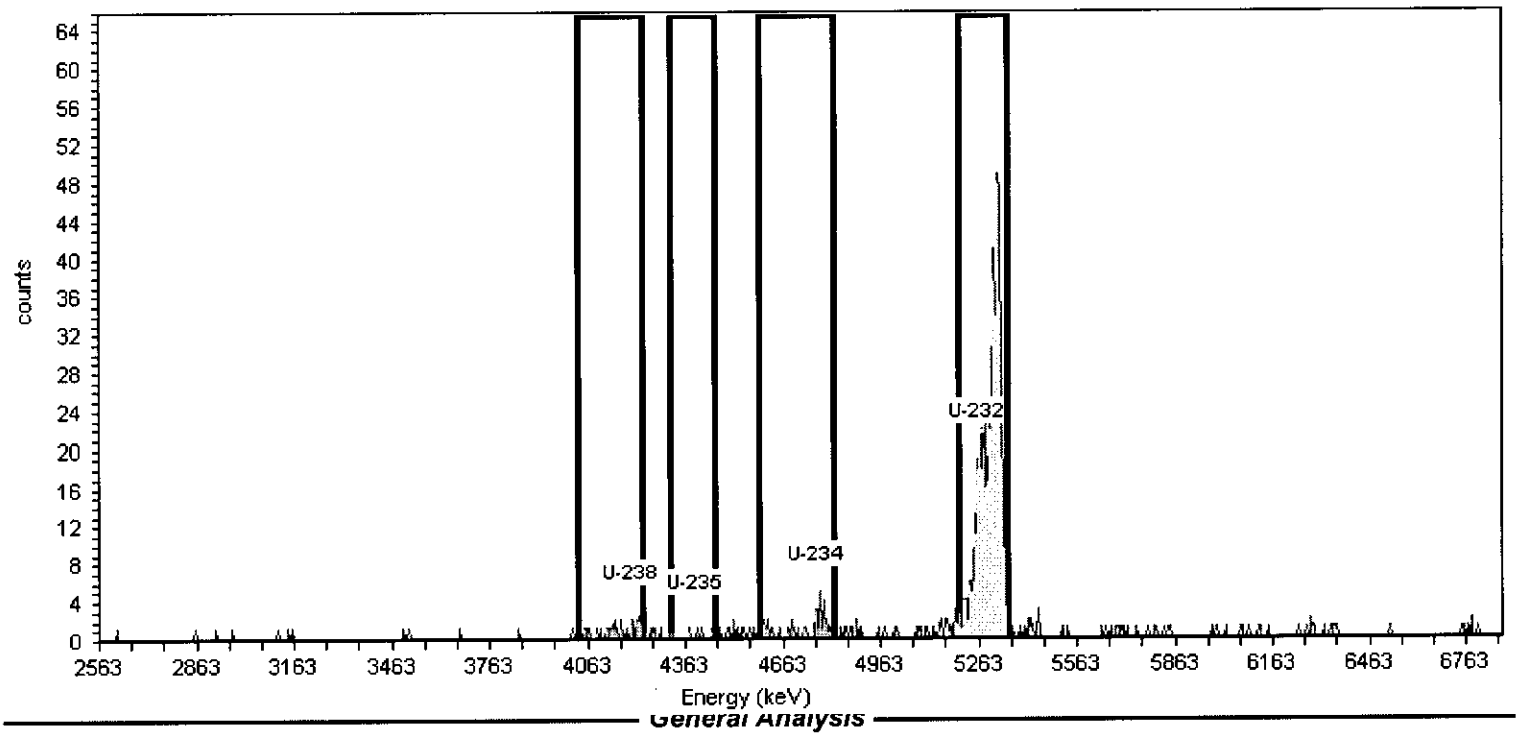
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 44.73%

Acquisition

Detector: 6 top SN: 48-142u6
Acquisition Start Date: 8/2/2010 9:24:05AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:18AM
Bkgd Info: Sample: 6 Top; Det: 6 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 007
Efficiency Calibration:2010.07.26 007
Calibration Date: 7/26/2010 10:10:01AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.22% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	17.041	100.2	32.57	5.0000	28	5.069E-001	3.564E-001	9.563E-002	2.410E-001
U-235	4396.000	4318.000	4453.000	5.806	80.9	4.96	4.0567	1	2.068E-002	2.053E-001	1.067E-001	2.751E-001
U-234	4765.000	4592.000	4819.000	6.233	100.0	40.00	21.0000	19	3.499E-001	4.385E-001	1.964E-001	4.426E-001
U-232	5263.000	5203.000	5350.000	20.519	99.8	596.10	11.3100	585	5.278E+000	6.975E-001	1.579E-001	3.703E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:03PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-05 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

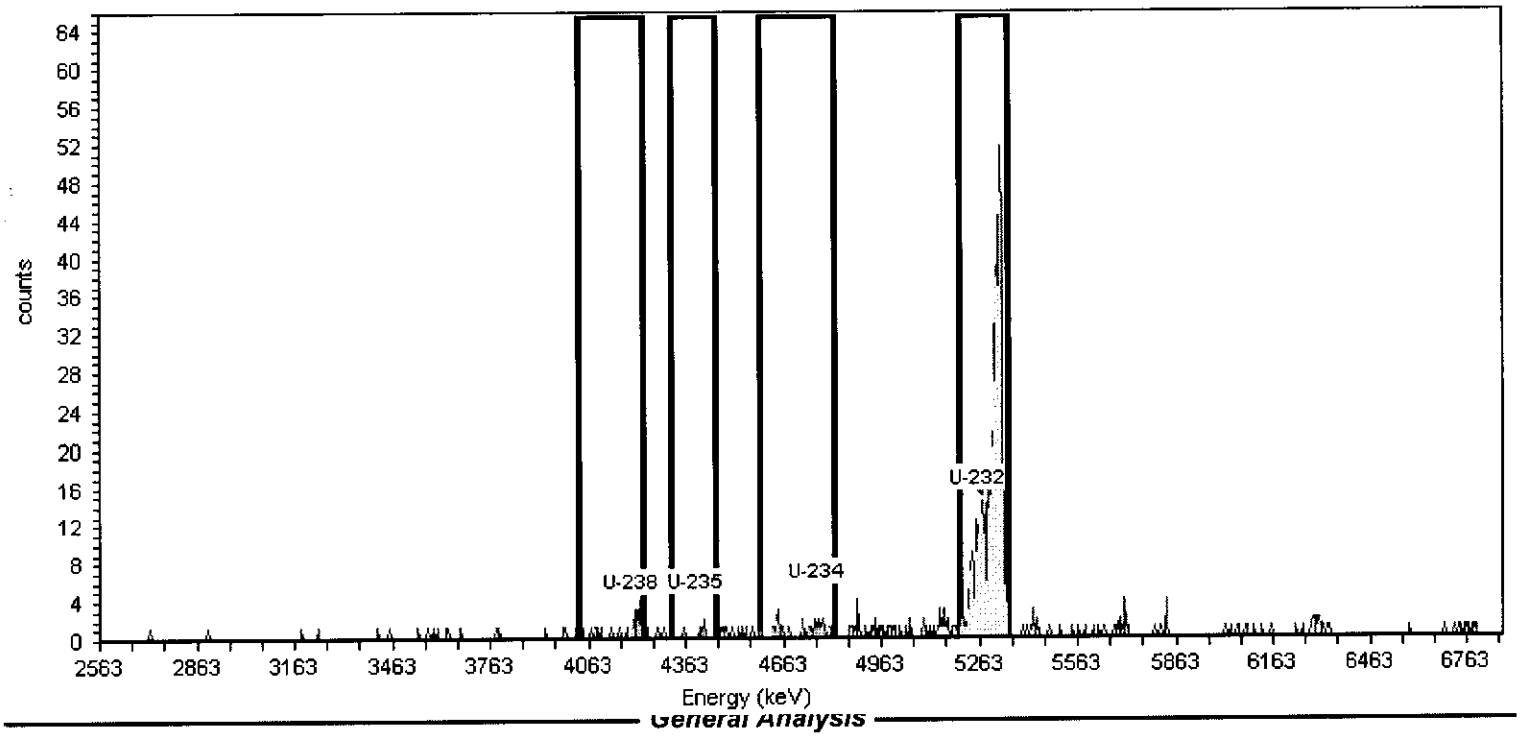
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 38.62%

Acquisition

Detector: 7 top SN: 48-142u7
Acquisition Start Date: 8/2/2010 9:24:00AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:21AM
Bkgd Info: Sample: 7 Top; Det: 7 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 008
Efficiency Calibration:2010.07.26 008
Calibration Date: 7/26/2010 10:11:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	12.651	100.2	23.43	6.0000	17	3.689E-001	3.545E-001	1.206E-001	2.985E-001
U-235	4396.000	4318.000	4453.000	25.746	80.9	5.00	3.0135	2	5.209E-002	2.230E-001	1.059E-001	2.827E-001
U-234	4765.000	4592.000	4819.000	160.334	100.0	31.71	10.0596	22	4.591E-001	4.242E-001	1.565E-001	3.703E-001
U-232	5263.000	5203.000	5350.000	20.763	99.8	513.63	5.6900	508	4.557E+000	6.378E-001	1.289E-001	3.207E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:11PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-06 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

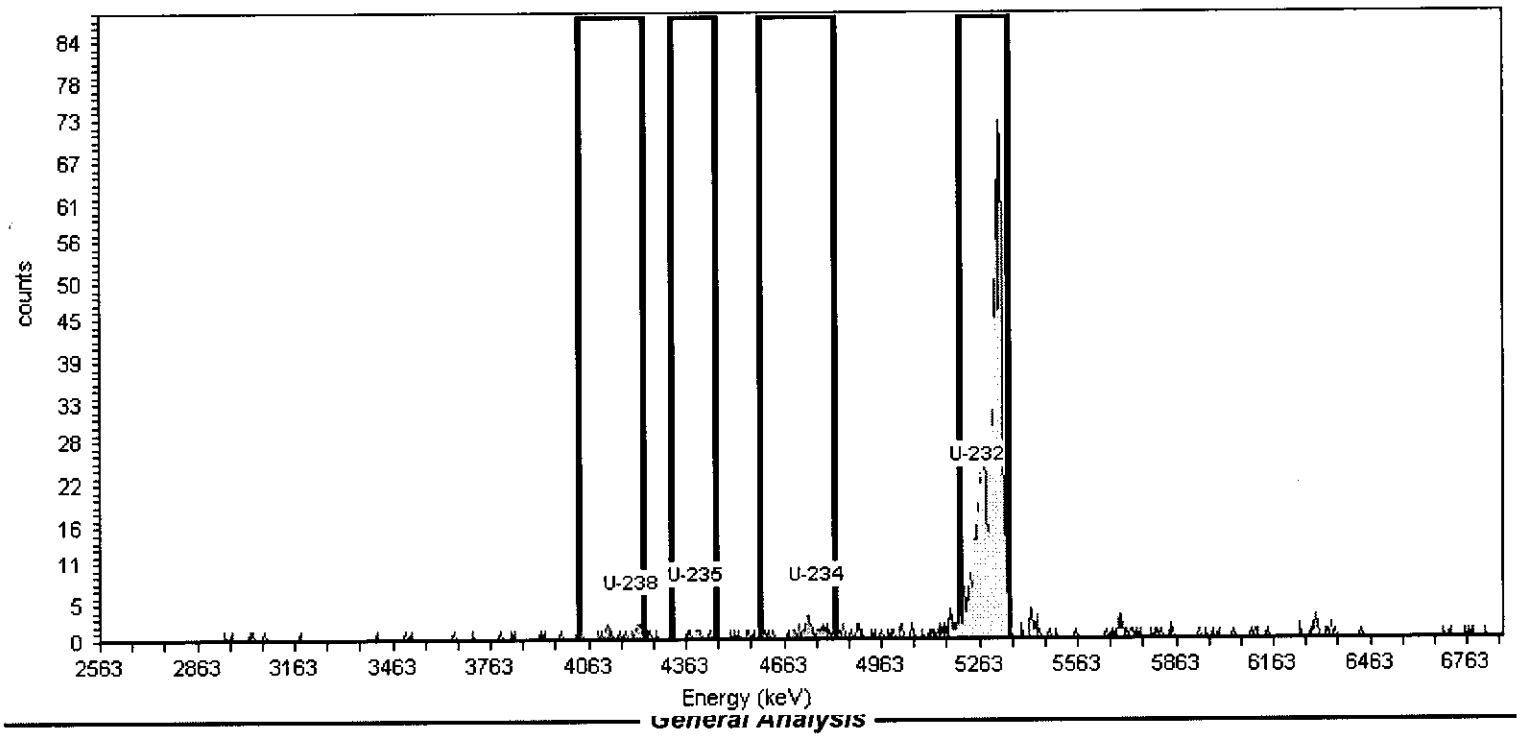
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 57.84%

Acquisition

Detector: 8 top SN: 48-150p4
Acquisition Start Date: 8/2/2010 9:24:03AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:25AM
Bkgd Info: Sample: 8 Top; Det: 8 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 009
Efficiency Calibration:2010.07.26 009
Calibration Date: 7/26/2010 10:12:05AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.30% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.376	100.2	19.33	7.0000	12	1.745E-001	2.210E-001	8.709E-002	2.125E-001
U-235	4396.000	4318.000	4453.000	46.179	80.9	7.00	4.0000	3	5.259E-002	1.748E-001	8.157E-002	2.106E-001
U-234	4765.000	4592.000	4819.000	69.710	100.0	37.23	18.0000	19	2.726E-001	3.214E-001	1.399E-001	3.182E-001
U-232	5263.000	5203.000	5350.000	19.984	99.8	768.93	9.1691	760	6.825E+000	7.961E-001	1.094E-001	2.608E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:23PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-07 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

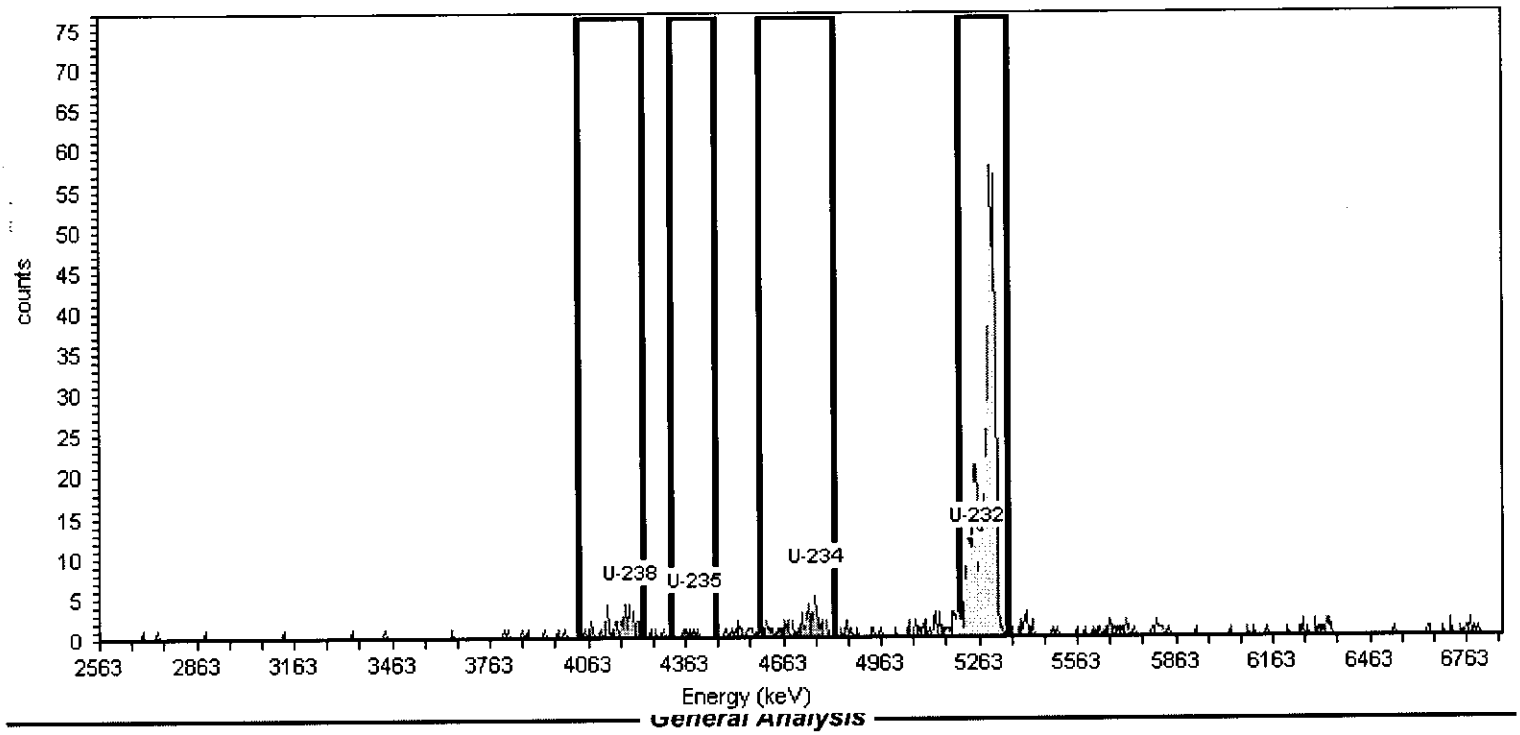
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 44.96%

Acquisition

Detector: 1 bottom SN: 47-011c7
Acquisition Start Date: 8/2/2010 9:24:09AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:27AM
Bkgd Info: Sample: 1 Bottom; Det: 1 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 010
Efficiency Calibration:2010.07.26 010
Calibration Date: 7/26/2010 10:13:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.21% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	43.303	100.2	45.00	11.0000	34	6.223E-001	4.335E-001	1.412E-001	3.320E-001
U-235	4396.000	4318.000	4453.000	47.486	80.9	5.00	5.0000	0	0.000E+000	2.151E-001	1.180E-001	2.973E-001
U-234	4765.000	4592.000	4819.000	53.699	100.0	56.71	17.9404	39	7.109E-001	5.008E-001	1.807E-001	4.110E-001
U-232	5263.000	5203.000	5350.000	36.136	99.8	594.38	7.0000	587	5.305E+000	6.951E-001	1.236E-001	3.017E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:27PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-08 Type: Sample
Spectrum #1 Analysis #1
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

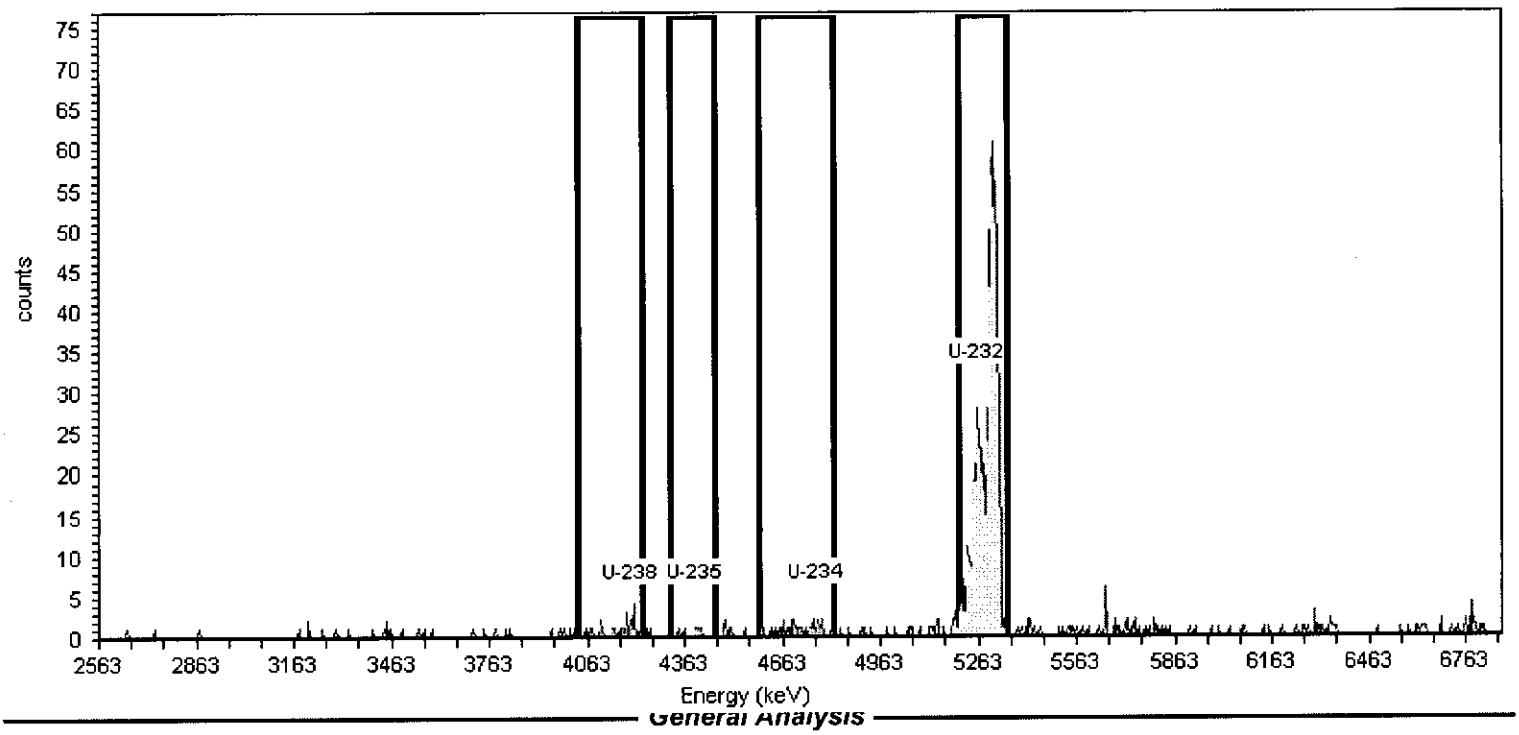
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 52.80%

Acquisition

Detector: 2 bottom SN: 47-011c5
Acquisition Start Date: 8/2/2010 9:24:10AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:29AM
Bkgd Info: Sample: 2 Bottom; Det: 2 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 011
Efficiency Calibration:2010.07.26 011
Calibration Date: 7/26/2010 10:14:16AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.66% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	16.834	100.2	26.00	3.0000	23	3.496E-001	2.569E-001	6.126E-002	1.636E-001
U-235	4396.000	4318.000	4453.000	94.665	80.9	8.98	7.0000	2	3.726E-002	2.260E-001	1.159E-001	2.828E-001
U-234	4765.000	4592.000	4819.000	197.740	100.0	34.23	29.0000	5	7.965E-002	3.637E-001	1.908E-001	4.228E-001
U-232	5263.000	5203.000	5350.000	28.340	99.8	719.00	11.8309	707	6.231E+000	7.528E-001	1.335E-001	3.122E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:23:58PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-09 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

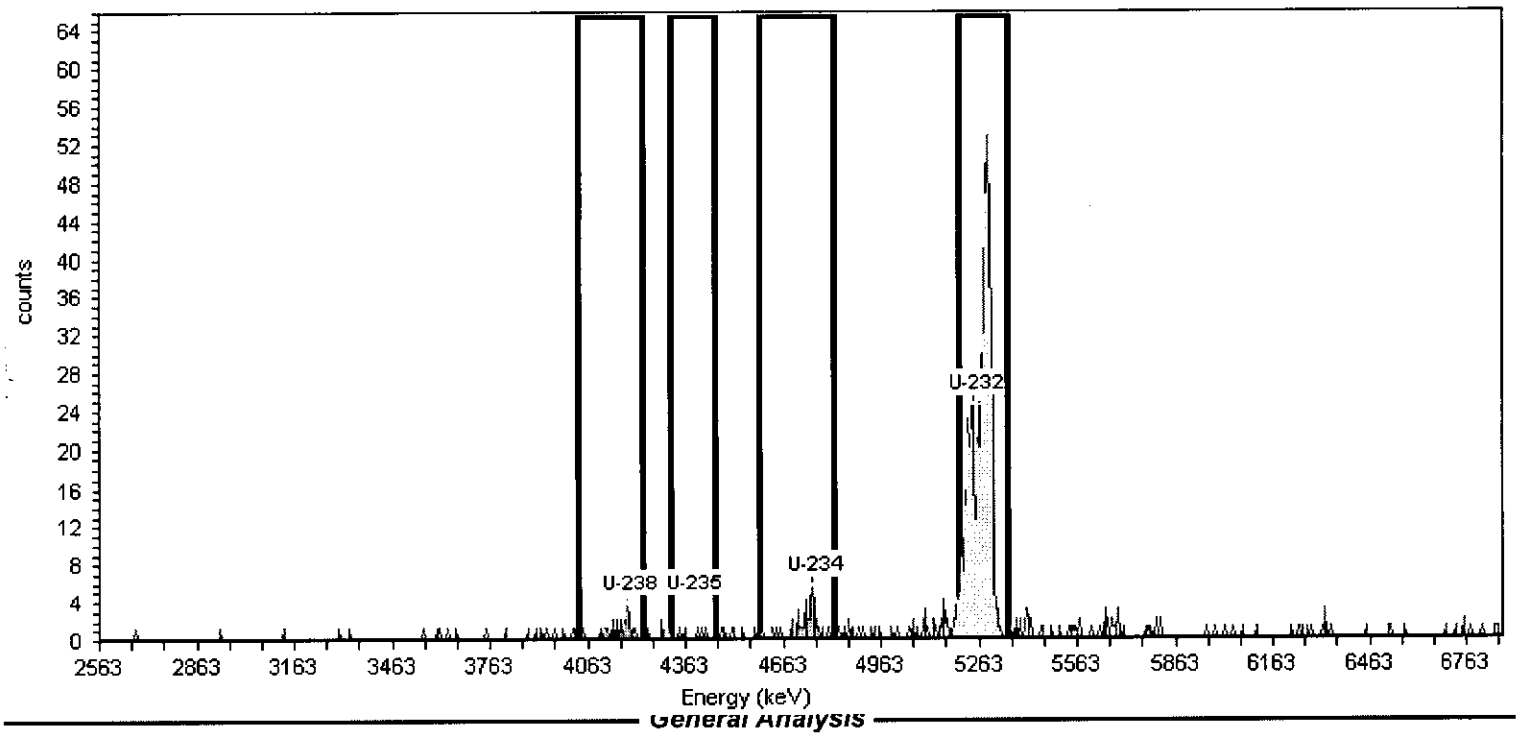
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 49.93%

Acquisition

Detector: 3 bottom SN: 47-011ii4
Acquisition Start Date: 8/2/2010 9:24:10AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 3 Bottom; Det: 3 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 012
Efficiency Calibration:2010.07.26 012
Calibration Date: 7/26/2010 10:15:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.55% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	29.760	100.2	23.57	8.0000	16	2.661E-001	2.940E-001	1.125E-001	2.712E-001
U-235	4396.000	4318.000	4453.000	.000	80.9	5.04	11.0216	-6	-1.268E-001	2.561E-001	1.635E-001	3.844E-001
U-234	4765.000	4592.000	4819.000	51.197	100.0	38.00	21.7704	16	2.779E-001	4.018E-001	1.859E-001	4.181E-001
U-232	5263.000	5203.000	5350.000	37.786	99.8	633.00	4.0000	629	5.892E+000	7.459E-001	8.729E-002	2.253E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC 2:24:33PM 8/2/2010

Sample

Sample: L83112-10 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

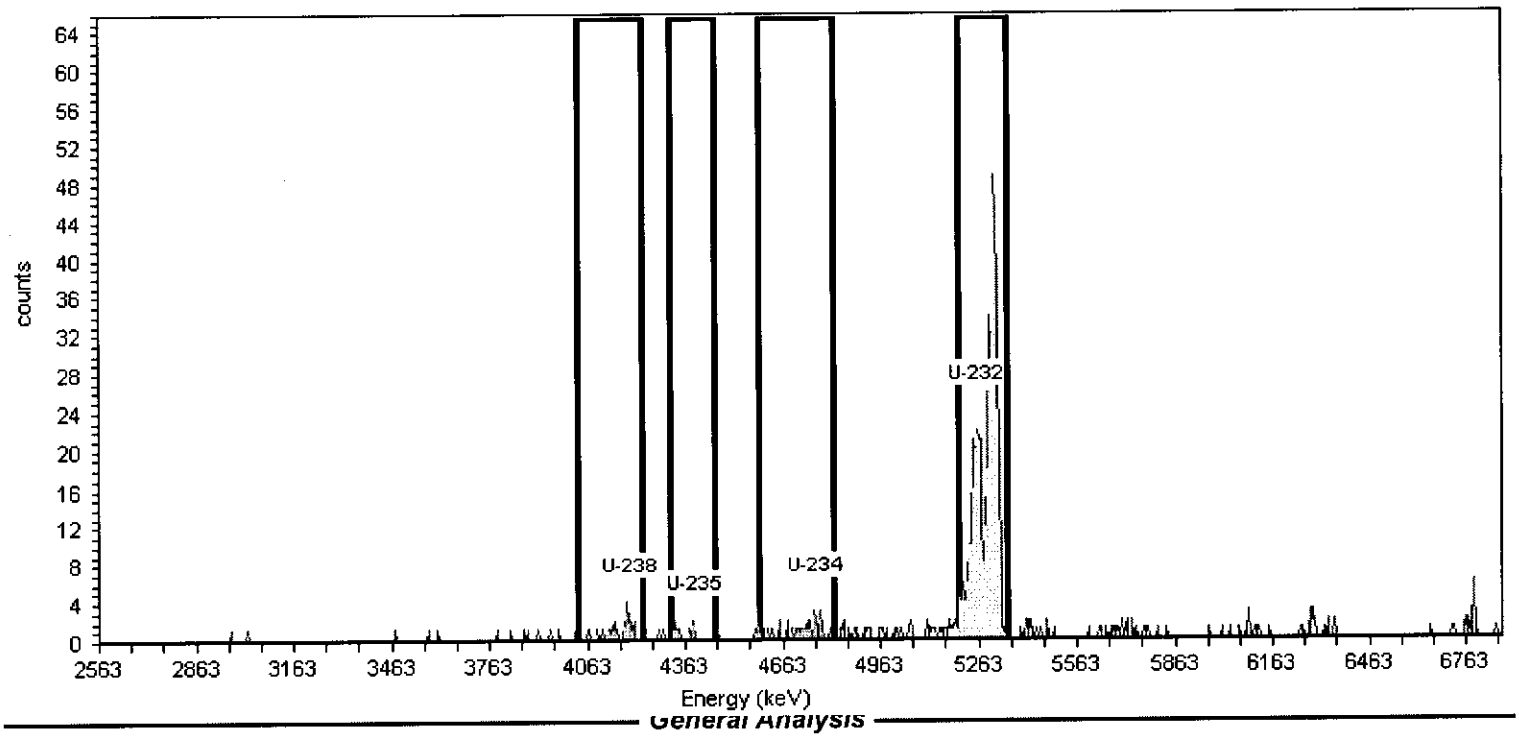
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 44.02%

Acquisition

Detector: 4 bottom SN: 47-077ii3
Acquisition Start Date: 8/2/2010 9:24:11AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:30AM
Bkgd Info: Sample: 4 Bottom; Det: 4 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 013
Efficiency Calibration:2010.07.26 013
Calibration Date: 7/26/2010 10:16:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.70% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	28.172	100.2	24.00	3.0000	21	4.039E-001	3.131E-001	7.749E-002	2.070E-001
U-235	4396.000	4318.000	4453.000	23.416	80.9	9.00	2.0216	7	1.663E-001	2.402E-001	7.881E-002	2.221E-001
U-234	4765.000	4592.000	4819.000	222.559	100.0	34.06	14.2296	20	3.821E-001	4.107E-001	1.691E-001	3.903E-001
U-232	5263.000	5203.000	5350.000	26.152	99.8	566.00	7.0000	559	5.194E+000	6.974E-001	1.299E-001	3.170E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:24:36PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-11 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

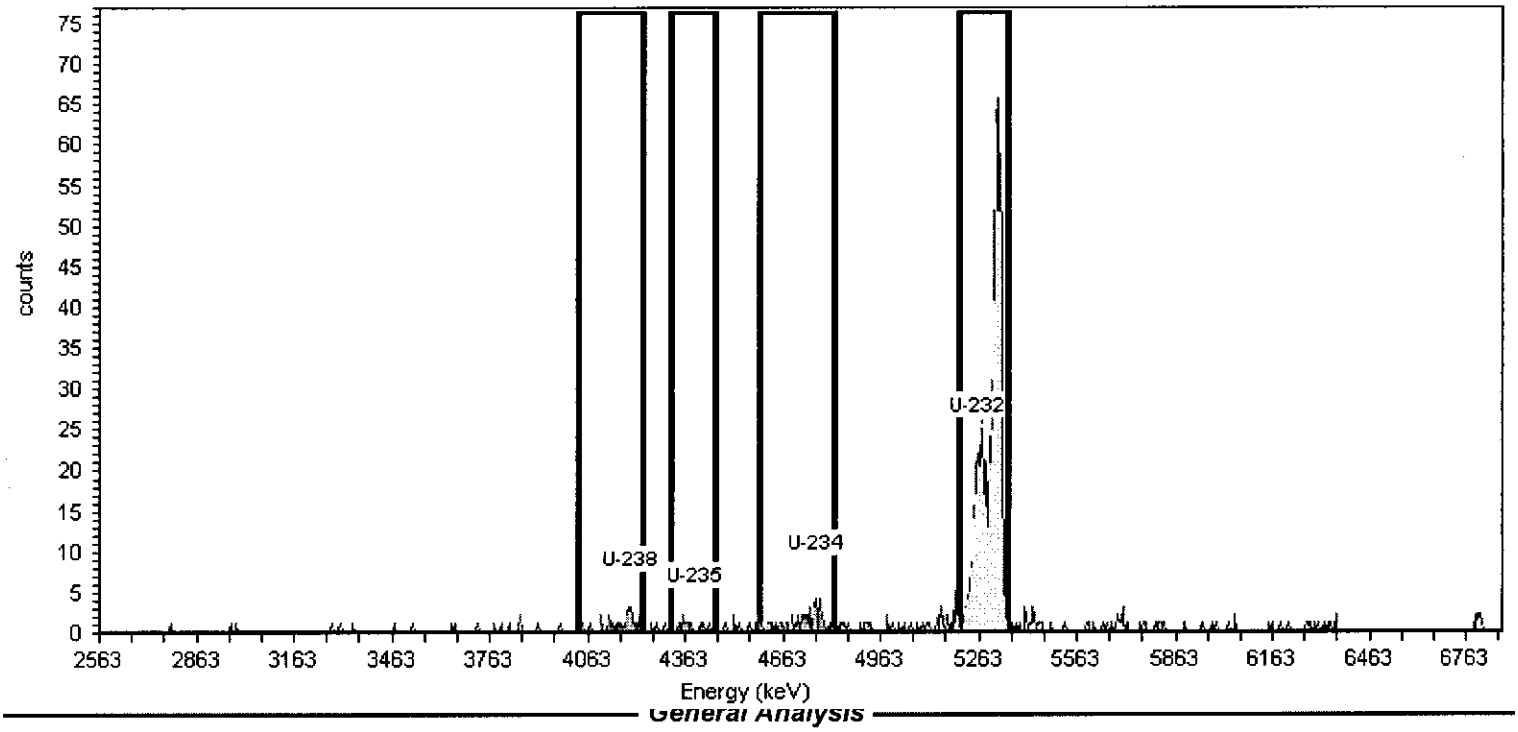
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 55.74%

Acquisition

Detector: 5 bottom SN: 47011ii5
Acquisition Start Date: 8/2/2010 9:24:11AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 5 Bottom; Det: 5 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 014
Efficiency Calibration:2010.07.26 014
Calibration Date: 7/26/2010 10:17:11AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.53% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	41.513	100.2	30.00	6.5711	23	3.592E-001	2.888E-001	9.142E-002	2.243E-001
U-235	4396.000	4318.000	4453.000	86.694	80.9	11.98	9.0000	3	5.657E-002	2.613E-001	1.326E-001	3.165E-001
U-234	4765.000	4592.000	4819.000	63.817	100.0	50.17	15.0596	35	5.393E-001	3.900E-001	1.387E-001	3.189E-001
U-232	5263.000	5203.000	5350.000	18.695	99.8	712.27	11.0000	701	6.578E+000	7.996E-001	1.298E-001	3.052E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:24:44PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-12 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

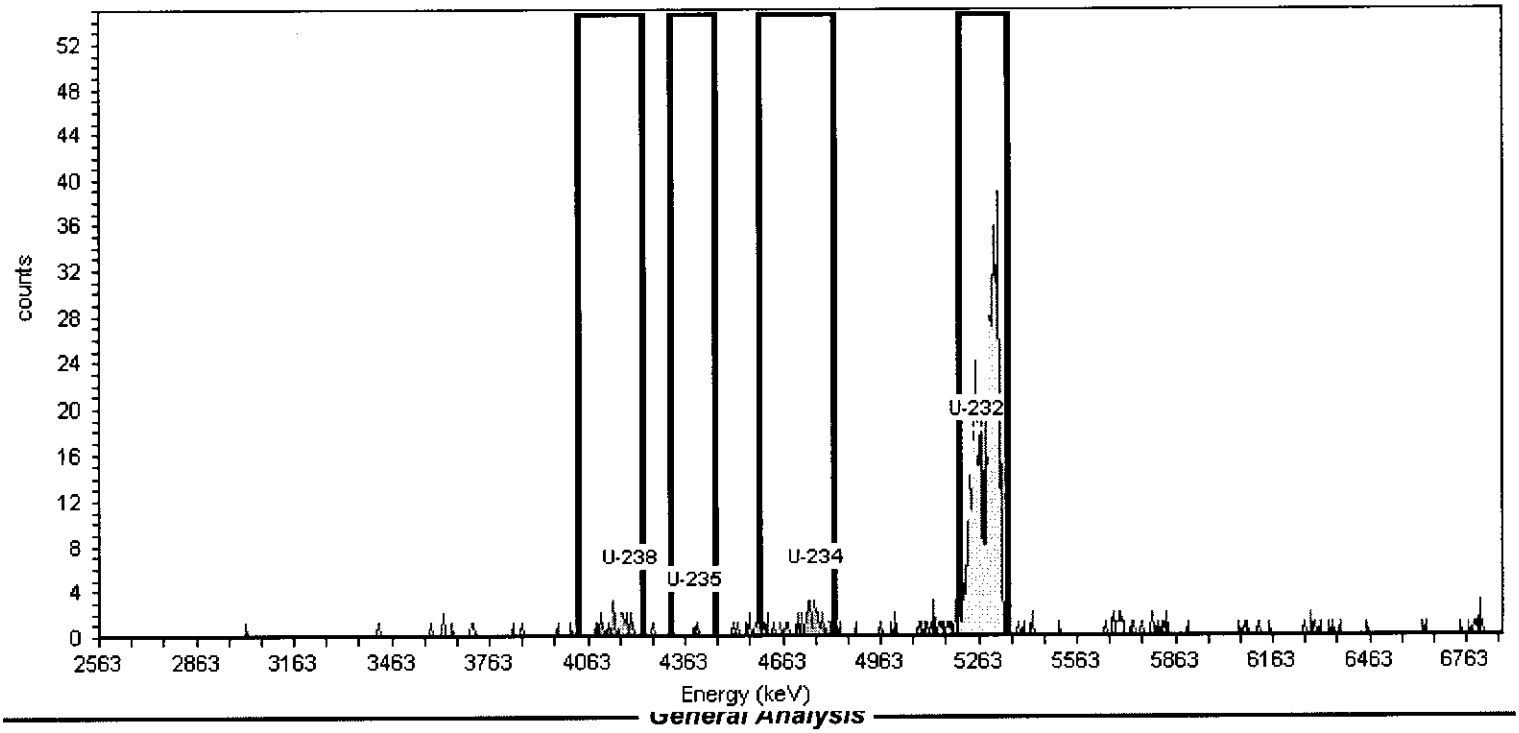
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 37.42%

Acquisition

Detector: 6 bottom SN: 40-225i4
Acquisition Start Date: 8/2/2010 9:24:12AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:31AM
Bkgd Info: Sample: 6 Bottom; Det: 6 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 015
Efficiency Calibration:2010.07.26 015
Calibration Date: 7/26/2010 10:18:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.99% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	100.683	100.2	26.00	4.0000	22	4.895E-001	3.828E-001	1.035E-001	2.673E-001
U-235	4396.000	4318.000	4453.000	24.537	80.9	2.00	3.0000	-1	-2.757E-002	1.850E-001	1.111E-001	2.967E-001
U-234	4765.000	4592.000	4819.000	97.742	100.0	40.00	23.0000	17	3.790E-001	5.380E-001	2.487E-001	5.577E-001
U-232	5263.000	5203.000	5350.000	12.137	99.8	502.00	18.8309	483	4.416E+000	6.487E-001	2.465E-001	5.592E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:24:52PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-13 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

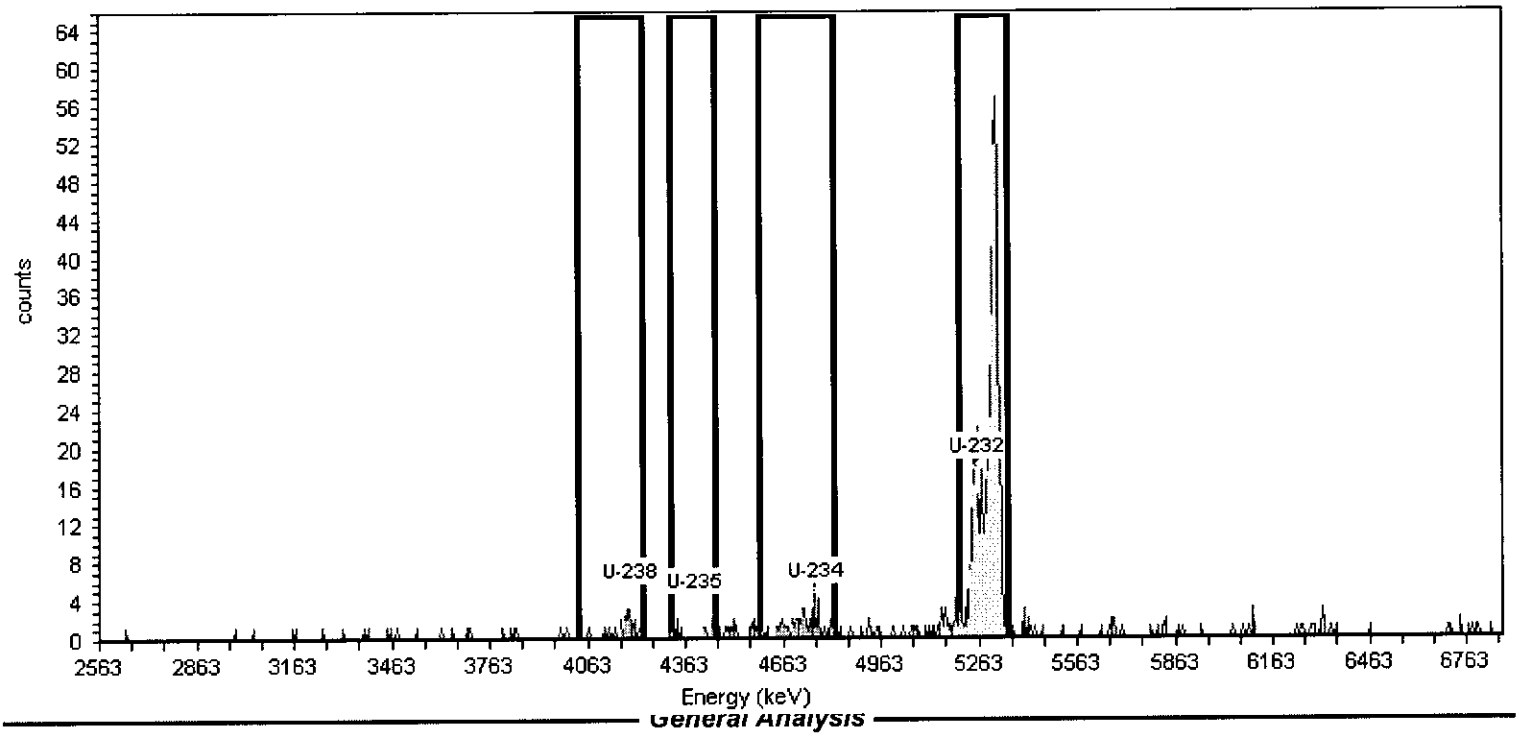
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 43.28%

Acquisition

Detector: 7 bottom SN: 47-011c4
Acquisition Start Date: 8/2/2010 9:24:12AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 7 Bottom; Det: 7 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 016
Efficiency Calibration:2010.07.26 016
Calibration Date: 7/26/2010 10:19:07AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.07% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	28.610	100.2	23.00	8.0000	15	2.872E-001	3.263E-001	1.260E-001	3.038E-001
U-235	4396.000	4318.000	4453.000	5.741	80.9	7.96	1.0000	7	1.652E-001	2.163E-001	5.519E-002	1.746E-001
U-234	4765.000	4592.000	4819.000	106.095	100.0	52.00	25.0596	27	5.169E-001	5.183E-001	2.234E-001	4.988E-001
U-232	5263.000	5203.000	5350.000	20.031	99.8	571.73	10.3100	561	5.107E+000	6.874E-001	1.570E-001	3.709E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
2:25:00PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-14 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 001
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

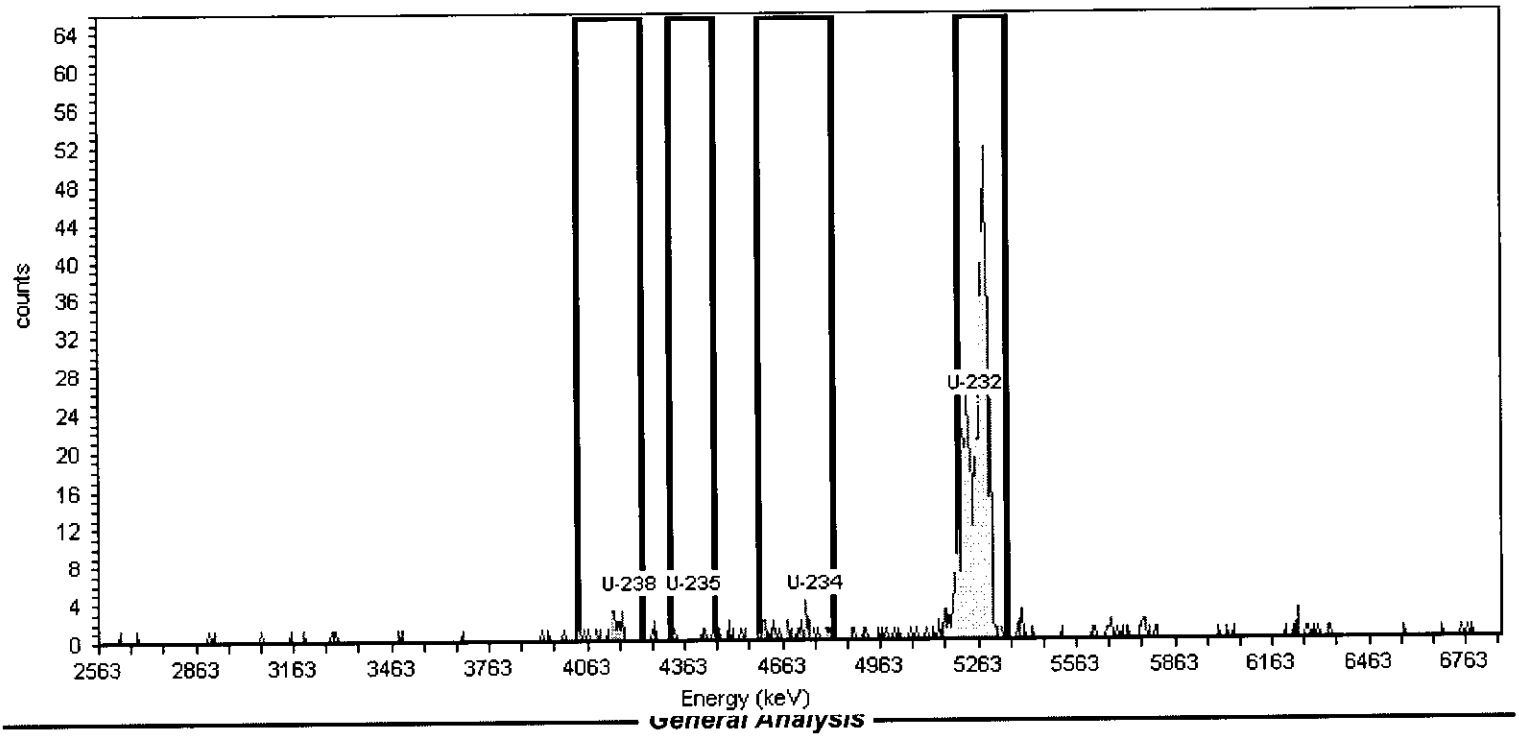
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 48.20%

Acquisition

Detector: 8 bottom SN: 40-225-I2
Acquisition Start Date: 8/2/2010 9:24:13AM
Live Time: 300.00 min.
Real Time: 300.01 min.
Background Date: 7/26/2010 10:23:32AM
Bkgd Info: Sample: 8 Bottom; Det: 8 bottom; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 017
Efficiency Calibration:2010.07.26 017
Calibration Date: 7/26/2010 10:20:10AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 17.77% +/- 0.46% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 9:17:18AM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	39.085	100.2	21.00	1.0000	20	3.498E-001	2.579E-001	4.069E-002	1.287E-001
U-235	4396.000	4318.000	4453.000	.179	80.9	3.02	5.9649	-3	-6.377E-002	1.954E-001	1.231E-001	3.049E-001
U-234	4765.000	4592.000	4819.000	29.230	100.0	31.94	18.0000	14	2.443E-001	3.754E-001	1.729E-001	3.933E-001
U-232	5263.000	5203.000	5350.000	70.616	99.8	622.69	8.0000	615	5.688E+000	7.316E-001	1.263E-001	3.046E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:04PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-15 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 002
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

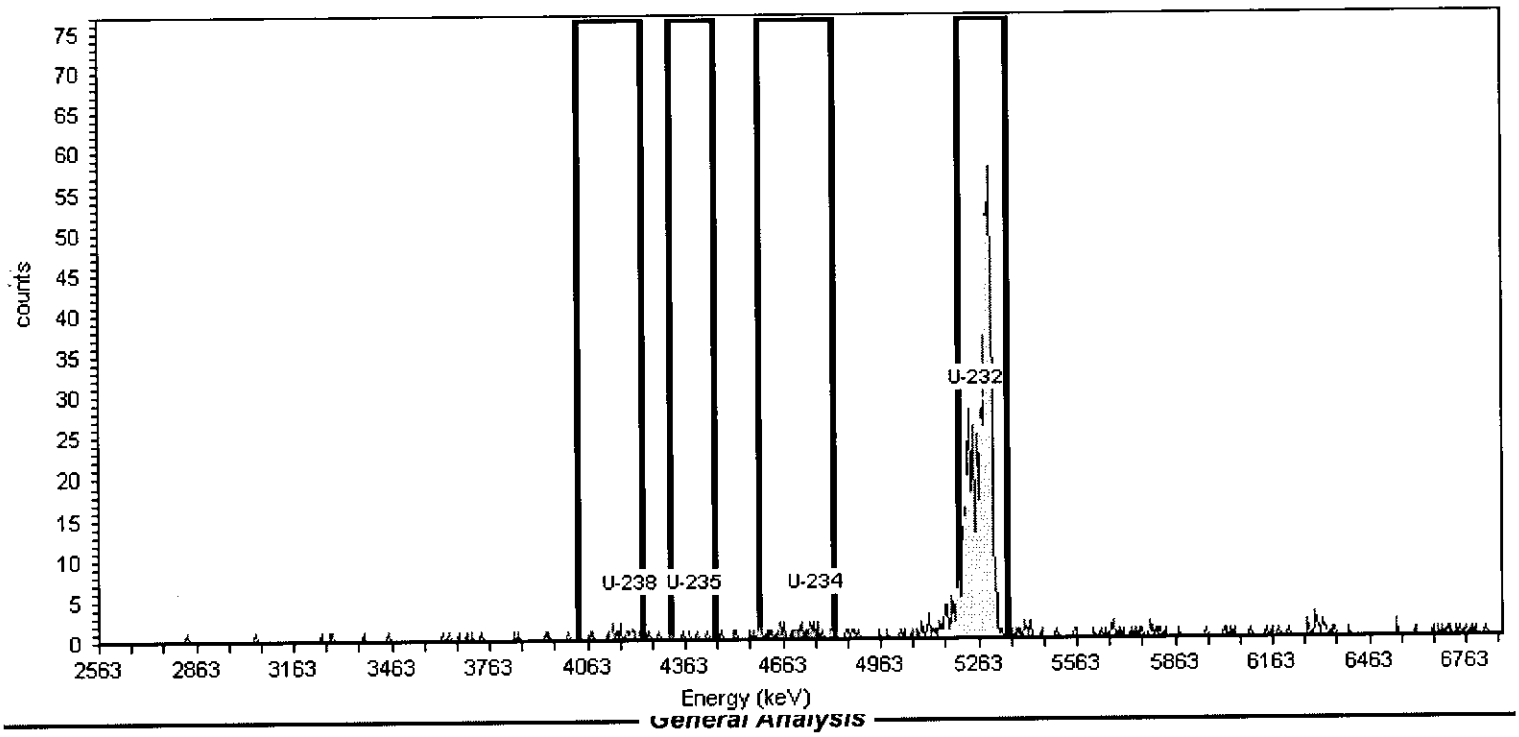
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 53.23%

Acquisition

Detector: 1 top SN: 48-142cc1
Acquisition Start Date: 8/2/2010 2:30:48PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 1 Top; Det: 1 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 001
Efficiency Calibration:2010.07.26 001
Calibration Date: 7/26/2010 10:03:03AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.26% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 2:28:57PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	76.067	100.2	17.00	8.0000	9	1.387E-001	2.331E-001	1.014E-001	2.445E-001
U-235	4396.000	4318.000	4453.000	8.904	80.9	5.96	4.0351	2	3.685E-002	1.813E-001	8.924E-002	2.301E-001
U-234	4765.000	4592.000	4819.000	.000	100.0	36.71	24.0000	13	1.963E-001	3.634E-001	1.760E-001	3.938E-001
U-232	5263.000	5203.000	5350.000	37.142	99.8	703.18	5.6900	697	6.282E+000	7.588E-001	9.388E-002	2.335E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:08PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-16 Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 002
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

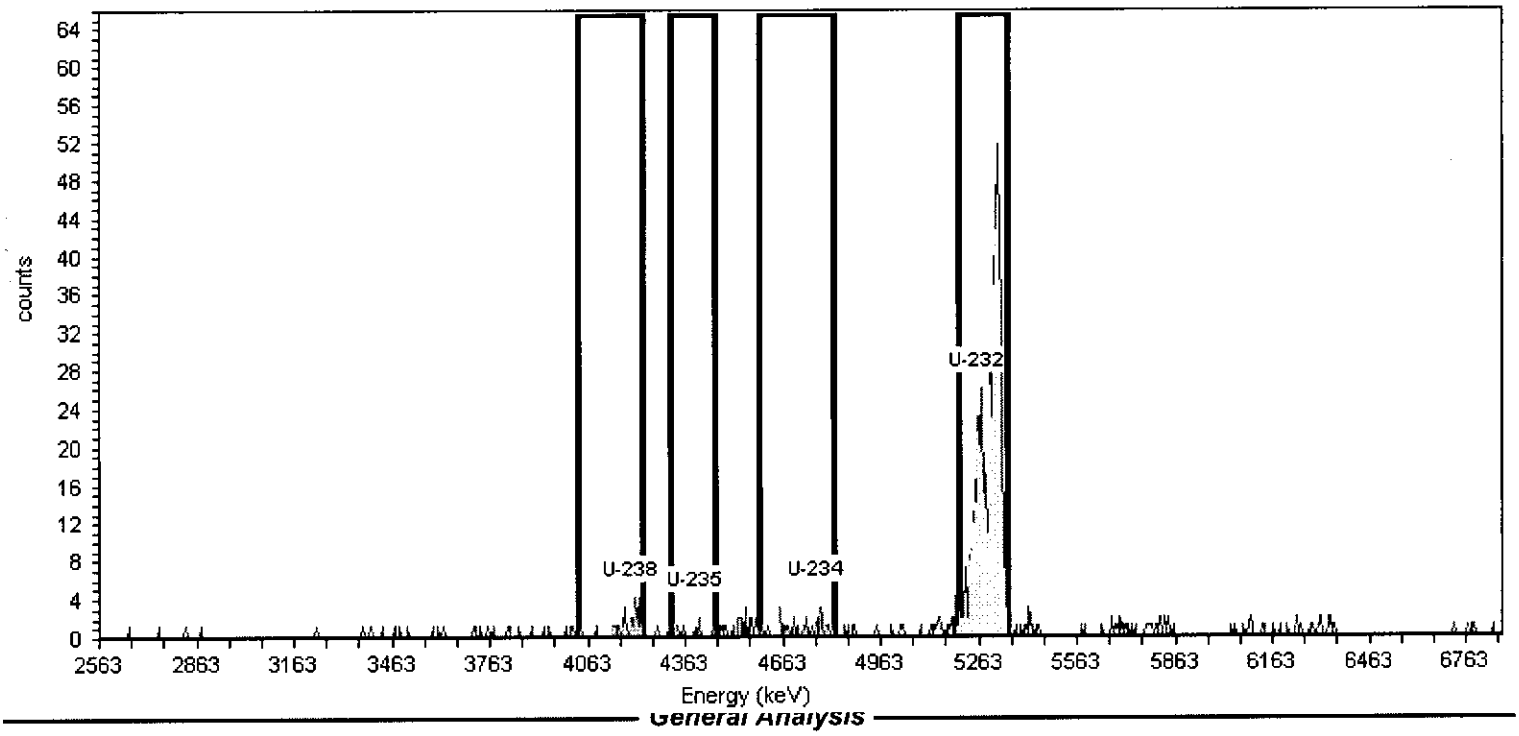
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 46.18%

Acquisition

Detector: 2 top SN: 48-142cc2
Acquisition Start Date: 8/2/2010 2:30:46PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 2 Top; Det: 2 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 003
Efficiency Calibration:2010.07.26 003
Calibration Date: 7/26/2010 10:05:14AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.90% +/- 0.48% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 2:28:57PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	15.639	100.2	31.33	8.0000	23	4.004E-001	3.346E-001	1.129E-001	2.723E-001
U-235	4396.000	4318.000	4453.000	48.191	80.9	6.02	12.0000	-6	-1.271E-001	2.722E-001	1.713E-001	4.002E-001
U-234	4765.000	4592.000	4819.000	40.608	100.0	28.29	30.4592	-2	-3.731E-002	3.954E-001	2.208E-001	4.880E-001
U-232	5263.000	5203.000	5350.000	18.232	99.8	633.62	7.1691	626	5.449E+000	6.919E-001	1.173E-001	2.856E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:30:51PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-01 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 002
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

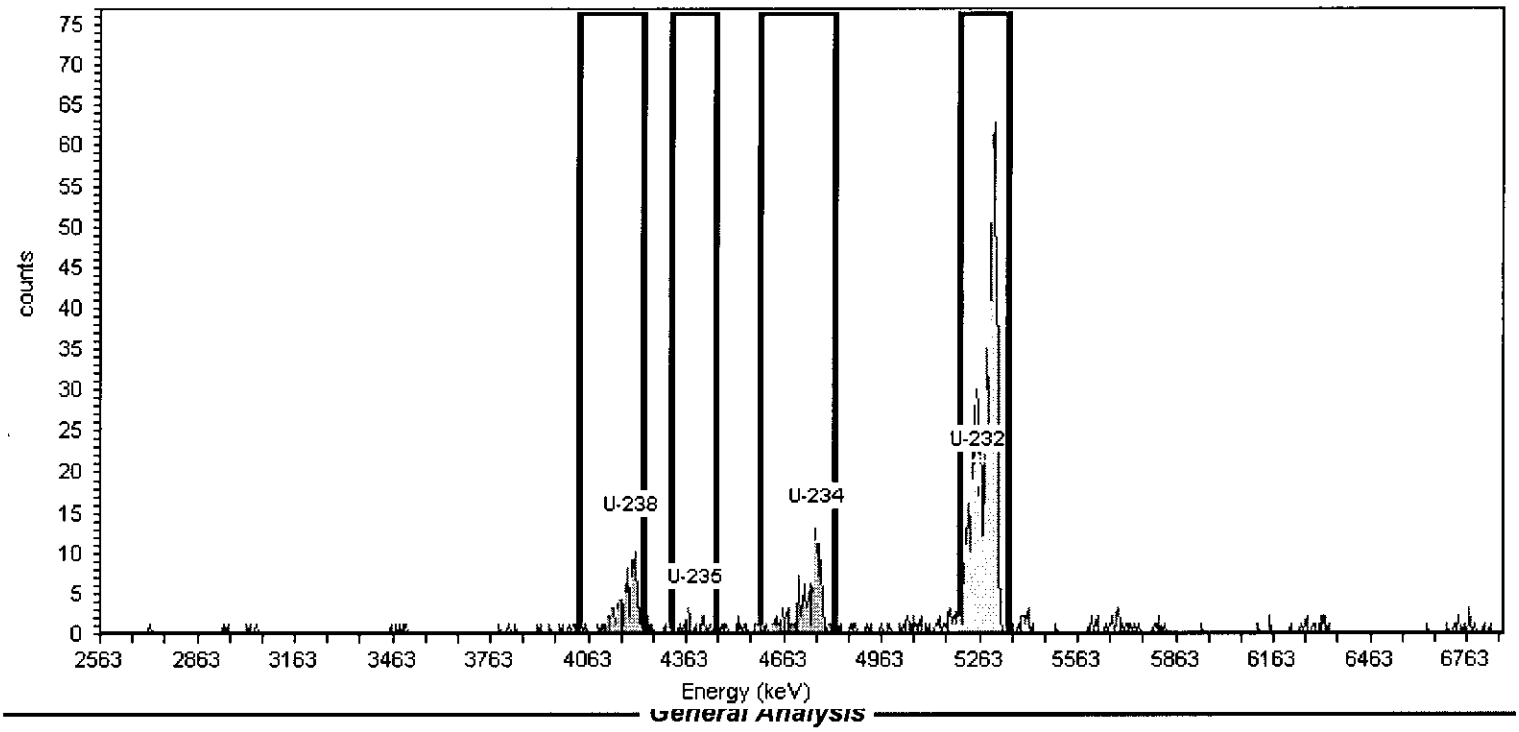
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 53.19%

Acquisition

Detector: 3 top SN: 48-142cc3
Acquisition Start Date: 8/2/2010 2:30:49PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:09AM
Bkgd Info: Sample: 3 Top; Det: 3 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 004
Efficiency Calibration:2010.07.26 004
Calibration Date: 7/26/2010 10:06:15AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.50% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 2:28:57PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	7.727	100.2	101.33	4.4289	97	1.475E+000	5.674E-001	7.454E-002	1.903E-001
U-235	4396.000	4318.000	4453.000	84.097	80.9	14.01	14.0351	0	-4.082E-004	2.997E-001	1.644E-001	3.799E-001
U-234	4765.000	4592.000	4819.000	31.188	100.0	132.89	30.7704	102	1.558E+000	6.750E-001	1.969E-001	4.350E-001
U-232	5263.000	5203.000	5350.000	34.086	99.8	713.37	7.3100	706	6.276E+000	7.550E-001	1.051E-001	2.555E-001

AlphaVision v5.3 — Alpha-Spectroscopy Analysis Report

ORTEC
Oak Ridge, TN 37830

Analyst: ORTEC

7:30:56PM 8/2/2010

Sample

Sample: L83112-16 DUP Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 002
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

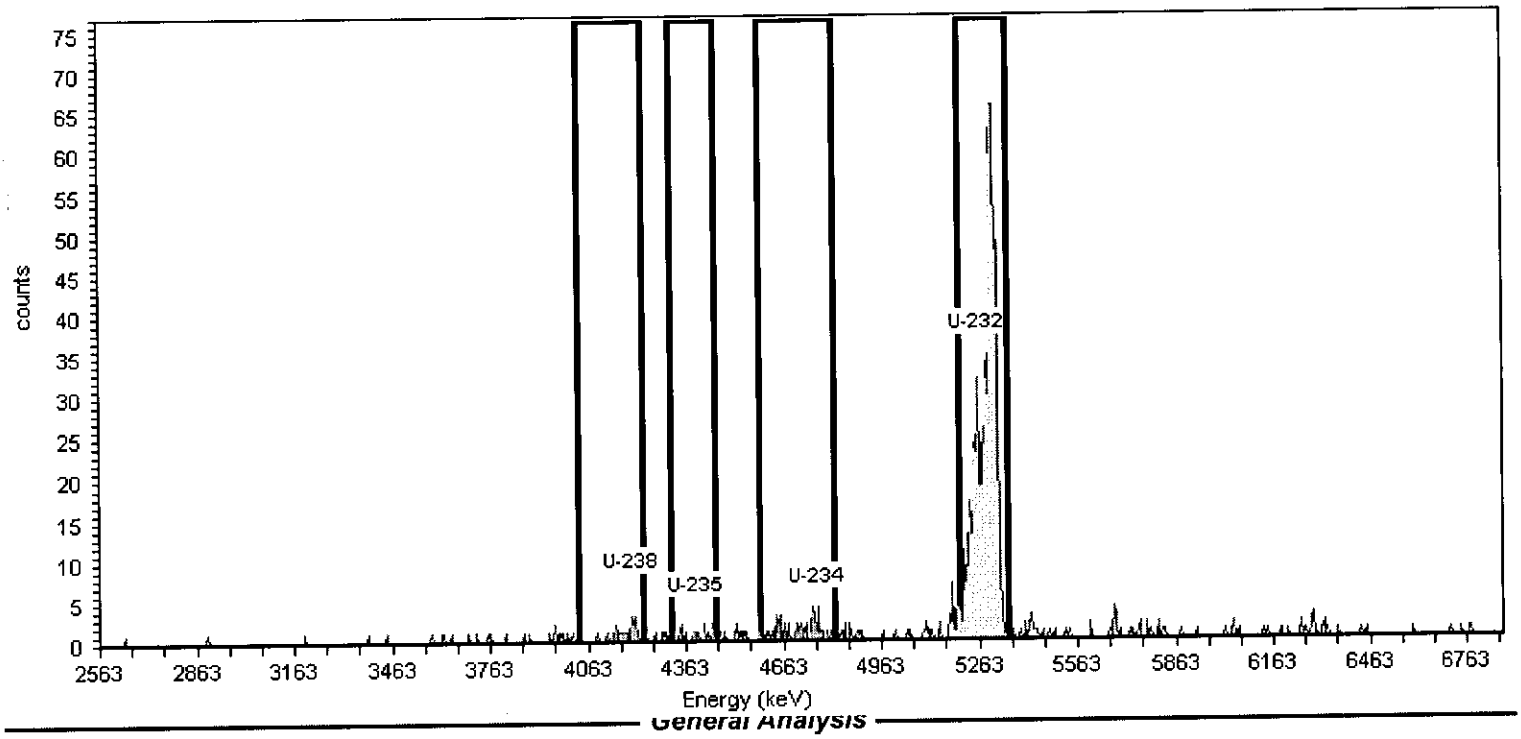
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 62.03%

Acquisition

Detector: 4 top SN: 48-150p3
Acquisition Start Date: 8/2/2010 2:30:53PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:12AM
Bkgd Info: Sample: 4 Top; Det: 4 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 005
Efficiency Calibration:2010.07.26 005
Calibration Date: 7/26/2010 10:07:52AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.33% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 2:28:57PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	18.713	100.2	25.00	7.5711	17	2.296E-001	2.307E-001	8.433E-002	2.043E-001
U-235	4396.000	4318.000	4453.000	11.328	80.9	14.02	11.0000	3	4.932E-002	2.452E-001	1.259E-001	2.960E-001
U-234	4765.000	4592.000	4819.000	139.756	100.0	51.00	25.7108	25	3.338E-001	3.539E-001	1.557E-001	3.471E-001
U-232	5263.000	5203.000	5350.000	32.515	99.8	820.34	4.3100	816	7.319E+000	8.221E-001	6.984E-002	1.788E-001

AlphaVision v5.3 **Alpha-Spectroscopy Analysis Report**

ORTEC
Oak Ridge, TN 37830
7:31:00PM 8/2/2010

Analyst: ORTEC

Sample

Sample: L83112-03 MS Type: Sample
Spectrum #1 Analysis #1
:
Sample Collection Date:
Comment:

Sample Volume : 1.00 Sample Units: mL
First Stage Dilution: N/A
Aliquot: N/A Aliquot Fraction: N/A
Dilution 2: N/A
Lab Preparation:

Batch

Batch Name: 2010.08.02 002
:
Description: WG286896

Client Name: Undefined
Client Contact:

Tracer

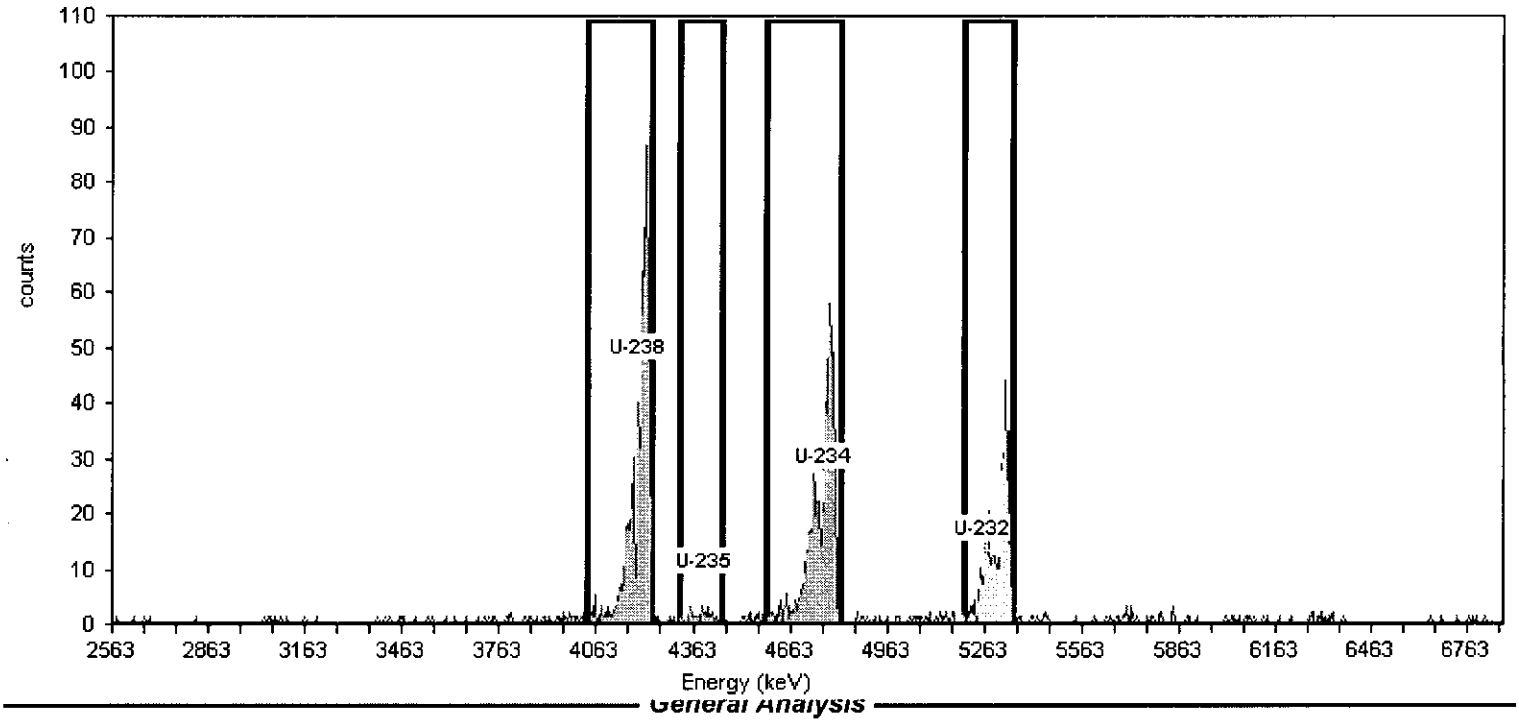
Tracer Name: rc040824-3
Tracer Activity: 26.20 DPM/mL x (Vol.)1.00 mL = 26.20 DPM
Tracer Ref. Date: 5/10/2001 12:20:28PM

Tracer Nuclide: U-232
Tracer Recovery: 30.54%

Acquisition

Detector: 5 top SN: 48-142u5
Acquisition Start Date: 8/2/2010 2:30:56PM
Live Time: 300.00 min.
Real Time: 300.00 min.
Background Date: 7/26/2010 10:23:15AM
Bkgd Info: Sample: 5 Top; Det: 5 top; Spectrum #1; Jul-26-2010 10:23

Energy Calibration: 2010.07.26 006
Efficiency Calibration:2010.07.26 006
Calibration Date: 7/26/2010 10:08:53AM
Energy Cal: Gain = 4.2170 keV / Ch
Offset = 2,559.67 keV
Quadratic = 0.0000 keV / Ch^2
Efficiency: 18.61% +/- 0.47% TPU(2 sigma)



General Analysis

Analysis Method: ROI Analysis, Set Name = URANIUM
Decay Correction:8/2/2010 2:28:57PM
MDA Constants: Kα = 1.65 , Kβ = 1.65

Nuclide Library: URANIUM
MDA Source: Background

Nuclide Summary (ROI)

Nuclide	Peak Energy keV	ROI Start keV	ROI End keV	FWHM keV	B.R. %	Gross Counts	Bkgd Counts	Net Counts	Activity pCi	3.00Sigma TPU pCi	Critical Level pCi	MDA pCi
U-238	4193.000	4037.000	4232.000	21.394	100.2	738.15	12.0000	726	1.914E+001	5.062E+000	2.125E-001	4.962E-001
U-235	4396.000	4318.000	4453.000	121.694	80.9	31.93	4.0000	28	9.122E-001	6.265E-001	1.520E-001	3.923E-001
U-234	4765.000	4592.000	4819.000	16.646	100.0	716.54	29.3399	687	1.815E+001	4.848E+000	3.328E-001	7.371E-001
U-232	5263.000	5203.000	5350.000	23.657	99.8	422.10	14.3100	408	3.603E+000	5.705E-001	2.547E-001	5.876E-001

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG287344

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 7/29/2010
Analysis Date: 8/2/2010
Start Time:
End Time:
Approved: MWM 8-5-10
Approved: MDB 8-5-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	WG286917PBS		0.5	9.0519	9.1019	0.0500	2.5000		89.53	0.07	0.13	0.89
2	WG286917LCSS	RC100624-2	0.5	9.0453	9.0981	0.0528	2.6400		89.53	48.04	2.14	0.84
3	L83112-01	BG-1 0-2 COMP	0.49378	9.0981	9.1478	0.0497	2.4850		89.53	2.11	0.48	0.90
4	L83112-02	BG-1 2-12 COMI	0.49434	9.0755	9.1232	0.0477	2.3850		89.53	4.97	0.74	0.94
5	L83112-03	BG-1 12-18 COM	0.48927	9.0778	9.151	0.0732	3.6600		89.53	1.66	0.35	0.62
6	L83112-04	BG-2 0-2 COMP	0.4911	9.0708	9.1267	0.0559	2.7950		89.53	3.53	0.58	0.81
7	L83112-05	BG-2 2-12 COMI	0.48869	9.109	9.1713	0.0623	3.1150		89.53	2.22	0.44	0.73
8	L83112-06	BG-2 12-18 COM	0.48921	9.0721	9.1261	0.0540	2.7000		89.53	1.63	0.41	0.84
9	L83112-07	BG-100 0-2 COM	0.49471	9.081	9.1299	0.0489	2.4450		89.53	1.86	0.46	0.92
10	L83112-08	BG-3 0-2 COMP	0.49186	9.0548	9.1047	0.0499	2.4950		89.53	2.80	0.55	0.90
11	L83112-09	BG-3 2-12 COMI	0.49034	9.0682	9.1189	0.0507	2.5350		91.60	1.95	0.45	0.88
12	L83112-10	BG-3 12-18 COM	0.48844	9.0842	9.1527	0.0685	3.4250		91.60	1.69	0.37	0.66
13	L83112-11	BG-4 0-2 COMP	0.49437	9.0962	9.1465	0.0503	2.5150		91.60	1.77	0.44	0.88
14	L83112-12	BG-4 2-12 COMI	0.49525	9.0642	9.1165	0.0523	2.6150		91.60	2.10	0.47	0.85
15	L83112-13	BG-4 12-18 COM	0.49557	9.1037	9.2263	0.1226	6.1300	R	91.60	1.73	0.39	0.72
16	L83112-14	BG-6 0-2 COMP	0.49583	9.0438	9.0939	0.0501	2.5050		91.60	7.47	0.87	0.88
17	L83112-15	BG-6 2-12 COMI	0.49429	9.0587	9.1082	0.0495	2.4750		91.60	2.55	0.52	0.90
18	L83112-16	BG-6 12-18 COM	0.4935	9.0927	9.1431	0.0504	2.5200		91.60	1.84	0.45	0.88
19	L83112-01DUP		0.49378	9.0759	9.1297	0.0538	2.6900		91.60	5.44	0.73	0.83
20	L83112-16DUP		0.4935	9.1088	9.1634	0.0546	2.7300		91.60	3.61	0.59	0.81
21	L83112-02MS	RC100624-2	0.49434	9.069	9.1206	0.0516	2.5800		93.38	47.55	2.15	0.85

Ra226 Decay Date:	
Time:	
Ba Correction Factor	0.05500
Counting Efficiency:	0.1700
Alpha BG Count @90min	0.24

R

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

KBS 8/6/10

ACZ Sample No.	GR CPM Alpha	Detector Alpha	BG CPM Alpha	NET CPM Alpha	Ingrow date & time	Count date & time	Ingrow Factor	Counting Efficiency	Fractional Yield	Detector #	BG alpha
WG286917PBS	0.0670	1	0.0389	0.0281	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.9091	1	0.0389
WG286917LCSS	21.6100	2	0.0722	21.5378	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.9600	2	0.0722
L83112-01	0.9330	3	0.0542	0.8788	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.9036	3	0.0542
L83112-02	2.0560	4	0.0667	1.9893	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.8673	4	0.0667
L83112-03	1.0780	5	0.0675	1.0105	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	1.3309	5	0.0675
L83112-04	1.6890	6	0.0417	1.6473	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	1.0164	6	0.0417
L83112-05	1.2000	7	0.0514	1.1486	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	1.1327	7	0.0514
L83112-06	0.7890	8	0.0569	0.7321	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.9818	8	0.0569
L83112-07	0.8440	9	0.0792	0.7648	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.8891	9	0.0792
L83112-08	1.2220	10	0.0528	1.1692	7/29/2010 16:50	8/2/2010 9:37	2.48	0.1700	0.9073	10	0.0528
L83112-09	0.8700	1	0.0389	0.8311	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9218		
L83112-10	1.0440	2	0.0722	0.9718	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	1.2455		
L83112-11	0.8100	3	0.0542	0.7558	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9145		
L83112-12	1.0000	4	0.0667	0.9333	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9509		
L83112-13	0.9700	5	0.0675	0.9025	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	1.1145		
L83112-14	3.2220	6	0.0417	3.1803	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9109		
L83112-15	1.1220	7	0.0514	1.0706	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9000		
L83112-16	0.8400	8	0.0569	0.7831	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9164		
L83112-01DUP	2.5560	9	0.0792	2.4768	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9782		
L83112-16DUP	1.7220	10	0.0528	1.6692	7/29/2010 16:50	8/2/2010 11:41	2.50	0.1700	0.9927		
L83112-02MS	21.0100	1	0.0389	20.9711	7/29/2010 16:50	8/2/2010 13:28	2.52	0.1700	0.9382		
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			
			#N/A	#N/A				0.1700			

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 8-5-10

Work Group: WG297344
Sample Type: Soil
Analysis Date: 8-2-10
Analyst: TCD
Prep Date: 7-29-10

Approved: MWB
Date: 8-5-10

Weekly background file: Back624
Daily background file: Back625

Alpha performance file: Peak917
Beta performance file: –

GAB dry date/time: –

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?		✓	
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?		✓	
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action
L831120-01DUP	RER exceeded control lim. due to non-homogeneity of sx	RC
L831120-16DUP	"	"

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287344

Date Reported: 05-Aug-10
Run ID: R737456
Date Analyzed: 02-Aug-10
ICAL Workgroup:
Instrument ID: LB770

WG286917PBS

Tag: Measured: 8/2/2010 9:37:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.07	1		pCi/g	++	0.89	0.13		

WG286917LCSS

Tag: Measured: 8/2/2010 9:38:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	48	1		pCi/g	++	0.84	2.1	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	100.4	1		%	++	0.84	2.1	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	47.83	1		pCi/g	++	0.84	2.1	RC100624-2	

L83112-01

Tag: Measured: 8/2/2010 9:39:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.1	1		pCi/g	++	0.9	0.48		RC

L83112-02

Tag: Measured: 8/2/2010 9:41:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	5	1		pCi/g	++	0.94	0.74		RC

L83112-03

Tag: Measured: 8/2/2010 9:42:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.7	1		pCi/g	++	0.62	0.35		RC

L83112-04

Tag: Measured: 8/2/2010 9:44:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	3.5	1		pCi/g	++	0.81	0.58		RC

L83112-05

Tag: Measured: 8/2/2010 9:45:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.2	1		pCi/g	++	0.73	0.44		RC

L83112-06

Tag: Measured: 8/2/2010 9:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.6	1		pCi/g	++	0.84	0.41		RC

L83112-07 Tag: **Measured: 8/2/2010 9:48:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.9	1		pCi/g	++	0.92	0.46		RC

L83112-08 Tag: **Measured: 8/2/2010 9:49:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.8	1		pCi/g	++	0.9	0.55		RC

L83112-09 Tag: **Measured: 8/2/2010 9:51:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2	1		pCi/g	++	0.88	0.45		RC

L83112-10 Tag: **Measured: 8/2/2010 9:52:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.7	1		pCi/g	++	0.66	0.37		RC

L83112-11 Tag: **Measured: 8/2/2010 9:54:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.8	1		pCi/g	++	0.88	0.44		RC

L83112-12 Tag: **Measured: 8/2/2010 9:55:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.1	1		pCi/g	++	0.85	0.47		RC

L83112-13 Tag: **Measured: 8/2/2010 9:57:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.7	1		pCi/g	++	0.72	0.39		RC

L83112-14 Tag: **Measured: 8/2/2010 9:58:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	7.5	1		pCi/g	++	0.88	0.87		RC

L83112-15 Tag: **Measured: 8/2/2010 10:00:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	2.6	1		pCi/g	++	0.9	0.52		RC

L83112-16 Tag: **Measured: 8/2/2010 10:01:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	)315-3050	1.8	1		pCi/g	++	0.88	0.45		RC

L83112-01DUP

Tag: Measured: 8/2/2010 10:02:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	5.4	1		pCi/g	++	0.83	0.73		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	3.78	1		%	ALRT	2	5		RC
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	88	1		pCi/g	ALRT	0.83	0.73		

L83112-16DUP

Tag: Measured: 8/2/2010 10:04:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	3.6	1		pCi/g	++	0.81	0.59		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	2.43	1		%	ALRT	2	5		RC
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	66.7	1		pCi/g	ALRT	0.81	0.59		

L83112-02MS

Tag: Measured: 8/2/2010 10:05:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	48	1		pCi/g	++	0.85	2.2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	88.1	1		%	++	0.85	2.2	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	48.81	1		pCi/g	++	0.85	2.2	RC100624-2	

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Soil
EPA 9315

WG286917

Instrument: LB770
Matrix Class: SOLID
List Type: QC-RA-226
List Function: PREP

Project:
SDG#:
SOP#: SOPRC003

Analyst: tcd
Dept: 50
Prep Date: 7-29-10 10:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq #	ACZ Sample No.	Client Sample ID	Sample Volume g	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes: Hours	Total pCi/g	Error (+ -)	LLD pCi/g
1	PBS		50									
2	LCSS											
3	L83112-01	BG-1 0-2 COMP										
4	L83112-02	BG-1 2-12 COMP										
5	L83112-03	BG-1 12-18 COMP										
6	L83112-04	BG-2 0-2 COMP										
7	L83112-05	BG-2 2-12 COMP										
8	L83112-06	BG-2 12-18 COMP										
9	L83112-07	BG-100 0-2 COMP										
10	L83112-08	BG-3 0-2 COMP										
11	L83112-09	BG-3 2-12 COMP										
12	L83112-10	BG-3 12-18 COMP										
13	L83112-11	BG-4 0-2 COMP										
14	L83112-12	BG-4 2-12 COMP										
15	L83112-13	BG-4 12-18 COMP										
16	L83112-14	BG-6 0-2 COMP										
17	L83112-15	BG-6 2-12 COMP										
18	L83112-16	BG-6 12-18 COMP										
19	DUP	12-01										
20	DUP	12-16										
21	MS	12-02										

Ra226 Decay Date:
Time:

Ba Correction Factor	0.05500
Counting Efficiency:	0.1700
Alpha BG Count @90min	0.24

Warns that Density above 5

Comments:

Template: RA-226-S-LB770-2

ingrowth 7-29-10
16.50

ACZ LABORATORIES, INC.
Standards/Reagents Information
wg286917.xls
Water 9/29/2010 10:08 AM

ANALYST: TCD

Second analyst:

DATE TIME of prep start:

PROJECT/WG:
Method Ra-226 9315 INSTR: LB770

Radioactive Standards

LCS & MS rc100624-2

Reagents

Barium Carrier:	rc100204-1	EDTA	rc100719-2
Sulfuric Acid	34642	Sulfuric Acid 0.1N	34642
Nitric Acid	35035	Ammonium sulfate	rc100719-1
lead carrier	rc100625-1	Acetic Acid	34657
Sodium hydroxide 10 N		Citric acid	rc100511-1

COMMENTS: Sample # 15 was accidentally spiked twice with Barium

Calculations for dry weight:

Login #
83112-1
83112-2
83112-3
83112-4
83112-5
83112-6
83112-7
83112-8
83112-9
83112-10
83112-11
83112-12
83112-13
83112-14
83112-15
83112-16

air dried solid(g)	soils sx wt (g)
0.987556561	0.5
0.988682982	0.5
0.978535268	0.5
0.982190502	0.5
0.977378969	0.5
0.978426264	0.5
0.989428643	0.5
0.983724222	0.5
0.980681818	0.5
0.976879665	0.5
0.988731784	0.5
0.990506866	0.5
0.991142816	0.5
0.991669425	0.5
0.988573661	0.5
0.986994462	0.5

dry wt(g)	Extract Vol	dchem Vol.(m	Corrected Sample Vol.(g)
0.49378	50	50	0.493778
0.49434	50	50	0.494341
0.48927	50	50	0.489268
0.49110	50	50	0.491095
0.48869	50	50	0.488689
0.48921	50	50	0.489213
0.49471	50	50	0.494714
0.49186	50	50	0.491862
0.49034	50	50	0.490341
0.48844	50	50	0.488440
0.49437	50	50	0.494366
0.49525	50	50	0.495253
0.49557	50	50	0.495571
0.49583	50	50	0.495835
0.49429	50	50	0.494287
0.49350	50	50	0.493497
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!
0.00000			#DIV/0!

3050

WG286651

ACZ Laboratories, Inc

QC List Type: I-X-3050
QCListMatClass: SOLID
Bench Sheet List: R-GROSS-AB
QC Ref: SP-3050-RC
Group ID: SP-G-3050-RC
Method Ref: M3050B for Rad Chem
SOP Ref: SOPSO28/SO

Instrument ID: SOILSPREP
Analyst: nrc
ACZ Dept: 20
Create Date: 07/26/2010 10:21
Start Date/Time: 07/26/2010 10:00
End Date/Time: 07/27/2010 9:59

SEQ	ACZ ID	Client ID	SubSX	Pri	Analysis Date	Sample Weight (g)	HNO3 (mL)	H2O2 (mL)	HCl (mL)	Soil Extract Volume (mL)	SCN Volume (mL)	Percent Solid (%)	Air Dry Moisture (%)	Comments
1	WG286651PBS1	NONE	<2000		07/26/10 10:00	0	7.5	5	5	50		0		
2	WG286651PBS2	NONE	<2000		07/26/10 11:15	0	7.5	5	5	50		0		
3	L83112-01	BG-1 0-2 COMP	<2000		07/26/10 12:31	0.5	7.5	5	5	50		98.75		
4	L83112-01DUP	NONE	<2000		07/26/10 13:47	0.5	7.5	5	5	50		98.75		
5	L83112-02	BG-1 2-12 COMP	<2000		07/26/10 15:03	0.5	7.5	5	5	50		98.87		
6	L83112-03	BG-1 12-18 COMP	<2000		07/26/10 16:18	0.5	7.5	5	5	50		97.85		
7	L83112-04	BG-2 0-2 COMP	<2000		07/26/10 17:34	0.5	7.5	5	5	50		98.22		
8	L83112-05	BG-2 2-12 COMP	<2000		07/26/10 18:50	0.5	7.5	5	5	50		97.74		
9	L83112-06	BG-2 12-18 COMP	<2000		07/26/10 20:06	0.5	7.5	5	5	50		97.84		
10	L83112-07	BG-100 0-2 COMP	<2000		07/26/10 21:22	0.5	7.5	5	5	50		98.94		
11	L83112-08	BG-3 0-2 COMP	<2000		07/26/10 22:37	0.5	7.5	5	5	50		98.37		
12	L83112-09	BG-3 2-12 COMP	<2000		07/26/10 23:53	0.5	7.5	5	5	50		98.07		
13	L83112-10	BG-3 12-18 COMP	<2000		07/27/10 1:09	0.5	7.5	5	5	50		97.69		
14	L83112-11	BG-4 0-2 COMP	<2000		07/27/10 2:25	0.5	7.5	5	5	50		98.87		
15	L83112-12	BG-4 2-12 COMP	<2000		07/27/10 3:40	0.5	7.5	5	5	50		99.05		
16	L83112-13	BG-4 12-18 COMP	<2000		07/27/10 4:56	0.5	7.5	5	5	50		99.11		
17	L83112-14	BG-6 0-2 COMP	<2000		07/27/10 6:12	0.5	7.5	5	5	50		99.17		
18	L83112-15	BG-6 2-12 COMP	<2000		07/27/10 7:28	0.5	7.5	5	5	50		98.86		
19	L83112-16	BG-6 12-18 COMP	<2000		07/27/10 8:44	0.5	7.5	5	5	50		98.7		
20	L83112-16DUP	NONE	<2000		07/27/10 9:59	0.5	7.5	5	5	50		98.7		

Report Comments:

AREV:
Initials, Date

Internal Comments

SREV:
Initials, Date

7/27/2010 11:22:48 AM 73010

Sample Measurement Parameters:
Comment: ~~WG286648~~ WG286917
User: tcd TCD 8-02-10
Instrument Name: LB770-2
Preset Time: 90:00
Cycles: 1
Outlier Definition: 4 sigma
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "1.5 hour"
Protocol ID: 6
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 90:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0389 (±0.0073)	0.0167	60
2	21.63	0.0722 (±0.0100)	0.0167	60.0
3	22.23	0.0542 (±0.0087)	0.0167	60.0
4	22.39	0.0667 (±0.0096)	0.0167	60.0
5	20.50	0.0675 (±0.0097)	0.0167	60.0
6	21.48	0.0417 (±0.0076)	0.0167	60.0
7	21.84	0.0514 (±0.0084)	0.0167	60.0
8	21.74	0.0569 (±0.0089)	0.0167	60.0
9	21.77	0.0792 (±0.0105)	0.0167	60.0
10	23.74	0.0528 (±0.0086)	0.0167	60.0

	Beta		
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	64.298 (±0.315)	0.0167	60
2	1.226 (±0.041)	0.0167	60.0
3	1.301 (±0.043)	0.0167	60.0
4	1.357 (±0.043)	0.0167	60.0
5	1.606 (±0.047)	0.0167	60.0
6	1.583 (±0.047)	0.0167	60.0
7	1.306 (±0.043)	0.0167	60.0
8	1.471 (±0.045)	0.0167	60.0
9	1.456 (±0.045)	0.0167	60.0
10	1.638 (±0.048)	0.0167	60.0

Cycle 1 of 1
Start Time: 8/2/2010 9:36:43

Elapsed Time: 90:00
Guard: 1168 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7361	pbs	0.067 (±40.8%)	0.0018	0.0006	369.6 (±0.578%)	0.0502	0.0248
2	7362	lcs	21.61 (±2.27%)	0.0022	0.0009	21.42 (±2.28%)	0.0095	0.0034
3	7363	L83112-01	0.933 (±10.9%)	0.0020	0.0007	2.82 (±6.27%)	0.0077	0.0035
4	7364	L83112-02	2.056 (±7.35%)	0.0022	0.0008	13.49 (±3.02%)	0.0080	0.0036
5	7365	L83112-03	1.078 (±10.2%)	0.0022	0.0008	3.76 (±5.44%)	0.0085	0.0039
6	7366	L83112-04	1.689 (±8.11%)	0.0018	0.0007	4.74 (±4.84%)	0.0085	0.0039
7	7367	L83112-05	1.200 (±9.62%)	0.0020	0.0007	3.41 (±5.71%)	0.0077	0.0035
8	7368	L83112-06	0.789 (±11.9%)	0.0020	0.0008	2.96 (±6.13%)	0.0081	0.0038
9	7369	L83112-07	0.844 (±11.5%)	0.0023	0.0009	2.82 (±6.27%)	0.0081	0.0037
10	7370	L83112-08	1.222 (±9.53%)	0.0020	0.0007	3.39 (±5.73%)	0.0086	0.0040

Sample Measurement Parameters:
Comment: WG286917
User: tcd
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 8/2/2010 11:40:33

Elapsed Time: 90:00
Guard: 1171 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7371	L83112-09	0.87 (±11.3%)	0.0018	0.0006	307.8 (±0.633%)	0.0502	0.0248
2	7372	L83112-10	1.044 (±10.3%)	0.0022	0.0009	3.82 (±5.39%)	0.0075	0.0034
3	7373	L83112-11	0.81 (±11.7%)	0.0020	0.0007	2.73 (±6.38%)	0.0077	0.0035
4	7374	L83112-12	1.000 (±10.5%)	0.0022	0.0008	5.37 (±4.79%)	0.0078	0.0036
5	7375	L83112-13	0.97 (±10.7%)	0.0022	0.0008	5.81 (±4.37%)	0.0084	0.0039
6	7376	L83112-14	3.222 (±5.87%)	0.0018	0.0007	8.30 (±3.66%)	0.0086	0.0039
7	7377	L83112-15	1.122 (±9.95%)	0.0020	0.0007	3.00 (±6.09%)	0.0077	0.0035
8	7378	L83112-16	0.84 (±11.5%)	0.0020	0.0008	2.48 (±6.70%)	0.0081	0.0038
9	7379	DUP 1	2.556 (±6.59%)	0.0023	0.0009	5.59 (±4.46%)	0.0083	0.0037
10	7380	DUP 2	1.722 (±8.03%)	0.0020	0.0007	4.10 (±5.21%)	0.0086	0.0040

Sample Measurement Parameters:
Comment: WG286917
User: MWM
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 8/2/2010 13:27:58

Elapsed Time: 90:00
Guard: 1170 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7381	L83112-02 MS	21.01 (±2.30%)	0.0018	0.0006	282.8 (±0.661%)	0.0505	0.0248
2	7382		0.089 (±35.4%)	0.0022	0.0009	1.07 (±10.2%)	0.0074	0.0034
3	7383		0.067 (±40.8%)	0.0020	0.0007	1.17 (±9.76%)	0.0076	0.0035
4	7384		0.078 (±37.8%)	0.0022	0.0008	1.52 (±8.54%)	0.0077	0.0036
5	7385		0.078 (±37.8%)	0.0022	0.0008	1.62 (±8.28%)	0.0084	0.0039
6	7386		0.033 (±57.7%)	0.0018	0.0007	1.90 (±7.65%)	0.0083	0.0039
7	7387		0.044 (±50.0%)	0.0020	0.0007	1.38 (±8.98%)	0.0076	0.0035
8	7388		0.078 (±37.8%)	0.0020	0.0008	1.46 (±8.74%)	0.0080	0.0038
9	7389		0.144 (±27.7%)	0.0023	0.0009	1.57 (±8.42%)	0.0080	0.0037
10	7390		0.067 (±40.8%)	0.0020	0.0007	1.78 (±7.91%)	0.0084	0.0040

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 4, 2010 Analytical Report for Service Request No: K1006867

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow/26460006.15-SOIL-200

Dear Andrea:

Enclosed are the results of the samples submitted to our laboratory on July 02, 2010. For your reference, these analyses have been assigned our service request number K1006867.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/lg

100% Recycled Paper

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1006867
Project:	Rhodia Silver Bow	**Date Received:**	7/2/2010
Sample Matrix:	Soil		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Ten samples were received for analysis at Columbia Analytical Services on 7/2/2010. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

PCB Aroclors by EPA Method 8082

Elevated Detection Limits:
Several samples required dilution due to the presence of elevated levels of target analyte. The reporting limits were adjusted to reflect the dilution.

Approved by _____ **Date** 8/4/10

Chain of Custody

K1006867

Chain of Custody

BARR
4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

COC 1 of 1

Project Number: 26460006.15 - SOIL - 200

Project Name: Rhodia Silver Bow

Sample Origination State: MT (use two letter postal state abbreviation)

COC Number: Nº 29290

Project Manager: KLG

Project QC Contact: AAN

Sampled by: KAM/JAMZ

Laboratory: CAS

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix: Water	Matrix: Soil	Type: Grab	Type: Comp.	Type: QC	Number of Containers/Preservative: Water: VOCs (HCl) #1	Water: SVOCs (unpreserved) #2	Water: Dissolved Metals (HNO_3)	Water: Total Metals (HNO_3)	Water: General (unpreserved) #3	Water: Diesel Range Organics (HCl)	Water: Nutrients (H_2SO_4) #4	Soil: VOCs (tared MeOH) #1	Soil: GRO, BTEX (tared MeOH) #1	Soil: DRO (tared unpreserved)	Soil: Metals (unpreserved)	Soil: SVOCs (unpreserved) #2	Soil: % Solids (plastic vial, unpres.)	Soil: PCB (4oz unpres)	Total Number Of Containers	
1. FTS-21	2	12	in.	06/30/2010	16:40		X	X																3	3	Run PCB
2. FTS-22	0	2	in	06/30/2010	16:55		X	X																1	1	SEE TABLE 1-1 (included)
3. FTS-23	0	2	in	06/30/2010	17:05		X	X																1	1	
4. FTS-24	0	2	in	06/30/2010	17:15		X	X																1	1	The PCB Data must Be Reported to the MDL
5. FTS-25	0	2	in	06/30/2010	17:25		X	X																1	1	
6. FTS-26	0	2	in	06/30/2010	17:35		X	X																1	1	
7. FTS-27	0	2	in	06/30/2010	17:50		X	X																1	1	
8. FTS-28	0	2	in	06/30/2010	18:00		X	X																1	1	
9. FTS-101	0	2	in	06/30/2010	17:40		X	X																1	1	↓
10. FTS-121	0	2	in	06/30/2010	18:10	X									2										2	Run PCB SEE TABLE 1-5 (included)

Common Parameter/Container - Preservation Key

#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
#2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
#3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
#4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	On Ice?	Date	Time	Received by:	Date	Time
[signature]	○ N	7/1/10	15:30	John Jones / John Jones	7/2/10	1515
Relinquished By:	On Ice? Y N	Date	Time	Received by:	Date	Time

Samples Shipped VIA: ☐ Air Freight ☒ Federal Express ☐ Sampler ☐ Other: _____

Air Bill Number: 8670 9279 9865

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

H:\RLG\STDFORMS\Chain Of Custody Form 2009 RLG Rev. 09\01\09

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC LH

Client / Project: Barr Service Request K10 O 6867

Received: 7/2/10 Opened: 7/2/10 By: JOHN

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
-0.6	0.0	257		8670 9279 9865	

7. Packing material used. *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Sleeves* (*Other*) plastic bags
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? NA (Y) N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
FTS-21 2-12	K1006867-001	06/30/2010	07/02/2010	07/08/2010	77.4	
FTS-22 0-2	K1006867-002	06/30/2010	07/02/2010	07/08/2010	84.0	
FTS-23 0-2	K1006867-003	06/30/2010	07/02/2010	07/08/2010	82.0	
FTS-24 0-2	K1006867-004	06/30/2010	07/02/2010	07/08/2010	76.9	
FTS-25 0-2	K1006867-005	06/30/2010	07/02/2010	07/08/2010	84.0	
FTS-26 0-2	K1006867-006	06/30/2010	07/02/2010	07/08/2010	88.7	
FTS-27 0-2	K1006867-007	06/30/2010	07/02/2010	07/08/2010	95.6	
FTS-28 0-2	K1006867-008	06/30/2010	07/02/2010	07/08/2010	91.1	
FTS-101 0-2	K1006867-009	06/30/2010	07/02/2010	07/08/2010	88.1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Analyzed:	07/08/2010

Duplicate Sample Summary

Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
FTS-21 2-12	K1006867-001	77.4	76.7	77.1	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

207695

Group ID:	KWG1006622				
Analyst:	SArwood			**Reviewed By:**	
Date Acquired:	07/08/2010 10:30	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/9/10
Date Completed:	07/09/2010 09:34	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K1002603-006	NRP001	MISC. SOLID	1.31g	3.37g	2.45g	55.3		
2	K1002603-011	SRP022	MISC. SOLID	1.32g	6.47g	2.53g	23.5		
3	K1002603-023	SMP-EXP1	MISC. SOLID	1.34g	11.44g	7.44g	60.4		
4	K1002603-025	AP7-EXP1	MISC. SOLID	1.30g	23.16g	10.80g	43.5		
5	K1002603-028	WWP1-EXP1(0-12)	MISC. SOLID	1.33g	14.97g	7.33g	44.0		
6	K1002603-030	WWP1-EXP2(0-12)	MISC. SOLID	1.34g	11.42g	4.75g	33.8		
7	K1002603-033	WWP2-EXP1(0-12)	SOIL	1.32g	16.10g	8.22g	46.7		
8	K1002603-035	WWP2-EXP2(12-24)	SEDIMENT	1.33g	17.28g	10.85g	59.7		
9	K1002603-037	WWP2-EXP3(0-12)	SEDIMENT	1.33g	16.44g	12.84g	76.2		
10	K1002603-046	SAOC2-EXP3(0-6in)	SOIL	1.33g	10.59g	8.84g	81.1		
11	K1002603-049	SAOC5-EXP1(0-6)	SOIL	1.32g	15.39g	12.67g	80.7		
12	K1002603-051	SAOC4-EXP2(0-6)	SOIL	1.32g	12.30g	10.43g	83.0		
13	K1002603-054	SAOC2-EXP1(0-6)	SOIL	1.32g	16.83g	14.85g	87.2		
14	K1002603-056	SAOC2-EXP2(0-6)	SOIL	1.33g	15.31g	12.82g	82.2		
15	K1002603-059	SAOC1-EXP1(0-6)	SOIL	1.34g	8.66g	6.95g	76.6		
16	K1002603-061	SAOC1-EXP8(0-6)	SOIL	1.34g	18.56g	16.16g	86.1		
17	K1002603-063	SAOC1-EXP5(0-6)	SOIL	1.31g	10.49g	9.03g	84.1		
18	K1002603-064	SAOC1-EXP5D(0-6)	SOIL	1.34g	13.67g	11.62g	83.4		
19	K1002603-066	SAOC7-EXP1(0-6)	SOIL	1.32g	14.44g	11.79g	79.8		
20	K1002603-068	SAOC1-EXP6(6-15)	SOIL	1.32g	20.14g	16.76g	82.0		
21	K1002603-072	SAOC1-EXP4(6-15)	SOIL	1.34g	14.91g	13.56g	90.1		
22	K1002603-074	SAOC1-EXP2(0-6)	SOIL	1.34g	9.98g	8.09g	78.1		

Group ID:	KWG1006622		
Analyst:	SArwood	**Reviewed By:**	JR
Date Acquired:	07/08/2010 10:30	**Oven TempStart:**	105 DEG C
Date Completed:	07/09/2010 09:34	**Oven TempEnd:**	105 DEG C
		Date Reviewed:	7/9/10

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
23	K1002603-079	SAOC5-EXP2	MISC. SOLID	1.33g	10.43g	9.49g	89.7		
24	K1002603-086	SAOC3-EXP3(15-24")	MISC. SOLID	1.33g	13.71g	11.88g	85.2		
25	K1002603-090	SAOC7-EXP2(11-24)	MISC. SOLID	1.32g	16.38g	13.93g	83.7		
26	K1006045-008	Composite	PAPERBOA	1.29g	4.38g	4.29g	97.1		
27	K1006204-011	Composite	PAPERBOA	1.29g	5.77g	5.59g	96.0		
28	K1006275-001	PM1 2nd Q 2010 32.0 Ave lb/msf	PAPERBOA	1.29g	3.31g	3.23g	96.0		
29	K1006275-002	PM2 2nd Q 2010 52.5 Ave lb/msf	PAPERBOA	1.29g	3.74g	3.65g	96.3		
30	K1006502-008	Composite	PAPERBOA	1.29g	3.55g	3.51g	98.2		
31	K1006504-008	Composite	PAPERBOA	1.30g	4.96g	4.83g	96.4		
32	K1006532-007	Composite	PAPERBOA	1.30g	3.47g	3.42g	97.7		
33	K1006790-001	WLF070110.01	MISC. SOLID	1.30g	26.13g	17.09g	63.6		
34	K1006867-001	FTS-21 2-12	SOIL	1.31g	8.67g	7.01g	77.4		
35	K1006867-002	FTS-22 0-2	SOIL	1.28g	8.10g	7.01g	84.0		
36	K1006867-003	FTS-23 0-2	SOIL	1.31g	7.77g	6.61g	82.0		
37	K1006867-004	FTS-24 0-2	SOIL	1.30g	6.01g	4.92g	76.9		
38	K1006867-005	FTS-25 0-2	SOIL	1.29g	7.61g	6.60g	84.0		
39	K1006867-006	FTS-26 0-2	SOIL	1.31g	8.66g	7.83g	88.7		
40	K1006867-007	FTS-27 0-2	SOIL	1.30g	13.58g	13.04g	95.6		
41	K1006867-008	FTS-28 0-2	SOIL	1.28g	13.04g	11.99g	91.1		
42	K1006867-009	FTS-101 0-2	SOIL	1.30g	8.52g	7.66g	88.1		
43	K1006895-005	Somat	SOIL	1.30g	10.04g	2.10g	9.15		
44	KWG1006622-1	Duplicate Client Sample	PAPERBOA	1.31g	5.27g	5.16g	97.2	K1006045-008	
45	KWG1006622-10	Duplicate Client Sample	SOIL	1.31g	17.37g	14.20g	80.3	K1002603-049	

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Group ID:	KWG1006622			**Reviewed By:**	JL
Analyst:	SArwood				
Date Acquired:	07/08/2010 10:30	**Oven TempStart:**	105 DEG C	**Date Reviewed:**	7/9/10
Date Completed:	07/09/2010 09:34	**Oven TempEnd:**	105 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
46	KWG1006622-11	Duplicate Client Sample	SOIL	1.29g	11.71g	9.49g	78.7	K1002603-074	
47	KWG1006622-2	Duplicate Client Sample	PAPERBOA	1.30g	6.48g	6.26g	95.8	K1006204-011	
48	KWG1006622-3	Duplicate Client Sample	PAPERBOA	1.31g	3.49g	3.41g	96.3	K1006275-001	
49	KWG1006622-4	Duplicate Client Sample	PAPERBOA	1.29g	3.44g	3.40g	98.1	K1006502-008	
50	KWG1006622-5	Duplicate Client Sample	PAPERBOA	1.27g	4.57g	4.47g	97.0	K1006504-008	
51	KWG1006622-6	Duplicate Client Sample	PAPERBOA	1.28g	3.48g	3.44g	98.2	K1006532-007	
52	KWG1006622-7	Duplicate Client Sample	SOIL	1.28g	8.97g	7.18g	76.7	K1006867-001	
53	KWG1006622-8	Duplicate Client Sample	SOIL	1.30g	9.49g	2.05g	9.16	K1006895-005	
54	KWG1006622-9	Duplicate Client Sample	MISC. SOLID	1.33g	3.20g	2.38g	56.1	K1002603-006	

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Polychlorinated Biphenyls

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Summary Package

Sample and QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Service Request: K1006867

Cover Page - Organic Analysis Data Package
Polychlorinated Biphenyls (PCBs)

Sample Name	Lab Code	Date Collected	Date Received
FTS-21 2-12	K1006867-001	06/30/2010	07/02/2010
FTS-22 0-2	K1006867-002	06/30/2010	07/02/2010
FTS-23 0-2	K1006867-003	06/30/2010	07/02/2010
FTS-24 0-2	K1006867-004	06/30/2010	07/02/2010
FTS-25 0-2	K1006867-005	06/30/2010	07/02/2010
FTS-26 0-2	K1006867-006	06/30/2010	07/02/2010
FTS-27 0-2	K1006867-007	06/30/2010	07/02/2010
FTS-28 0-2	K1006867-008	06/30/2010	07/02/2010
FTS-101 0-2	K1006867-009	06/30/2010	07/02/2010
FTS-121 0-2	K1006867-010	06/30/2010	07/02/2010
FTS-21 2-12MS	KWG1007334-1	06/30/2010	07/02/2010
FTS-21 2-12DMS	KWG1007334-2	06/30/2010	07/02/2010

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: LISA HARRIS

Date: August 4, 2010 Title: Scientist

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Water	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-121 0-2	**Units:**	ug/L
Lab Code:	K1006867-010	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1221	ND	U	0.39	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1232	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1242	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1248	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1254	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1260	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1262	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1268	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	36-113	07/22/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1007137-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1221	ND	U	0.39	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1232	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1242	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1248	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1254	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1260	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1262	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1268	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	70	36-113	07/21/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-21 2-12	**Units:**	mg/Kg
Lab Code:	K1006867-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.90**		0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	74	35-133	07/27/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-22 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	2.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**8.1**	D	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	105	35-133	07/27/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-23 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.33**		0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	75	35-133	07/27/10	Acceptable

Comments:

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-24 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.98	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**3.6**	D	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	95	35-133	07/27/10	Acceptable

Comments:

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-25 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.44**		0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	35-133	07/27/10	Acceptable

Comments:

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-26 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	1.9	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**14**	D	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	104	35-133	07/27/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-27 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.20**		0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	80	35-133	07/27/10	Acceptable

Comments:

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-28 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	2.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	17	D	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	108	35-133	07/27/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-101 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	1.9	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**15**	D	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	106	35-133	07/27/10	Acceptable

Comments:

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG1007334-4

Units: mg/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8082

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.15	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	35-133	07/27/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Water

Service Request: K1006867

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A
Analysis Method: 8082

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
FTS-121 0-2	K1006867-010	76
Method Blank	KWG1007137-3	70
Lab Control Sample	KWG1007137-1	69
Duplicate Lab Control Sample	KWG1007137-2	69

Surrogate Recovery Control Limits (%)

Sur1 =	Decachlorobiphenyl	36-113

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541
Analysis Method: 8082

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
FTS-21 2-12	K1006867-001	74
FTS-22 0-2	K1006867-002	105 D
FTS-23 0-2	K1006867-003	75
FTS-24 0-2	K1006867-004	95 D
FTS-25 0-2	K1006867-005	72
FTS-26 0-2	K1006867-006	104 D
FTS-27 0-2	K1006867-007	80
FTS-28 0-2	K1006867-008	108 D
FTS-101 0-2	K1006867-009	106 D
Method Blank	KWG1007334-4	88
FTS-21 2-12MS	KWG1007334-1	68
FTS-21 2-12DMS	KWG1007334-2	63
Lab Control Sample	KWG1007334-3	82

Surrogate Recovery Control Limits (%)

Sur1 =	Decachlorobiphenyl	35-133

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/13/2010
Sample Matrix:	Soil	**Date Analyzed:**	07/27/2010

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-21 2-12	**Units:**	mg/Kg
Lab Code:	K1006867-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007334

Analyte Name	Sample Result	FTS-21 2-12MS KWG1007334-1 Matrix Spike			FTS-21 2-12DMS KWG1007334-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Aroclor 1016	ND	0.594	0.953	62	0.578	0.970	60	27-174	3	40
Aroclor 1260	0.90	1.58	0.953	71	1.43	0.970	55	20-185	10	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Water

Service Request: K1006867
Date Extracted: 07/07/2010
Date Analyzed: 07/21/2010

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A
Analysis Method: 8082

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1007137

	Lab Control Sample KWG1007137-1 Lab Control Spike			Duplicate Lab Control Sample KWG1007137-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	1.53	2.00	77	1.59	2.00	80	41-113	4	30
Aroclor 1260	1.53	2.00	77	1.51	2.00	75	47-117	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/13/2010
Sample Matrix:	Soil	**Date Analyzed:**	07/27/2010

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8082	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1007334

	Lab Control Sample KWG1007334-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	0.771	1.00	77	48-121
Aroclor 1260	0.803	1.00	80	53-129

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/07/2010
Sample Matrix:	Water	**Date Analyzed:**	07/21/2010
		Time Analyzed:	22:55

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\072110A.B\0721F025.D
Lab Code:	KWG1007137-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007137

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1007137-1	J:\GC09\DATA\072110A.B\0721F026.D	07/21/10	23:21
Duplicate Lab Control Sample	KWG1007137-2	J:\GC09\DATA\072110A.B\0721F027.D	07/21/10	23:48
FTS-121 0-2	K1006867-010	J:\GC09\DATA\072110A.B\0721F028.D	07/22/10	00:15

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/13/2010
Sample Matrix:	Soil	**Date Analyzed:**	07/27/2010
		Time Analyzed:	03:33

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\072610.B\0726F039.D
Lab Code:	KWG1007334-4	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007334

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1007334-3	J:\GC09\DATA\072610.B\0726F040.D	07/27/10	03:59
FTS-21 2-12	K1006867-001	J:\GC09\DATA\072610.B\0726F045.D	07/27/10	06:12
FTS-21 2-12MS	KWG1007334-1	J:\GC09\DATA\072610.B\0726F046.D	07/27/10	06:38
FTS-21 2-12DMS	KWG1007334-2	J:\GC09\DATA\072610.B\0726F047.D	07/27/10	07:05
FTS-23 0-2	K1006867-003	J:\GC09\DATA\072610.B\0726F052.D	07/27/10	09:18
FTS-25 0-2	K1006867-005	J:\GC09\DATA\072610.B\0726F054.D	07/27/10	10:11
FTS-27 0-2	K1006867-007	J:\GC09\DATA\072610.B\0726F061.D	07/27/10	13:17
FTS-22 0-2	K1006867-002	J:\GC09\DATA\072710.B\0727F005.D	07/27/10	19:16
FTS-24 0-2	K1006867-004	J:\GC09\DATA\072710.B\0727F006.D	07/27/10	19:42
FTS-26 0-2	K1006867-006	J:\GC09\DATA\072710.B\0727F007.D	07/27/10	20:09
FTS-28 0-2	K1006867-008	J:\GC09\DATA\072710.B\0727F008.D	07/27/10	20:36
FTS-101 0-2	K1006867-009	J:\GC09\DATA\072710.B\0727F009.D	07/27/10	21:02

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/07/2010
Sample Matrix:	Water	**Date Analyzed:**	07/21/2010
		Time Analyzed:	23:21

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\072110A.B\0721F026.D
Lab Code:	KWG1007137-1	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007137

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1007137-3	J:\GC09\DATA\072110A.B\0721F025.D	07/21/10	22:55
FTS-121 0-2	K1006867-010	J:\GC09\DATA\072110A.B\0721F028.D	07/22/10	00:15

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/13/2010
Sample Matrix:	Soil	**Date Analyzed:**	07/27/2010
		Time Analyzed:	03:59

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\072610.B\0726F040.D
Lab Code:	KWG1007334-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007334

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1007334-4	J:\GC09\DATA\072610.B\0726F039.D	07/27/10	03:33
FTS-21 2-12	K1006867-001	J:\GC09\DATA\072610.B\0726F045.D	07/27/10	06:12
FTS-21 2-12MS	KWG1007334-1	J:\GC09\DATA\072610.B\0726F046.D	07/27/10	06:38
FTS-21 2-12DMS	KWG1007334-2	J:\GC09\DATA\072610.B\0726F047.D	07/27/10	07:05
FTS-23 0-2	K1006867-003	J:\GC09\DATA\072610.B\0726F052.D	07/27/10	09:18
FTS-25 0-2	K1006867-005	J:\GC09\DATA\072610.B\0726F054.D	07/27/10	10:11
FTS-27 0-2	K1006867-007	J:\GC09\DATA\072610.B\0726F061.D	07/27/10	13:17
FTS-22 0-2	K1006867-002	J:\GC09\DATA\072710.B\0727F005.D	07/27/10	19:16
FTS-24 0-2	K1006867-004	J:\GC09\DATA\072710.B\0727F006.D	07/27/10	19:42
FTS-26 0-2	K1006867-006	J:\GC09\DATA\072710.B\0727F007.D	07/27/10	20:09
FTS-28 0-2	K1006867-008	J:\GC09\DATA\072710.B\0727F008.D	07/27/10	20:36
FTS-101 0-2	K1006867-009	J:\GC09\DATA\072710.B\0727F009.D	07/27/10	21:02

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-35MS

Level ID	File ID
A	\\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
B	\\Cash1\Acqudata\GC09\data\070110.B\0701F004.D
C	\\Cash1\Acqudata\GC09\data\070110.B\0701F005.D
D	\\Cash1\Acqudata\GC09\data\070110.B\0701F006.D
E	\\Cash1\Acqudata\GC09\data\070110.B\0701F007.D
F	\\Cash1\Acqudata\GC09\data\070110.B\0701F008.D
G	\\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
H	\\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
I	\\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
J	\\Cash1\Acqudata\GC09\data\070110.B\0701F012.D
K	\\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
L	\\Cash1\Acqudata\GC09\data\070110.B\0701F014.D
M	\\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
N	\\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
O	\\Cash1\Acqudata\GC09\data\070110.B\0701F017.D
P	\\Cash1\Acqudata\GC09\data\070110.B\0701F018.D

Level ID	File ID
Q	\\Cash1\Acqudata\GC09\data\070110.B\0701F019.D
R	\\Cash1\Acqudata\GC09\data\070110.B\0701F020.D
S	\\Cash1\Acqudata\GC09\data\070110.B\0701F021.D
T	\\Cash1\Acqudata\GC09\data\070110.B\0701F022.D
U	\\Cash1\Acqudata\GC09\data\070110.B\0701F023.D
V	\\Cash1\Acqudata\GC09\data\070110.B\0701F024.D
W	\\Cash1\Acqudata\GC09\data\070110.B\0701F025.D
X	\\Cash1\Acqudata\GC09\data\070110.B\0701F026.D
Y	\\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Z	\\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
AA	\\Cash1\Acqudata\GC09\data\070110.B\0701F029.D
AB	\\Cash1\Acqudata\GC09\data\070110.B\0701F030.D
AC	\\Cash1\Acqudata\GC09\data\070110.B\0701F031.D
AD	\\Cash1\Acqudata\GC09\data\070110.B\0701F032.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	2.5	5950	B	5.0	5780	C	50	5050	D	100	4700	E	200	4260
	F	500	3770												
Aroclor 1016 {1}	A	25	74.4	B	50	76.1	C	500	67.8	D	1000	64.9	E	2000	59.0
	F	5000	53.7												
Aroclor 1016 {2}	A	25	134	B	50	132	C	500	114	D	1000	106	E	2000	97.2
	F	5000	84.5												
Aroclor 1016 {3}	A	25	269	B	50	270	C	500	227	D	1000	211	E	2000	190
	F	5000	166												
Aroclor 1016 {4}	A	25	123	B	50	129	C	500	111	D	1000	104	E	2000	94.8
	F	5000	86.2												
Aroclor 1016 {5}	A	25	190	B	50	193	C	500	160	D	1000	149	E	2000	136
	F	5000	119												
Aroclor 1260 {1}	A	25	276	B	50	275	C	500	236	D	1000	219	E	2000	198
	F	5000	175												
Aroclor 1260 {2}	A	25	425	B	50	411	C	500	338	D	1000	313	E	2000	283
Aroclor 1260 {3}	A	25	398	B	50	403	C	500	355	D	1000	346	E	2000	319
	F	5000	288												
Aroclor 1260 {4}	A	25	216	B	50	214	C	500	200	D	1000	191	E	2000	179
	F	5000	162												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	25	475	B	50	477	C	500	455	D	1000	435	E	2000	404
	F	5000	371												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	17.3		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	13.2		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.5		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	18.9		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	15.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	18.6		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	17.4		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.6		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	10.8		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	9.6		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010
Date Analyzed: 07/02/2010

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL9609
Units: ng/mL

File ID:
\\Cash1\Acqudata\GC09\data\070110.B\0701F033.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F035.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F036.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F037.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F039.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F040.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F041.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1016 {1}	1000	1000	66.0	66.5	1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	960	111	107	-4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	970	222	215	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	990	108	107	-1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	970	158	153	-3	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	9	± 20 %	NA
Aroclor 1260 {1}	1000	990	230	227	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	354	341	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	950	352	335	-5	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1300	193	257	33	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1200	436	535	23	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-XLB

Level ID	File ID
A	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R003.D
B	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R004.D
C	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R005.D
D	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R006.D
E	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R007.D
F	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R008.D
G	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R009.D
H	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R010.D
I	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R011.D
J	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R012.D
K	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R013.D
L	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R014.D
M	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R015.D
N	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R016.D
O	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R017.D
P	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R018.D
Q	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R019.D
R	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R020.D
S	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R021.D
T	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R022.D
U	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R023.D
V	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R024.D
W	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R025.D
X	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R026.D
Y	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R027.D
Z	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R028.D
AA	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R029.D
AB	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R030.D
AC	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R031.D
AD	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R032.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	2.5	7090	B	5.0	6920	C	50	6020	D	100	5580	E	200	5010
	F	500	4360												
Aroclor 1016 {1}	A	25	116	B	50	124	C	500	107	D	1000	99.9	E	2000	90.9
	F	5000	80.8												
Aroclor 1016 {2}	A	25	189	B	50	194	C	500	177	D	1000	165	E	2000	150
	F	5000	131												
Aroclor 1016 {3}	A	25	172	B	50	180	C	500	154	D	1000	140	E	2000	125
	F	5000	107												
Aroclor 1016 {4}	A	25	189	B	50	192	C	500	167	D	1000	153	E	2000	138
	F	5000	119												
Aroclor 1016 {5}	A	25	183	B	50	185	C	500	160	D	1000	147	E	2000	133
	F	5000	117												
Aroclor 1260 {1}	A	25	235	B	50	223	C	500	215	D	1000	204	E	2000	190
	F	5000	170												
Aroclor 1260 {2}	A	25	481	B	50	494	C	500	431	D	1000	405	E	2000	373
	F	5000	335												
Aroclor 1260 {3}	A	25	248	B	50	269	C	500	233	D	1000	217	E	2000	198
	F	5000	176												
Aroclor 1260 {4}	A	25	299	B	50	297	C	500	278	D	1000	266	E	2000	247
	F	5000	225												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	25	590	B	50	571	C	500	507	D	1000	479	E	2000	443
	F	5000	399												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.3		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.5		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	14.3		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	19.0		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	18.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	17.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	11.4		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	14.7		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	10.8		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	14.8		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010
Date Analyzed: 07/02/2010

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL9609
Units: ng/mL

File ID:
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R033.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R034.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R035.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R036.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R037.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R038.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R039.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R040.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R041.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	1000	940	NA	NA	NA	-6	± 20 %	NA
Aroclor 1016 {1}	1000	980	103	101	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	940	168	158	-6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	890	146	131	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	920	160	147	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	940	154	144	-6	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	9	± 20 %	NA
Aroclor 1260 {1}	1000	1100	206	229	11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	940	420	397	-6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1200	224	274	23	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	269	272	1	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1200	498	581	17	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/21/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F017.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	90	4920	4440	-10	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	1100	66.0	74.2	12	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	115	4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	227	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	114	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	161	2	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 20 %	NA
Aroclor 1260 {1}	1000	1000	230	231	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	920	354	326	-8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	353	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	193	188	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	436	420	-4	NA	± 100 %	AverageRF
Aroclor 1260	1000	970	NA	NA	NA	-3	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/21/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R017.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	5830	5590	-4	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	1000	103	105	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	990	168	166	-1	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	970	146	143	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	950	160	152	-5	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	960	154	149	-4	NA	± 100 %	AverageRF
Aroclor 1016	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	990	206	204	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	420	404	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	970	224	218	-3	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	960	269	259	-4	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	930	498	465	-7	NA	± 100 %	AverageRF
Aroclor 1260	1000	960	NA	NA	NA	-4	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/22/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F031.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	4920	4550	-8	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	1000	66.0	69.1	5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	115	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	226	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	114	5	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	162	2	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	3	± 20 %	NA
Aroclor 1260 {1}	1000	1000	230	232	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	920	354	327	-8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	353	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	980	193	190	-2	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	980	436	428	-2	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/22/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R031.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	98	5830	5690	-2	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	990	103	103	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	168	0	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	970	146	142	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	970	160	155	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	154	151	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	1000	206	206	0	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	980	420	410	-2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	980	224	219	-2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	269	262	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	950	498	472	-5	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F037.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	87	4920	4300	-13	NA	± 20 %	AverageRF
Aroclor 1016	1000	960	NA	NA	NA	-4	± 20 %	NA
Aroclor 1016 {1}	1000	970	66.0	64.0	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	950	111	106	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	900	222	201	-10	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	108	105	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	990	158	155	-1	NA	± 100 %	AverageRF
Aroclor 1260	1000	950	NA	NA	NA	-5	± 20 %	NA
Aroclor 1260 {1}	1000	950	230	219	-5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	910	354	324	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	930	352	328	-7	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	990	193	191	-1	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	436	420	-4	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R037.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	100	5830	5860	0	NA	± 20 %	AverageRF
Aroclor 1016	1000	910	NA	NA	NA	-9	± 20 %	NA
Aroclor 1016 {1}	1000	980	103	101	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	880	168	147	-12	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	830	146	122	-17	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	870	160	139	-13	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	154	156	1	NA	± 100 %	AverageRF
Aroclor 1260	1000	970	NA	NA	NA	-3	± 20 %	NA
Aroclor 1260 {1}	1000	1100	206	234	14	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	420	438	4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	920	224	206	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	820	269	221	-18	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	920	498	458	-8	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F051.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	82	4920	4010	-18	NA	± 20 %	AverageRF
Aroclor 1016	1000	920	NA	NA	NA	-8	± 20 %	NA
Aroclor 1016 {1}	1000	990	66.0	65.4	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	910	111	101	-9	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	890	222	198	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	930	108	100	-7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	880	158	140	-12	NA	± 100 %	AverageRF
Aroclor 1260	1000	850	NA	NA	NA	-15	± 20 %	NA
Aroclor 1260 {1}	1000	850	230	195	-15	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	790	354	280	-21	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	352	308	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	850	193	165	-15	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	870	436	379	-13	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R051.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	89	5830	5180	-11	NA	± 20 %	AverageRF
Aroclor 1016	1000	870	NA	NA	NA	-13	± 20 %	NA
Aroclor 1016 {1}	1000	950	103	97.8	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	870	168	145	-13	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	850	146	125	-15	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	830	160	133	-17	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	840	154	129	-16	NA	± 100 %	AverageRF
Aroclor 1260	1000	870	NA	NA	NA	-13	± 20 %	NA
Aroclor 1260 {1}	1000	880	206	182	-12	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	860	420	361	-14	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	224	193	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	880	269	237	-12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	870	498	432	-13	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F055.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	83	4920	4100	-17	NA	± 20 %	AverageRF
Aroclor 1016	1000	940	NA	NA	NA	-6	± 20 %	NA
Aroclor 1016 {1}	1000	980	66.0	64.7	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	970	111	108	-3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	910	222	203	-9	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	940	108	101	-6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	900	158	143	-10	NA	± 100 %	AverageRF
Aroclor 1260	1000	860	NA	NA	NA	-14	± 20 %	NA
Aroclor 1260 {1}	1000	860	230	199	-14	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	800	354	285	-20	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	352	304	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	870	193	169	-13	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	880	436	386	-12	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R055.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	89	5830	5210	-11	NA	± 20 %	AverageRF
Aroclor 1016	1000	880	NA	NA	NA	-12	± 20 %	NA
Aroclor 1016 {1}	1000	930	103	95.7	-7	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	880	168	148	-12	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	860	146	126	-14	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	870	160	138	-13	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	870	154	133	-13	NA	± 100 %	AverageRF
Aroclor 1260	1000	880	NA	NA	NA	-12	± 20 %	NA
Aroclor 1260 {1}	1000	890	206	184	-11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	880	420	368	-12	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	224	196	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	880	269	236	-12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	880	498	436	-12	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F058.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	86	4920	4230	-14	NA	± 20 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	1	± 20 %	NA
Aroclor 1016 {1}	1000	1000	66.0	69.1	5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	114	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	223	0	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1000	108	111	3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	960	158	152	-4	NA	± 100 %	AverageRF
Aroclor 1260	1000	890	NA	NA	NA	-11	± 20 %	NA
Aroclor 1260 {1}	1000	890	230	205	-11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	840	354	296	-16	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	890	352	314	-11	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	900	193	174	-10	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	910	436	397	-9	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R058.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	5830	5380	-8	NA	± 20 %	AverageRF
Aroclor 1016	1000	930	NA	NA	NA	-7	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	105	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	940	168	157	-6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	900	146	132	-10	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	910	160	145	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	900	154	139	-10	NA	± 100 %	AverageRF
Aroclor 1260	1000	910	NA	NA	NA	-9	± 20 %	NA
Aroclor 1260 {1}	1000	920	206	189	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	900	420	378	-10	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	900	224	201	-10	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	920	269	247	-8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	890	498	443	-11	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F066.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	91	4920	4460	-9	NA	± 20 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	6	± 20 %	NA
Aroclor 1016 {1}	1000	1100	66.0	73.8	12	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	116	5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	228	3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	116	7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	161	2	NA	± 100 %	AverageRF
Aroclor 1260	1000	950	NA	NA	NA	-5	± 20 %	NA
Aroclor 1260 {1}	1000	960	230	222	-4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	870	354	306	-13	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	980	352	344	-2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	193	187	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	436	420	-4	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R066.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	5830	5580	-4	NA	± 20 %	AverageRF
Aroclor 1016	1000	990	NA	NA	NA	-1	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	106	3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	168	0	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	980	146	143	-2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	160	156	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	950	154	147	-5	NA	± 100 %	AverageRF
Aroclor 1260	1000	960	NA	NA	NA	-4	± 20 %	NA
Aroclor 1260 {1}	1000	970	206	201	-3	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	950	420	400	-5	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	960	224	214	-4	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	269	261	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	498	478	-4	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F003.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	4920	4530	-8	NA	± 20 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 20 %	NA
Aroclor 1016 {1}	1000	1100	66.0	72.7	10	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	115	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	231	4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1000	108	113	5	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	163	3	NA	± 100 %	AverageRF
Aroclor 1260	1000	990	NA	NA	NA	-1	± 20 %	NA
Aroclor 1260 {1}	1000	990	230	227	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	910	354	322	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	350	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	193	210	8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	980	436	427	-2	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R003.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	99	5830	5750	-1	NA	± 20 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	0	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	106	3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	169	1	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	980	146	144	-2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	990	160	158	-1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	154	151	-2	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	990	206	204	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	420	404	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	970	224	217	-3	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	980	269	265	-2	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	970	498	484	-3	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F012.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	94	4920	4620	-6	NA	± 20 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 20 %	NA
Aroclor 1016 {1}	1000	1100	66.0	72.9	10	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	114	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	229	3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	114	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	163	4	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	990	230	228	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	900	354	320	-10	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	352	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	990	193	192	-1	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	990	436	434	-1	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R012.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	98	5830	5740	-2	NA	± 20 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	0	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	106	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	169	1	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	990	146	145	-1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	160	157	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	990	154	152	-1	NA	± 100 %	AverageRF
Aroclor 1260	1000	990	NA	NA	NA	-1	± 20 %	NA
Aroclor 1260 {1}	1000	1000	206	207	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	980	420	410	-2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	990	224	221	-1	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	269	269	0	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	980	498	489	-2	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082

Analysis Lot: KWG1007212
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0721F016.D	Instrument Blank	KWG1007212-1	7/21/2010	18:56		7/21/2010	18:56
0721F017.D	Continuing Calibration Verification	KWG1007212-2	7/21/2010	19:22		7/21/2010	19:22
0721F019.D	ZZZZZZ	ZZZZZZ	7/21/2010	20:16		7/21/2010	20:16
0721F020.D	ZZZZZZ	ZZZZZZ	7/21/2010	20:42		7/21/2010	20:42
0721F024.D	ZZZZZZ	ZZZZZZ	7/21/2010	22:28		7/21/2010	22:28
0721F025.D	Method Blank	KWG1007137-3	7/21/2010	22:55		7/21/2010	22:55
0721F026.D	Lab Control Sample	KWG1007137-1	7/21/2010	23:21		7/21/2010	23:21
0721F027.D	Duplicate Lab Control Sample	KWG1007137-2	7/21/2010	23:48		7/21/2010	23:48
0721F028.D	FTS-121 0-2	K1006867-010	7/22/2010	00:15		7/22/2010	00:15
0721F030.D	Instrument Blank	KWG1007212-3	7/22/2010	01:08		7/22/2010	01:08
0721F031.D	Continuing Calibration Verification	KWG1007212-4	7/22/2010	01:34		7/22/2010	01:34

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082

Analysis Lot: KWG1007403
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0726F002.D	Continuing Calibration Verification	KWG1007403-1	7/26/2010	11:07		7/26/2010	11:07
0726F003.D	Instrument Blank	KWG1007403-2	7/26/2010	11:33		7/26/2010	11:33
0726F004.D	ZZZZZZ	ZZZZZZ	7/26/2010	12:00		7/26/2010	12:00
0726F005.D	ZZZZZZ	ZZZZZZ	7/26/2010	12:26		7/26/2010	12:26
0726F006.D	ZZZZZZ	ZZZZZZ	7/26/2010	12:53		7/26/2010	12:53
0726F007.D	ZZZZZZ	ZZZZZZ	7/26/2010	13:20		7/26/2010	13:20
0726F009.D	ZZZZZZ	ZZZZZZ	7/26/2010	14:13		7/26/2010	14:13
0726F012.D	ZZZZZZ	ZZZZZZ	7/26/2010	15:33		7/26/2010	15:33
0726F013.D	ZZZZZZ	ZZZZZZ	7/26/2010	16:00		7/26/2010	16:00
0726F014.D	ZZZZZZ	ZZZZZZ	7/26/2010	16:26		7/26/2010	16:26
0726F015.D	ZZZZZZ	ZZZZZZ	7/26/2010	16:53		7/26/2010	16:53
0726F016.D	Continuing Calibration Verification	KWG1007403-3	7/26/2010	17:20		7/26/2010	17:20
0726F017.D	Instrument Blank	KWG1007403-4	7/26/2010	17:47		7/26/2010	17:47
0726F018.D	ZZZZZZ	ZZZZZZ	7/26/2010	18:13		7/26/2010	18:13
0726F021.D	ZZZZZZ	ZZZZZZ	7/26/2010	19:33		7/26/2010	19:33
0726F023.D	ZZZZZZ	ZZZZZZ	7/26/2010	20:27		7/26/2010	20:27
0726F024.D	ZZZZZZ	ZZZZZZ	7/26/2010	20:53		7/26/2010	20:53
0726F025.D	ZZZZZZ	ZZZZZZ	7/26/2010	21:20		7/26/2010	21:20
0726F027.D	ZZZZZZ	ZZZZZZ	7/26/2010	22:13		7/26/2010	22:13
0726F028.D	ZZZZZZ	ZZZZZZ	7/26/2010	22:40		7/26/2010	22:40
0726F029.D	Continuing Calibration Verification	KWG1007403-5	7/26/2010	23:07		7/26/2010	23:07
0726F030.D	Instrument Blank	KWG1007403-6	7/26/2010	23:33		7/26/2010	23:33
0726F031.D	ZZZZZZ	ZZZZZZ	7/27/2010	00:00		7/27/2010	00:00
0726F035.D	ZZZZZZ	ZZZZZZ	7/27/2010	01:46		7/27/2010	01:46
0726F036.D	ZZZZZZ	ZZZZZZ	7/27/2010	02:13		7/27/2010	02:13
0726F037.D	Continuing Calibration Verification	KWG1007403-7	7/27/2010	02:39		7/27/2010	02:39
0726F038.D	Instrument Blank	KWG1007403-8	7/27/2010	03:06		7/27/2010	03:06
0726F039.D	Method Blank	KWG1007334-4	7/27/2010	03:33		7/27/2010	03:33
0726F040.D	Lab Control Sample	KWG1007334-3	7/27/2010	03:59		7/27/2010	03:59
0726F042.D	ZZZZZZ	ZZZZZZ	7/27/2010	04:52		7/27/2010	04:52
0726F043.D	ZZZZZZ	ZZZZZZ	7/27/2010	05:19		7/27/2010	05:19
0726F044.D	ZZZZZZ	ZZZZZZ	7/27/2010	05:45		7/27/2010	05:45
0726F045.D	FTS-21 2-12	K1006867-001	7/27/2010	06:12		7/27/2010	06:12
0726F046.D	FTS-21 2-12MS	KWG1007334-1	7/27/2010	06:38		7/27/2010	06:38

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082

Analysis Lot: KWG1007403
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0726F047.D	FTS-21 2-12DMS	KWG1007334-2	7/27/2010	07:05		7/27/2010	07:05
0726F050.D	Instrument Blank	KWG1007403-10	7/27/2010	08:25		7/27/2010	08:25
0726F051.D	Continuing Calibration Verification	KWG1007403-9	7/27/2010	08:51		7/27/2010	08:51
0726F052.D	FTS-23 0-2	K1006867-003	7/27/2010	09:18		7/27/2010	09:18
0726F054.D	FTS-25 0-2	K1006867-005	7/27/2010	10:11		7/27/2010	10:11
0726F055.D	Continuing Calibration Verification	KWG1007403-11	7/27/2010	10:37		7/27/2010	10:37
0726F056.D	Instrument Blank	KWG1007403-12	7/27/2010	11:04		7/27/2010	11:04
0726F057.D	ZZZZZZ	ZZZZZZ	7/27/2010	11:31		7/27/2010	11:31
0726F058.D	Continuing Calibration Verification	KWG1007403-13	7/27/2010	11:58		7/27/2010	11:58
0726F059.D	Instrument Blank	KWG1007403-14	7/27/2010	12:24		7/27/2010	12:24
0726F061.D	FTS-27 0-2	K1006867-007	7/27/2010	13:17		7/27/2010	13:17
0726F065.D	Instrument Blank	KWG1007403-16	7/27/2010	15:04		7/27/2010	15:04
0726F066.D	Continuing Calibration Verification	KWG1007403-15	7/27/2010	15:31		7/27/2010	15:31

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082

Analysis Lot: KWG1007595
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0727F002.D	Instrument Blank	KWG1007595-1	7/27/2010	17:56		7/27/2010	17:56
0727F003.D	Continuing Calibration Verification	KWG1007595-2	7/27/2010	18:22		7/27/2010	18:22
0727F004.D	ZZZZZZ	ZZZZZZ	7/27/2010	18:49		7/27/2010	18:49
0727F005.D	FTS-22 0-2	K1006867-002	7/27/2010	19:16		7/27/2010	19:16
0727F006.D	FTS-24 0-2	K1006867-004	7/27/2010	19:42		7/27/2010	19:42
0727F007.D	FTS-26 0-2	K1006867-006	7/27/2010	20:09		7/27/2010	20:09
0727F008.D	FTS-28 0-2	K1006867-008	7/27/2010	20:36		7/27/2010	20:36
0727F009.D	FTS-101 0-2	K1006867-009	7/27/2010	21:02		7/27/2010	21:02
0727F011.D	Instrument Blank	KWG1007595-3	7/27/2010	21:56		7/27/2010	21:56
0727F012.D	Continuing Calibration Verification	KWG1007595-4	7/27/2010	22:22		7/27/2010	22:22

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Water

Service Request: K1006867
Date Extracted: 07/07/2010

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A
Analysis Method: 8082

Extraction Lot: KWG1007137
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTS-121 0-2	K1006867-010	06/30/10	07/02/10	1030mL	2mL	NA	
Method Blank	KWG1007137-3	NA	NA	1030mL	2mL	NA	
Lab Control Sample	KWG1007137-1	NA	NA	1000mL	2mL	NA	
Duplicate Lab Control Sample	KWG1007137-2	NA	NA	1000mL	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Extracted: 07/13/2010

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541
Analysis Method: 8082

Extraction Lot: KWG1007334
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTS-21 2-12	K1006867-001	06/30/10	07/02/10	13.26g	10mL	77.4	
FTS-22 0-2	K1006867-002	06/30/10	07/02/10	11.97g	10mL	84.0	
FTS-23 0-2	K1006867-003	06/30/10	07/02/10	12.65g	10mL	82.0	
FTS-24 0-2	K1006867-004	06/30/10	07/02/10	13.39g	10mL	76.9	
FTS-25 0-2	K1006867-005	06/30/10	07/02/10	11.94g	10mL	84.0	
FTS-26 0-2	K1006867-006	06/30/10	07/02/10	12.03g	10mL	88.7	
FTS-27 0-2	K1006867-007	06/30/10	07/02/10	10.81g	10mL	95.6	
FTS-28 0-2	K1006867-008	06/30/10	07/02/10	11.03g	10mL	91.1	
FTS-101 0-2	K1006867-009	06/30/10	07/02/10	12.10g	10mL	88.1	
Method Blank	KWG1007334-4	NA	NA	13.56g	10mL	NA	
FTS-21 2-12MS	KWG1007334-1	06/30/10	07/02/10	13.56g	10mL	77.4	
FTS-21 2-12DMS	KWG1007334-2	06/30/10	07/02/10	13.32g	10mL	77.4	
Lab Control Sample	KWG1007334-3	NA	NA	10.00g	10mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Extracted:	07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-21 2-12	**Units:**	mg/Kg
Lab Code:	K1006867-001	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.098	0.019	0.90	0.84	6.9		1	07/27/10

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: 06/30/2010
Date Received: 07/02/2010
Date Extracted: 07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name: FTS-22 0-2
Lab Code: K1006867-002

Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	1.0	0.19	8.1	7.5	7.7	D	10	07/27/10

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: 06/30/2010
Date Received: 07/02/2010
Date Extracted: 07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name: FTS-23 0-2
Lab Code: K1006867-003

Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.097	0.019	0.33	0.30	9.5		1	07/27/10

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Extracted:	07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-24 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-004	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.49	0.095	3.6	3.2	11.8	D	5	07/27/10

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: 06/30/2010
Date Received: 07/02/2010
Date Extracted: 07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name: FTS-25 0-2
Lab Code: K1006867-005
Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.10	0.019	0.44	0.38	14.6		1	07/27/10

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Extracted:	07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-26 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-006	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.94	0.19	14	13	7.4	D	10	07/27/10

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Extracted:	07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-27 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-007	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.097	0.019	0.20	0.18	10.5		1	07/27/10

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Extracted:	07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-28 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-008	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	1.0	0.19	17	16	6.1	D	10	07/27/10

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010
		Date Extracted:	07/13/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-101 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-009	**Basis:**	Dry
		Level:	Low
Extraction Method:	EPA 3541		
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Aroclor 1260	0.94	0.19	15	14	6.9	D	10	07/27/10

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

QC Reports

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Water

Service Request: K1006867

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A
Analysis Method: 8082

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
FTS-121 0-2	K1006867-010	76
Method Blank	KWG1007137-3	70
Lab Control Sample	KWG1007137-1	69
Duplicate Lab Control Sample	KWG1007137-2	69

Surrogate Recovery Control Limits (%)

Sur1 =	Decachlorobiphenyl	36-113

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541
Analysis Method: 8082

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
FTS-21 2-12	K1006867-001	74
FTS-22 0-2	K1006867-002	105 D
FTS-23 0-2	K1006867-003	75
FTS-24 0-2	K1006867-004	95 D
FTS-25 0-2	K1006867-005	72
FTS-26 0-2	K1006867-006	104 D
FTS-27 0-2	K1006867-007	80
FTS-28 0-2	K1006867-008	108 D
FTS-101 0-2	K1006867-009	106 D
Method Blank	KWG1007334-4	88
FTS-21 2-12MS	KWG1007334-1	68
FTS-21 2-12DMS	KWG1007334-2	63
Lab Control Sample	KWG1007334-3	82

Surrogate Recovery Control Limits (%)

Sur1 =	Decachlorobiphenyl	35-133

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Extracted: 07/13/2010
Date Analyzed: 07/27/2010

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: FTS-21 2-12
Lab Code: K1006867-001

Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry

Level: Low
Extraction Lot: KWG1007334

Analyte Name	Sample Result	FTS-21 2-12MS KWG1007334-1 Matrix Spike			FTS-21 2-12DMS KWG1007334-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Aroclor 1016	ND	0.594	0.953	62	0.578	0.970	60	27-174	3	40
Aroclor 1260	0.90	1.58	0.953	71	1.43	0.970	55	20-185	10	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/07/2010
Sample Matrix:	Water	**Date Analyzed:**	07/21/2010

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8082	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1007137

	Lab Control Sample KWG1007137-1 Lab Control Spike			Duplicate Lab Control Sample KWG1007137-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	1.53	2.00	77	1.59	2.00	80	41-113	4	30
Aroclor 1260	1.53	2.00	77	1.51	2.00	75	47-117	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Extracted: 07/13/2010
Date Analyzed: 07/27/2010

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG1007334

	Lab Control Sample KWG1007334-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	0.771	1.00	77	48-121
Aroclor 1260	0.803	1.00	80	53-129

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/07/2010
Sample Matrix:	Water	**Date Analyzed:**	07/21/2010
		Time Analyzed:	22:55

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\072110A.B\0721F025.D
Lab Code:	KWG1007137-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007137

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1007137-1	J:\GC09\DATA\072110A.B\0721F026.D	07/21/10	23:21
Duplicate Lab Control Sample	KWG1007137-2	J:\GC09\DATA\072110A.B\0721F027.D	07/21/10	23:48
FTS-121 0-2	K1006867-010	J:\GC09\DATA\072110A.B\0721F028.D	07/22/10	00:15

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/13/2010
Sample Matrix:	Soil	**Date Analyzed:**	07/27/2010
		Time Analyzed:	03:33

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\072610.B\0726F039.D
Lab Code:	KWG1007334-4	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007334

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1007334-3	J:\GC09\DATA\072610.B\0726F040.D	07/27/10	03:59
FTS-21 2-12	K1006867-001	J:\GC09\DATA\072610.B\0726F045.D	07/27/10	06:12
FTS-21 2-12MS	KWG1007334-1	J:\GC09\DATA\072610.B\0726F046.D	07/27/10	06:38
FTS-21 2-12DMS	KWG1007334-2	J:\GC09\DATA\072610.B\0726F047.D	07/27/10	07:05
FTS-23 0-2	K1006867-003	J:\GC09\DATA\072610.B\0726F052.D	07/27/10	09:18
FTS-25 0-2	K1006867-005	J:\GC09\DATA\072610.B\0726F054.D	07/27/10	10:11
FTS-27 0-2	K1006867-007	J:\GC09\DATA\072610.B\0726F061.D	07/27/10	13:17
FTS-22 0-2	K1006867-002	J:\GC09\DATA\072710.B\0727F005.D	07/27/10	19:16
FTS-24 0-2	K1006867-004	J:\GC09\DATA\072710.B\0727F006.D	07/27/10	19:42
FTS-26 0-2	K1006867-006	J:\GC09\DATA\072710.B\0727F007.D	07/27/10	20:09
FTS-28 0-2	K1006867-008	J:\GC09\DATA\072710.B\0727F008.D	07/27/10	20:36
FTS-101 0-2	K1006867-009	J:\GC09\DATA\072710.B\0727F009.D	07/27/10	21:02

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/07/2010
Sample Matrix:	Water	**Date Analyzed:**	07/21/2010
		Time Analyzed:	23:21

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\072110A.B\0721F026.D
Lab Code:	KWG1007137-1	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007137

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1007137-3	J:\GC09\DATA\072110A.B\0721F025.D	07/21/10	22:55
FTS-121 0-2	K1006867-010	J:\GC09\DATA\072110A.B\0721F028.D	07/22/10	00:15

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Extracted:**	07/13/2010
Sample Matrix:	Soil	**Date Analyzed:**	07/27/2010
		Time Analyzed:	03:59

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\072610.B\0726F040.D
Lab Code:	KWG1007334-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG1007334

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1007334-4	J:\GC09\DATA\072610.B\0726F039.D	07/27/10	03:33
FTS-21 2-12	K1006867-001	J:\GC09\DATA\072610.B\0726F045.D	07/27/10	06:12
FTS-21 2-12MS	KWG1007334-1	J:\GC09\DATA\072610.B\0726F046.D	07/27/10	06:38
FTS-21 2-12DMS	KWG1007334-2	J:\GC09\DATA\072610.B\0726F047.D	07/27/10	07:05
FTS-23 0-2	K1006867-003	J:\GC09\DATA\072610.B\0726F052.D	07/27/10	09:18
FTS-25 0-2	K1006867-005	J:\GC09\DATA\072610.B\0726F054.D	07/27/10	10:11
FTS-27 0-2	K1006867-007	J:\GC09\DATA\072610.B\0726F061.D	07/27/10	13:17
FTS-22 0-2	K1006867-002	J:\GC09\DATA\072710.B\0727F005.D	07/27/10	19:16
FTS-24 0-2	K1006867-004	J:\GC09\DATA\072710.B\0727F006.D	07/27/10	19:42
FTS-26 0-2	K1006867-006	J:\GC09\DATA\072710.B\0727F007.D	07/27/10	20:09
FTS-28 0-2	K1006867-008	J:\GC09\DATA\072710.B\0727F008.D	07/27/10	20:36
FTS-101 0-2	K1006867-009	J:\GC09\DATA\072710.B\0727F009.D	07/27/10	21:02

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Water	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-121 0-2	**Units:**	ug/L
Lab Code:	K1006867-010	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1221	ND	U	0.39	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1232	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1242	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1248	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1254	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1260	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1262	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	
Aroclor 1268	ND	U	0.20	0.0094	1	07/07/10	07/22/10	KWG1007137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	36-113	07/22/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F028.D
Lab ID: K1006867-010
RunType: SMPL
Matrix: WATER

Date Acquired: 07/22/2010 00:15
Date Quantitated: 07/22/2010 09:57
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R028.D
Lab ID: K1006867-010
RunType: SMPL
Matrix: WATER

Date Acquired: 07/22/2010 00:15
Date Quantitated: 07/22/2010 09:59
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	WATER
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007212	**Prep Lot:**	KWG1007137	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3535A		
Prep Ref:	931189	**Prep Date:**	07/07/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ6548
MB Ref:	J:\GC09\DATA\072110A.B\0721F025.D	**Method ID:**	MJ579
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072110A.B\0721F028.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R028.D			**Vial:**	13
Acqu Date:	07/22/2010 00:15	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-010				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.18 -0.01	17.53 -0.01	354224	443557	72.00	76.09			76OK
			%Recovery =		72OK	76OK	**Limits =**	36-113	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1016 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1221 {1}			0d	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {2}			0d	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {3}			0d	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {4}			0d	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1232 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1242 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072110A.B\0721F028.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R028.D			**Vial:**	13
Acqu Date:	07/22/2010 00:15	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-010				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1248 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1254 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1260 {1}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {2}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {3}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {4}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {5}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1262 {1}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {2}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {3}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {4}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {5}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1268 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F028.D
Report Date: 22-Jul-2010 09:57

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F028.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R028.D
Inj Date : 22-JUL-2010 00:15
Sample Info: K1006867-010
Misc Info : SEMIVOA GC\W1007121\2-CCV.H
Cal Date : 22-JUL-2010 08:50
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	490096	496000	86.4	85.7		100.00
Decachlorobiphenyl	16.180	17.527	354224	443557	72.0	76.1		100.00

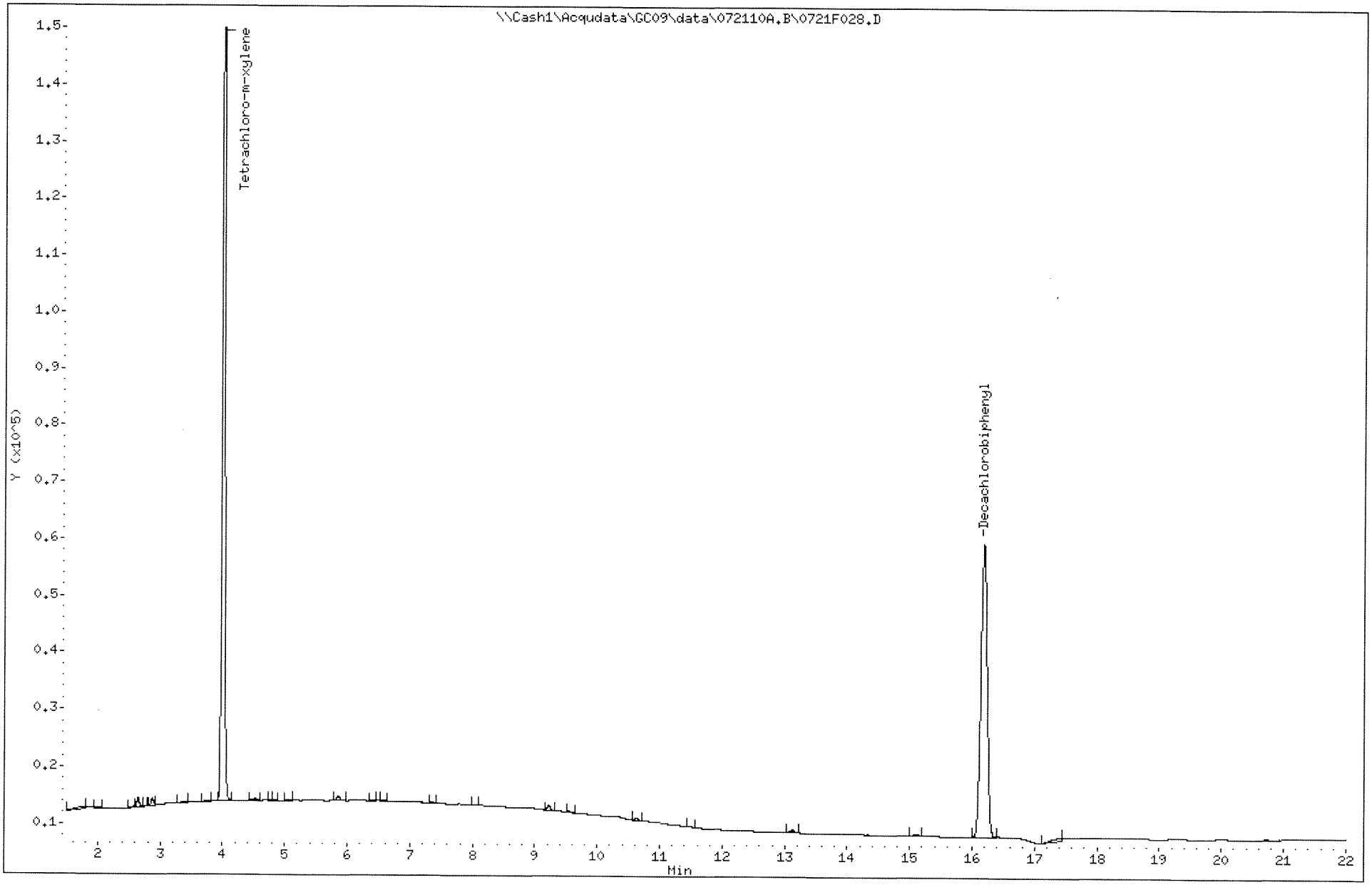
Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F028.D
Date : 22-JUL-2010 00:15
Client ID:
Sample Info: K1006867-010

Instrument: GC09.i

Operator: LHarris

Column phase: DB-35MS

Column diameter: 0.53

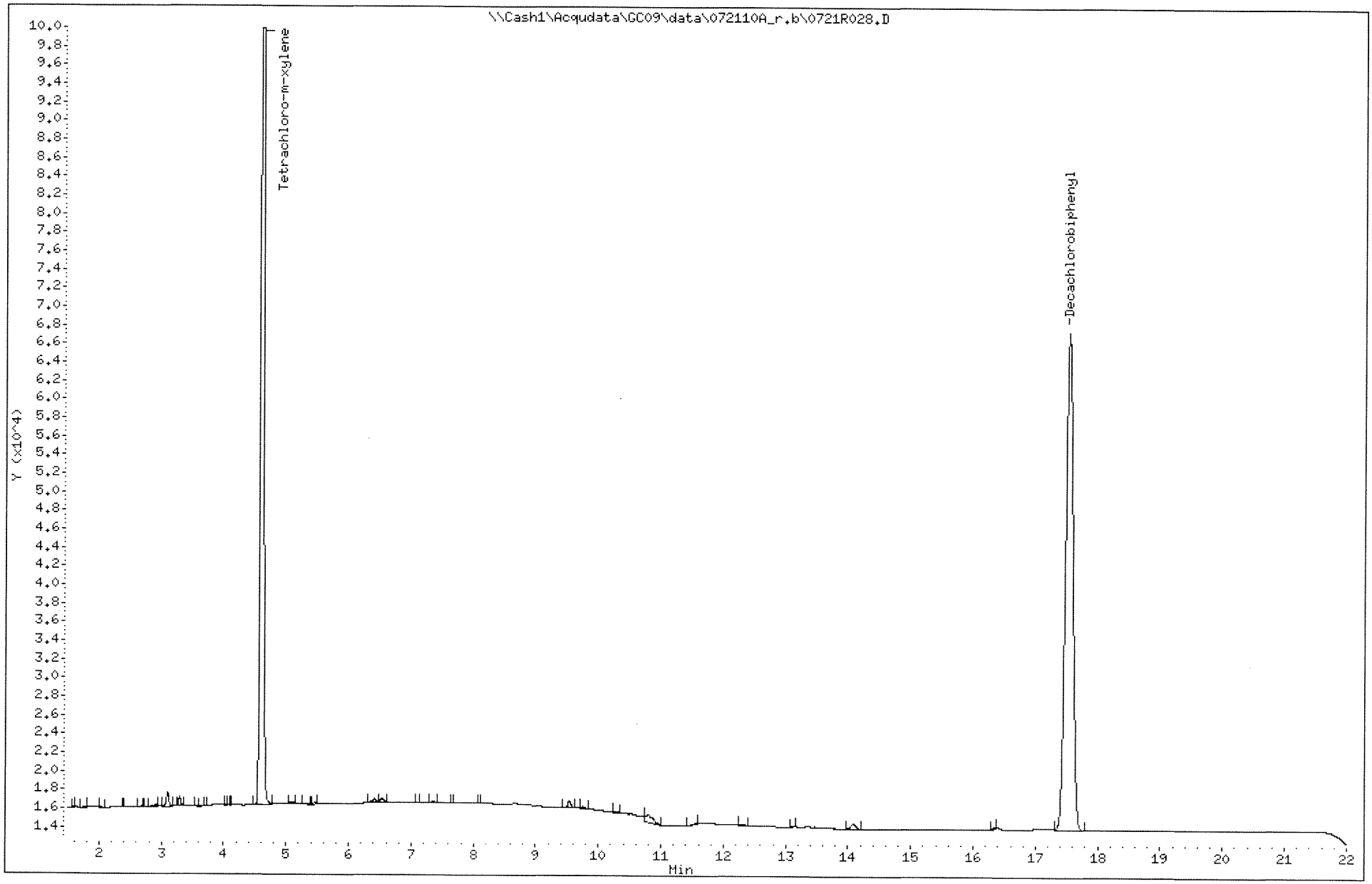


Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R028.D
Date : 22-JUL-2010 00:15
Client ID:
Sample Info: K1006867-010

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1007137-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1221	ND	U	0.39	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1232	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1242	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1248	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1254	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1260	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1262	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1268	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	70	36-113	07/21/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F025.D
Lab ID: KWG1007137-3
RunType: MB
Matrix: WATER

Date Acquired: 07/21/2010 22:55
Date Quantitated: 07/22/2010 09:57
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
CAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R025.D
Lab ID: KWG1007137-3
RunType: MB
Matrix: WATER

Date Acquired: 07/21/2010 22:55
Date Quantitated: 07/22/2010 09:58
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
CAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Rtd MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/21/2010

Analysis Lot:	KWG1007212	**Prep Lot:**	KWG1007137	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3535A		
Prep Ref:	931192	**Prep Date:**	07/07/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ579
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F025.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R025.D			**Vial:**	10
Acqu Date:	07/21/2010 22:55	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007137-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

urrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	0.00	4.59	0.00	420960	424489	74.21	73.36			74OK
					%Recovery =		74OK	73OK	**Limits =**	21-114	
Decachlorobiphenyl	16.18	-0.01	17.53	-0.01	329372	410439	66.95	70.40			70OK
					%Recovery =		67OK	70OK	**Limits =**	36-113	

arget Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1016 {1}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {2}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {3}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {4}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1016 {5}			0	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1221 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1232 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1242 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	

ndetected at or above MDL
nalyte detected above MDL, but below MRL
lit above MRL also found in Method Blank
nalyte concentration above high point of ICAL
resumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072110A.B\0721F025.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R025.D			**Vial:**	10
Acqu Date:	07/21/2010 22:55	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007137-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1248 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1254 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1260 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1262 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1268 {1}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {2}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {3}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {4}			0	0	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {5}			0	0	0.0000	0.0000	0.0094U	0.0094U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1030 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

: Undetected at or above MDL
Analyte detected above MDL, but below MRL
: Hit above MRL also found in Method Blank
: Analyte concentration above high point of ICAL
: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F025.D
Report Date: 22-Jul-2010 09:57

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F025.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R025.D
Inj Date : 21-JUL-2010 22:55
Sample Info: KWG1007137-3 | MB | 8082 PCB | WATER
Misc Info : SEMIVOA GC\W1007121\2-CCV.H
Cal Date : 22-JUL-2010 08:50
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

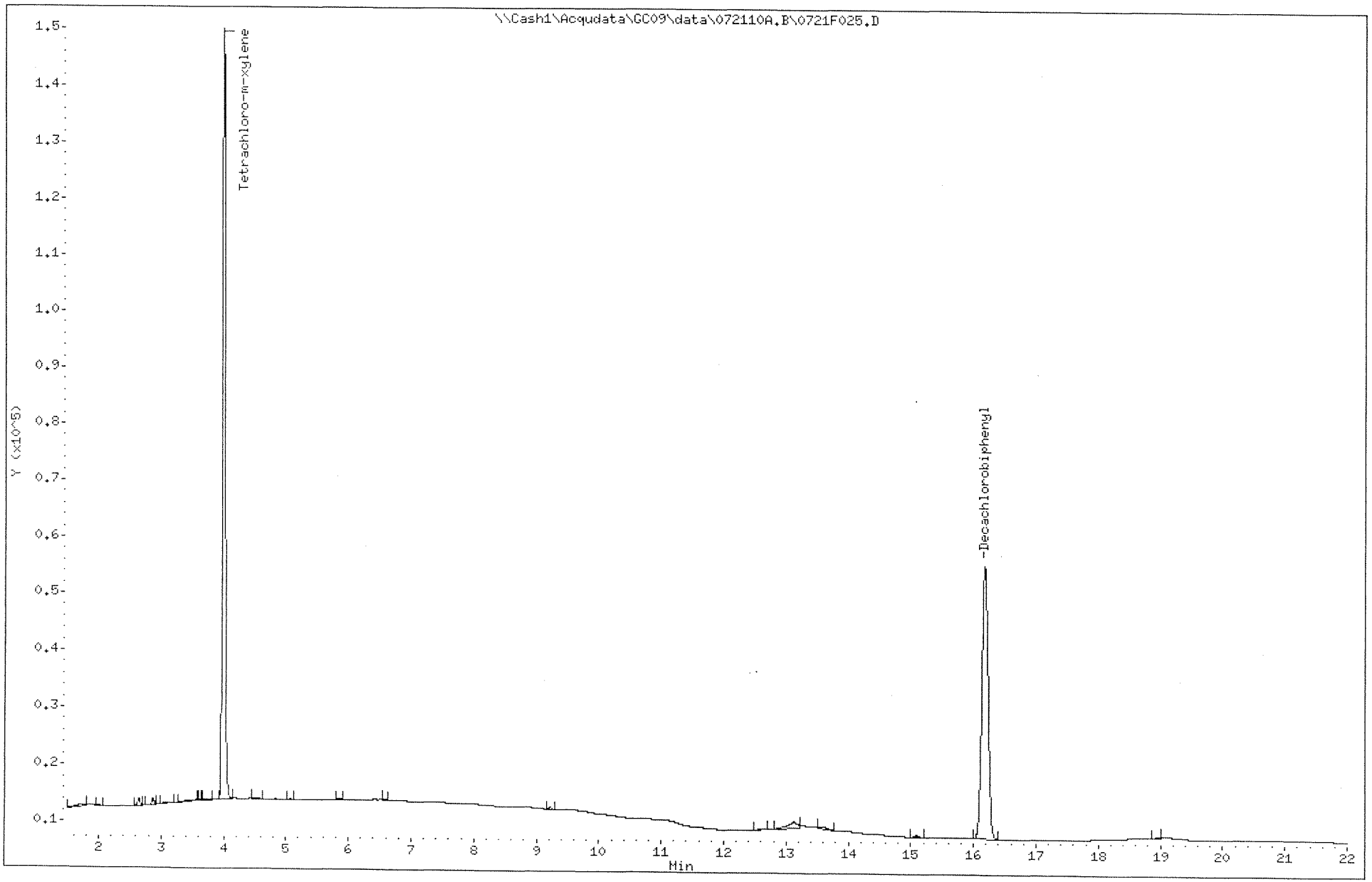
Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.590	420960	424489	74.2	73.4		100.00
Decachlorobiphenyl	16.177	17.527	329372	410439	66.9	70.4		100.00

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F025.D
Date : 21-JUL-2010 22:55
Client ID:
Sample Info: KWG1007137-3 | MB | 8082 PCB | WATER

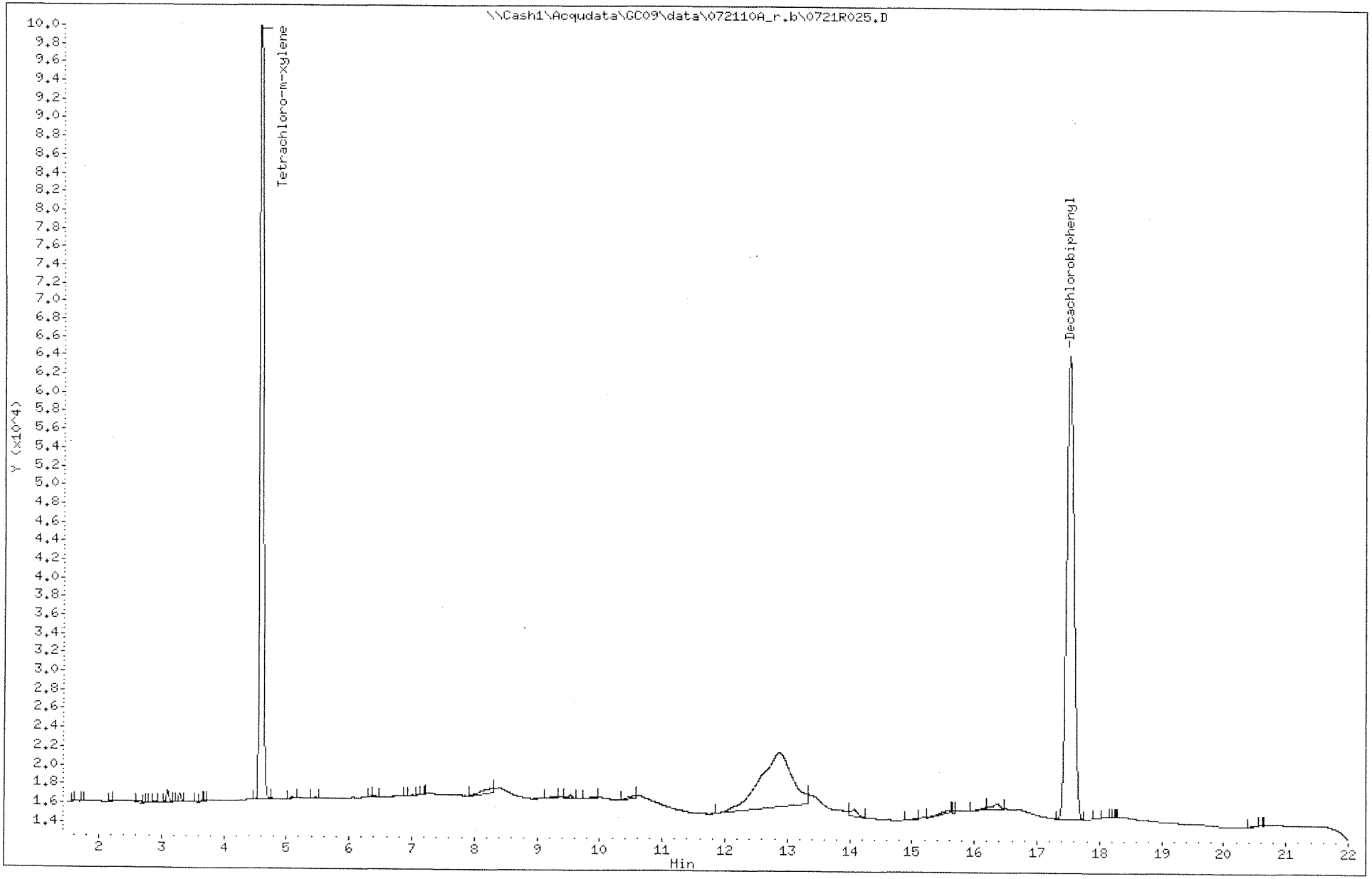
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R025.D
Date : 21-JUL-2010 22:55
Client ID:
Sample Info: KWG1007137-3 | MB | 8082 PCB | WATER

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**Units:**	ug/L
Lab Code:	KWG1007137-1	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**1.53**		0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1221	ND	U	0.40	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1232	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1242	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1248	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1254	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1260	**1.53**		0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1262	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1268	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	69	36-113	07/21/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F026.D
Lab ID: KWG1007137-1
RunType: LCS
Matrix: WATER

Date Acquired: 07/21/2010 23:21
Date Quantitated: 07/22/2010 09:57
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
CAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R026.D	**Date Acquired:**	07/21/2010 23:21
Lab ID:	KWG1007137-1	**Date Quantitated:**	07/22/2010 09:59
RunType:	LCS	**Batch ID:**	KWG1007212
Matrix:	WATER	**Analysis Method:**	8082
		ListJoinID:	LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/21/2010

Analysis Lot:	KWG1007212	**Prep Lot:**	KWG1007137	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3535A		
Prep Ref:	931190	**Prep Date:**	07/07/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:	J:\GC09\DATA\072110A.B\0721F025.D	**Method ID:**	MJ579
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F026.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R026.D			**Vial:**	11
Acqu Date:	07/21/2010 23:21	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007137-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1		RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	0.00	4.59		433714	438957	76.46	75.86			76OK
					%Recovery =		76OK	76OK	Limits =	21-114	
Decachlorobiphenyl	16.18	-0.01	17.53	-0.01	330943	404520	67.27	69.39			69OK
					%Recovery =		67OK	69OK	Limits =	36-113	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1		RT #2		Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016					0	0	766.27	742.92	1.53	1.49	**1.53**
Aroclor 1016 {1}	5.68	0.00	5.74	-0.01	52603	79373	797.22	769.59	1.59	1.54	
Aroclor 1016 {2}	5.74	0.00	6.90	-0.01	83631	125516	751.55	748.55	1.50	1.50	
Aroclor 1016 {3}	6.26	0.00	7.08	0.00	166643	105654	749.85	721.63	1.50	1.44	
Aroclor 1016 {4}	6.50	0.00	7.18	0.00	81910	117145	758.90	733.49	1.52	1.47	
Aroclor 1016 {5}	7.05	0.00	7.46	0.00	122113	114248	773.82	741.34	1.55	1.48	
Aroclor 1221					0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1221 {1}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {2}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {3}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {4}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232					0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1232 {1}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {2}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {3}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {4}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242					0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1242 {1}					0d	0d	0.0000	0.0000	0.0094U	0.0094U	

: Undetected at or above MDL
: Analyte detected above MDL, but below MRL
: Hit above MRL also found in Method Blank
: Analyte concentration above high point of ICAL
: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072110A.B\0721F026.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R026.D			**Vial:**	11
Acqu Date:	07/21/2010 23:21	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007137-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260			0	0	741.12	765.10	1.48	1.53	**1.53**
Aroclor 1260 {1}	8.96	10.53 0.00	159167	163475	692.71	793.16	1.39	1.59	
Aroclor 1260 {2}	9.55 0.00	10.88 0.00	238917	278477	675.13	663.28	1.35	1.33	
Aroclor 1260 {3}	10.31 0.00	11.06 0.00	223793	193239	636.60	863.93	1.27	1.73	
Aroclor 1260 {4}	11.01 0.00	11.56 -0.01	171061	185178	884.13	688.63	1.77	1.38	
Aroclor 1260 {5}	11.48 0.00	12.30 -0.01	356478	406690	817.04	816.50	1.63	1.63	
Aroclor 1262			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

: Undetected at or above MDL
Analyte detected above MDL, but below MRL
: Hit above MRL also found in Method Blank
Analyte concentration above high point of ICAL
: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F026.D
Report Date: 22-Jul-2010 09:57

Columbia Analytical Services

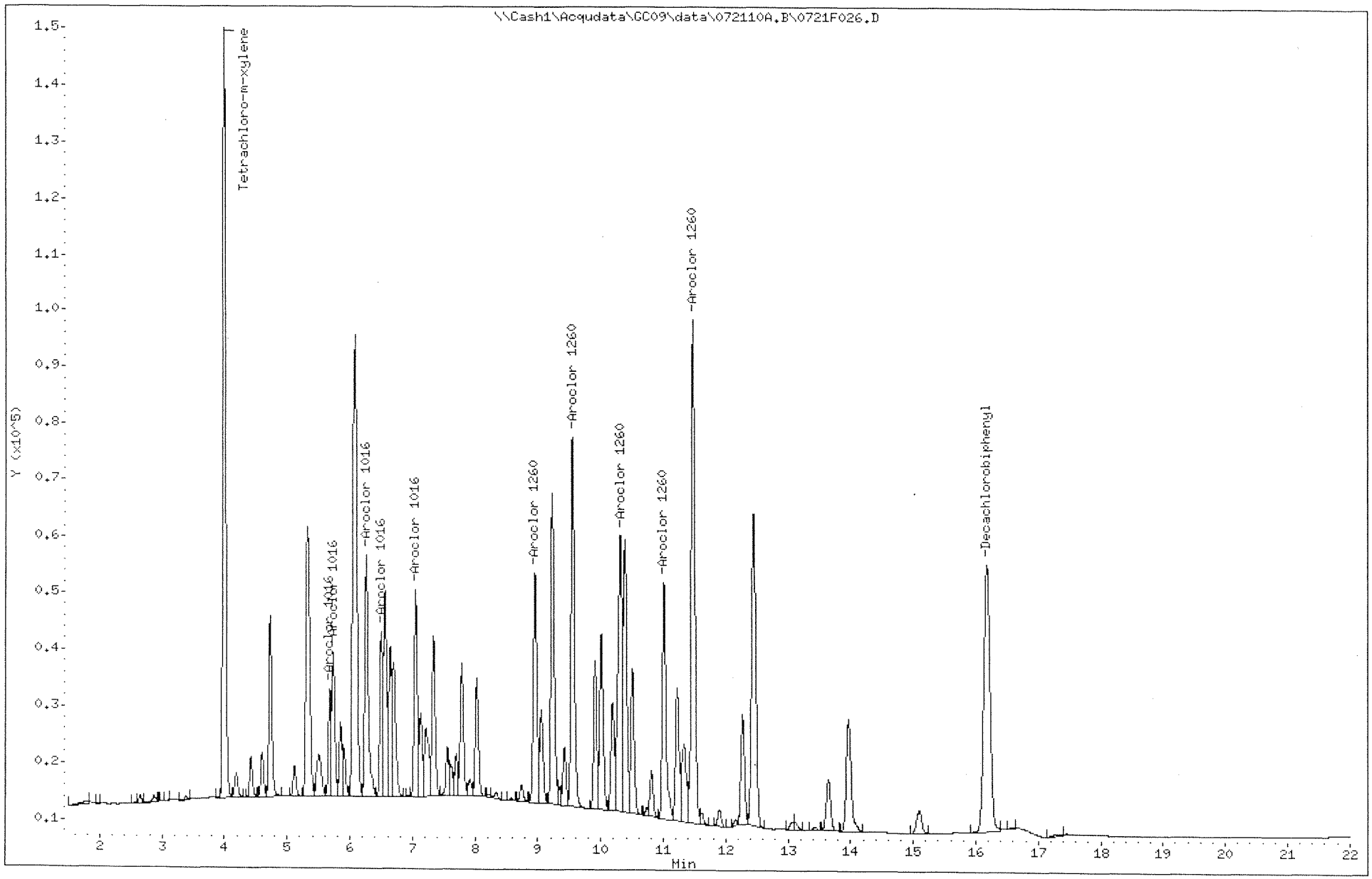
Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F026.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R026.D
Inj Date : 21-JUL-2010 23:21
Sample Info: KWG1007137-1 | LCS | 8082 PCB | WATER
Misc Info : SEMIVOA GC\W1007121\2-CCV.H
Cal Date : 22-JUL-2010 08:50
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	433714	438957	76.4	75.8		100.00
Aroclor 1016	5.680	5.740	52603	79373	797	770	80.00- 120.00	100.00
	5.737	6.903	83631	125516	752	748	132.70- 199.06	158.99
	6.257	7.083	166643	105654	750	722	261.51- 392.27	316.79
	6.500	7.183	81910	117145	759	733	131.51- 197.26	155.71
	7.050	7.460	122113	114248	774	741	186.98- 280.47	232.14
			Average of Peak Amounts =		766	743		
Aroclor 1260	8.957	10.530	159167	163475	693	793	80.00- 120.00	100.00
	9.550	10.877	238917	278477	675	663	112.79- 169.19	150.10
	10.313	11.063	223793	193239	637	864	121.76- 182.64	140.60
	11.010	11.563	171061	185178	884	689	65.54- 98.31	107.47
	11.477	12.303	356478	406690	817	816	147.93- 221.89	223.96
			Average of Peak Amounts =		741	765		
Decachlorobiphenyl	16.177	17.530	330943	404520	67.3	69.4		100.00

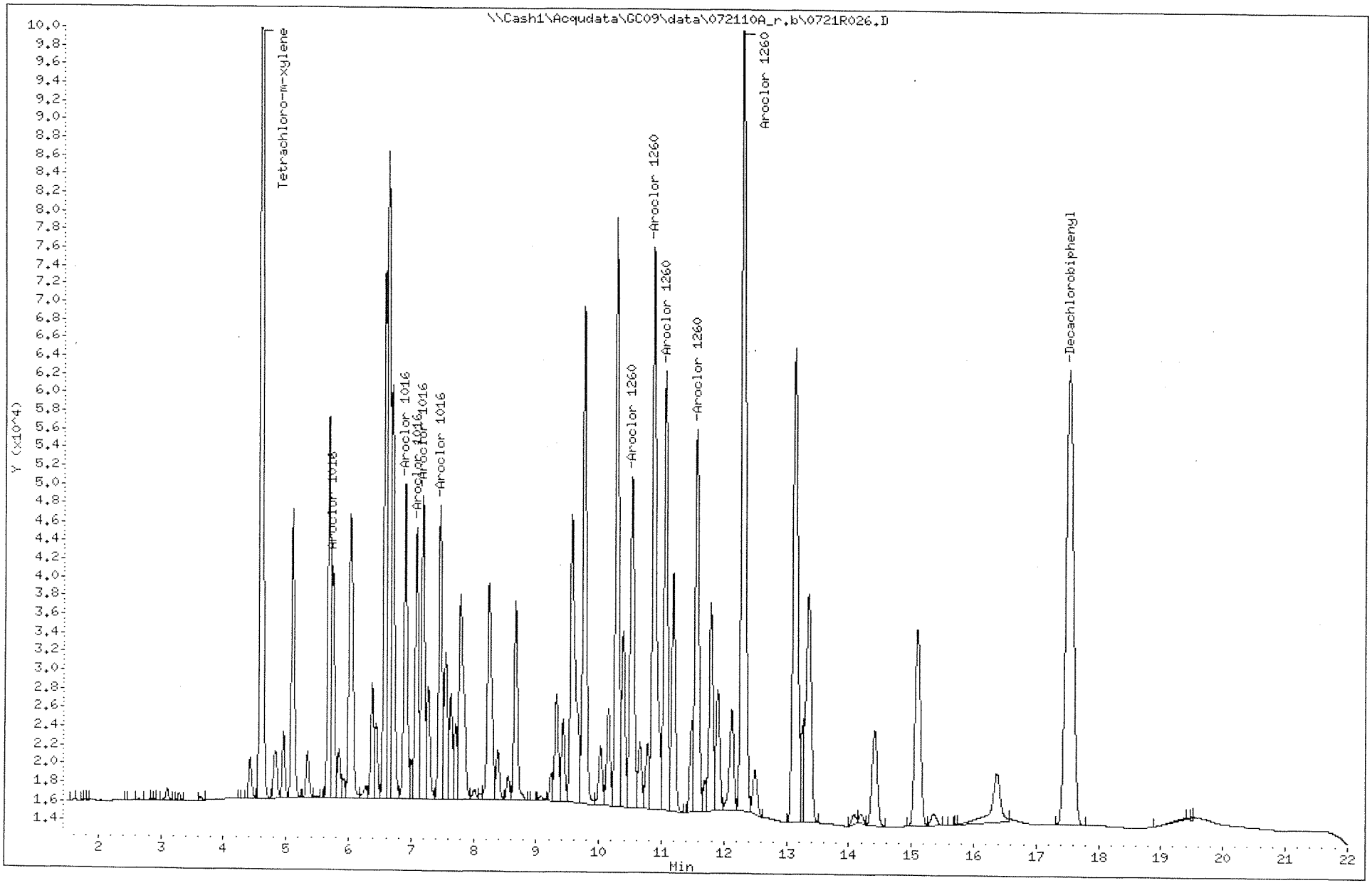
Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F026.D
Date : 21-JUL-2010 23:21
Client ID:
Sample Info: KWG1007137-1 | LCS | 8082 PCB | WATER

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R026.D
Date : 21-JUL-2010 23:21
Client ID:
Sample Info: KWG1007137-1 | LCS | 8082 PCB | WATER

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Duplicate Lab Control Sample	**Units:**	ug/L
Lab Code:	KWG1007137-2	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**1.59**		0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1221	ND	U	0.40	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1232	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1242	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1248	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1254	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1260	**1.51**		0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1262	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	
Aroclor 1268	ND	U	0.20	0.0094	1	07/07/10	07/21/10	KWG1007137	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	69	36-113	07/21/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F027.D
Lab ID: KWG1007137-2
RunType: DLCS
Matrix: WATER

Date Acquired: 07/21/2010 23:48
Date Quantitated: 07/22/2010 09:57
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

)ata File: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R027.D
,ab ID: KWG1007137-2
:unType: DLCS
Matrix: WATER

Date Acquired: 07/21/2010 23:48
Date Quantitated: 07/22/2010 09:59
Batch ID: KWG1007212
Analysis Method: 8082
ListJoinID: LJ6548

'ample Exceptions

xception Categories	Result	Low Limit	High Limit	Pass	Fail
nalytical Holding Time	NA	NA	NA	x	
:AL Analyte Recovery	NA	NA	NA	x	
:cond Source ICAL Verification	NA	NA	NA	x	
alibration Verification Pass/Fail	NA	NA	NA	x	
ontinuing Calibration Recovery	NA	NA	NA	x	
ontinuing Calibration Recovery (Closing)	NA	NA	NA	x	
rrogates	NA	NA	NA	x	
nalyte Co-elution	NA	NA	NA	x	
:tention Time	NA	NA	NA	x	
:low Lowest ICAL Level	NA	NA	NA	x	
d MRL Unsupported by ICAL	NA	NA	NA	x	
bove Highest ICAL Level	NA	NA	NA	x	
viroquant/Stealth Calibration Check	NA	NA	NA	x	
verdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/21/2010

Analysis Lot:	KWG1007212	**Prep Lot:**	KWG1007137	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3535A		
Prep Ref:	931191	**Prep Date:**	07/07/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:	J:\GC09\DATA\072110A.B\0721F025.D	**Method ID:**	MJ579
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F027.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R027.D			**Vial:**	12
Acqu Date:	07/21/2010 23:48	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	DLCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007137-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99 0.00	4.59	391247	398432	68.97	68.86			69OK
			%Recovery =		69OK	69OK	**Limits =**	21-114	
Decachlorobiphenyl	16.18 -0.01	17.53 -0.01	317074	402063	64.45	68.97			69OK
			%Recovery =		64OK	69OK	**Limits =**	36-113	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	797.22	748.74	1.59	1.50	1.59
Aroclor 1016 {1}	5.68 0.00	5.74 0.00	53134	76812	805.27	744.76	1.61	1.49	
Aroclor 1016 {2}	5.74 0.00	6.91 0.00	87551	127364	786.77	759.57	1.57	1.52	
Aroclor 1016 {3}	6.26	7.08 0.00	173852	108100	782.28	738.33	1.56	1.48	
Aroclor 1016 {4}	6.50 0.00	7.18 0.00	87982	118065	815.15	739.25	1.63	1.48	
Aroclor 1016 {5}	7.05 0.00	7.46 0.00	125713	117399	796.63	761.78	1.59	1.52	
Aroclor 1221			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
P: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072110A.B\0721F027.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R027.D			**Vial:**	12
Acqu Date:	07/21/2010 23:48	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	DLCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007137-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1260			0	0	756.17	753.76	1.51	1.51	1.51
Aroclor 1260 {1}	8.96	10.53 0.00	162923	162968	709.06	790.70	1.42	1.58	
Aroclor 1260 {2}	9.55 0.00	10.88 0.00	244365	268367	690.52	639.20	1.38	1.28	
Aroclor 1260 {3}	10.31 0.00	11.06 0.00	233888	180952	665.32	808.99	1.33	1.62	
Aroclor 1260 {4}	11.01 0.00	11.57 0.00	173187	189076	895.12	703.13	1.79	1.41	
Aroclor 1260 {5}	11.48 0.00	12.31 0.00	358124	411818	820.81	826.79	1.64	1.65	
Aroclor 1262			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268			0	0	0.0000	0.0000	0.0094U	0.0094U	0.0094U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.0094U	0.0094U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	1000 mL	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

Undetected at or above MDL
Analyte detected above MDL, but below MRL
Hit above MRL also found in Method Blank
Analyte concentration above high point of ICAL
Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F027.D
Report Date: 22-Jul-2010 09:57

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F027.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R027.D
Inj Date : 21-JUL-2010 23:48
Sample Info: KWG1007137-2 | DLCS | 8082 PCB | WATER
Misc Info : SEMIVOA GC\W1007121\2-CCV.H
Cal Date : 22-JUL-2010 08:50
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

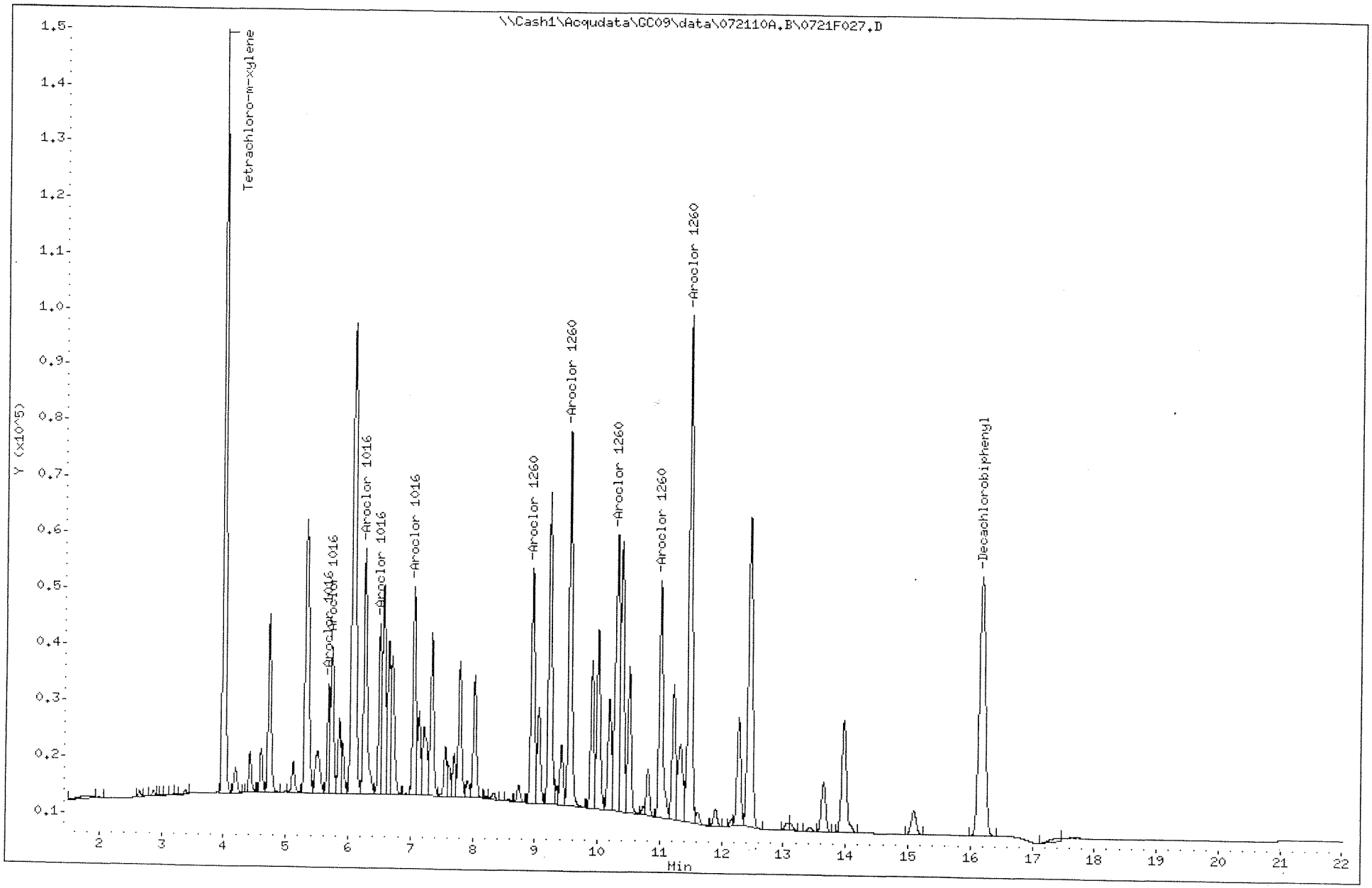
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	391247	398432	69.0	68.8		100.00
Aroclor 1016	5.680	5.743	53134	76812	805	745	80.00- 120.00	100.00
	5.737	6.907	87551	127364	787	760	132.70- 199.06	164.77
	6.260	7.083	173852	108100	782	738	261.51- 392.27	327.20
	6.500	7.183	87982	118065	815	739	131.51- 197.26	165.59
	7.050	7.460	125713	117399	797	762	186.98- 280.47	236.60
			Average of Peak Amounts =		797	749		
Aroclor 1260	8.957	10.530	162923	162968	709	791	80.00- 120.00	100.00
	9.550	10.877	244365	268367	690	639	112.79- 169.19	149.99
	10.313	11.063	233888	180952	665	809	121.76- 182.64	143.56
	11.010	11.567	173187	189076	895	703	65.54- 98.31	106.30
	11.477	12.307	358124	411818	821	827	147.93- 221.89	219.81
			Average of Peak Amounts =		756	754		
Decachlorobiphenyl	16.180	17.530	317074	402063	64.4	69.0		100.00

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F027.D
Date : 21-JUL-2010 23:48
Client ID:
Sample Info: KWG1007137-2 | DLCS | 8082 PCB | WATER

Instrument: GC09.i

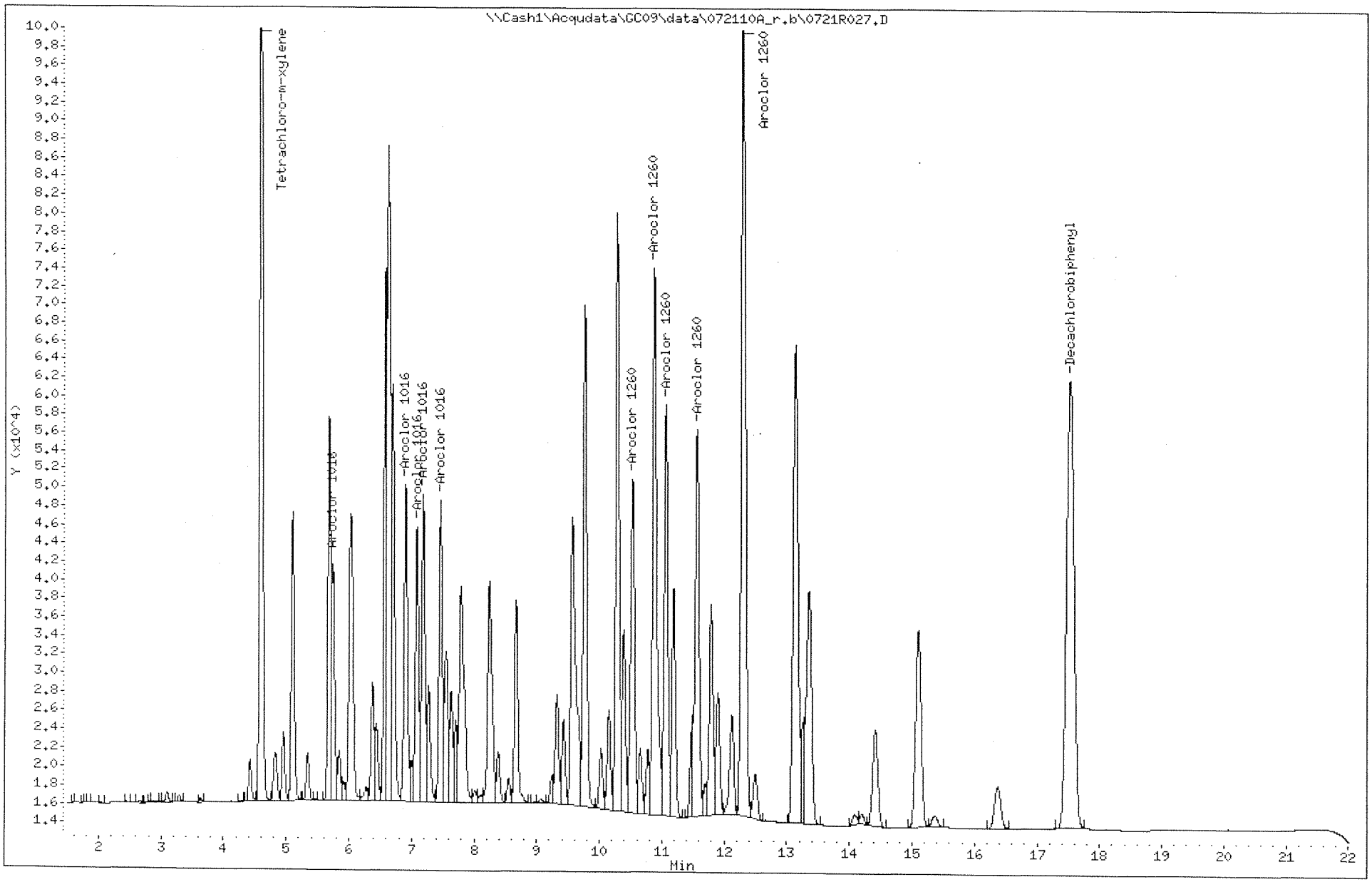
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R027.D
Date : 21-JUL-2010 23:48
Client ID:
Sample Info: KWG1007137-2 | DLCS | 8082 PCB | WATER

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-21 2-12	**Units:**	mg/Kg
Lab Code:	K1006867-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.90**		0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.098	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	74	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F045.D
Lab ID: K1006867-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 06:12
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R045.D
Lab ID: K1006867-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 06:12
Date Quantitated: 07/27/2010 15:54
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Printed: 07/27/2010 16:49:09
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933057	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072610.B\0726F045.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R045.D			**Vial:**	38
Acqu Date:	07/27/2010 06:12	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-001				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.17	0.00	17.53	339558	433649	69.02	74.39			74OK
					%Recovery =	69OK	74OK	Limits =	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1016 {1}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {2}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {3}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {4}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {5}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F045.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R045.D			**Vial:**	38
Acqu Date:	07/27/2010 06:12	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-001				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	858.66	926.19	0.84	0.90	**0.90**
Aroclor 1260 {1}	8.95	10.53	156780	173728m	682.33	842.91	0.66	0.82	
Aroclor 1260 {2}	9.55 +0.00	10.88 +0.00	269907	349270m	762.70	831.90	0.74	0.81	
Aroclor 1260 {3}	10.31	11.06	282335	219698m	803.13	982.22	0.78	0.96	
Aroclor 1260 {4}	11.01	11.57 +0.00	201763	255196m	1,043	949.02	1.0	0.92	
Aroclor 1260 {5}	11.47	12.30	437325	510505m	1,002	1,025	0.98	1.0	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	13.26 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	77.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F045.D
Report Date: 27-Jul-2010 15:51

Columbia Analytical Services

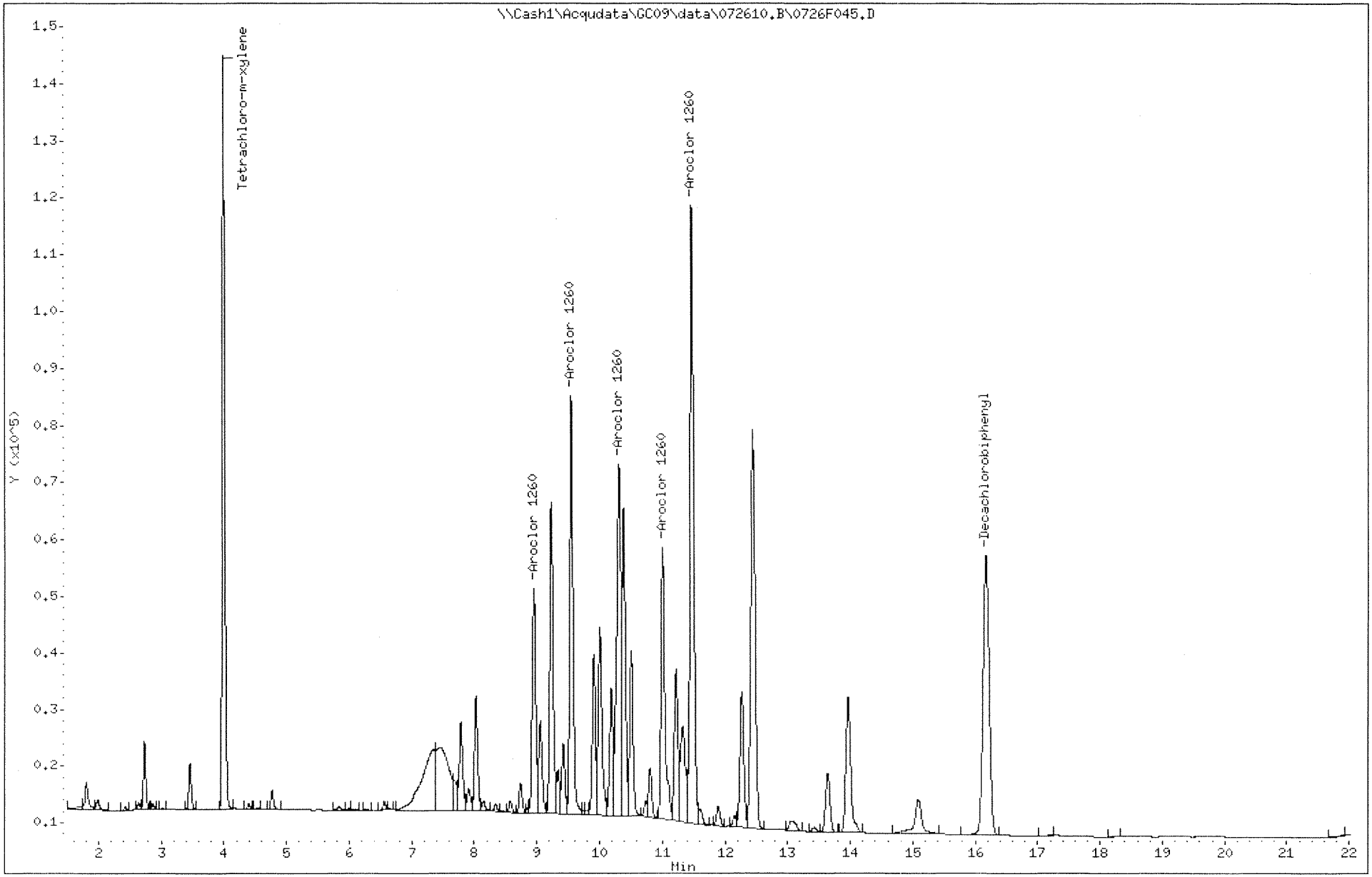
Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F045.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R045.D
Inj Date : 27-JUL-2010 06:12
Sample Info: K1006867-001
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	371916	371674	65.6	64.2		100.00
Aroclor 1260	8.953	10.530	156780	173728	682	843	80.00- 120.00	100.00
	9.550	10.877	269907	349270	763	832	115.28- 172.93	172.16
	10.310	11.063	282335	219698	803	982	122.15- 183.23	180.08
	11.007	11.567	201763	255196	1040	949	67.81- 101.71	128.69
	11.473	12.303	437325	510505	1000	1020	154.72- 232.08	278.94
			Average of Peak Amounts =		858	925		
Decachlorobiphenyl	16.170	17.527	339558	433649	69.0	74.4		100.00

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F045.D
Date : 27-JUL-2010 06:12
Client ID:
Sample Info: K1006867-001

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



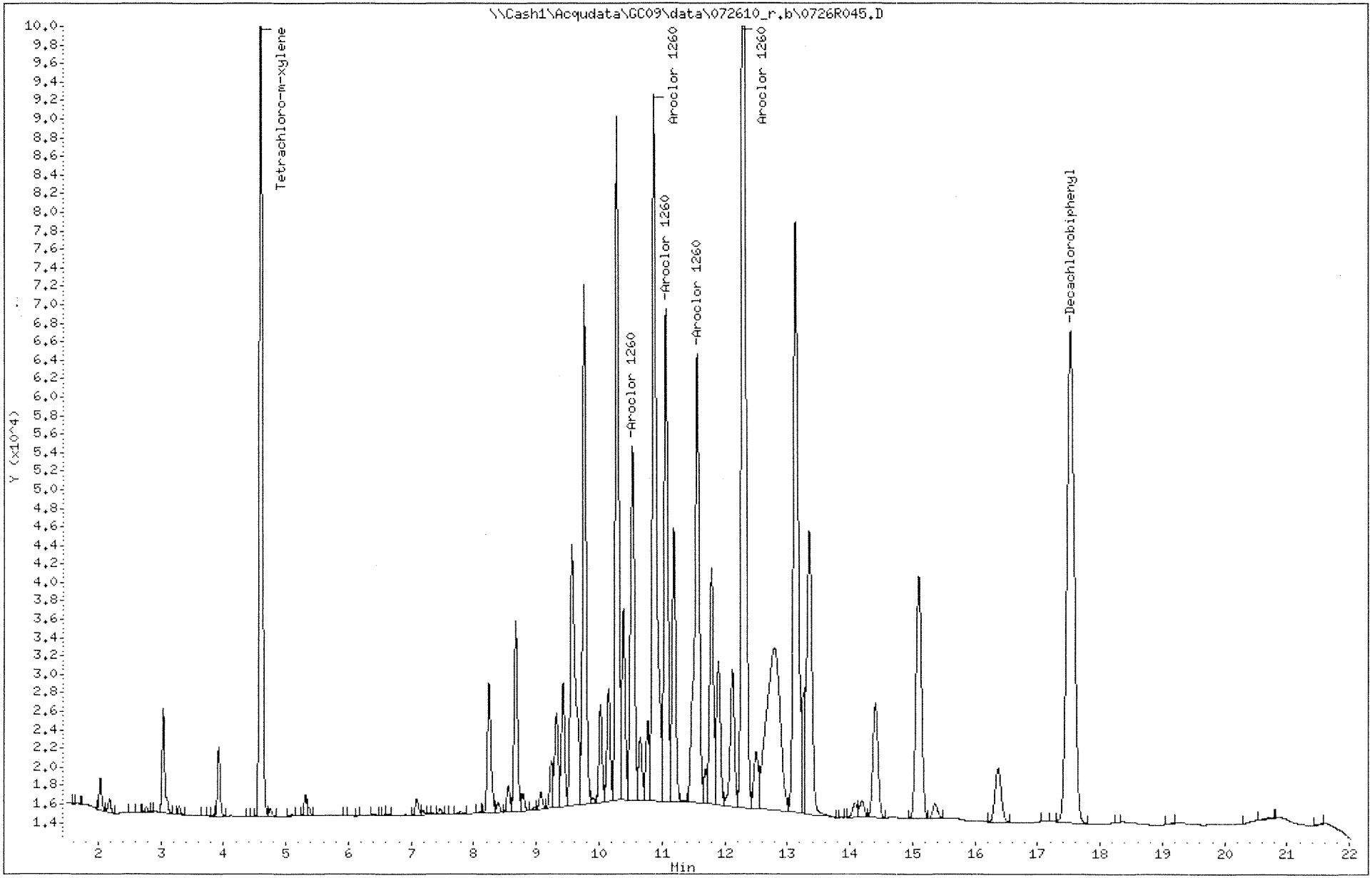
Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R045.D
Date : 27-JUL-2010 06:12
Client ID:
Sample Info: K1006867-001

Instrument: GC09.i

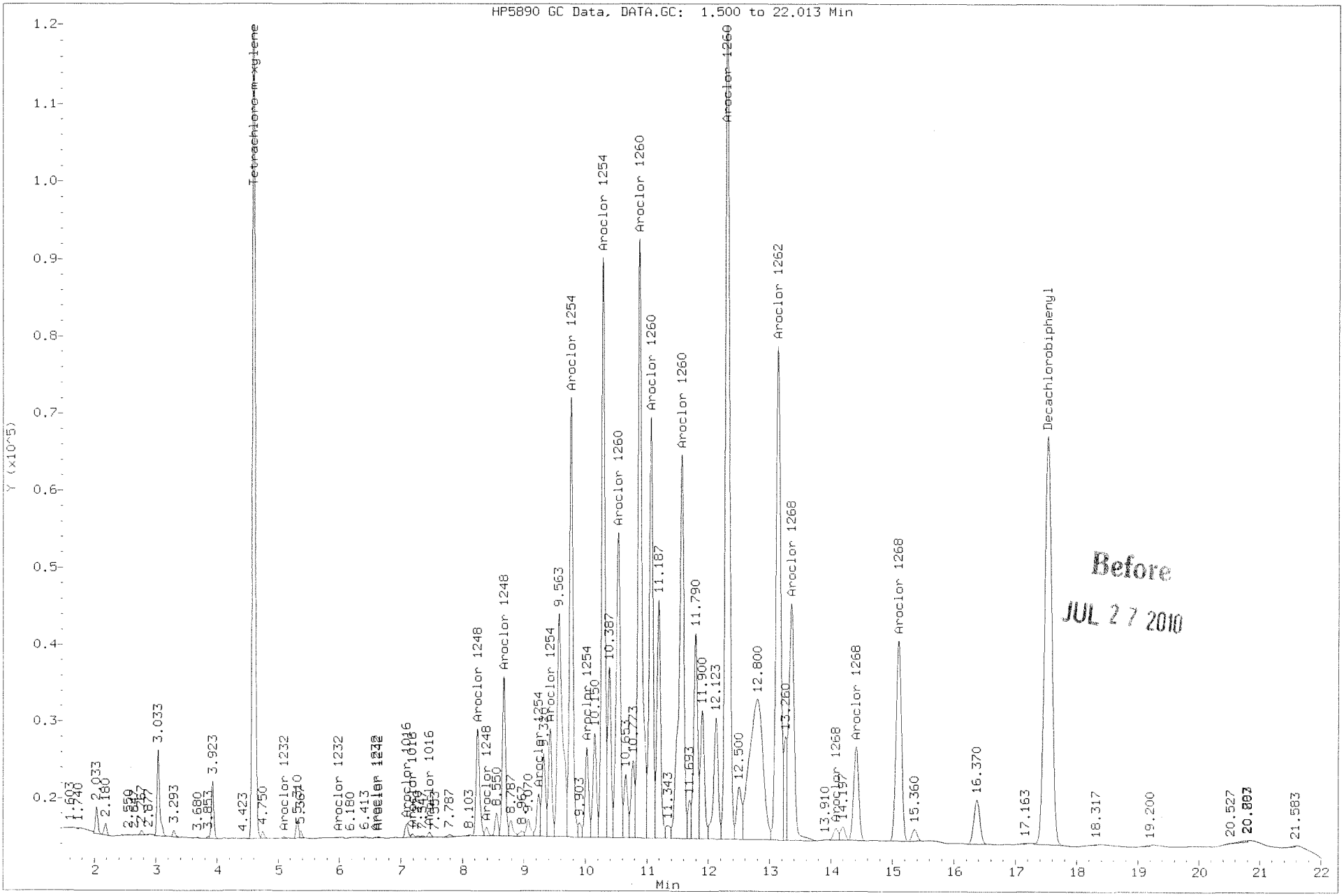
Operator: LHarris

Column phase: DB-XLB

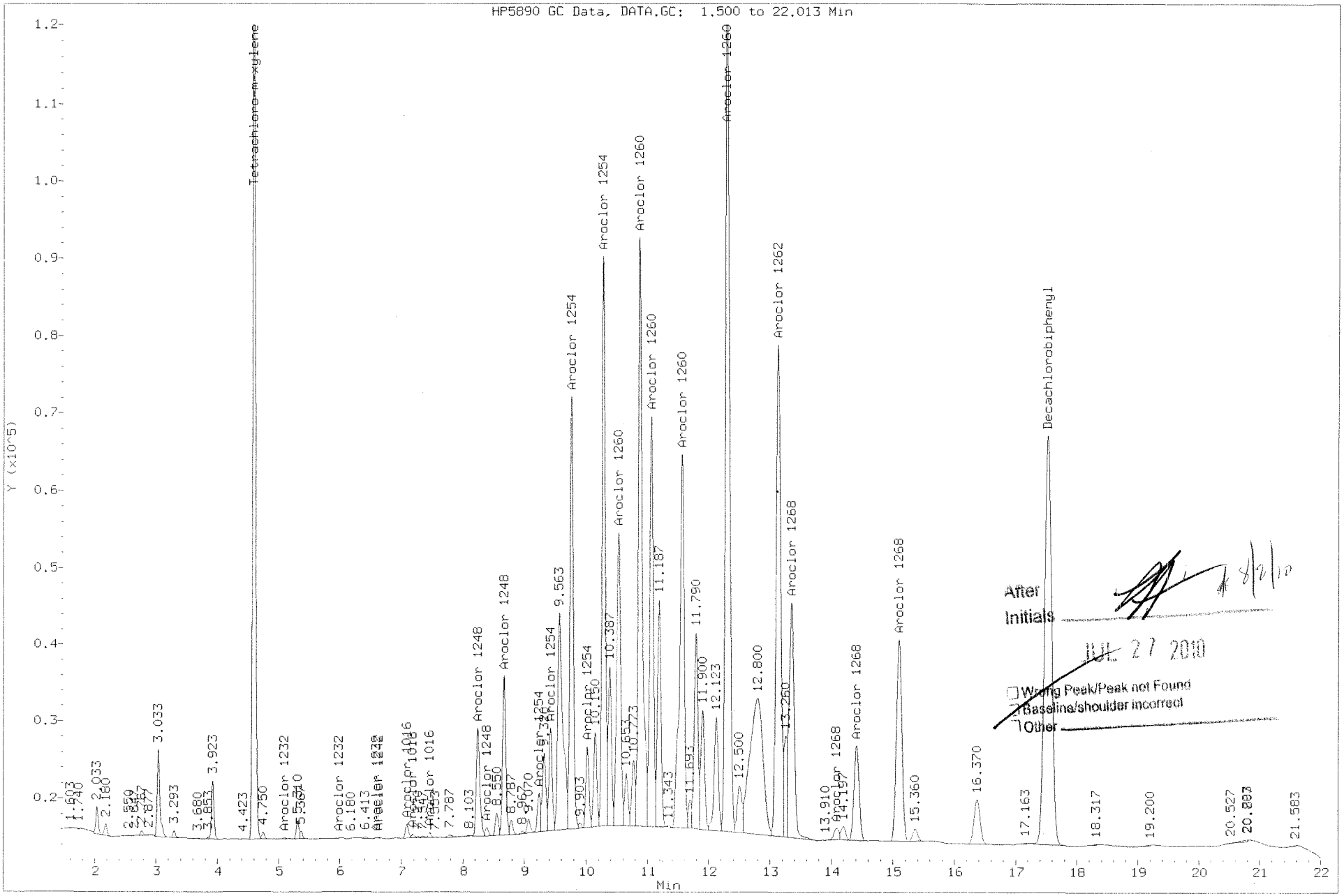
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R045.D
Injection Date: 27-JUL-2010 06:12
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R045.D
Injection Date: 27-JUL-2010 06:12
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-22 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	2.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**8.1**	D	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	105	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F005.D
Lab ID: K1006867-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 19:16
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: A Gonsalves

Secondary Review: 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R005.D
Lab ID: K1006867-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 19:16
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: [signature]

Secondary Review: [signature] 8/2/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007595	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933058	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072710.B\0727F005.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R005.D			**Vial:**	4
Acqu Date:	07/27/2010 19:16	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-002				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.17 $^{0.00}$	17.52 $^{+0.00}$	49667	60940	10.10	10.45			105OK
			%Recovery =		101OK	105OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F005.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R005.D			**Vial:**	4
Acqu Date:	07/27/2010 19:16	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-002				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1260			0	0	750.74	819.29	7.5D	8.1D	8.1D
Aroclor 1260 {1}	8.95	10.53 +0.00	106039	140560	461.49	681.98	4.6D	6.8D	
Aroclor 1260 {2}	9.55	10.87	232666	297534	657.46	708.67	6.5D	7.0D	
Aroclor 1260 {3}	10.31	11.06	245327	199003	697.86	889.70	6.9D	8.8D	
Aroclor 1260 {4}	11.00	11.56	182837	226857	945.00	843.63	9.4D	8.4D	
Aroclor 1260 {5}	11.47	12.30	432777	484385	991.91	972.48	9.9D	9.7D	
Aroclor 1262			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	11.97 g	**Dilution:**	10.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	84.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F005.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F005.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R005.D
Inj Date : 27-JUL-2010 19:16
Sample Info: K1006867-002 @10X
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

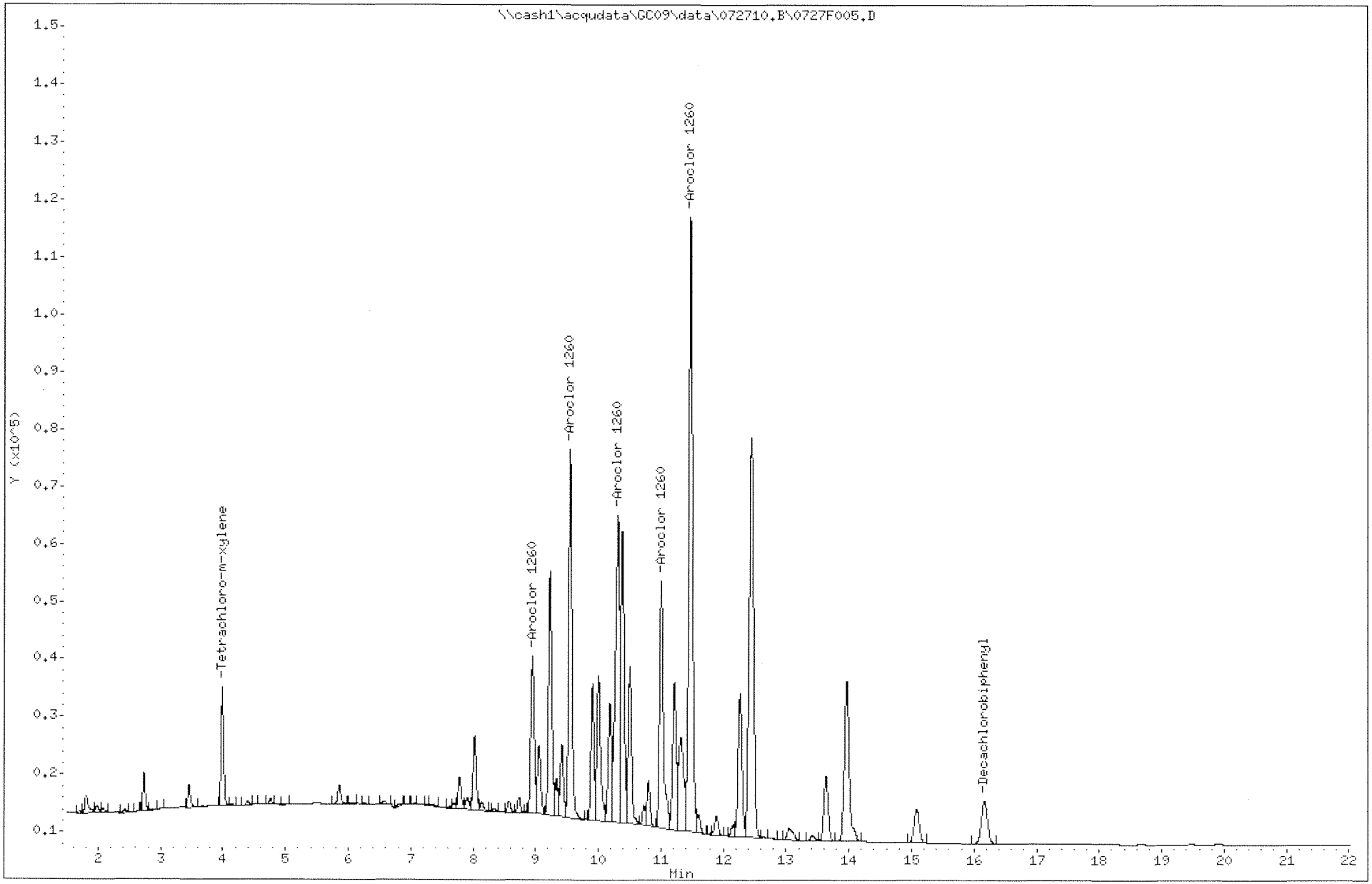
Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	57859	56473	10.2	9.76		100.00
Aroclor 1260	8.950	10.530	106039	140560	461	682	80.00- 120.00	100.00
	9.547	10.873	232666	297534	657	709	113.30- 169.95	219.42
	10.310	11.060	245327	199003	698	890	123.35- 185.02	231.36
	11.003	11.560	182837	226857	945	844	73.88- 110.83	172.42
	11.470	12.300	432777	484385	992	972	150.38- 225.57	408.13
			Average of Peak Amounts =		751	819		
Decachlorobiphenyl	16.167	17.523	49667	60940	10.1	10.4		100.00

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F005.D
Date : 27-JUL-2010 19:16
Client ID:
Sample Info: K1006867-002 @10X

Instrument: GC09.i

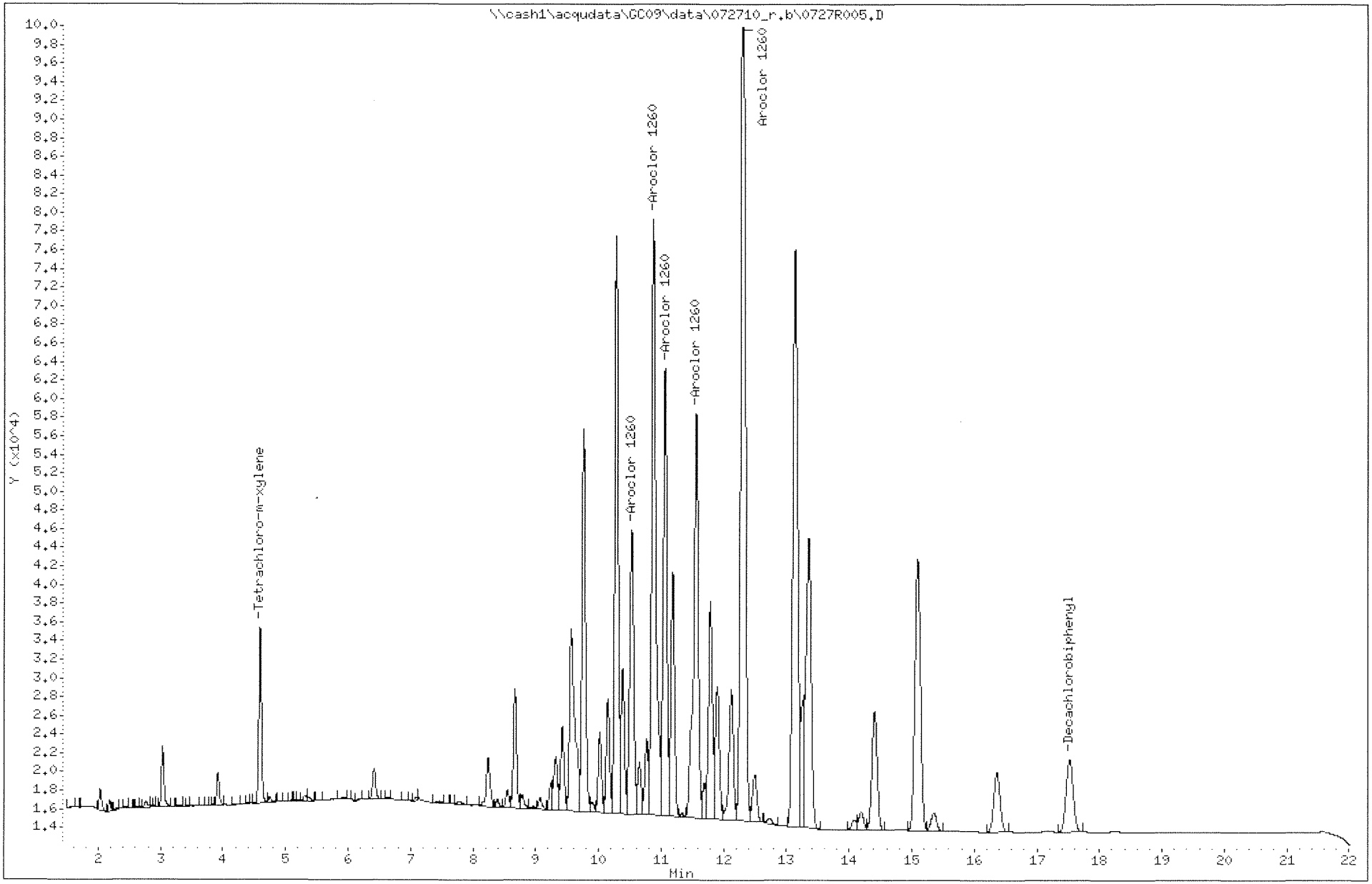
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\072710_r.b\0727R005.D
Date : 27-JUL-2010 19:16
Client ID:
Sample Info: K1006867-002 @10X

Instrument: GC09.i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-23 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.33**		0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	75	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F052.D
Lab ID: K1006867-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 09:18
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R052.D
Lab ID: K1006867-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 09:18
Date Quantitated: 07/27/2010 15:54
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 8/2/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933059	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072610.B\0726F052.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R052.D			**Vial:**	42
Acqu Date:	07/27/2010 09:18	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-003				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.18 +0.01	17.53 +0.01	351221	439294	71.39	75.35			75OK
			%Recovery =		71OK	75OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F052.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R052.D			**Vial:**	42
Acqu Date:	07/27/2010 09:18	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-003				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	308.32	338.70	0.30	0.33	**0.33**
Aroclor 1260 {1}	8.95 +0.00	10.54 +0.01	64536m	68254m	280.87	331.16	0.27	0.32	
Aroclor 1260 {2}	9.55 +0.00	10.88	95901m	143731m	271.00	342.34	0.26	0.33	
Aroclor 1260 {3}	10.32 +0.00	11.07 +0.00	116769m	73066m	332.16	326.66	0.32	0.31	
Aroclor 1260 {4}	11.01 +0.00	11.57 +0.00	54857m	89773m	283.53	333.85	0.27	0.32	
Aroclor 1260 {5}	11.48 +0.01	12.31 +0.01	163201m	179069m	374.05	359.51	0.36	0.35	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	12.65 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	82.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F052.D
Report Date: 27-Jul-2010 15:52

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F052.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R052.D
Inj Date : 27-JUL-2010 09:18
Sample Info: K1006867-003
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	465525	495255	82.1	85.6		100.00
Aroclor 1260	8.950	10.543	64536	68254	281	331	80.00- 120.00	100.00(M)
	9.553	10.877	95901	143731	271	342	115.28- 172.93	148.60(M)
	10.317	11.067	116769	73066	332	327	122.15- 183.23	180.94(M)
	11.010	11.567	54857	89773	284	334	67.81- 101.71	85.00(M)
	11.480	12.310	163201	179069	374	360	154.72- 232.08	252.88(M)
			Average of Peak Amounts =		308	339		
Decachlorobiphenyl	16.180	17.533	351221	439294	71.4	75.4		100.00

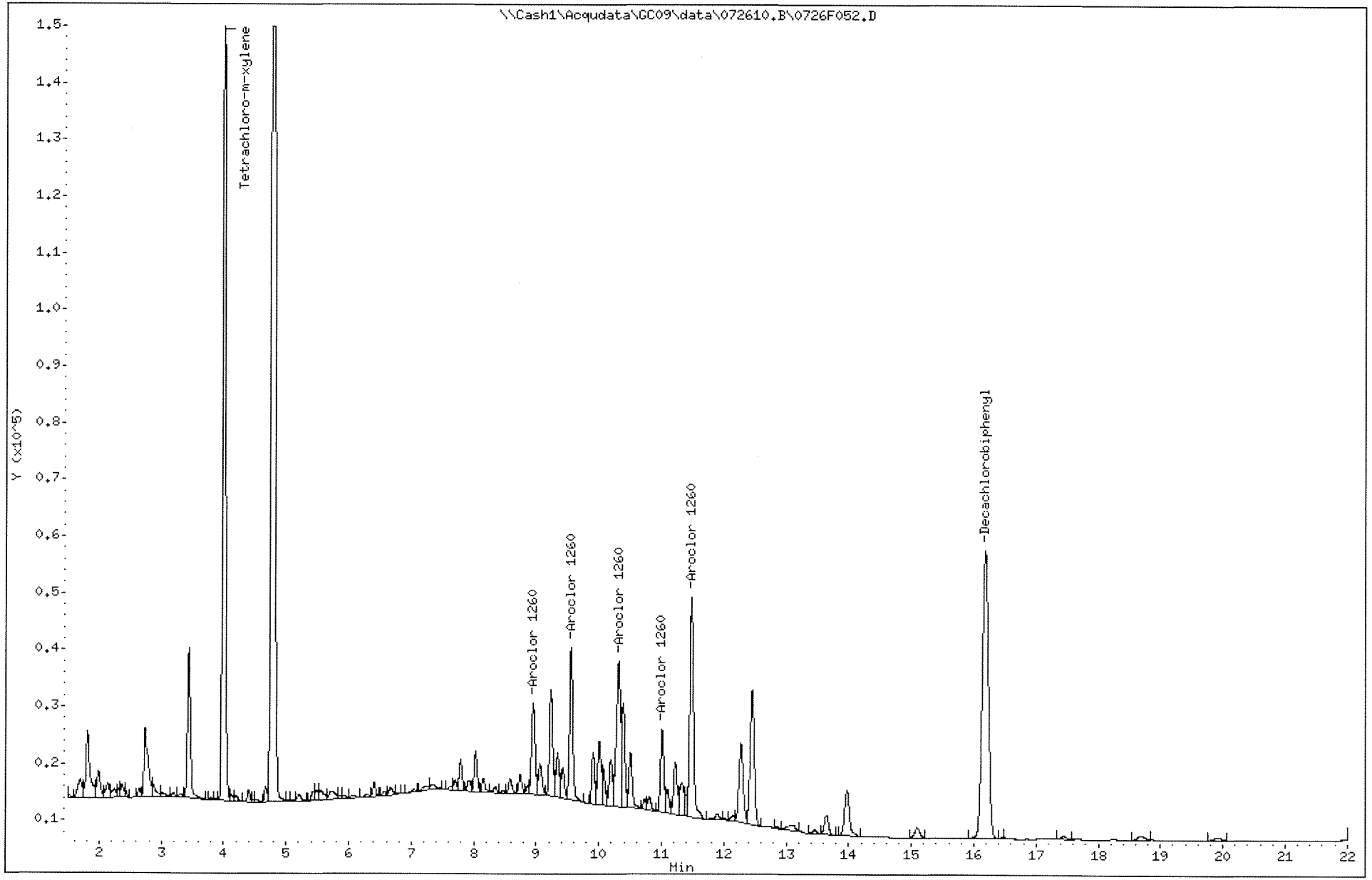
QC Flag Legend

M - Compound response manually integrated.

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F052.D
Date : 27-JUL-2010 09:18
Client ID:
Sample Info: K1006867-003

Instrument: GC09.i

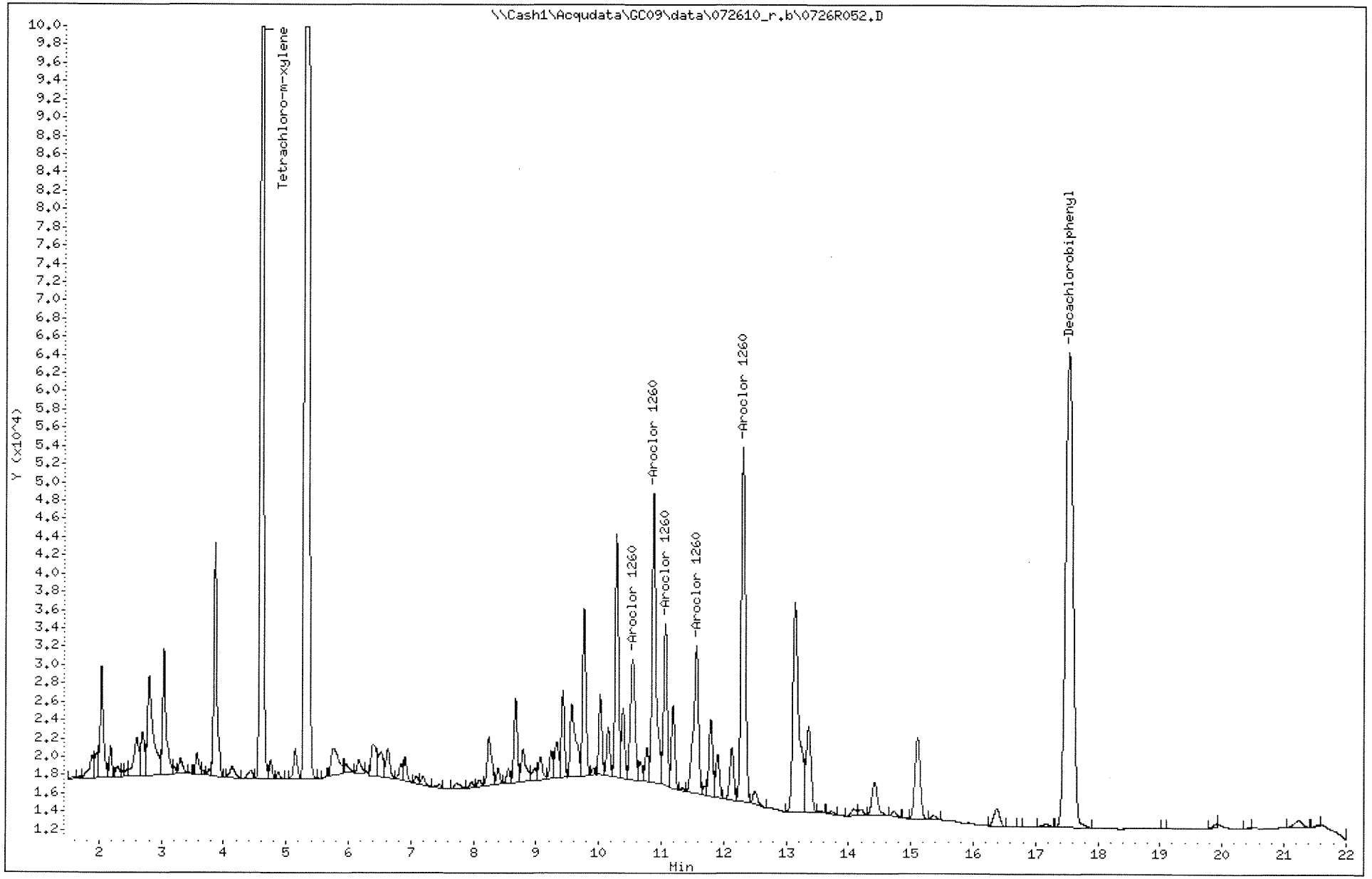
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



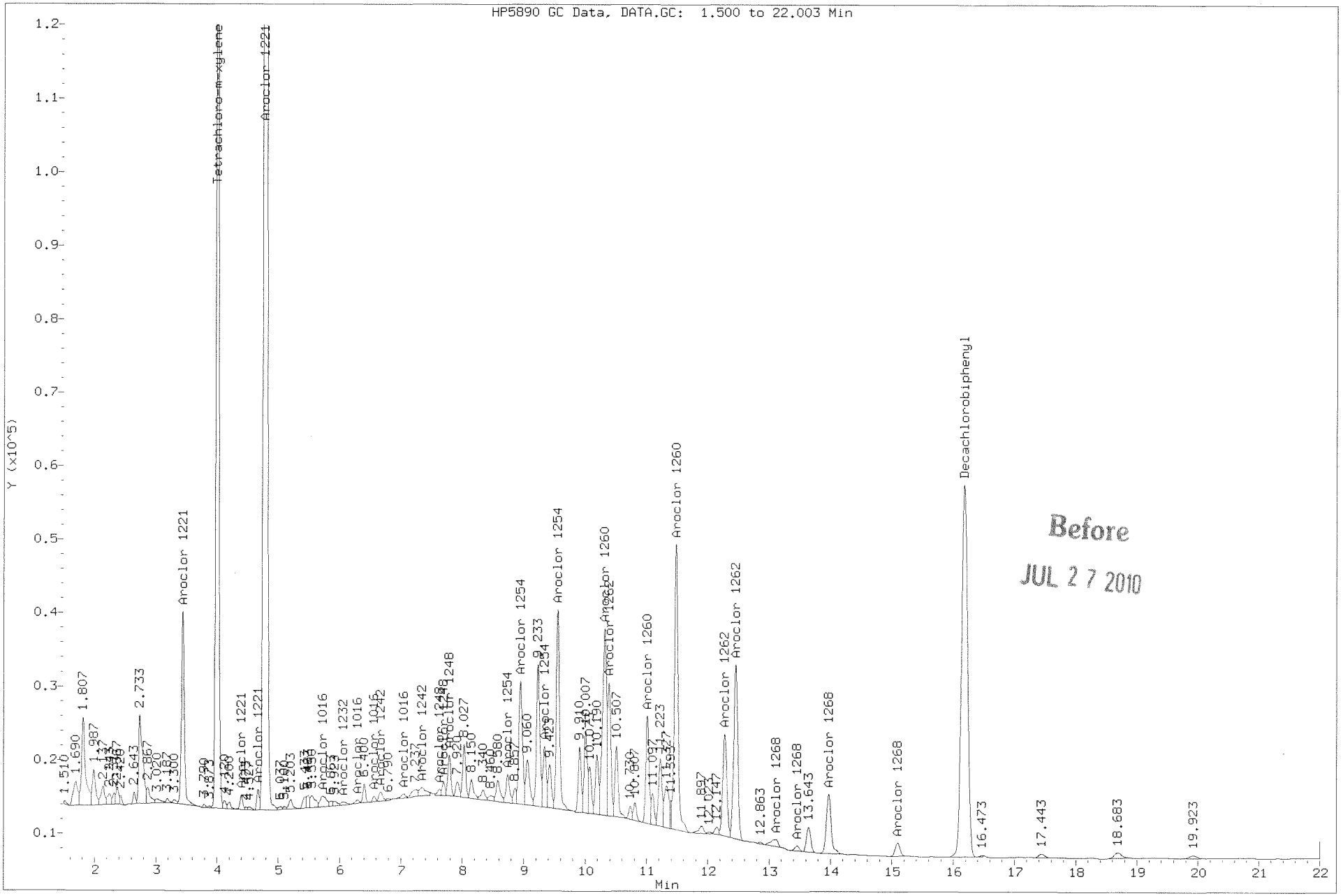
Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R052.D
Date : 27-JUL-2010 09:18
Client ID:
Sample Info: K1006867-003

Instrument: GC09.i

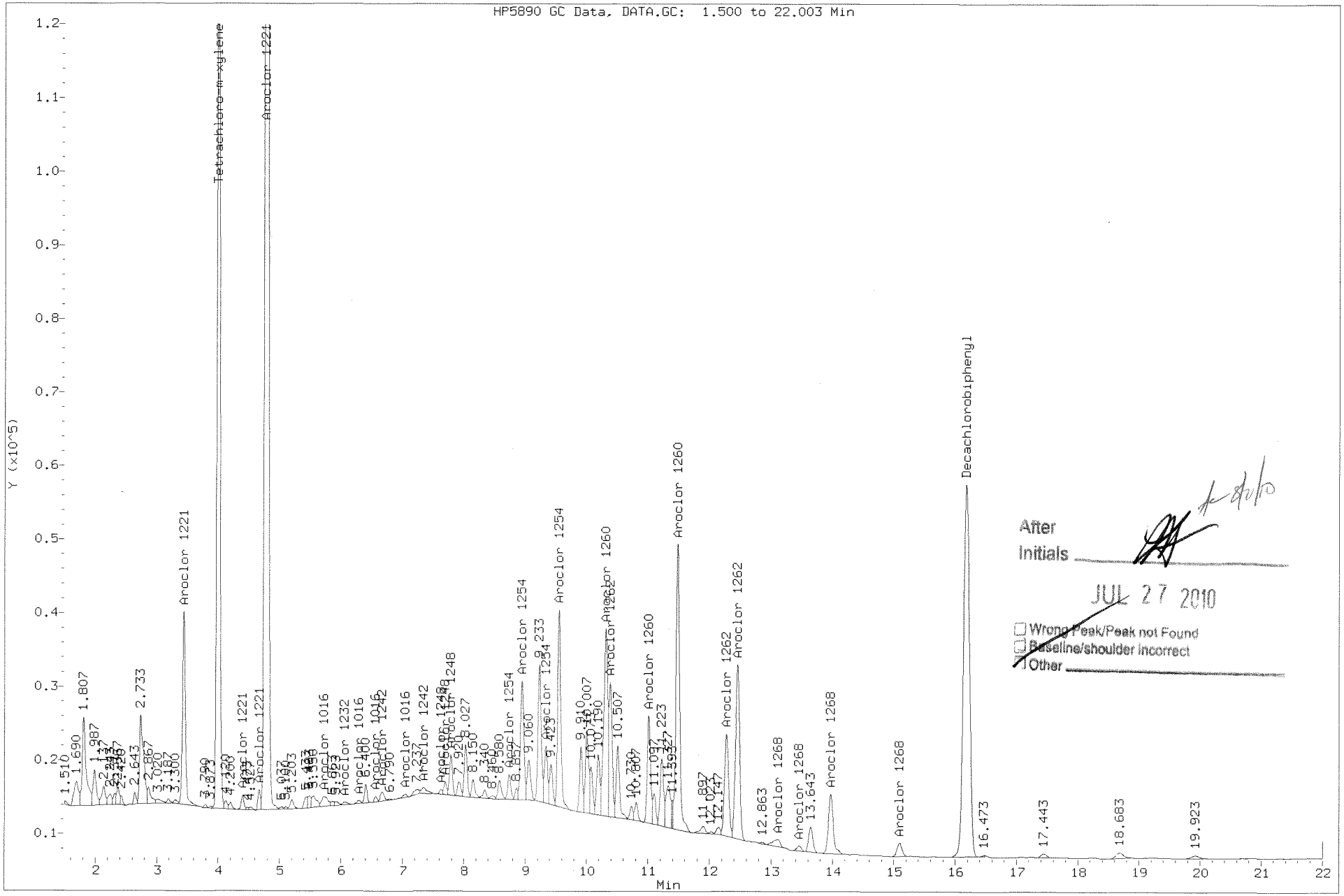
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



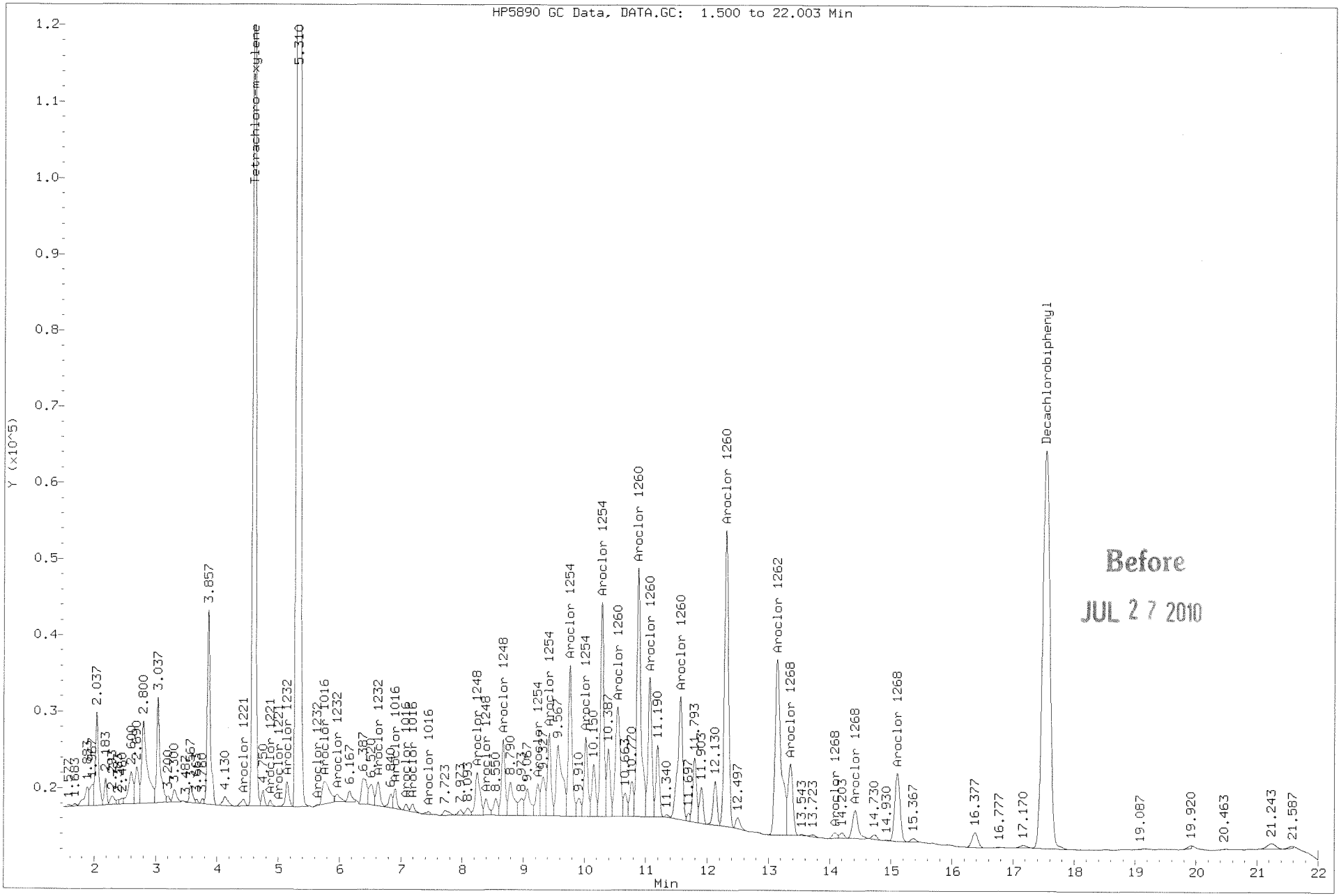
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F052.D
Injection Date: 27-JUL-2010 09:18
Instrument: GC09.i
Client Sample ID:



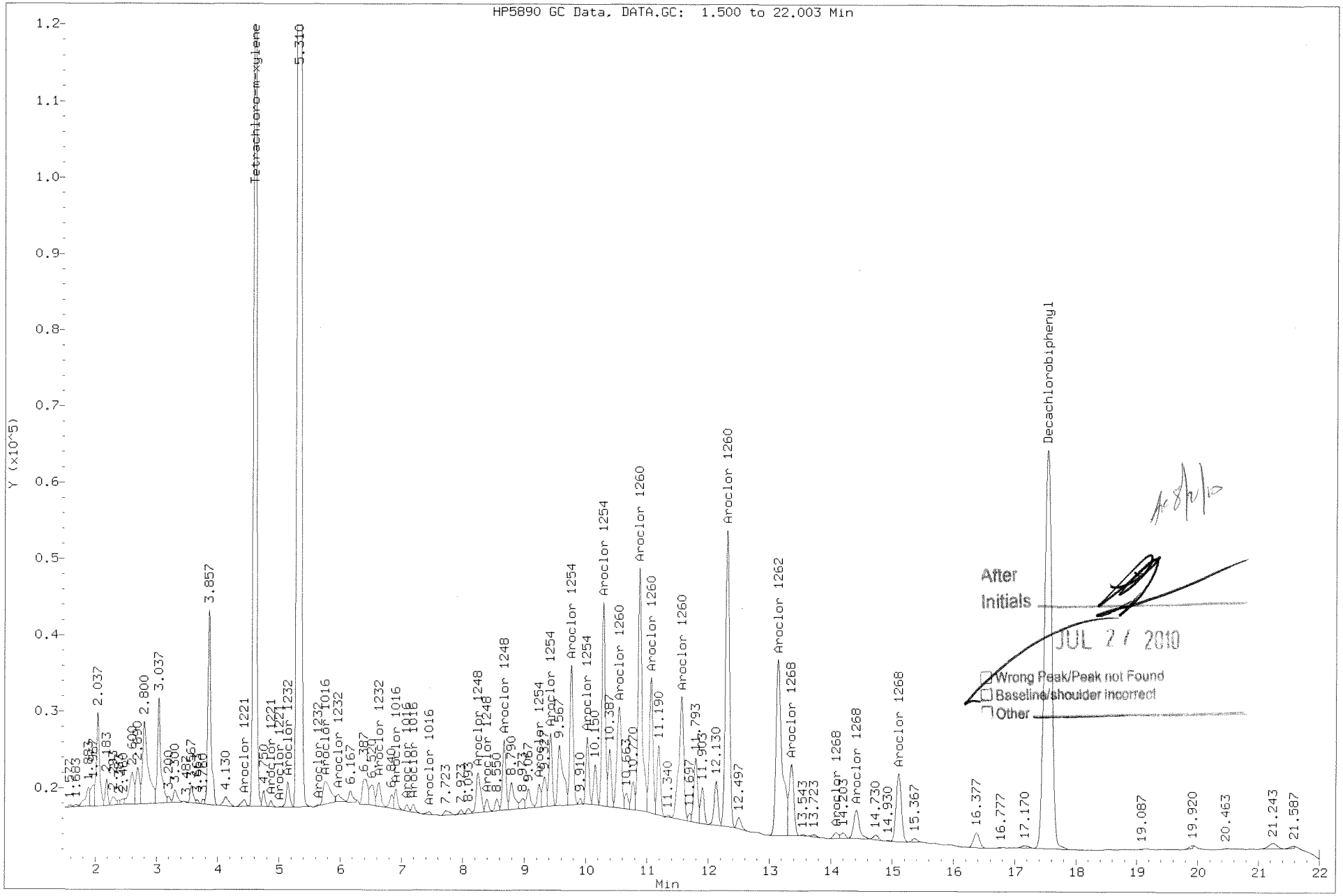
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F052.D
Injection Date: 27-JUL-2010 09:18
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R052.D
Injection Date: 27-JUL-2010 09:18
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R052.D
Injection Date: 27-JUL-2010 09:18
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-24 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.98	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**3.6**	D	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.49	0.095	5	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	95	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F006.D
Lab ID: K1006867-004
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 19:42
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: [signature]

Secondary Review: [signature]

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R006.D
Lab ID: K1006867-004
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 19:42
Date Quantitated: 07/30/2010 15:40
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: [signature]

Secondary Review: 8/2/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007595	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933060	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072710.B\0727F006.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R006.D			**Vial:**	5
Acqu Date:	07/27/2010 19:42	**Quant Date:**	07/30/2010 15:39	**Dilution:**	5.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-004				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.17 [0.00]	17.52	89339	110976	18.16	19.04			95OK
			%Recovery =		91OK	95OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1221			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1232			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1242			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F006.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R006.D			**Vial:**	5
Acqu Date:	07/27/2010 19:42	**Quant Date:**	07/30/2010 15:39	**Dilution:**	5.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-004				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1248			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1254			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1260			0	0	668.49	745.65	3.2D	3.6D	3.6D
Aroclor 1260 {1}	8.95	10.53	81761	120325	355.83	583.80	1.7D	2.8D	
Aroclor 1260 {2}	9.54 0.00	10.87	212335	263743	600.01	628.19	2.9D	3.1D	
Aroclor 1260 {3}	10.31	11.06	209530	192742	596.03	861.70	2.9D	4.2D	
Aroclor 1260 {4}	11.00	11.56	167466	208097	865.55	773.86	4.2D	3.8D	
Aroclor 1260 {5}	11.47	12.30	403600	438653	925.04	880.67	4.5D	4.3D	
Aroclor 1262			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1268			0	0	0.0000	0.0000	0.095U	0.095U	0.095U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.095U	0.095U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.095U	0.095U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	13.39 g	**Dilution:**	5.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	76.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F006.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F006.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R006.D
Inj Date : 27-JUL-2010 19:42
Sample Info: K1006867-004 @5X
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

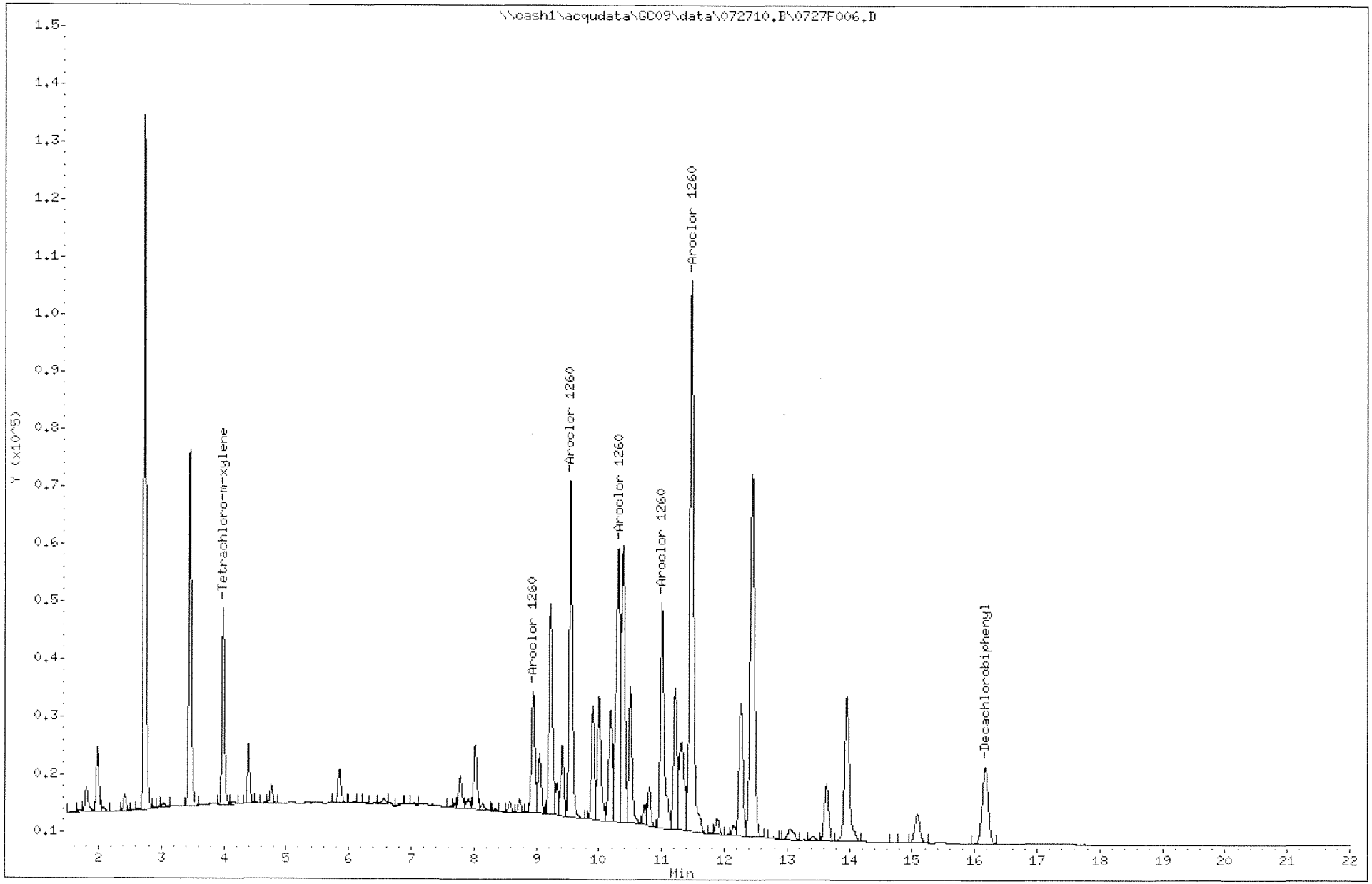
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	95999	93824	16.9	16.2		100.00
Aroclor 1260	8.950	10.527	81761	120325	356	584	80.00- 120.00	100.00
	9.543	10.873	212335	263743	600	628	113.30- 169.95	259.70
	10.310	11.060	209530	192742	596	862	123.35- 185.02	256.27
	11.003	11.560	167466	208097	866	774	73.88- 110.83	204.82
	11.470	12.300	403600	438653	925	881	150.38- 225.57	493.63
			Average of Peak Amounts =		669	746		
Decachlorobiphenyl	16.167	17.520	89339	110976	18.2	19.0		100.00

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F006.D
Date : 27-JUL-2010 19:42
Client ID:
Sample Info: K1006867-004 @5X

Instrument: GC09.i

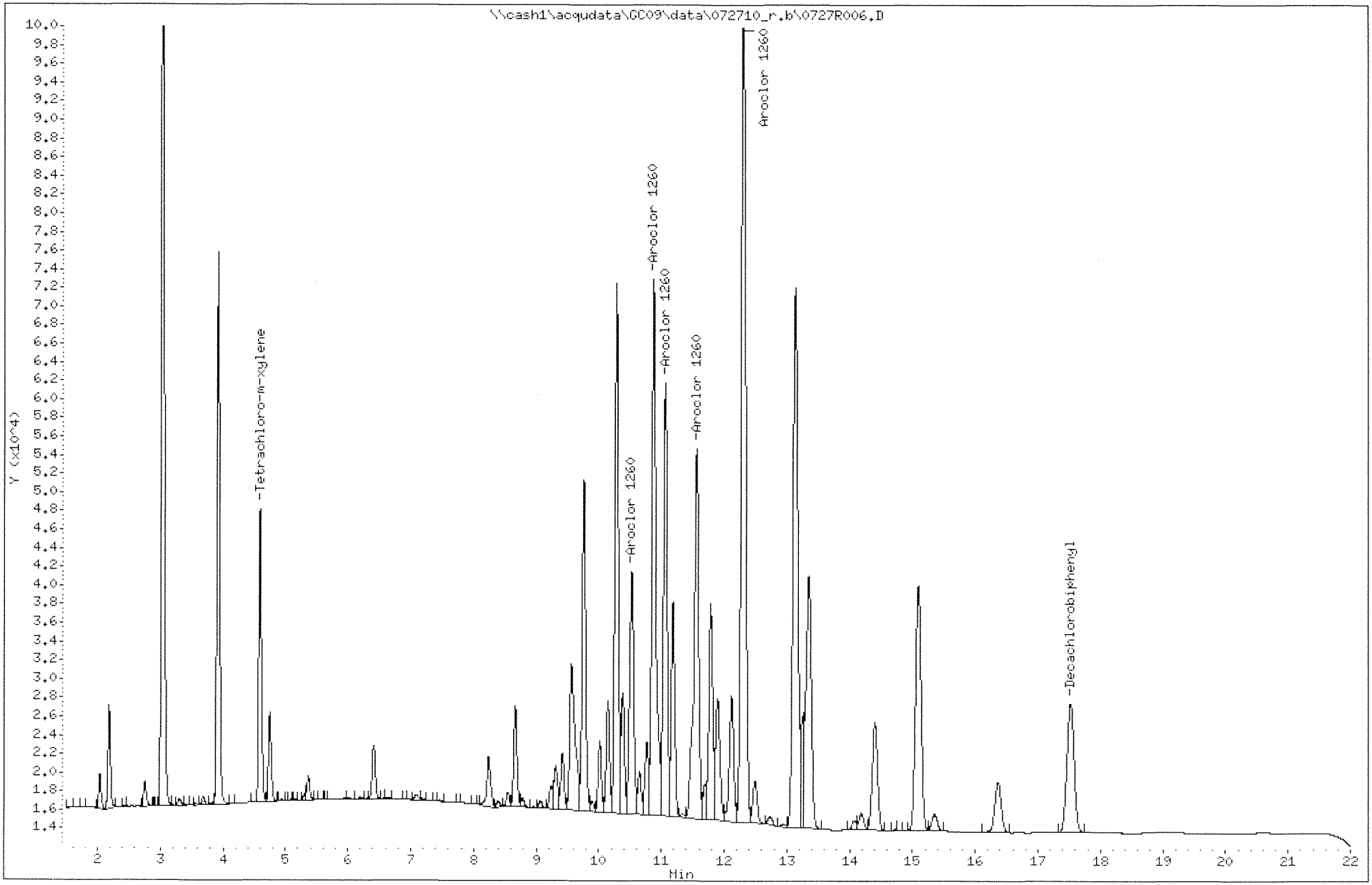
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\cash1\acqudata\GC09\data\072710_r,b\0727R006.D
Date : 27-JUL-2010 19:42
Client ID:
Sample Info: K1006867-004 @5X

Instrument: GC09,i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-25 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.44**		0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F054.D
Lab ID: K1006867-005
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 10:11
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R054.D
Lab ID: K1006867-005
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 10:11
Date Quantitated: 07/27/2010 15:55
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933061	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072610.B\0726F054.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R054.D			**Vial:**	44
Acqu Date:	07/27/2010 10:11	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1		RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.17	0.00	17.53	333053	421410	67.70	72.29			72OK
				%Recovery =		68OK	72OK	Limits =	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1016 {1}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {2}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {3}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {4}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {5}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F054.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R054.D			**Vial:**	44
Acqu Date:	07/27/2010 10:11	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	385.55	440.29	0.38	0.44	**0.44**
Aroclor 1260 {1}	8.95 $^{0.00}$	10.53	48715	63614m	212.01	308.65	0.21	0.31	
Aroclor 1260 {2}	9.55	10.88	126845	160341m	358.44	381.91	0.36	0.38	
Aroclor 1260 {3}	10.31	11.06	122329	115320m	347.98	515.57	0.35	0.51	
Aroclor 1260 {4}	11.01	11.56	84213	121547m	435.26	452.01	0.43	0.45	
Aroclor 1260 {5}	11.47	12.30	250475	270615m	574.08	543.31	0.57	0.54	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	11.94 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	84.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F054.D
Report Date: 27-Jul-2010 15:52

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F054.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R054.D
Inj Date : 27-JUL-2010 10:11
Sample Info: K1006867-005
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	408125	413849	71.9	71.5		100.00
Aroclor 1260	8.950	10.530	48715	63614	212	309	80.00- 120.00	100.00
	9.550	10.877	126845	160341	358	382	115.28- 172.93	260.38
	10.313	11.063	122329	115320	348	516	122.15- 183.23	251.11
	11.007	11.563	84213	121547	435	452	67.81- 101.71	172.87
	11.473	12.303	250475	270615	574	543	154.72- 232.08	514.16
			Average of Peak Amounts =		385	440		
Decachlorobiphenyl	16.170	17.527	333053	421410	67.7	72.3		100.00

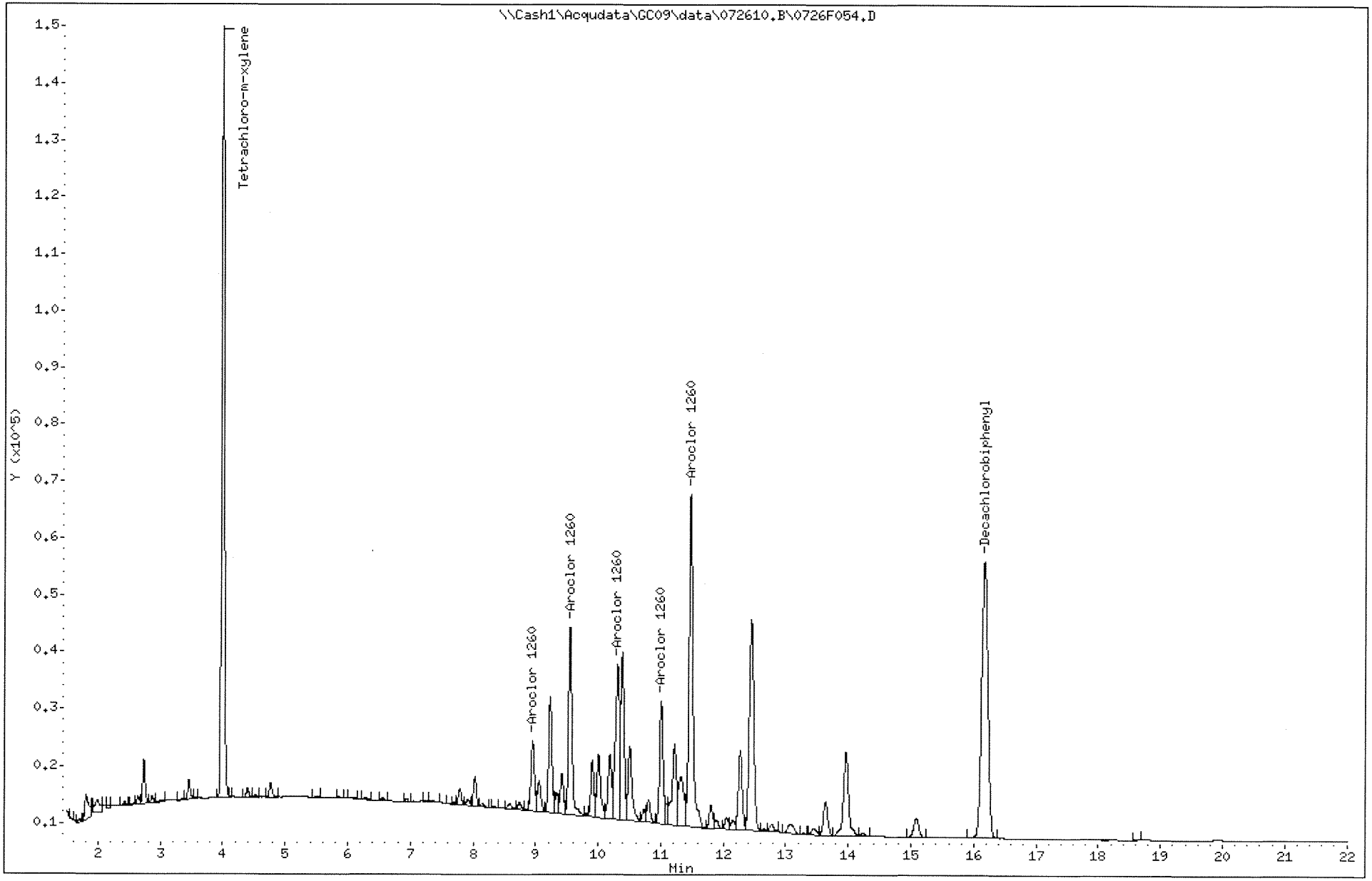
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F054.D
Date : 27-JUL-2010 10:11
Client ID:
Sample Info: K1006867-005

Instrument: GC09.i

Operator: LHarris

Column phase: DB-35MS

Column diameter: 0.53

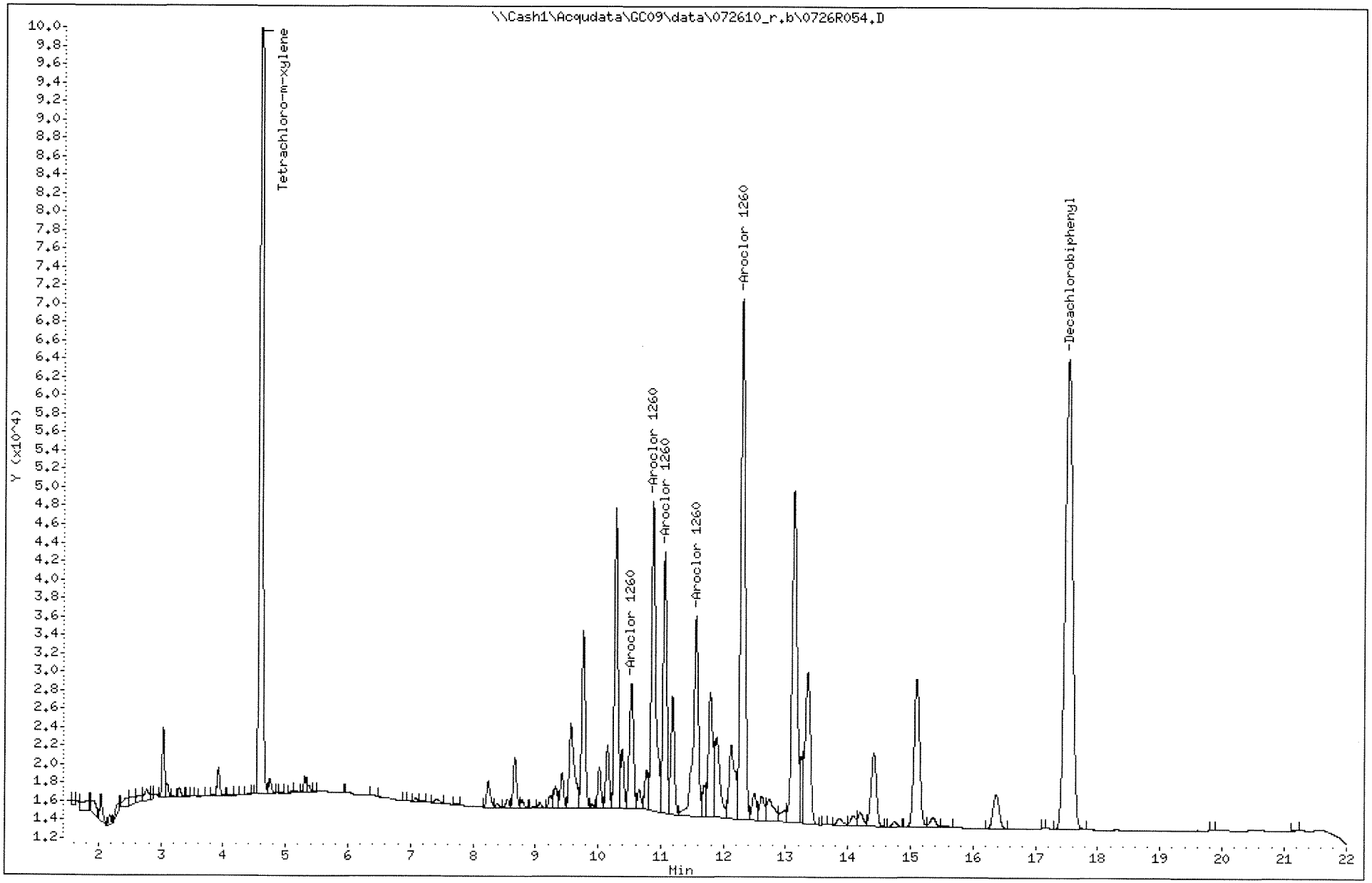


Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R054.D
Date : 27-JUL-2010 10:11
Client ID:
Sample Info: K1006867-005

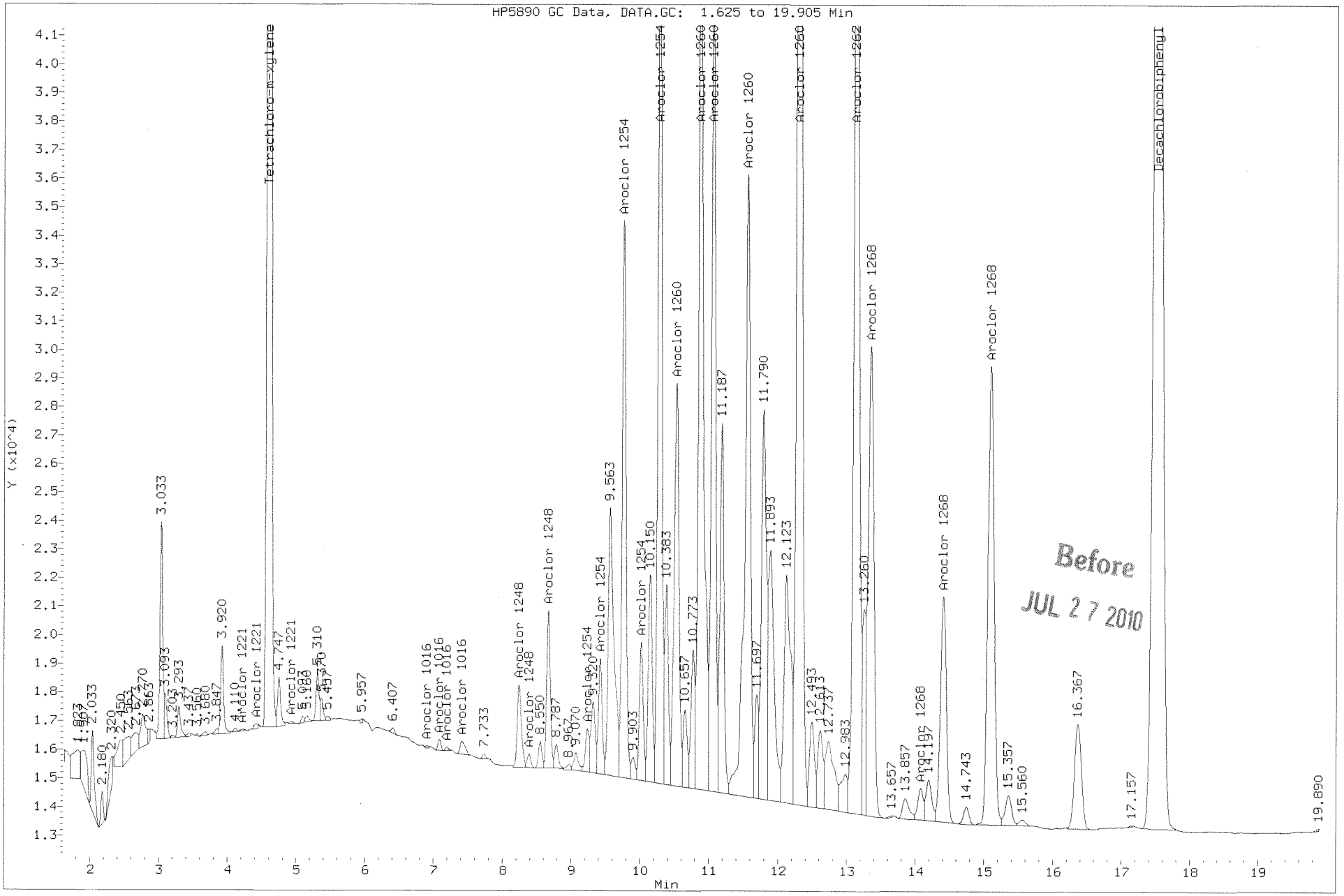
Instrument: GC09.i

Operator: LHarris

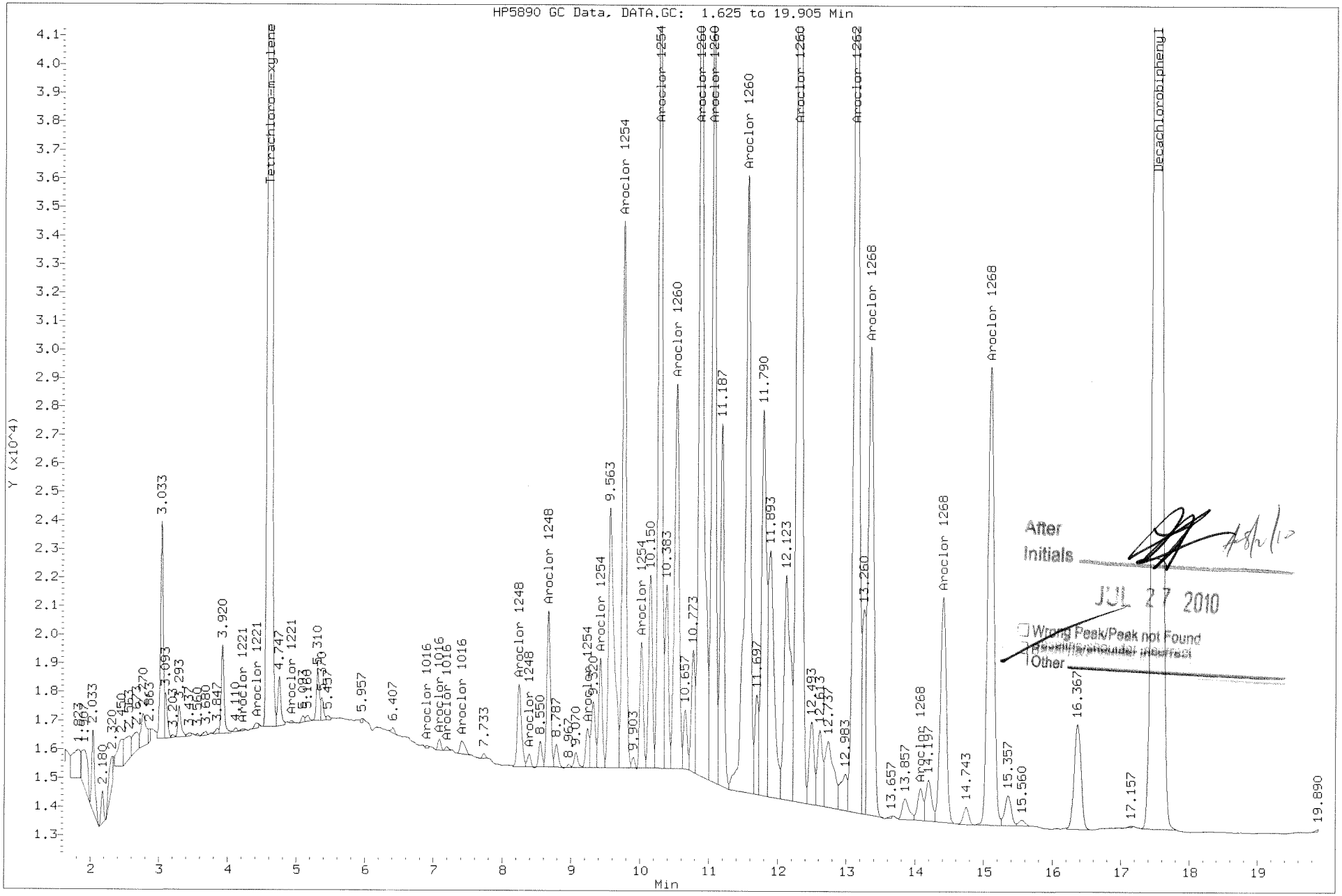
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R054.D
Injection Date: 27-JUL-2010 10:11
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R054.D
Injection Date: 27-JUL-2010 10:11
Instrument: GC09.i
Client Sample ID:



Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-26 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	1.9	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**14**	D	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	104	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F007.D
Lab ID: K1006867-006
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 20:09
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R007.D
Lab ID: K1006867-006
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 20:09
Date Quantitated: 07/30/2010 15:40
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 08/01/10

Secondary Review: 8/2/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007595	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933062	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072710.B\0727F007.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R007.D			**Vial:**	6
Acqu Date:	07/27/2010 20:09	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.16 -0.01	17.52	50354	60413	10.24	10.36			104OK
			%Recovery =		102OK	104OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F007.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R007.D			**Vial:**	6
Acqu Date:	07/27/2010 20:09	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1260			0	0	1,374	1,485	13D	14D	14D
Aroclor 1260 {1}	8.95 $^{0.00}$	10.53 $^{+0.00}$	257376	288739	1,120	1,401	10D	13D	
Aroclor 1260 {2}	9.55	10.87	439474	559207	1,242	1,332	12D	12D	
Aroclor 1260 {3}	10.31	11.06	467361	346208	1,329	1,548	12D	15D	
Aroclor 1260 {4}	11.00	11.56	295909	413983	1,529	1,540	14D	14D	
Aroclor 1260 {5}	11.47	12.30	720223	799697	1,651	1,606	15D	15D	
Aroclor 1262			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	12.03 g	**Dilution:**	10.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	88.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F007.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

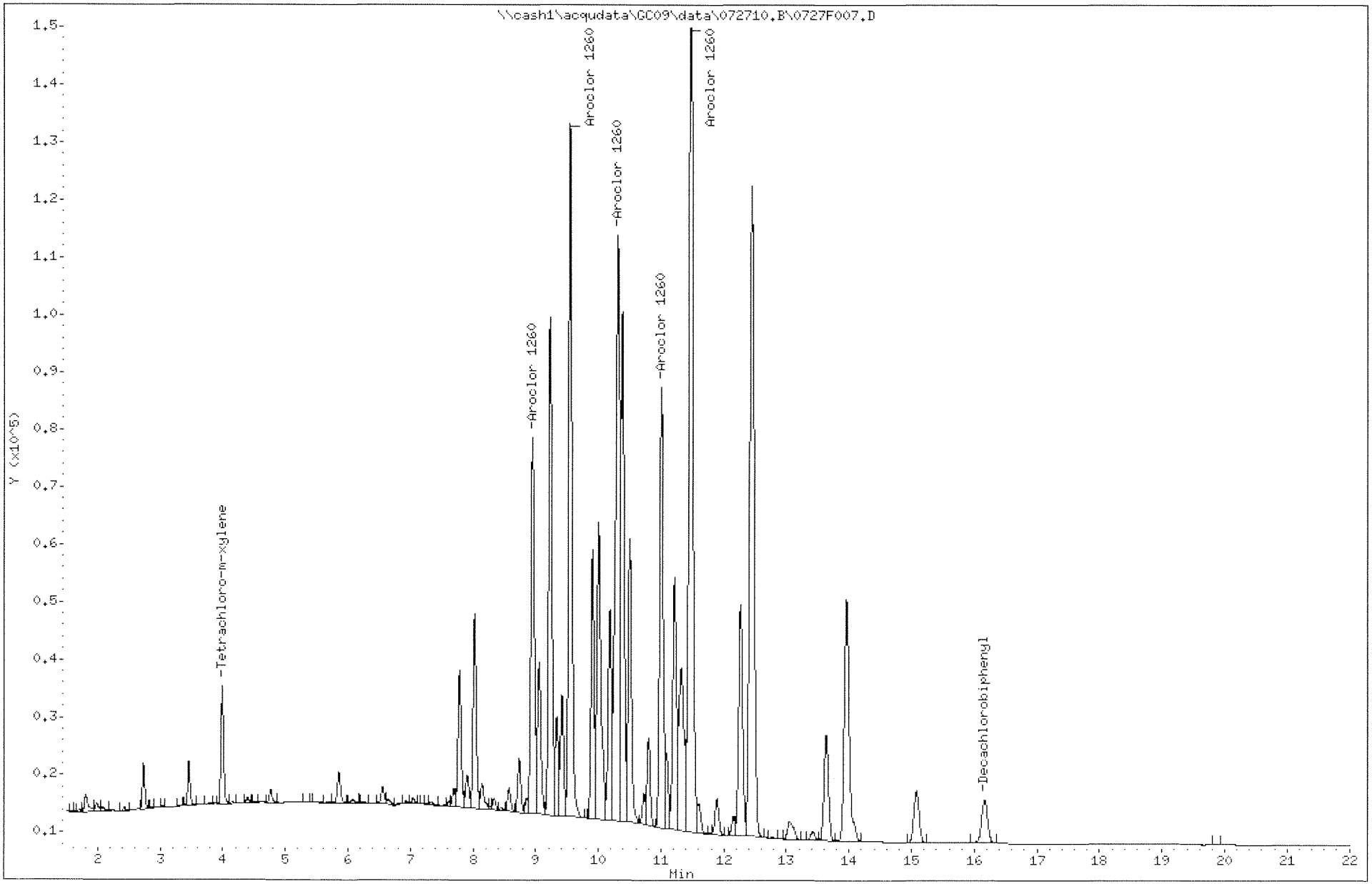
Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F007.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R007.D
Inj Date : 27-JUL-2010 20:09
Sample Info: K1006867-006 @10X
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	57158	55529	10.1	9.60		100.00
Aroclor 1260	8.947	10.530	257376	288739	1120	1400	80.00- 120.00	100.00
	9.547	10.873	439474	559207	1240	1330	113.30- 169.95	170.75
	10.310	11.060	467361	346208	1330	1550	123.35- 185.02	181.59
	11.003	11.560	295909	413983	1530	1540	73.88- 110.83	114.97
	11.470	12.300	720223	799697	1650	1600	150.38- 225.57	279.83
			Average of Peak Amounts =		1370	1480		
Decachlorobiphenyl	16.163	17.520	50354	60413	10.2	10.4		100.00

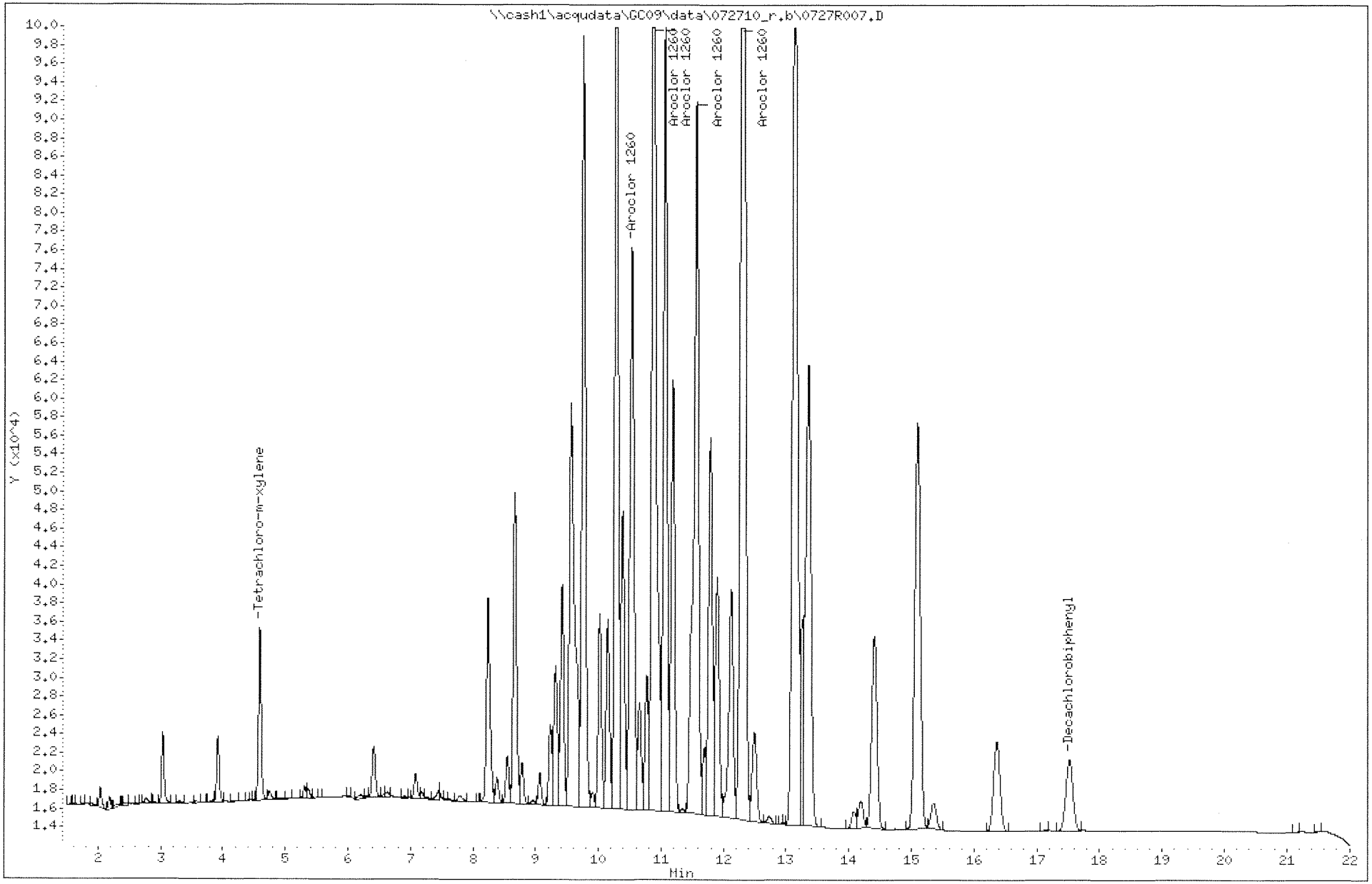
Data File: \\cash1\acqudata\GC09\data\072710.B\0727F007.D
Date : 27-JUL-2010 20:09
Client ID:
Sample Info: K1006867-006 @10X

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\072710_r.b\0727R007.D
Date : 27-JUL-2010 20:09
Client ID:
Sample Info: K1006867-006 @10X

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: 06/30/2010
Date Received: 07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name: FTS-27 0-2
Lab Code: K1006867-007

Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.20**		0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	80	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F061.D
Lab ID: K1006867-007
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 13:17
Date Quantitated: 07/27/2010 15:53
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/28/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R061.D
Lab ID: K1006867-007
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 13:17
Date Quantitated: 07/27/2010 15:55
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933063	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072610.B\0726F061.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R061.D			**Vial:**	46
Acqu Date:	07/27/2010 13:17	**Quant Date:**	07/27/2010 15:53	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-007				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.17 0.00	17.52 -0.01	382815	466034	77.81	79.94			80OK
			%Recovery =		78OK	80OK	Limits =	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F061.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R061.D			**Vial:**	46
Acqu Date:	07/27/2010 13:17	**Quant Date:**	07/27/2010 15:53	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-007				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	189.51	204.38	0.18	0.20	**0.20**
Aroclor 1260 {1}	8.95 -0.01	10.53	48915	42171m	212.88	204.61	0.21	0.20	
Aroclor 1260 {2}	9.55	10.87	57168	80431m	161.54	191.57	0.16	0.19	
Aroclor 1260 {3}	10.31	11.06	66040	46281m	187.86	206.91	0.18	0.20	
Aroclor 1260 {4}	11.00 0.00	11.56	39787	59306m	205.64	220.55	0.20	0.21	
Aroclor 1260 {5}	11.47	12.30	78372	98760m	179.63	198.28	0.17	0.19	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.81 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	95.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F061.D
Report Date: 27-Jul-2010 15:53

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F061.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R061.D
Inj Date : 27-JUL-2010 13:17
Sample Info: K1006867-007
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

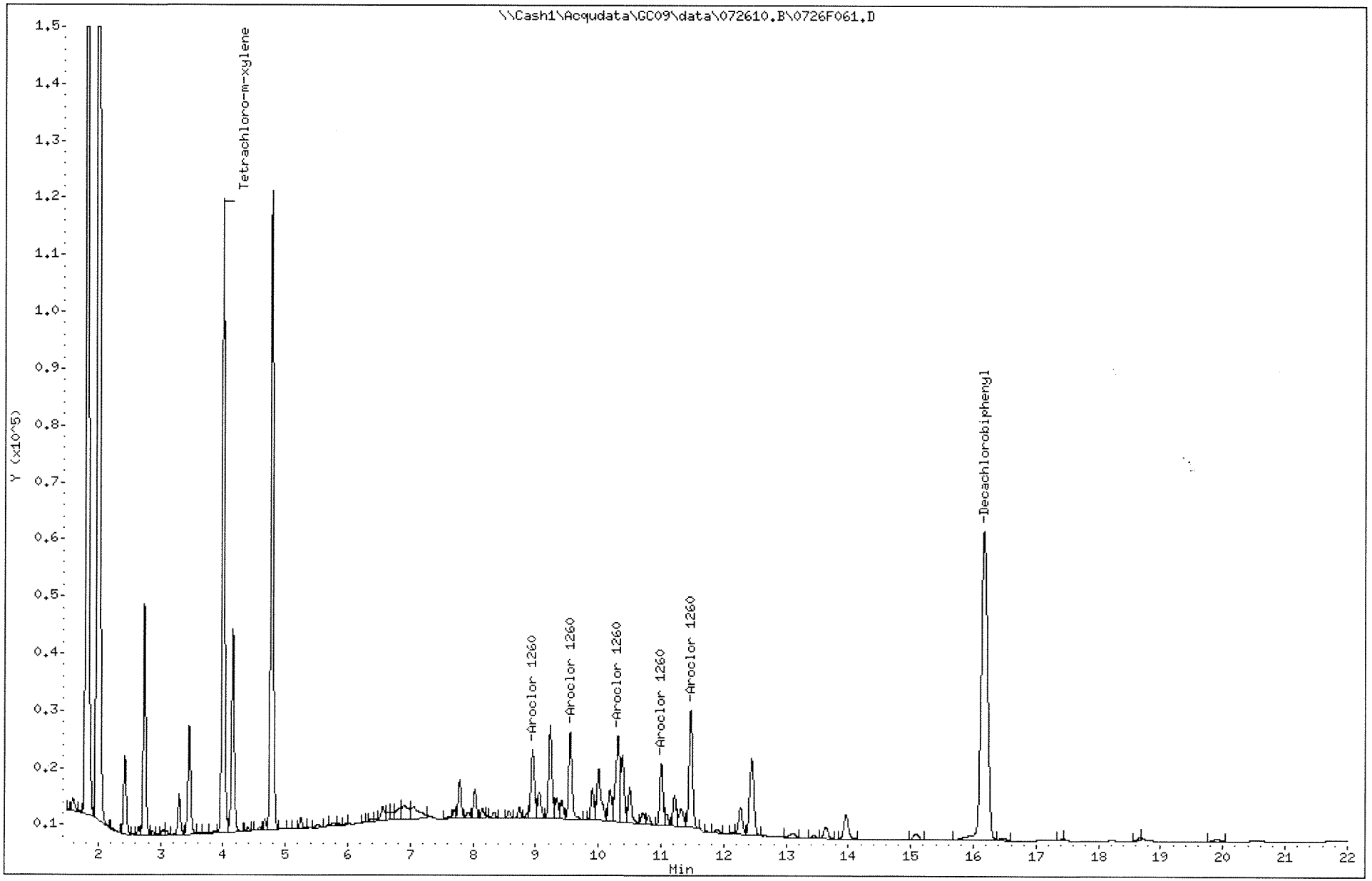
Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	310131	325437	54.7	56.2		100.00
Aroclor 1260	8.947	10.530	48915	42171	213	205	80.00- 120.00	100.00
	9.547	10.873	57168	80431	162	192	115.28- 172.93	116.87
	10.310	11.060	66040	46281	188	207	122.15- 183.23	135.01
	11.003	11.563	39787	59306	206	220	67.81- 101.71	81.34
	11.473	12.303	78372	98760	180	198	154.72- 232.08	160.22
			Average of Peak Amounts =		190	204		
Decachlorobiphenyl	16.167	17.520	382815	466034	77.8	79.9		100.00

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F061.D
Date : 27-JUL-2010 13:17
Client ID:
Sample Info: K1006867-007

Instrument: GC09.i

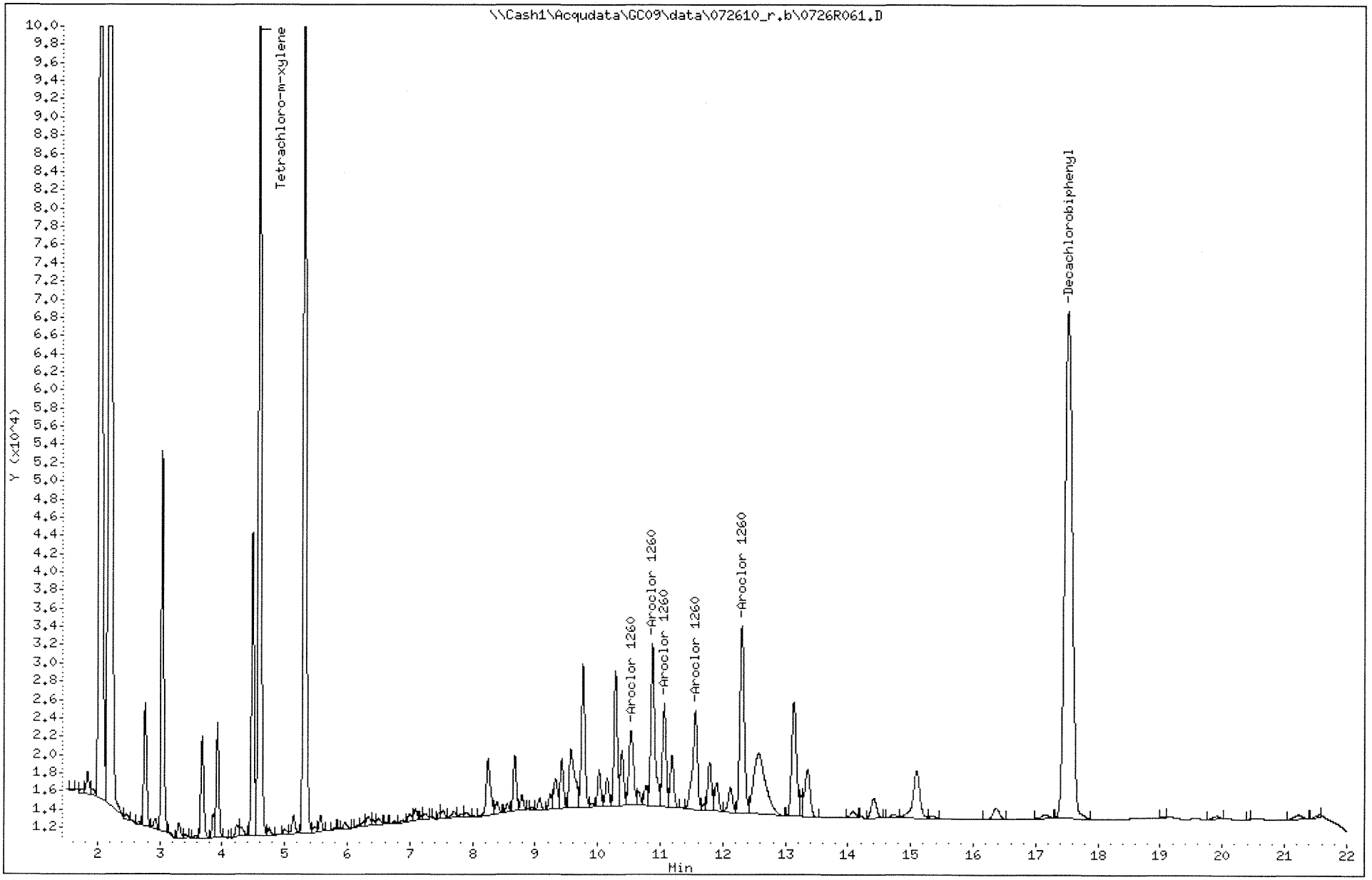
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



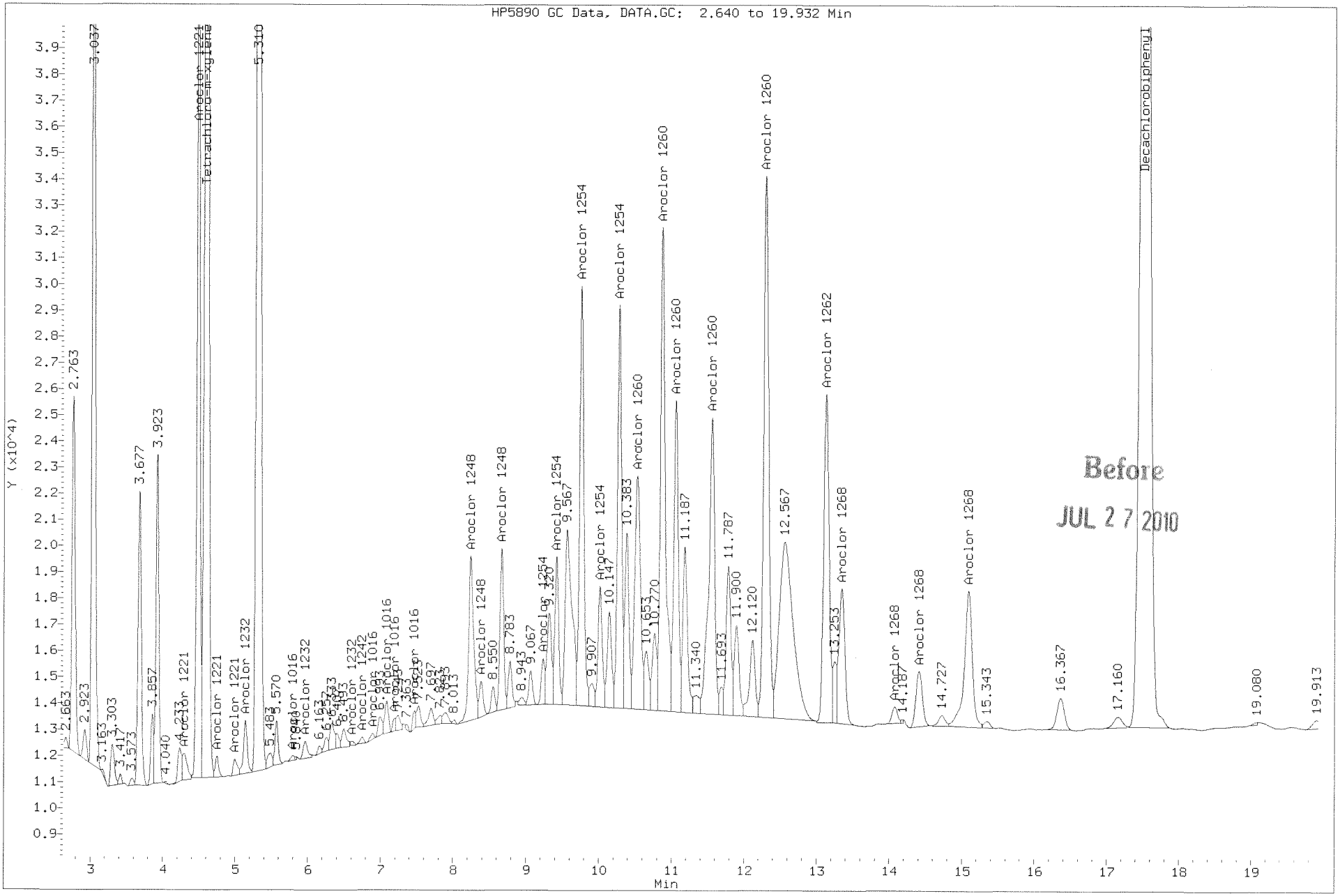
Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R061.D
Date : 27-JUL-2010 13:17
Client ID:
Sample Info: K1006867-007

Instrument: GC09.i

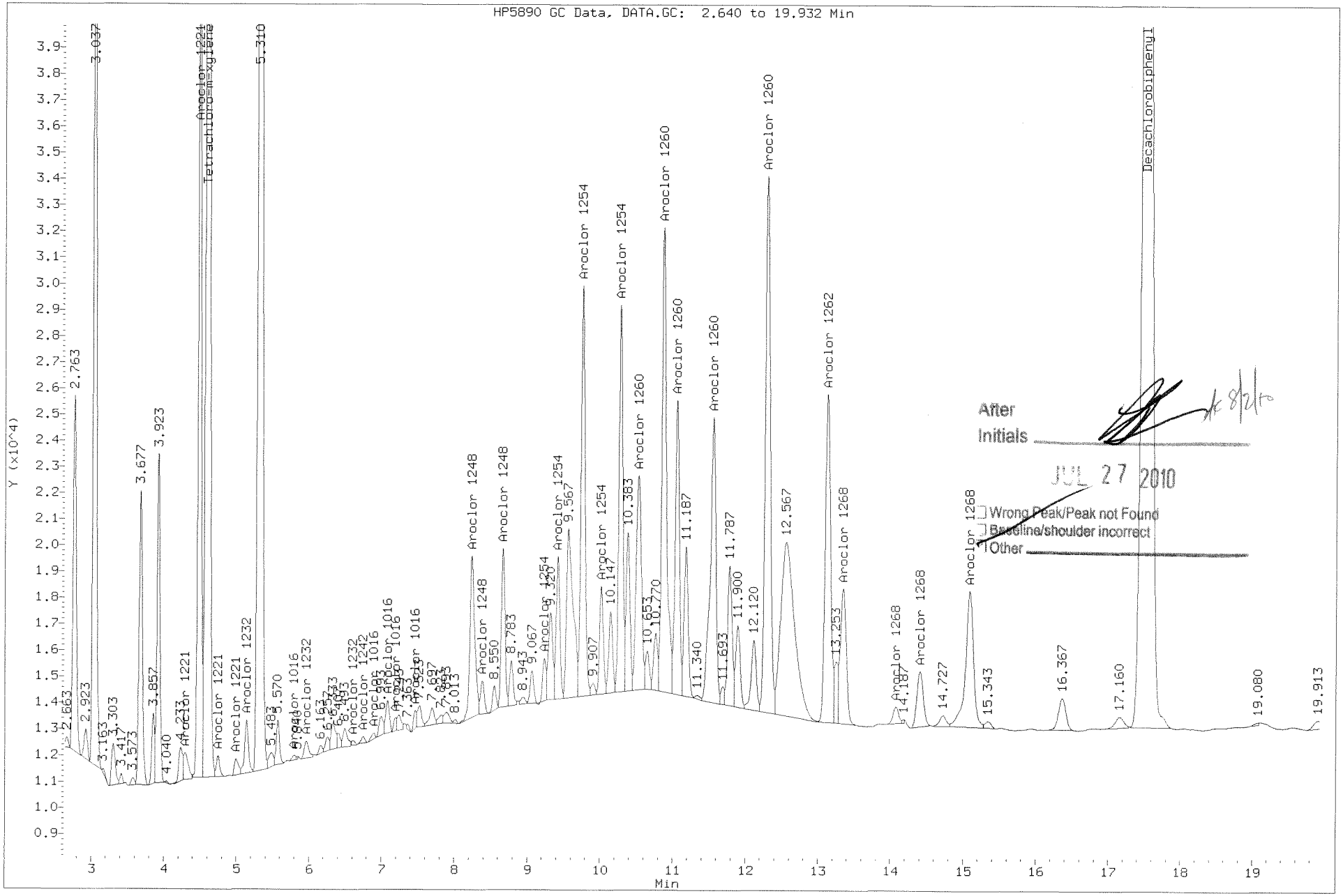
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R061.D
Injection Date: 27-JUL-2010 13:17
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R061.D
Injection Date: 27-JUL-2010 13:17
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-28 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	2.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	17	D	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	1.0	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	108	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F008.D
Lab ID: K1006867-008
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 20:36
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature] 8/01/10

Secondary Review: [signature] 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R008.D
Lab ID: K1006867-008
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 20:36
Date Quantitated: 07/30/2010 15:40
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature] 8/2/10

Secondary Review: dc 8/2/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007595	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933064	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072710.B\0727F008.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R008.D			**Vial:**	7
Acqu Date:	07/27/2010 20:36	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-008				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.17 [0.00]	17.52	50519	63185	10.27	10.84			108OK
			%Recovery =		103OK	108OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F008.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R008.D			**Vial:**	7
Acqu Date:	07/27/2010 20:36	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-008				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds — **Final Conc. Units:** mg/Kg Dry Weight

Parameter Name	RT #1		RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {5}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248				0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1248 {1}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {2}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {3}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {4}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {5}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254				0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1254 {1}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {2}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {3}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {4}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {5}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1260				0	0	1,574	1,707	16D	17D	17D
Aroclor 1260 {1}	8.95	0.00	10.53	238398	301663	1,038	1,464	10D	15D	
Aroclor 1260 {2}	9.54	0.00	10.87	481298	612531	1,360	1,459	14D	15D	
Aroclor 1260 {3}	10.31		11.06	515553	412572	1,467	1,845	15D	18D	
Aroclor 1260 {4}	11.00		11.56	384675	484396	1,988	1,801	20D	18D	
Aroclor 1260 {5}	11.47		12.30	881326	980562	2,020	1,969	20D	20D	
Aroclor 1262				0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1262 {1}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {2}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {3}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {4}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {5}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268				0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1268 {1}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {2}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {3}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {4}				0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {5}				0d	0d	0.0000	0.0000	0.19U	0.19U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	11.03 g	**Dilution:**	10.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	91.1 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F008.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F008.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R008.D
Inj Date : 27-JUL-2010 20:36
Sample Info: K1006867-008 @10X
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

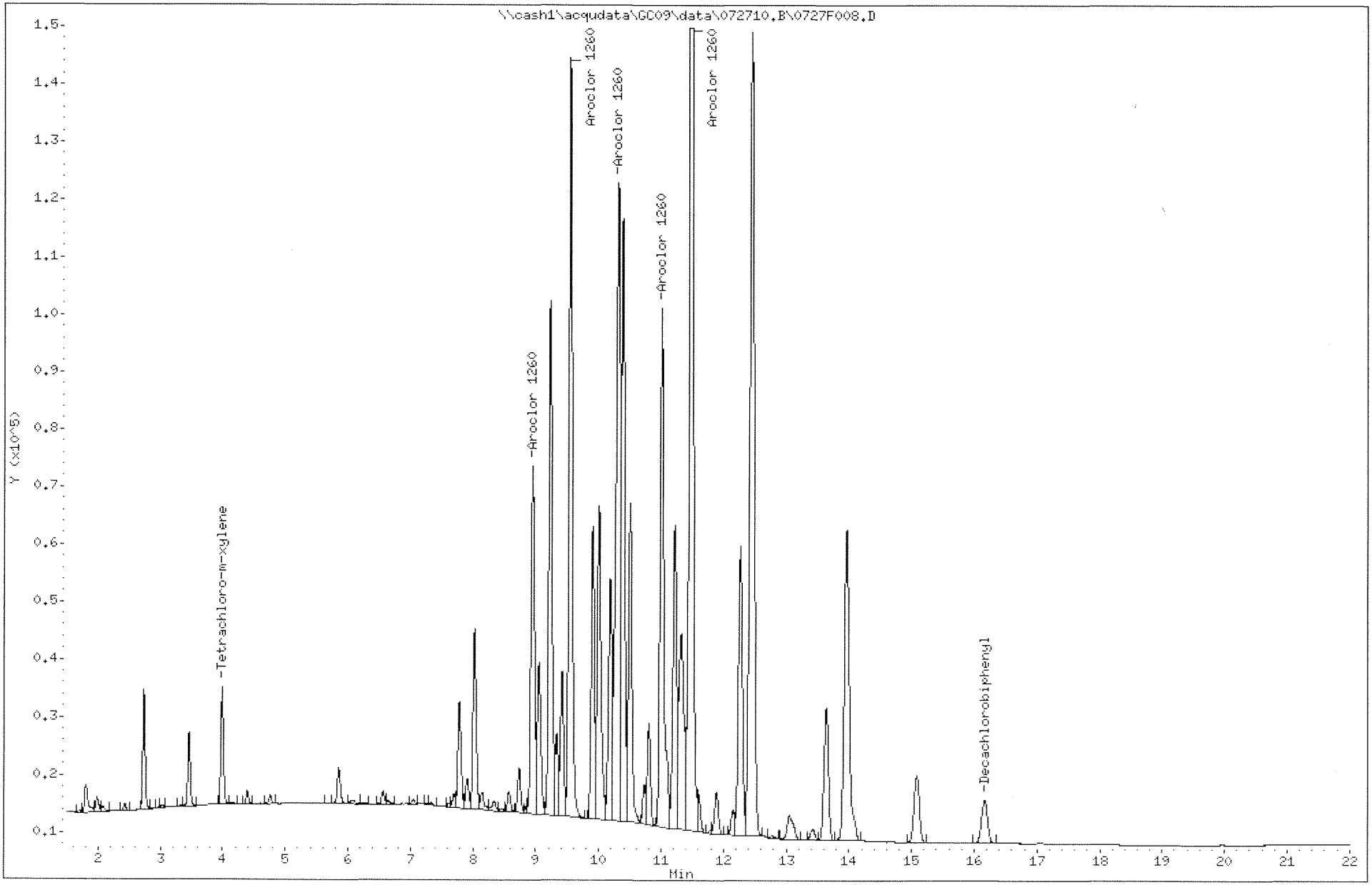
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	57499	55822	10.1	9.65		100.00
Aroclor 1260	8.947	10.527	238398	301663	1040	1460	80.00- 120.00	100.00
	9.543	10.873	481298	612531	1360	1460	113.30- 169.95	201.89
	10.310	11.060	515553	412572	1470	1840	123.35- 185.02	216.26
	11.003	11.560	384675	484396	1990	1800	73.88- 110.83	161.36
	11.470	12.300	881326	980562	2020	1970	150.38- 225.57	369.69
			Average of Peak Amounts =		1580	1710		
Decachlorobiphenyl	16.167	17.520	50519	63185	10.3	10.8		100.00

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F008.D
Date : 27-JUL-2010 20:36
Client ID:
Sample Info: K1006867-008 @10X

Instrument: GC09.i

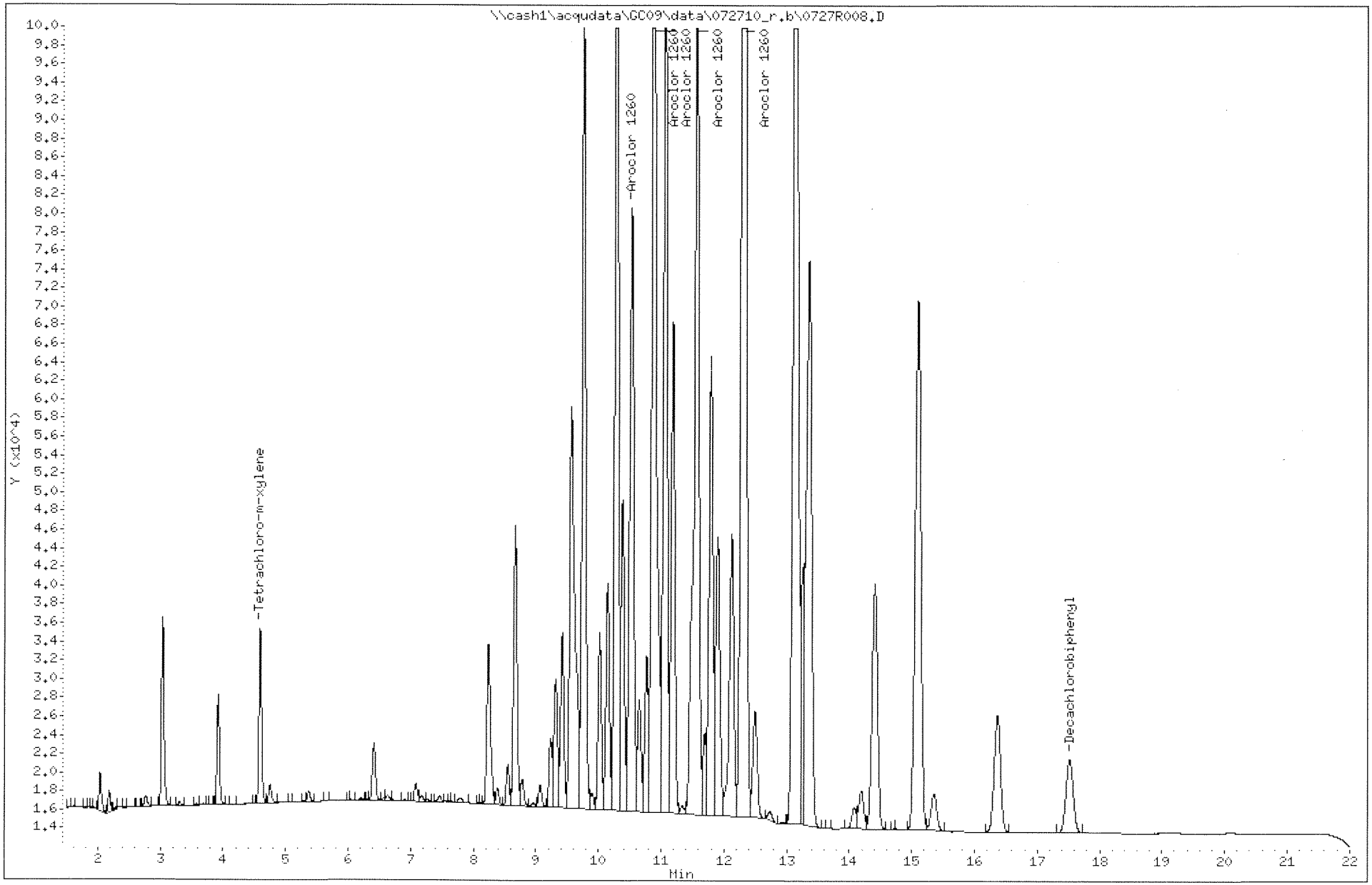
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\cash1\acqudata\GC09\data\072710_r.b\0727R008.D
Date : 27-JUL-2010 20:36
Client ID:
Sample Info: K1006867-008 @10X

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-101 0-2	**Units:**	mg/Kg
Lab Code:	K1006867-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	1.9	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**15**	D	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.94	0.19	10	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	106	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F009.D
Lab ID: K1006867-009
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 21:02
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: A 8/08/2010

Secondary Review: AK 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R009.D
Lab ID: K1006867-009
RunType: SMPL
Matrix: SOIL

Date Acquired: 07/27/2010 21:02
Date Quantitated: 07/30/2010 15:40
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: 8/2/10

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**	06/30/2010	**Receive Date:**	07/02/2010

Analysis Lot:	KWG1007595	**Prep Lot:**	KWG1007334	**Report Group:**	K1006867
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933065	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ9899
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\072710.B\0727F009.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R009.D			**Vial:**	8
Acqu Date:	07/27/2010 21:02	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-009				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.16 -0.01	17.52 0.00	51913	61808	10.55	10.60			106OK
			%Recovery =		106OK	106OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F009.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R009.D			**Vial:**	8
Acqu Date:	07/27/2010 21:02	**Quant Date:**	07/30/2010 15:39	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K1006867-009				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1260			0	0	1,448	1,565	14D	15D	15D
Aroclor 1260 {1}	8.95 0.00	10.53	282865	309691	1,231	1,503	12D	14D	
Aroclor 1260 {2}	9.54 0.00	10.87 0.00	463577	593173	1,310	1,413	12D	13D	
Aroclor 1260 {3}	10.31 0.00	11.06 0.00	498766	362613	1,419	1,621	13D	15D	
Aroclor 1260 {4}	11.00 0.00	11.56	305418	438645	1,579	1,631	15D	15D	
Aroclor 1260 {5}	11.47	12.30	742691	825516	1,702	1,657	16D	16D	
Aroclor 1262			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268			0	0	0.0000	0.0000	0.19U	0.19U	0.19U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.19U	0.19U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.19U	0.19U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	12.10 g	**Dilution:**	10.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	88.1 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F009.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F009.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R009.D
Inj Date : 27-JUL-2010 21:02
Sample Info: K1006867-009 @10X
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

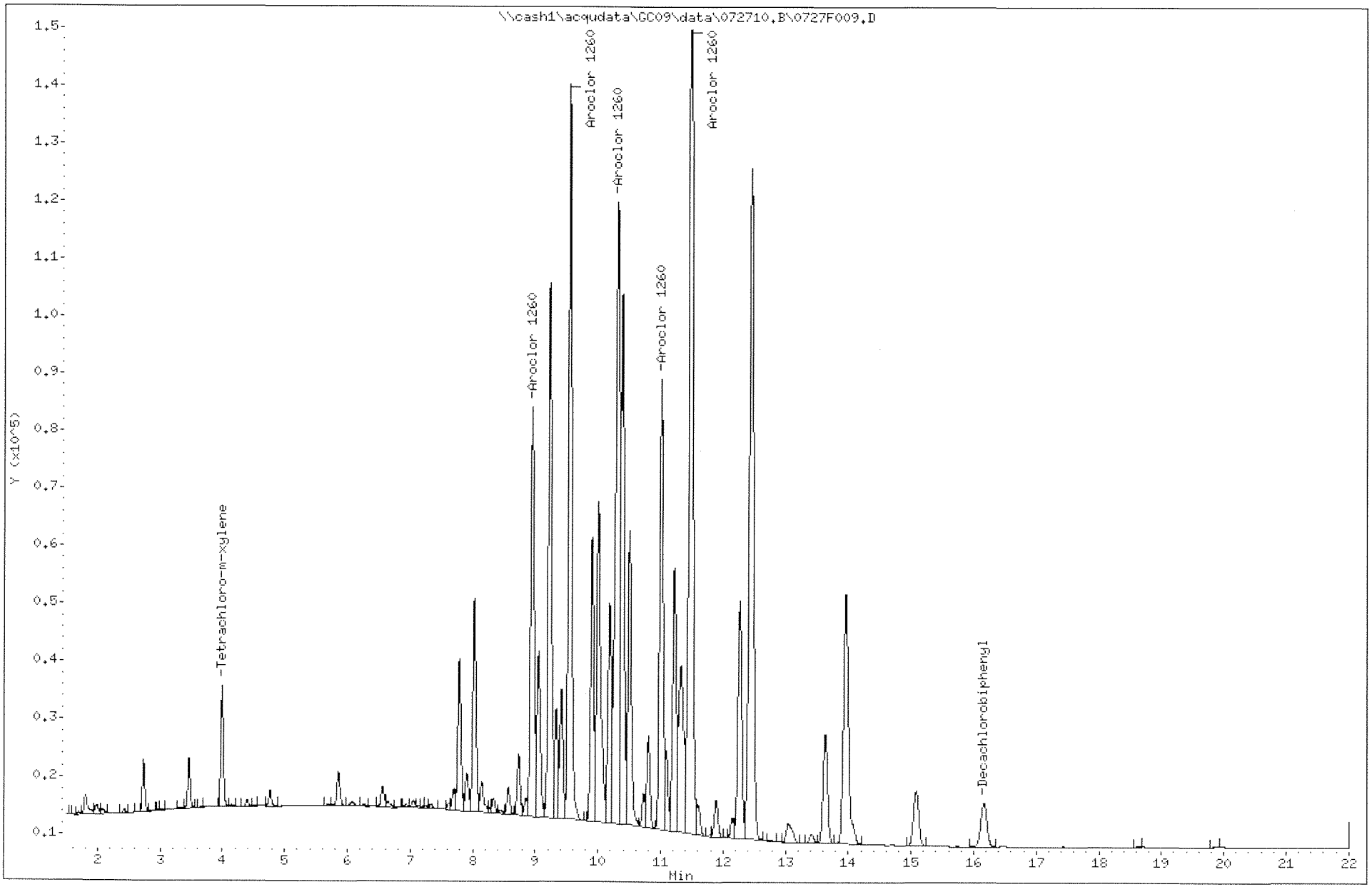
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	59319	57340	10.4	9.91		100.00
Aroclor 1260	8.947	10.527	282865	309691	1230	1500	80.00- 120.00	100.00
	9.543	10.870	463577	593173	1310	1410	113.30- 169.95	163.89
	10.307	11.057	498766	362613	1420	1620	123.35- 185.02	176.33
	11.000	11.560	305418	438645	1580	1630	73.88- 110.83	107.97
	11.470	12.300	742691	825516	1700	1660	150.38- 225.57	262.56
			Average of Peak Amounts =		1450	1560		
Decachlorobiphenyl	16.163	17.517	51913	61808	10.6	10.6		100.00

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F009.D
Date : 27-JUL-2010 21:02
Client ID:
Sample Info: K1006867-009 @10X

Instrument: GC09.i

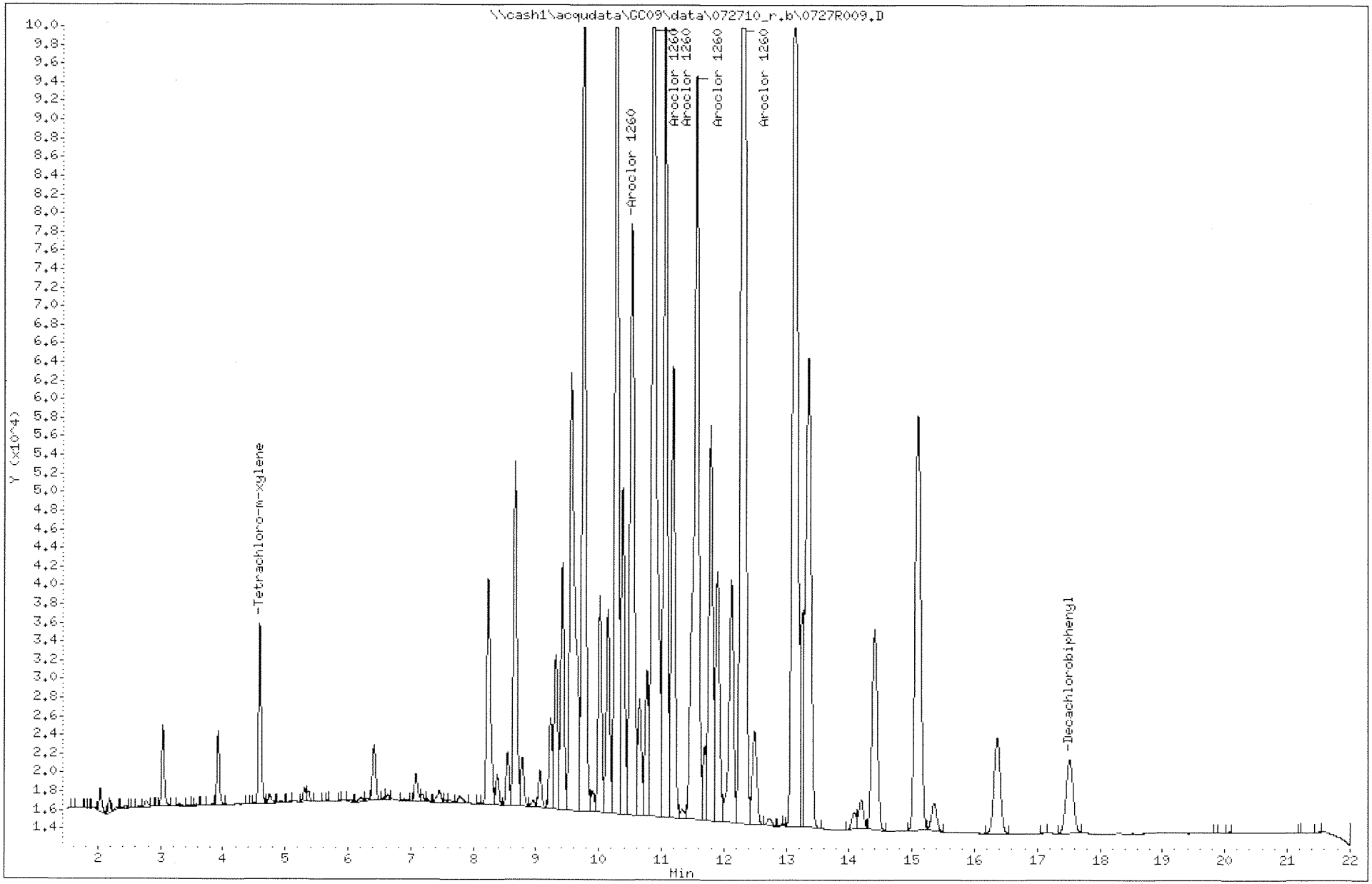
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\cash1\acqudata\GC09\data\072710_r.b\0727R009.D
Date : 27-JUL-2010 21:02
Client ID:
Sample Info: K1006867-009 @10X

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1007334-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.15	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.074	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F039.D
Lab ID: KWG1007334-4
RunType: MB
Matrix: SOIL

Date Acquired: 07/27/2010 03:33
Date Quantitated: 07/27/2010 15:51
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R039.D
Lab ID: KWG1007334-4
RunType: MB
Matrix: SOIL

Date Acquired: 07/27/2010 03:33
Date Quantitated: 07/27/2010 15:53
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/26/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933069	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F039.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R039.D			**Vial:**	32
Acqu Date:	07/27/2010 03:33	**Quant Date:**	07/27/2010 15:51	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2		Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	+0.00	461056	467490	81.28	80.79			81OK
					%Recovery =	81OK	81OK	Limits =	10-135	
Decachlorobiphenyl	16.17	17.53	+0.00	416335	515716	84.62	88.46			88OK
					%Recovery =	85OK	88OK	Limits =	35-133	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1016 {1}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {2}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {3}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {4}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1016 {5}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F039.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R039.D			**Vial:**	32
Acqu Date:	07/27/2010 03:33	**Quant Date:**	07/27/2010 15:51	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {4}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1260 {1}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260 {2}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260 {3}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260 {4}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260 {5}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0	0	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0	0	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	13.56 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F039.D
Report Date: 27-Jul-2010 15:51

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F039.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R039.D
Inj Date : 27-JUL-2010 03:33
Sample Info: KWG1007334-4 | MB | 8082 PCB | SOIL
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

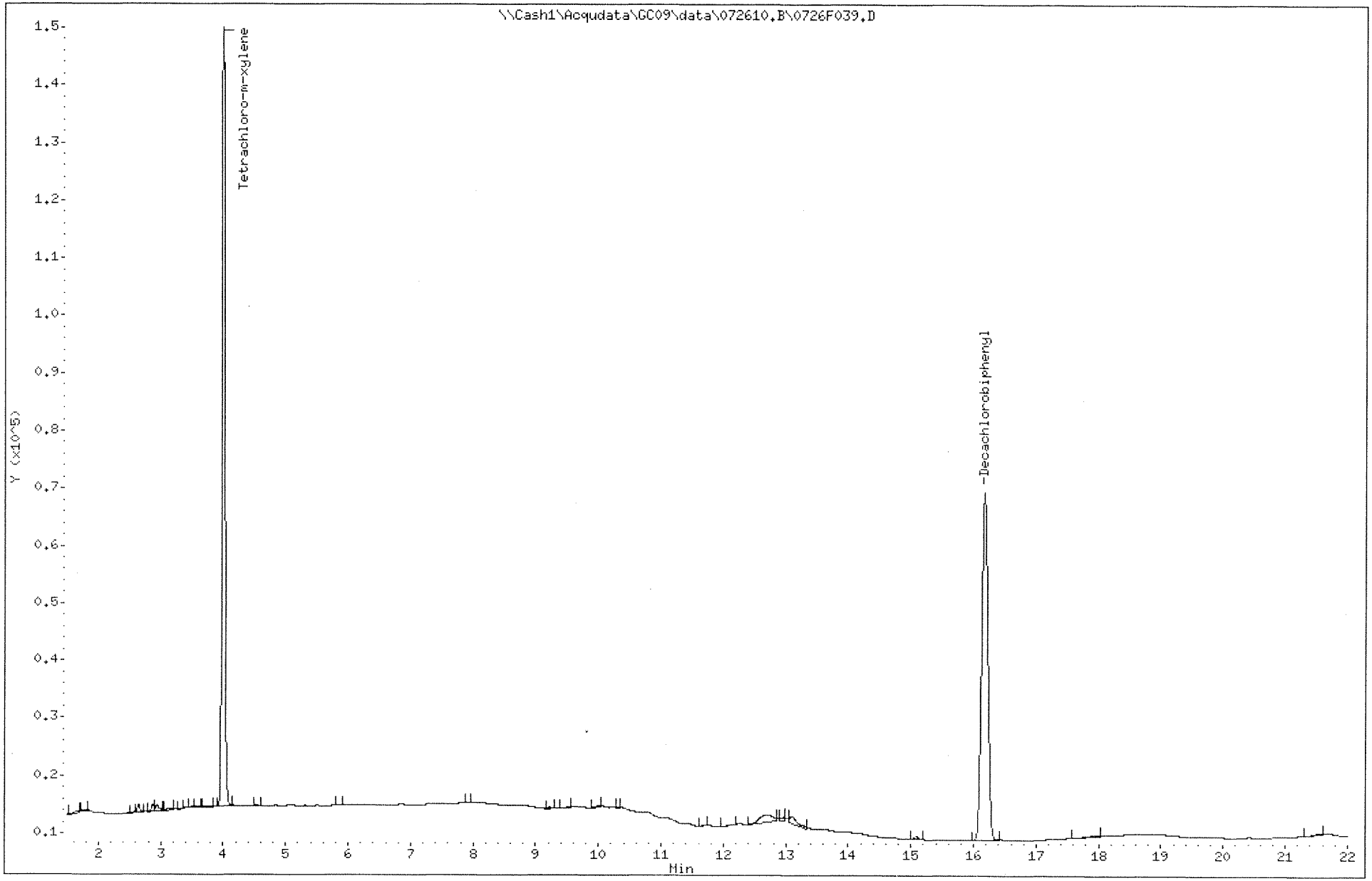
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	461056	467490	81.3	80.8		100.00
Decachlorobiphenyl	16.173	17.530	416335	515716	84.6	88.5		100.00

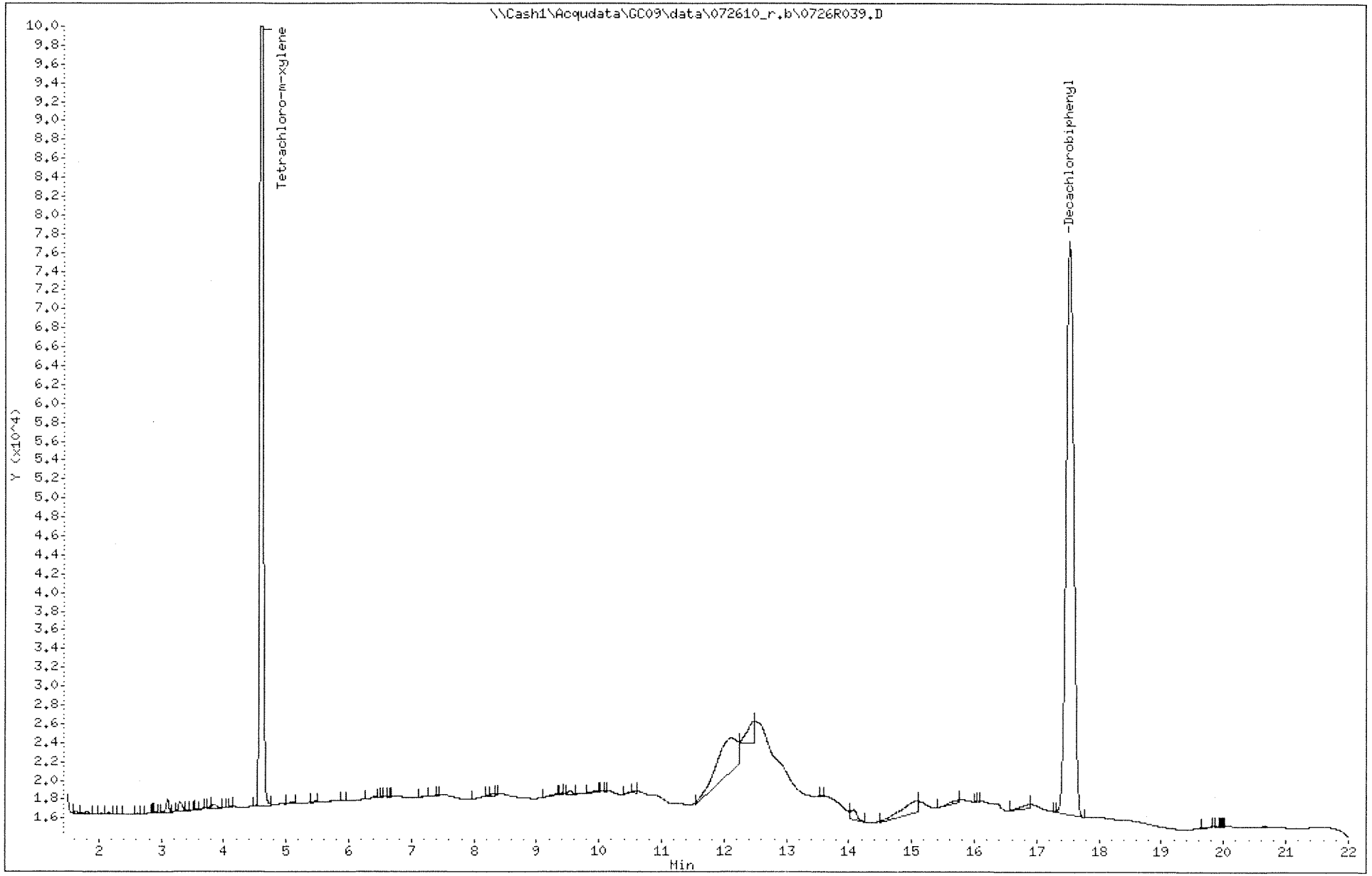
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F039.D
Date : 27-JUL-2010 03:33
Client ID:
Sample Info: KWG1007334-4 | MB | 8082 PCB | SOIL

Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R039.D
Date : 27-JUL-2010 03:33
Client ID:
Instrument: GC09.i
Sample Info: KWG1007334-4 | MB | 8082 PCB | SOIL
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Date Collected:**	06/30/2010
Sample Matrix:	Soil	**Date Received:**	07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name:	FTS-21 2-12MS	**Units:**	mg/Kg
Lab Code:	KWG1007334-1	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**0.594**		0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**1.58**		0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.096	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.096	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	68	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F046.D
Lab ID: KWG1007334-1 -- K1006867-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 07/27/2010 06:38
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R046.D
Lab ID: KWG1007334-1 -- K1006867-001MS
RunType: MS
Matrix: SOIL

Date Acquired: 07/27/2010 06:38
Date Quantitated: 07/27/2010 15:54
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/26/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933066	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F046.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R046.D			**Vial:**	39
Acqu Date:	07/27/2010 06:38	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-1 -- K1006867-001MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59 +0.00	359773	358546	63.42	61.96			63OK
			%Recovery =		63OK	62OK	Limits =	10-135	
Decachlorobiphenyl	16.17	17.53 +0.00	311905	395378	63.40	67.82			68OK
			%Recovery =		63OK	68OK	Limits =	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	623.03	594.80	0.594	0.567	**0.594**
Aroclor 1016 {1}	5.68	5.74 +0.00	42353	59979	641.88	581.55	0.612	0.554	
Aroclor 1016 {2}	5.74 +0.00	6.90	66425	98610	596.93	588.09	0.569	0.560	
Aroclor 1016 {3}	6.26	7.08	139215	90715	626.43	619.59	0.597	0.590	
Aroclor 1016 {4}	6.50	7.18	68351	94119	633.27	589.32	0.603	0.561	
Aroclor 1016 {5}	7.05 +0.00	7.46	97310	91766	616.64	595.45	0.588	0.567	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F046.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R046.D			**Vial:**	39
Acqu Date:	07/27/2010 06:38	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-1 -- K1006867-001MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	1,495	1,660	1.42	1.58	**1.58**
Aroclor 1260 {1}	8.95	10.53	278747	315091	1,213	1,529	1.16	1.46	
Aroclor 1260 {2}	9.55 +0.00	10.88 +0.00	454327	595370	1,284	1,418	1.22	1.35	
Aroclor 1260 {3}	10.31 +0.00	11.06	473728	391991	1,348	1,753	1.28	1.67	
Aroclor 1260 {4}	11.01	11.57 +0.00	352179	466848	1,820	1,736	1.73	1.65	
Aroclor 1260 {5}	11.47	12.30	790476	929025	1,812	1,865	1.73	1.78	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	13.56 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	77.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F046.D
Report Date: 27-Jul-2010 15:52

Columbia Analytical Services

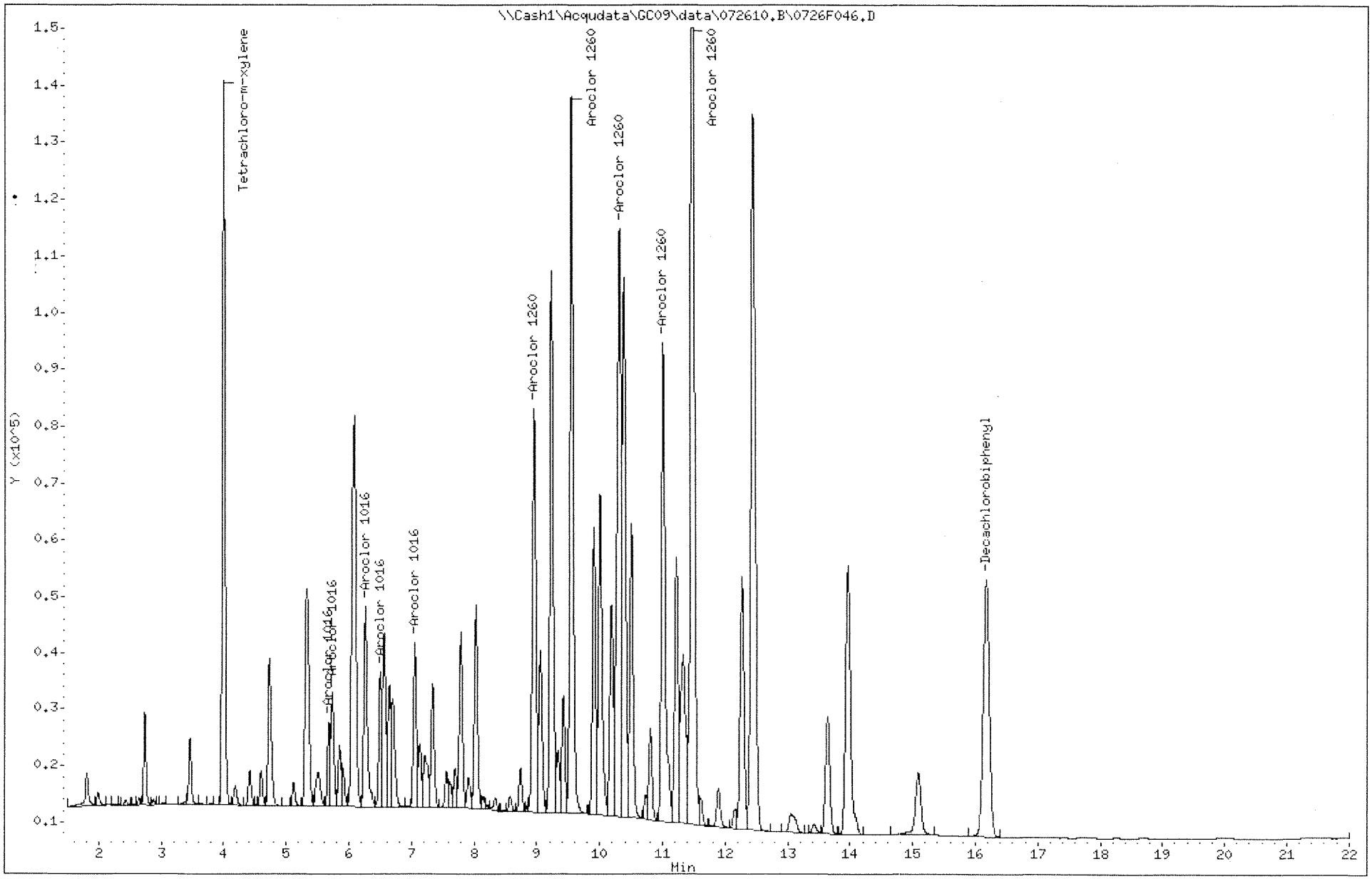
Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F046.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R046.D
Inj Date : 27-JUL-2010 06:38
Sample Info: K1006867-001 MS
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	359773	358546	63.4	62.0		100.00
Aroclor 1016	5.677	5.743	42353	59979	642	582	80.00- 120.00	100.00
	5.737	6.903	66425	98610	597	588	132.29- 198.44	156.84
	6.257	7.083	139215	90715	626	620	258.39- 387.58	328.70
	6.497	7.183	68351	94119	633	589	128.59- 192.88	161.38
	7.050	7.460	97310	91766	617	595	176.28- 264.43	229.76
			Average of Peak Amounts =		623	595		
Aroclor 1260	8.953	10.530	278747	315091	1210	1530	80.00- 120.00	100.00
	9.550	10.877	454327	595370	1280	1420	115.28- 172.93	162.99
	10.313	11.063	473728	391991	1350	1750	122.15- 183.23	169.95
	11.007	11.567	352179	466848	1820	1740	67.81- 101.71	126.34
	11.473	12.303	790476	929025	1810	1860	154.72- 232.08	283.58
			Average of Peak Amounts =		1490	1660		
Decachlorobiphenyl	16.173	17.530	311905	395378	63.4	67.8		100.00

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F046.D
Date : 27-JUL-2010 06:38
Client ID:
Sample Info: K1006867-001 MS

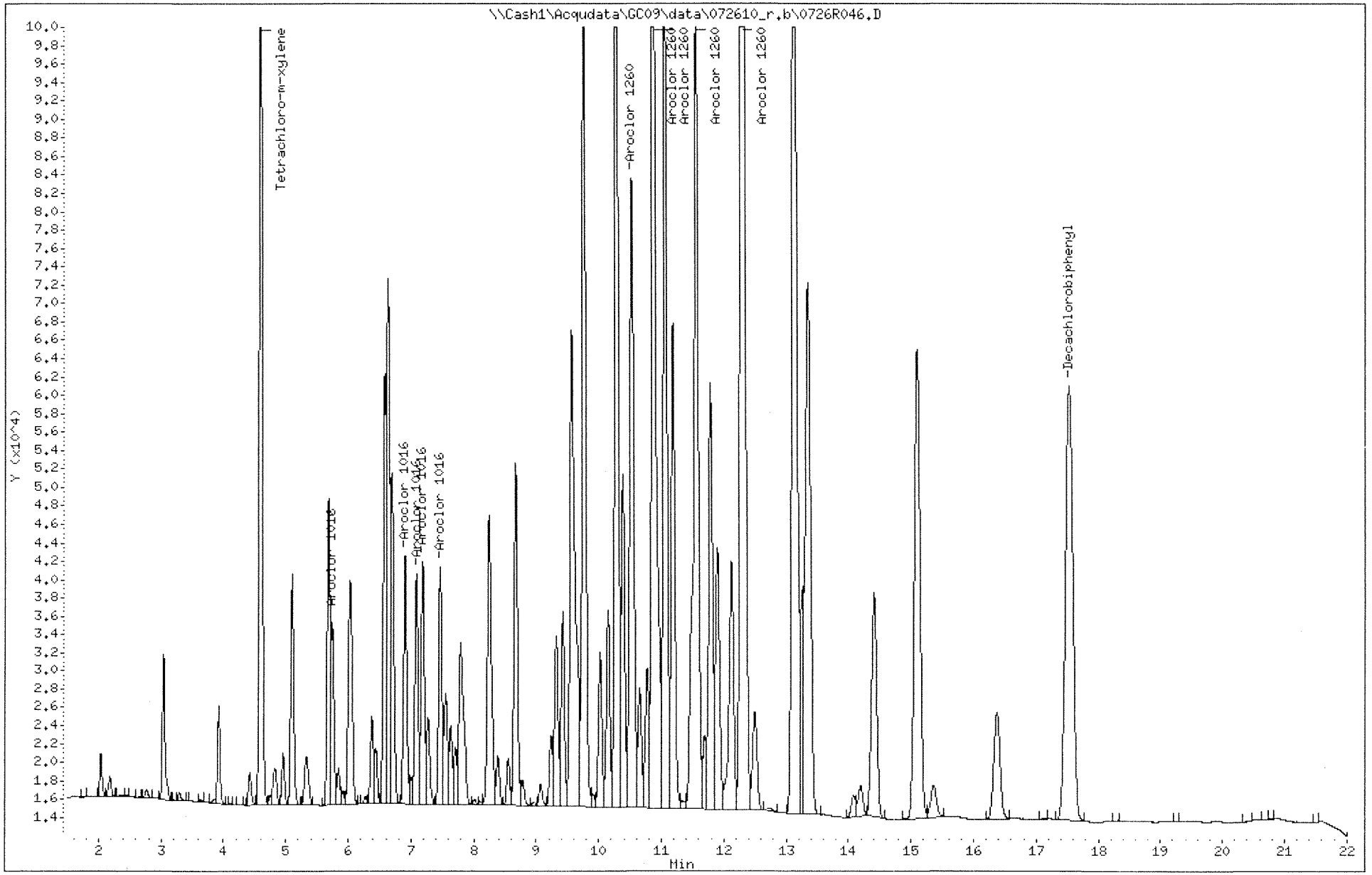
Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R046.D
Date : 27-JUL-2010 06:38
Client ID:
Sample Info: K1006867-001 MS

Instrument: GC09.i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: 06/30/2010
Date Received: 07/02/2010

Polychlorinated Biphenyls (PCBs)

Sample Name: FTS-21 2-12DMS
Lab Code: KWG1007334-2

Extraction Method: EPA 3541
Analysis Method: 8082

Units: mg/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**0.578**		0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**1.43**		0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.097	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	63	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F047.D
Lab ID: KWG1007334-2 -- K1006867-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 07/27/2010 07:05
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R047.D
Lab ID: KWG1007334-2 -- K1006867-001DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 07/27/2010 07:05
Date Quantitated: 07/27/2010 15:54
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/26/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933067	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F047.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R047.D			**Vial:**	40
Acqu Date:	07/27/2010 07:05	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-2 -- K1006867-001DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59 +0.00	347779	342588	61.31	59.21			61OK
			%Recovery =		61OK	59OK	**Limits =**	10-135	
Decachlorobiphenyl	16.18 +0.00	17.53 +0.00	290717	369615	59.09	63.40			63OK
			%Recovery =		59OK	63OK	**Limits =**	35-133	

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	596.09	575.82	0.578	0.559	**0.578**
Aroclor 1016 {1}	5.68 +0.00	5.74 +0.00	40039	58420	606.81	566.43	0.589	0.549	
Aroclor 1016 {2}	5.74 +0.00	6.91 +0.00	63686	95477	572.31	569.41	0.555	0.552	
Aroclor 1016 {3}	6.26	7.08	131872	86918	593.39	593.66	0.576	0.576	
Aroclor 1016 {4}	6.50 +0.00	7.18	64927	90976	601.55	569.64	0.583	0.553	
Aroclor 1016 {5}	7.05 +0.00	7.46	95692	89376	606.39	579.95	0.588	0.563	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F047.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R047.D			**Vial:**	40
Acqu Date:	07/27/2010 07:05	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-2 -- K1006867-001DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: mg/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	1,333	1,476	1.29	1.43	**1.43**
Aroclor 1260 {1}	8.95	10.53	258612	287191	1,126	1,393	1.09	1.35	
Aroclor 1260 {2}	9.55 +0.00	10.88 +0.00	414113	543069	1,170	1,293	1.14	1.25	
Aroclor 1260 {3}	10.31 +0.00	11.06	424175	349139	1,207	1,561	1.17	1.51	
Aroclor 1260 {4}	11.01	11.57 +0.00	313307	416305	1,619	1,548	1.57	1.50	
Aroclor 1260 {5}	11.48 +0.00	12.31 +0.00	674395	788837	1,546	1,584	1.50	1.54	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	13.32 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	77.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F047.D
Report Date: 27-Jul-2010 15:52

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F047.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R047.D
Inj Date : 27-JUL-2010 07:05
Sample Info: K1006867-001 DMS
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

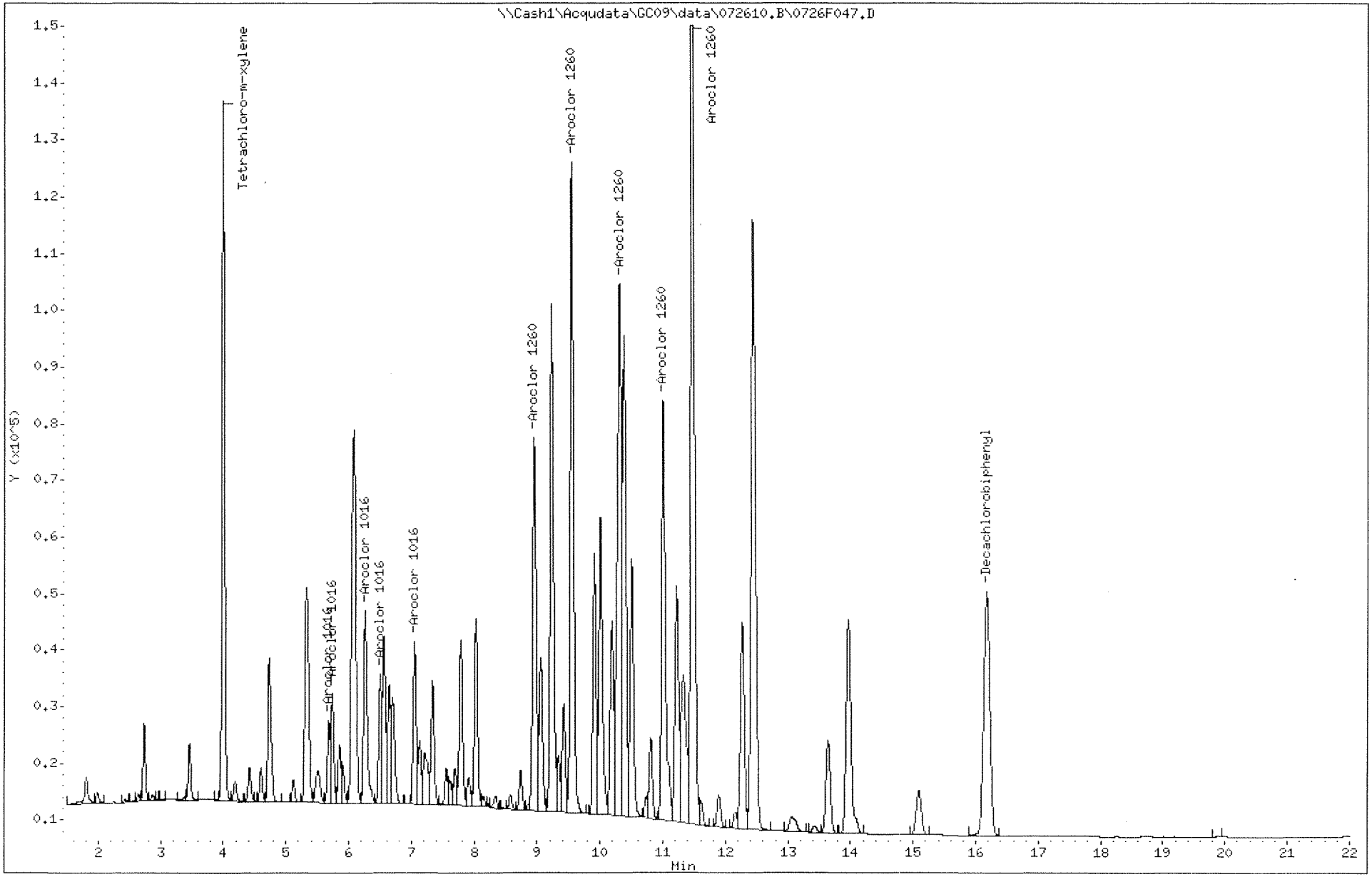
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	347779	342588	61.3	59.2		100.00
Aroclor 1016	5.680	5.743	40039	58420	607	566	80.00- 120.00	100.00
	5.737	6.907	63686	95477	572	569	132.29- 198.44	159.06
	6.257	7.083	131872	86918	593	594	258.39- 387.58	329.36
	6.500	7.183	64927	90976	602	570	128.59- 192.88	162.16
	7.050	7.460	95692	89376	606	580	176.28- 264.43	239.00
			Average of Peak Amounts =		596	576		
Aroclor 1260	8.953	10.530	258612	287191	1120	1390	80.00- 120.00	100.00
	9.550	10.877	414113	543069	1170	1290	115.28- 172.93	160.13
	10.313	11.063	424175	349139	1210	1560	122.15- 183.23	164.02
	11.007	11.567	313307	416305	1620	1550	67.81- 101.71	121.15
	11.477	12.307	674395	788837	1540	1580	154.72- 232.08	260.77
			Average of Peak Amounts =		1330	1470		
Decachlorobiphenyl	16.177	17.530	290717	369615	59.1	63.4		100.00

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F047.D
Date : 27-JUL-2010 07:05
Client ID:
Sample Info: K1006867-001 DMS

Instrument: GC09.i

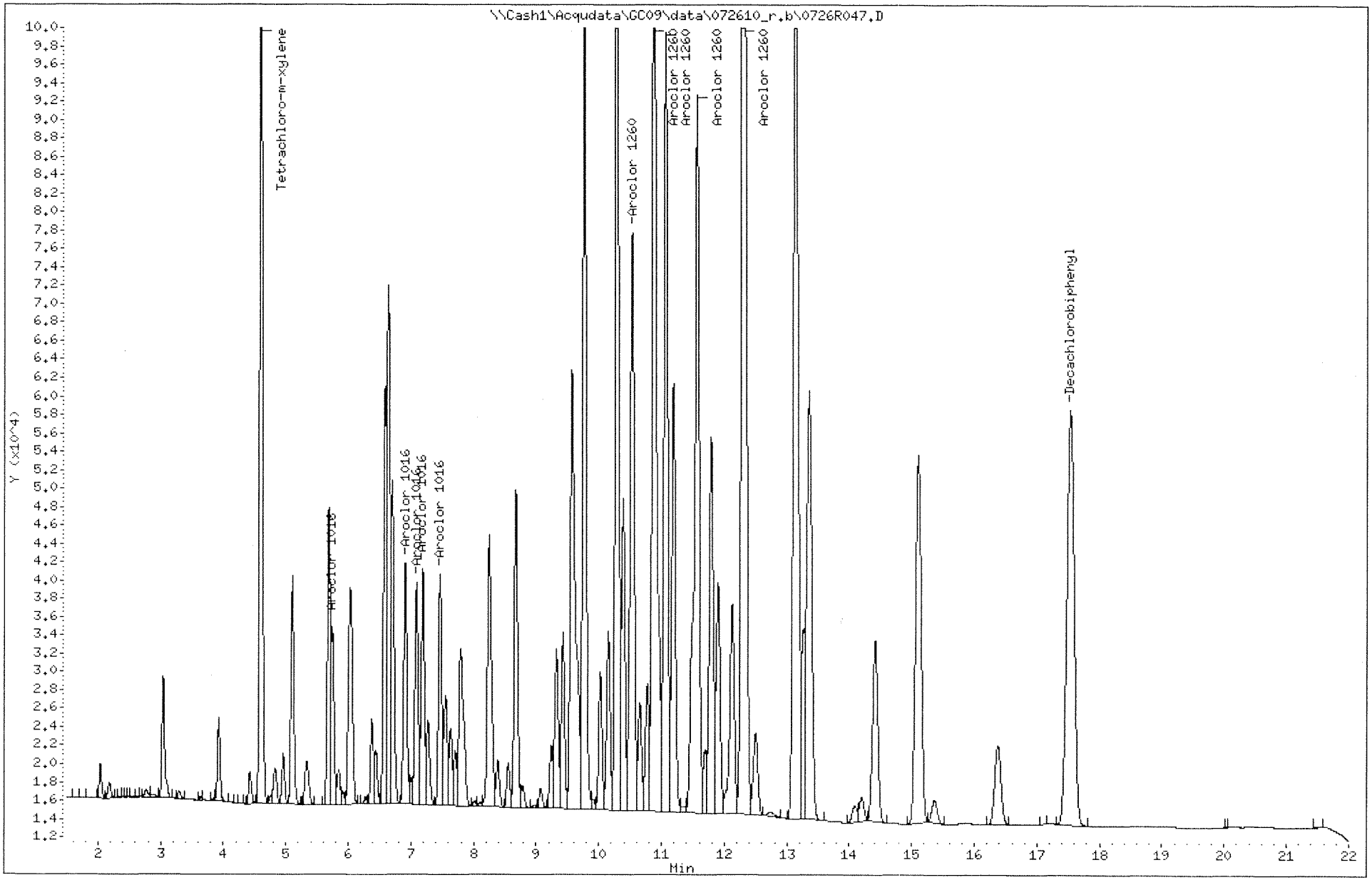
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R047.D
Date : 27-JUL-2010 07:05
Client ID:
Sample Info: K1006867-001 DMS

Instrument: GC09.i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200
Sample Matrix: Soil

Service Request: K1006867
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Lab Control Sample
Lab Code: KWG1007334-3

Units: mg/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8082

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**0.771**		0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1221	ND	U	0.20	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1232	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1242	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1248	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1254	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1260	**0.803**		0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1262	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	
Aroclor 1268	ND	U	0.10	0.019	1	07/13/10	07/27/10	KWG1007334	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	35-133	07/27/10	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F040.D
Lab ID: KWG1007334-3
RunType: LCS
Matrix: SOIL

Date Acquired: 07/27/2010 03:59
Date Quantitated: 07/27/2010 15:51
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R040.D
Lab ID: KWG1007334-3
RunType: LCS
Matrix: SOIL

Date Acquired: 07/27/2010 03:59
Date Quantitated: 07/27/2010 15:53
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/26/2010

Analysis Lot:	KWG1007403	**Prep Lot:**	KWG1007334	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3541		
Prep Ref:	933068	**Prep Date:**	07/13/2010		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:	J:\GC09\DATA\072610.B\0726F039.D	**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F040.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R040.D			**Vial:**	33
Acqu Date:	07/27/2010 03:59	**Quant Date:**	07/27/2010 15:51	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	428103	432490	75.47	74.74			75OK
				%Recovery =	75OK	75OK	Limits =	10-135	
Decachlorobiphenyl	16.17	17.53 +0.00	395672m	480569	80.42	82.43			82OK
				%Recovery =	80OK	82OK	Limits =	35-133	

Target Compounds

Final Conc. Units: mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	771.47	743.11	0.771	0.743	**0.771**
Aroclor 1016 {1}	5.68	5.74	50405	79093	763.91	766.87	0.764	0.767	
Aroclor 1016 {2}	5.73	6.90	85511	124851	768.44	744.59	0.768	0.745	
Aroclor 1016 {3}	6.26	7.08	168470	105130	758.07	718.05	0.758	0.718	
Aroclor 1016 {4}	6.50	7.18	84358	117222	781.58	733.98	0.782	0.734	
Aroclor 1016 {5}	7.05 +0.00	7.46	123934	115900	785.36	752.06	0.785	0.752	
Aroclor 1221			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F040.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R040.D			**Vial:**	33
Acqu Date:	07/27/2010 03:59	**Quant Date:**	07/27/2010 15:51	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007334-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds — **Final Conc. Units:** mg/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1260			0	0	788.30	802.57	0.788	0.803	**0.803**
Aroclor 1260 {1}	8.95	10.53	164420	164288	715.58	797.10	0.716	0.797	
Aroclor 1260 {2}	9.55 +0.00	10.88 +0.00	250045	288233	706.57	686.52	0.707	0.687	
Aroclor 1260 {3}	10.31 +0.00	11.06	243588	199652	692.91	892.60	0.693	0.893	
Aroclor 1260 {4}	11.01	11.57 +0.00	182971	202049	945.69	751.37	0.946	0.751	
Aroclor 1260 {5}	11.47	12.31 +0.00	384279	440941	880.76	885.26	0.881	0.885	
Aroclor 1262			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268			0	0	0.0000	0.0000	0.019U	0.019U	0.019U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	0.019U	0.019U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	0.019U	0.019U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	10.00 g	**Dilution:**	1.0
Prep Final Vol:	10 mL	**Unit Factor:**	0.001
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F040.D
Report Date: 27-Jul-2010 15:51

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F040.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R040.D
Inj Date : 27-JUL-2010 03:59
Sample Info: KWG1007334-3 | LCS | 8082 PCB | SOIL
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

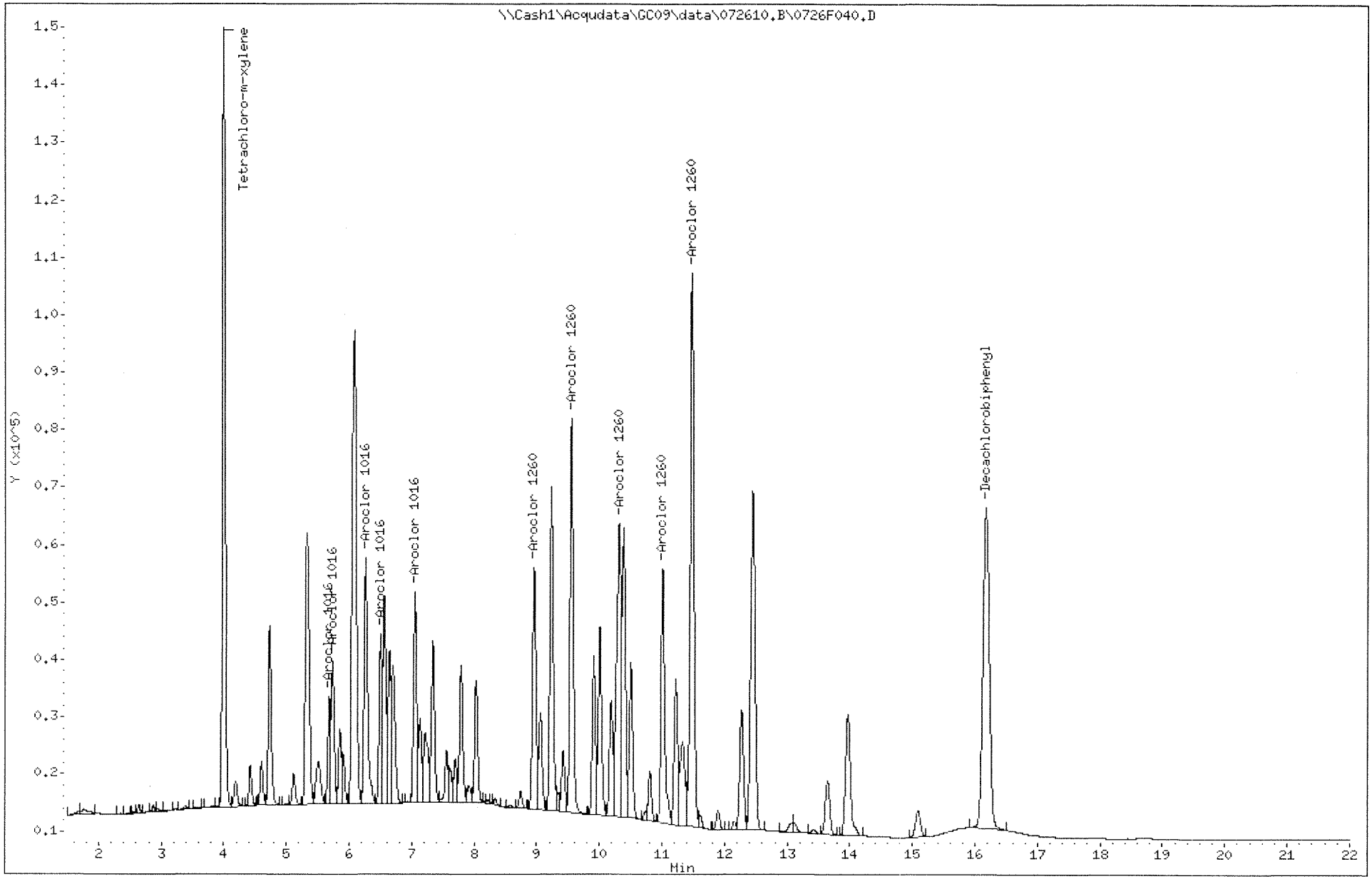
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.590	428103	432490	75.5	74.7		100.00
Aroclor 1016	5.677	5.740	50405	79093	764	767	80.00- 120.00	100.00
	5.733	6.903	85511	124851	768	744	132.29- 198.44	169.65
	6.257	7.083	168470	105130	758	718	258.39- 387.58	334.23
	6.497	7.183	84358	117222	782	734	128.59- 192.88	167.36
	7.050	7.460	123934	115900	785	752	176.28- 264.43	245.88
			Average of Peak Amounts =		771	743		
Aroclor 1260	8.953	10.530	164420	164288	716	797	80.00- 120.00	100.00
	9.550	10.877	250045	288233	706	686	115.28- 172.93	152.08
	10.313	11.063	243588	199652	693	892	122.15- 183.23	148.15
	11.007	11.567	182971	202049	946	751	67.81- 101.71	111.28
	11.473	12.307	384279	440941	881	885	154.72- 232.08	233.72
			Average of Peak Amounts =		788	802		
Decachlorobiphenyl	16.173	17.530	395672	480569	80.4	82.4		100.00(M)

QC Flag Legend

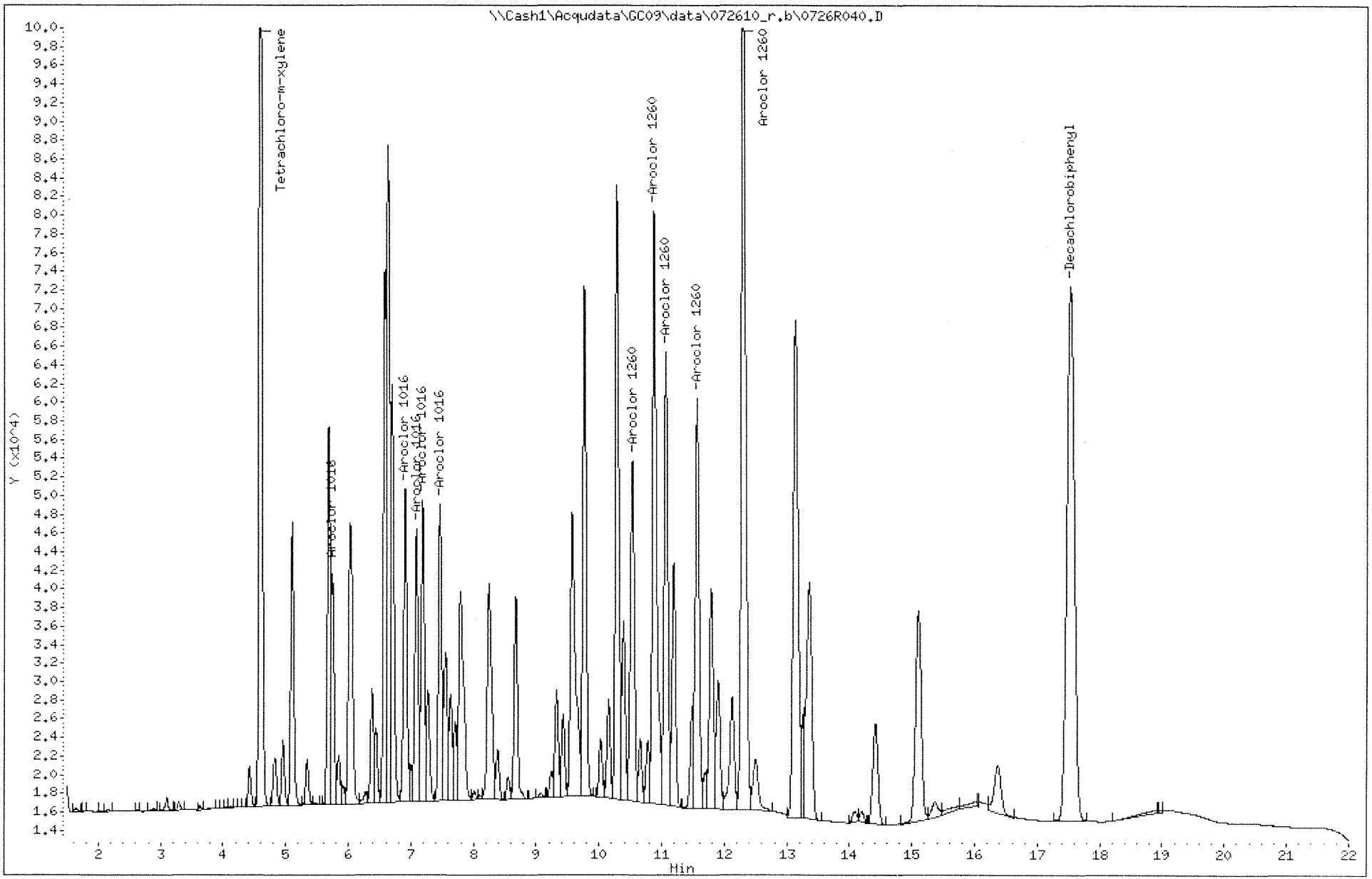
M - Compound response manually integrated.

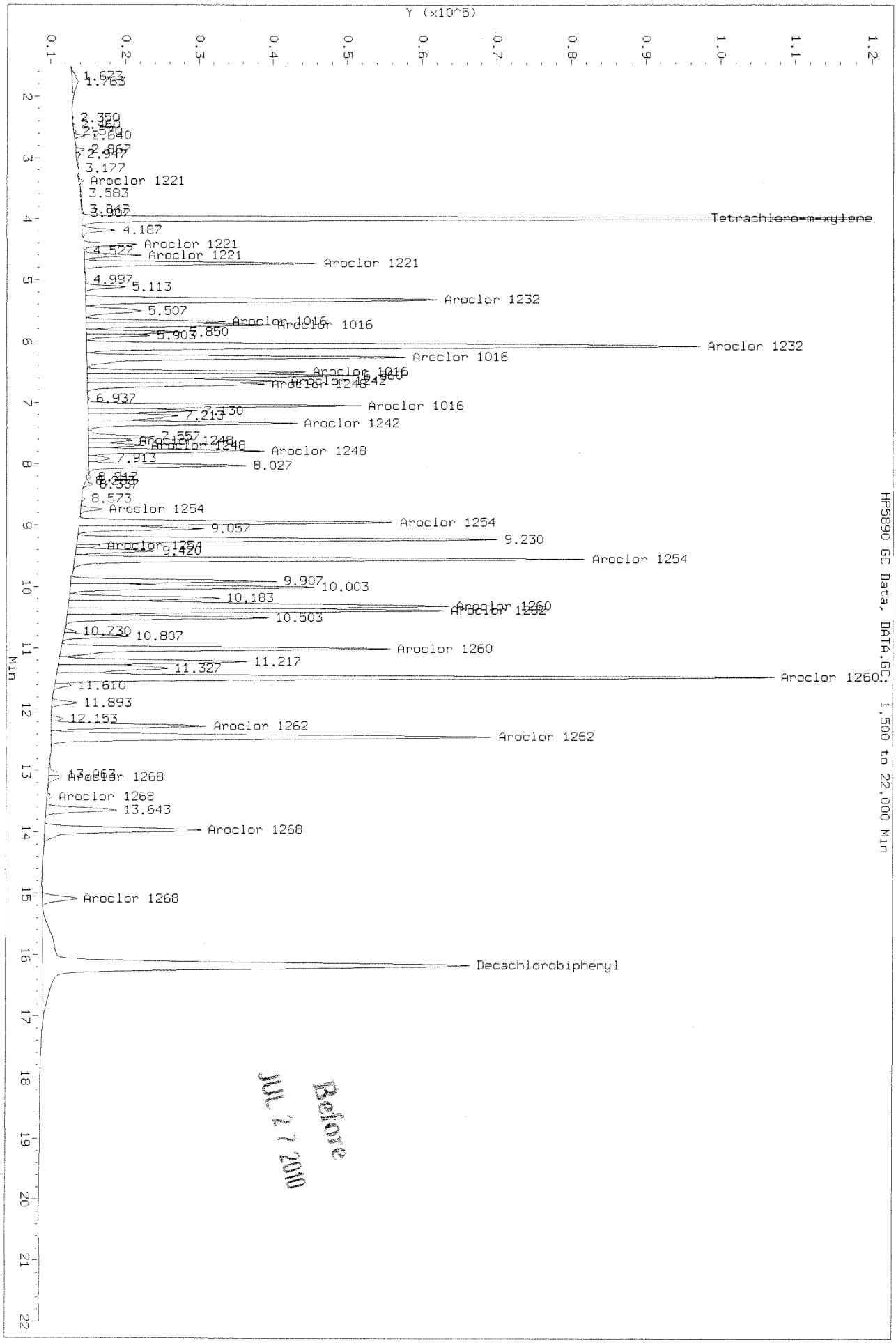
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F040.D
Date : 27-JUL-2010 03:59
Client ID:
Instrument: GC09.i
Sample Info: KWG1007334-3 | LCS | 8082 PCB | SOIL
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



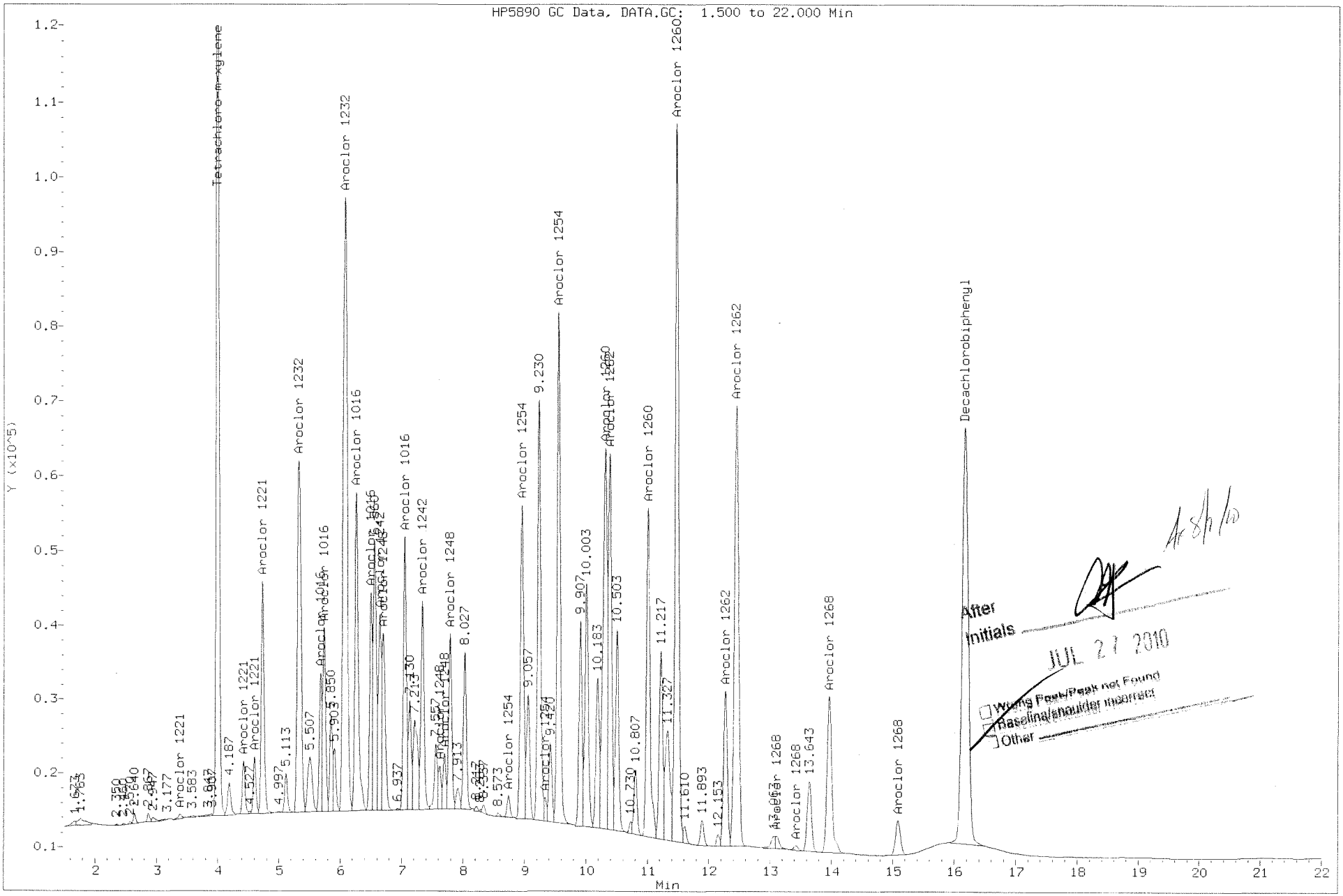
Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R040.D
Date : 27-JUL-2010 03:59
Client ID:
Sample Info: KWG1007334-3 | LCS | 8082 PCB | SOIL

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53




Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F040.D
Injection Date: 27-JUL-2010 03:59
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC, 1.500 to 22.000 Min
Y (x10^5)
Min
1.673
1.763
2.350
2.640
2.867
2.947
3.177
Aroclor 1221
3.583
3.843
3.967
Tetrachloro-m-xylene
4.187
Aroclor 1221
4.527
Aroclor 1221
Aroclor 1221
4.997
5.113
Aroclor 1232
5.507
Aroclor 1016
Aroclor 1016
5.850
5.903
Aroclor 1232
Aroclor 1016
Aroclor 1016
Aroclor 1248
6.937
Aroclor 1016
7.130
7.213
Aroclor 1242
7.557
Aroclor 1248
Aroclor 1248
7.913
8.027
8.217
8.337
8.573
Aroclor 1254
Aroclor 1254
9.057
9.230
Aroclor 1254
9.420
9.907
10.003
10.183
Aroclor 1260
Aroclor 1262
10.503
10.730
10.807
Aroclor 1260
11.217
11.327
Aroclor 1260
11.610
11.893
12.153
Aroclor 1262
Aroclor 1262
13.063
Aroclor 1268
Aroclor 1268
13.643
Aroclor 1268
Aroclor 1268
Decachlorobiphenyl
Before
JUL 27 2010

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F040.D
Injection Date: 27-JUL-2010 03:59
Instrument: GC09.i
Client Sample ID:



Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Standards Data

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-35MS

Level ID	File ID
A	\\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
B	\\Cash1\Acqudata\GC09\data\070110.B\0701F004.D
C	\\Cash1\Acqudata\GC09\data\070110.B\0701F005.D
D	\\Cash1\Acqudata\GC09\data\070110.B\0701F006.D
E	\\Cash1\Acqudata\GC09\data\070110.B\0701F007.D
F	\\Cash1\Acqudata\GC09\data\070110.B\0701F008.D
G	\\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
H	\\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
I	\\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
J	\\Cash1\Acqudata\GC09\data\070110.B\0701F012.D
K	\\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
L	\\Cash1\Acqudata\GC09\data\070110.B\0701F014.D
M	\\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
N	\\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
O	\\Cash1\Acqudata\GC09\data\070110.B\0701F017.D
P	\\Cash1\Acqudata\GC09\data\070110.B\0701F018.D
Q	\\Cash1\Acqudata\GC09\data\070110.B\0701F019.D
R	\\Cash1\Acqudata\GC09\data\070110.B\0701F020.D
S	\\Cash1\Acqudata\GC09\data\070110.B\0701F021.D
T	\\Cash1\Acqudata\GC09\data\070110.B\0701F022.D
U	\\Cash1\Acqudata\GC09\data\070110.B\0701F023.D
V	\\Cash1\Acqudata\GC09\data\070110.B\0701F024.D
W	\\Cash1\Acqudata\GC09\data\070110.B\0701F025.D
X	\\Cash1\Acqudata\GC09\data\070110.B\0701F026.D
Y	\\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Z	\\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
AA	\\Cash1\Acqudata\GC09\data\070110.B\0701F029.D
AB	\\Cash1\Acqudata\GC09\data\070110.B\0701F030.D
AC	\\Cash1\Acqudata\GC09\data\070110.B\0701F031.D
AD	\\Cash1\Acqudata\GC09\data\070110.B\0701F032.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	2.5	5950	B	5.0	5780	C	50	5050	D	100	4700	E	200	4260
	F	500	3770												
Aroclor 1016 {1}	A	25	74.4	B	50	76.1	C	500	67.8	D	1000	64.9	E	2000	59.0
	F	5000	53.7												
Aroclor 1016 {2}	A	25	134	B	50	132	C	500	114	D	1000	106	E	2000	97.2
	F	5000	84.5												
Aroclor 1016 {3}	A	25	269	B	50	270	C	500	227	D	1000	211	E	2000	190
	F	5000	166												
Aroclor 1016 {4}	A	25	123	B	50	129	C	500	111	D	1000	104	E	2000	94.8
	F	5000	86.2												
Aroclor 1016 {5}	A	25	190	B	50	193	C	500	160	D	1000	149	E	2000	136
	F	5000	119												
Aroclor 1260 {1}	A	25	276	B	50	275	C	500	236	D	1000	219	E	2000	198
	F	5000	175												
Aroclor 1260 {2}	A	25	425	B	50	411	C	500	338	D	1000	313	E	2000	283
Aroclor 1260 {3}	A	25	398	B	50	403	C	500	355	D	1000	346	E	2000	319
	F	5000	288												
Aroclor 1260 {4}	A	25	216	B	50	214	C	500	200	D	1000	191	E	2000	179
	F	5000	162												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	25	475	B	50	477	C	500	455	D	1000	435	E	2000	404
	F	5000	371												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	17.3		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	13.2		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.5		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	18.9		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	15.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	18.6		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	17.4		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.6		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	10.8		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	9.6		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	Barr Engineering Company	**Service Request:**	K1006867
Project:	Rhodia Silver Bow/26460006.15-SOIL-200	**Calibration Date:**	07/01/2010
		Date Analyzed:	07/02/2010

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration ID:**	CAL9609
Analysis Method:	8082	**Units:**	ng/mL

File ID: \\Cash1\Acqudata\GC09\data\070110.B\0701F033.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F035.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F036.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F037.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F039.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F040.D
\\Cash1\Acqudata\GC09\data\070110.B\0701F041.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1016 {1}	1000	1000	66.0	66.5	1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	960	111	107	-4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	970	222	215	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	990	108	107	-1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	970	158	153	-3	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	9	± 20 %	NA
Aroclor 1260 {1}	1000	990	230	227	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	354	341	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	950	352	335	-5	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1300	193	257	33	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1200	436	535	23	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-XLB

Level ID	File ID
A	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R003.D
B	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R004.D
C	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R005.D
D	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R006.D
E	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R007.D
F	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R008.D
G	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R009.D
H	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R010.D
I	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R011.D
J	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R012.D
K	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R013.D
L	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R014.D
M	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R015.D
N	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R016.D
O	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R017.D
P	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R018.D
Q	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R019.D
R	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R020.D
S	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R021.D
T	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R022.D
U	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R023.D
V	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R024.D
W	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R025.D
X	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R026.D
Y	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R027.D
Z	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R028.D
AA	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R029.D
AB	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R030.D
AC	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R031.D
AD	\\Cash1\Acqudata\GC09\data\070110_r.b\0701R032.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl	A	2.5	7090	B	5.0	6920	C	50	6020	D	100	5580	E	200	5010
	F	500	4360												
Aroclor 1016 {1}	A	25	116	B	50	124	C	500	107	D	1000	99.9	E	2000	90.9
	F	5000	80.8												
Aroclor 1016 {2}	A	25	189	B	50	194	C	500	177	D	1000	165	E	2000	150
	F	5000	131												
Aroclor 1016 {3}	A	25	172	B	50	180	C	500	154	D	1000	140	E	2000	125
	F	5000	107												
Aroclor 1016 {4}	A	25	189	B	50	192	C	500	167	D	1000	153	E	2000	138
	F	5000	119												
Aroclor 1016 {5}	A	25	183	B	50	185	C	500	160	D	1000	147	E	2000	133
	F	5000	117												
Aroclor 1260 {1}	A	25	235	B	50	223	C	500	215	D	1000	204	E	2000	190
	F	5000	170												
Aroclor 1260 {2}	A	25	481	B	50	494	C	500	431	D	1000	405	E	2000	373
	F	5000	335												
Aroclor 1260 {3}	A	25	248	B	50	269	C	500	233	D	1000	217	E	2000	198
	F	5000	176												
Aroclor 1260 {4}	A	25	299	B	50	297	C	500	278	D	1000	266	E	2000	247
	F	5000	225												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {5}	A	25	590	B	50	571	C	500	507	D	1000	479	E	2000	443
	F	5000	399												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL9609
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.3		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.5		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	14.3		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	19.0		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	18.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	17.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	11.4		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	14.7		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	10.8		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	14.8		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Calibration Date: 07/01/2010
Date Analyzed: 07/02/2010

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL9609
Units: ng/mL

File ID: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R033.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R034.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R035.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R036.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R037.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R038.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R039.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R040.D
\\Cash1\Acqudata\GC09\data\070110_r.b\0701R041.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016	1000	940	NA	NA	NA	-6	± 20 %	NA
Aroclor 1016 {1}	1000	980	103	101	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	940	168	158	-6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	890	146	131	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	920	160	147	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	940	154	144	-6	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	9	± 20 %	NA
Aroclor 1260 {1}	1000	1100	206	229	11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	940	420	397	-6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1200	224	274	23	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	269	272	1	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1200	498	581	17	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Sequence Name: D:\GC09\SEQUENCE\070110.S
Comment: PCB Aroclors by EPA 8082
Operator: LHarris
Data Path: D:\GC09\DATA\070110.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

ICAL 9609

Don't use for DOD 4.1
7/2/10

Line	Type	Vial	DataFile	Method	Sample Name
1	DeleteGC				
2	MaskName -		----r---		
3	IB	1	0701F001	PCB_REG	IB
4	IB	2	0701F002	PCB_REG	IB
5	ICAL	3	0701F003	PCB_REG	1016/1260 @ 25ppb | PCB5-55F
6	ICAL	4	0701F004	PCB_REG	1016/1260 @ 50ppb | PCB5-55G
7	ICAL	5	0701F005	PCB_REG	1016/1260 @ 500ppb | PCB5-55H
8	ICAL	6	0701F006	PCB_REG	1016/1260 @ 1000ppb | PCB5-60G
9	ICAL	7	0701F007	PCB_REG	1016/1260 @ 2000ppb | PCB5-55J
10	ICAL	8	0701F008	PCB_REG	1016/1260 @ 5000ppb | PCB5-55K
11	ICAL	9	0701F009	PCB_REG	1221/1254 @ 50/25ppb | PCB5-52D
12	ICAL	10	0701F010	PCB_REG	1221/1254 @ 100/50ppb | PCB5-52E
13	ICAL	11	0701F011	PCB_REG	1221/1254 @ 1000/500ppb | PCB5-52F
14	ICAL	12	0701F012	PCB_REG	1221/1254 @ 2000/1000ppb | PCB5-52G
15	ICAL	13	0701F013	PCB_REG	1221/1254 @ 4000/2000ppb | PCB5-52H
16	ICAL	14	0701F014	PCB_REG	1221/1254 @ 10000/5000ppb | PCB5-52I
17	ICAL	15	0701F015	PCB_REG	1232/1262 @ 25ppb | PCB5-52J
18	ICAL	16	0701F016	PCB_REG	1232/1262 @ 50ppb | PCB5-52K
19	ICAL	17	0701F017	PCB_REG	1232/1262 @ 500ppb | PCB5-52L
20	ICAL	18	0701F018	PCB_REG	1232/1262 @ 1000ppb | PCB5-52M
21	ICAL	19	0701F019	PCB_REG	1232/1262 @ 2000ppb | PCB5-52N
22	ICAL	20	0701F020	PCB_REG	1232/1262 @ 5000ppb | PCB5-52O
23	ICAL	21	0701F021	PCB_REG	1242/1268 @ 25ppb | PCB5-52P
24	ICAL	22	0701F022	PCB_REG	1242/1268 @ 50ppb | PCB5-52Q
25	ICAL	23	0701F023	PCB_REG	1242/1268 @ 500ppb | PCB5-52R
26	ICAL	24	0701F024	PCB_REG	1242/1268 @ 1000ppb | PCB5-52S
27	ICAL	25	0701F025	PCB_REG	1242/1268 @ 2000ppb | PCB5-52T
28	ICAL	26	0701F026	PCB_REG	1242/1268 @ 5000ppb | PCB5-53A
29	ICAL	27	0701F027	PCB_REG	1248 @ 25ppb | PCB5-53B
30	ICAL	28	0701F028	PCB_REG	1248 @ 50ppb | PCB5-53C
31	ICAL	29	0701F029	PCB_REG	1248 @ 500ppb | PCB5-53D
32	ICAL	30	0701F030	PCB_REG	1248 @ 1000ppb | PCB5-53E
33	ICAL	31	0701F031	PCB_REG	1248 @ 2000ppb | PCB5-53F
34	ICAL	32	0701F032	PCB_REG	1248 @ 5000ppb | PCB5-53G
35	ICV	33	0701F033	PCB_REG	1016 @ 1000ppb | PCB5-49E
36	ICV	34	0701F034	PCB_REG	1221 @ 1000ppb | PCB5-53J
37	ICV	35	0701F035	PCB_REG	1232 @ 1000ppb | PCB5-49F
38	ICV	36	0701F036	PCB_REG	1242 @ 1000ppb | PCB5-49G
39	ICV	37	0701F037	PCB_REG	1248 @ 1000ppb | PCB5-49H
40	ICV	38	0701F038	PCB_REG	1254 @ 1000ppb | PCB5-53K
41	ICV	39	0701F039	PCB_REG	1260 @ 1000ppb | PCB5-49I
42	ICV	40	0701F040	PCB_REG	1262 @ 1000ppb | PCB5-49J
43	ICV	41	0701F041	PCB_REG	1268 @ 1000ppb | PCB5-49K

Last Modified: Thu Jul 01 11:05:10 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F002.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F002.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R002.D
Inj Date : 01-JUL-2010 15:10
Sample Info: IB
Misc Info :
Cal Date : 02-JUL-2010 09:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

7/2/10
7/2/10

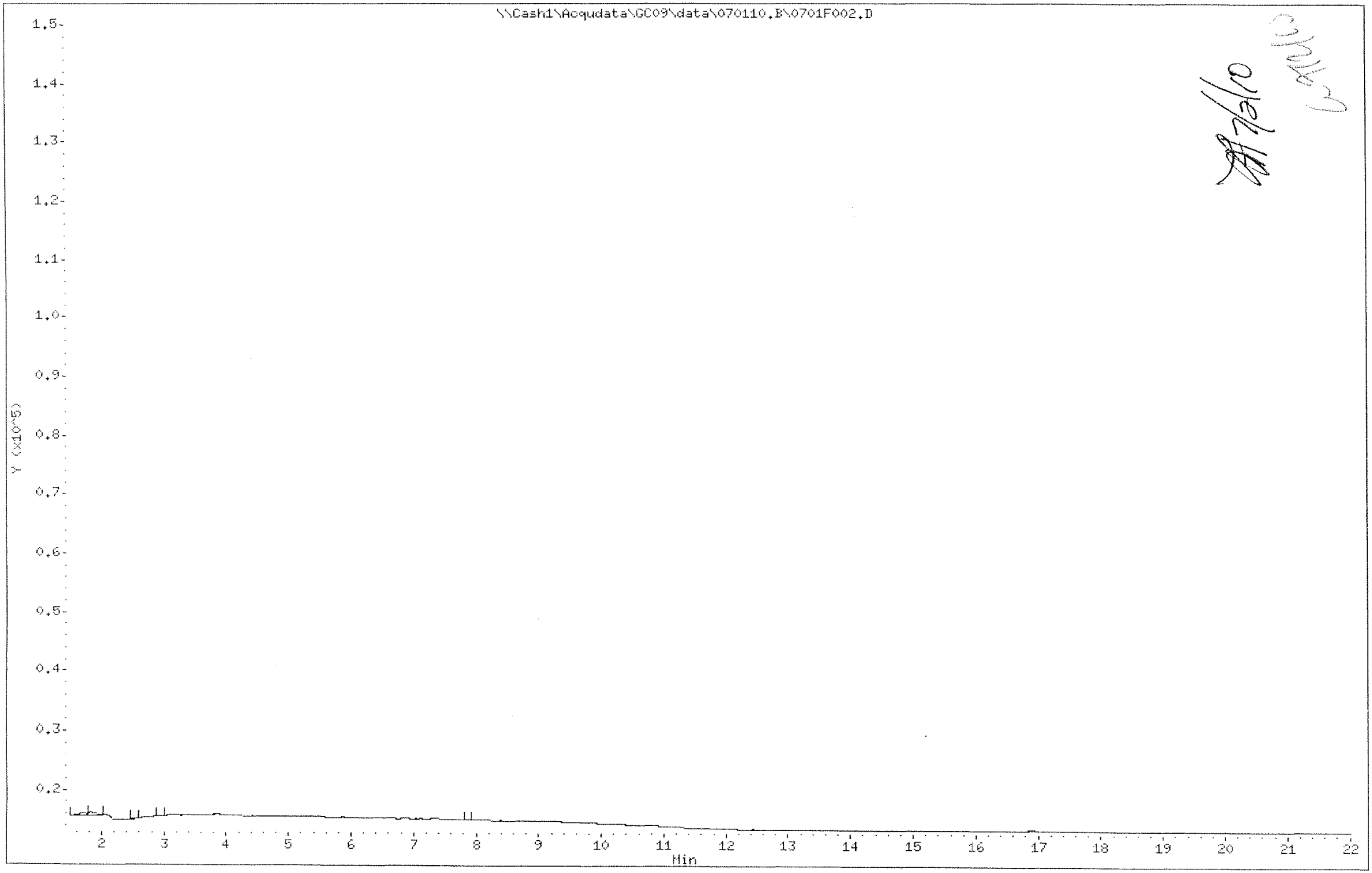
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F002.D
Date : 01-JUL-2010 15:10
Client ID:
Sample Info: IB

Instrument: GC09.i

Operator: LHarris

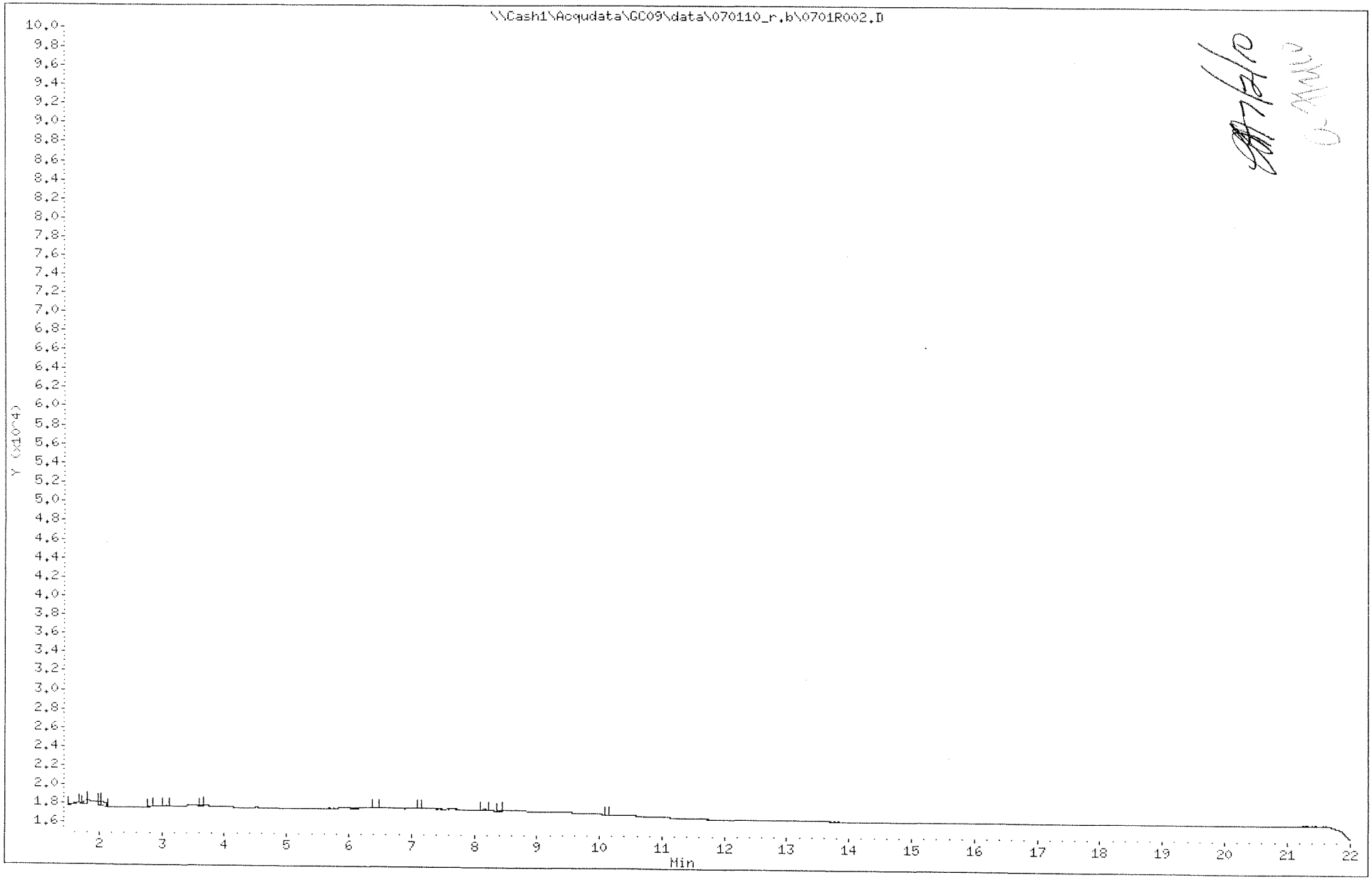
Column phase: DB-35MS

Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R002.D
Date : 01-JUL-2010 15:10
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R003.D
Inj Date : 01-JUL-2010 15:37
Sample Info: 1016/1260 @ 25ppb | PCB5-55F
Misc Info :
Cal Date : 02-JUL-2010 08:12
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.593	17231	17107	3.03	2.95		100.00(M)
Aroclor 1016	5.687	5.743	1860	2910	28.3	28.2	80.00- 120.00	100.00(M)
	5.743	6.907	3355	4729	30.1	28.1	138.61- 207.92	180.37(M)
	6.267	7.087	6735	4290	30.2	29.0	283.61- 425.41	362.07(M)
	6.507	7.187	3072	4722	28.5	29.3	135.31- 202.97	165.18(M)
	7.060	7.463	4742	4572	30.0	29.6	202.79- 304.19	254.91(M)
			Average of Peak Amounts =		29.4	28.8		
Aroclor 1260	8.967	10.530	6903	5866	29.8	28.2	80.00- 120.00	100.00(M)
	9.563	10.877	10617	12023	29.8	28.6	119.55- 179.33	153.80(M)
	10.327	11.067	9953	6202	28.3	27.7	117.24- 175.86	144.18(M)
	11.023	11.567	5393	7479	28.0	27.8	62.30- 93.45	78.13(M)
	11.490	12.310	11876	14747	27.0	29.6	138.87- 208.31	172.03(M)
			Average of Peak Amounts =		28.6	28.4		
Decachlorobiphenyl	16.213	17.533	14884	17727	3.02	3.04		100.00

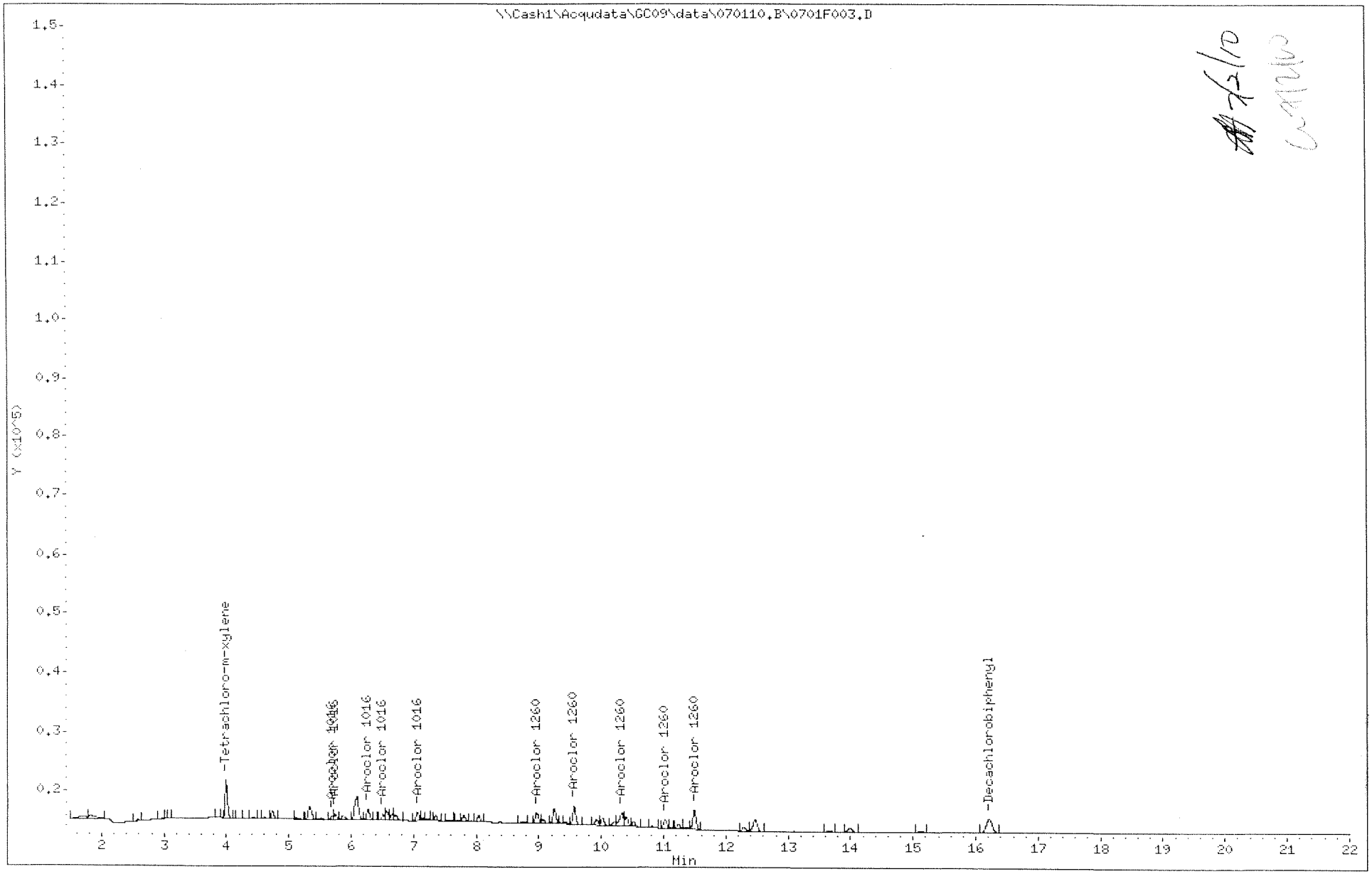
QC Flag Legend

M - Compound response manually integrated.

7/2/10
7/2/10

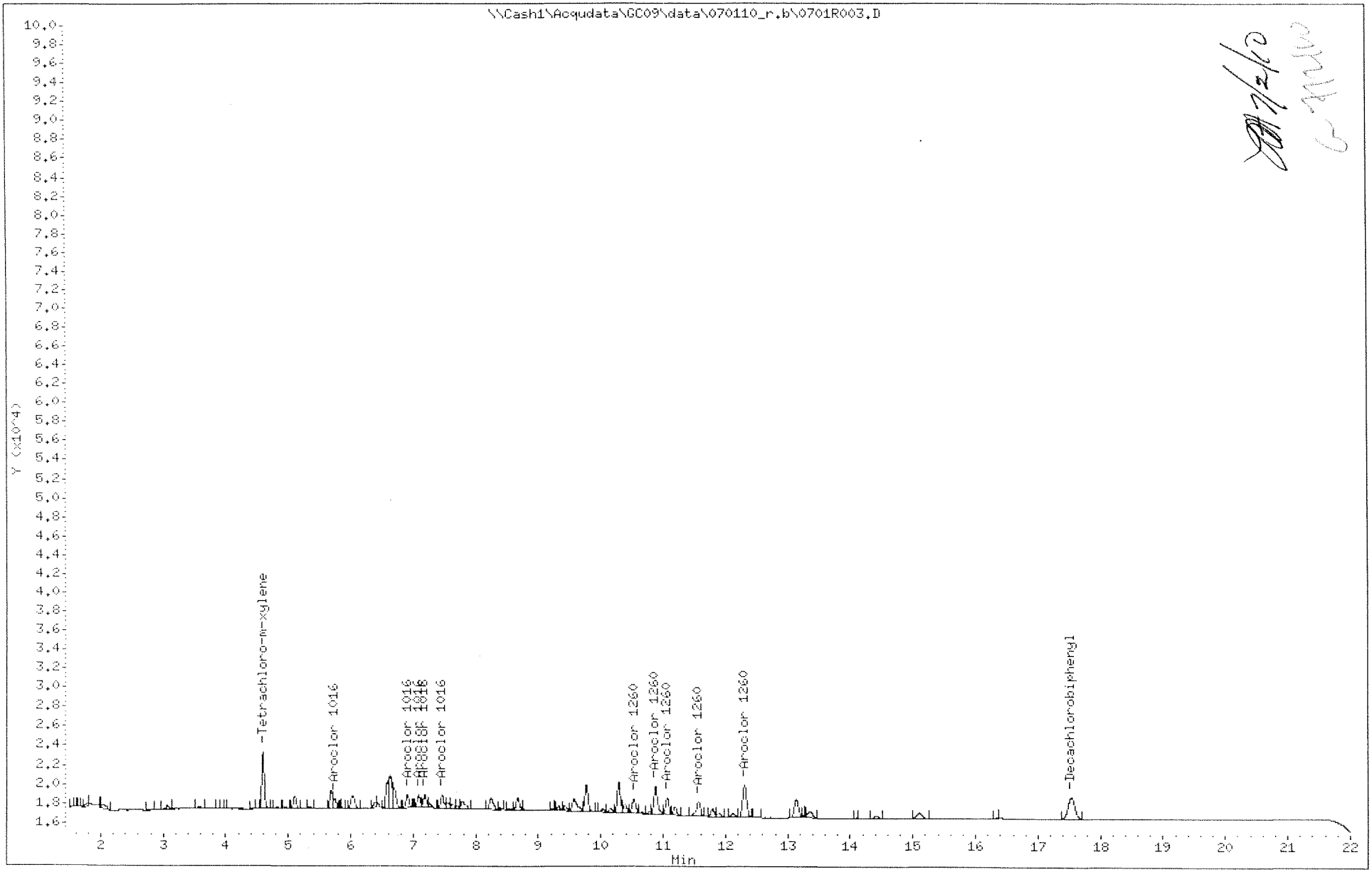
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
Date : 01-JUL-2010 15:37
Client ID:
Sample Info: 1016/1260 @ 25ppb | PCB5-55F

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

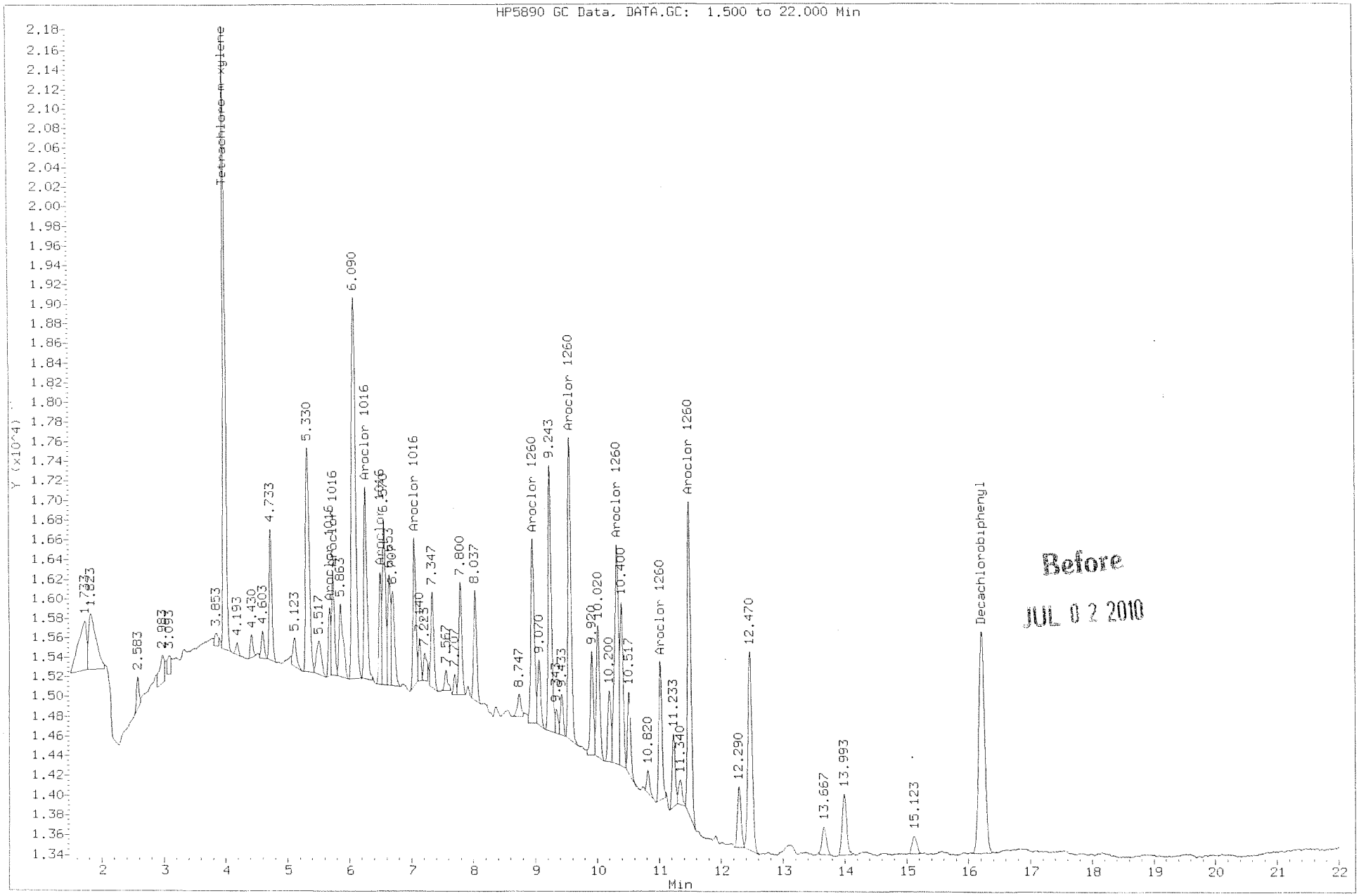


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R003.D
Date : 01-JUL-2010 15:37
Client ID:
Sample Info: 1016/1260 @ 25ppb | PCB5-55F

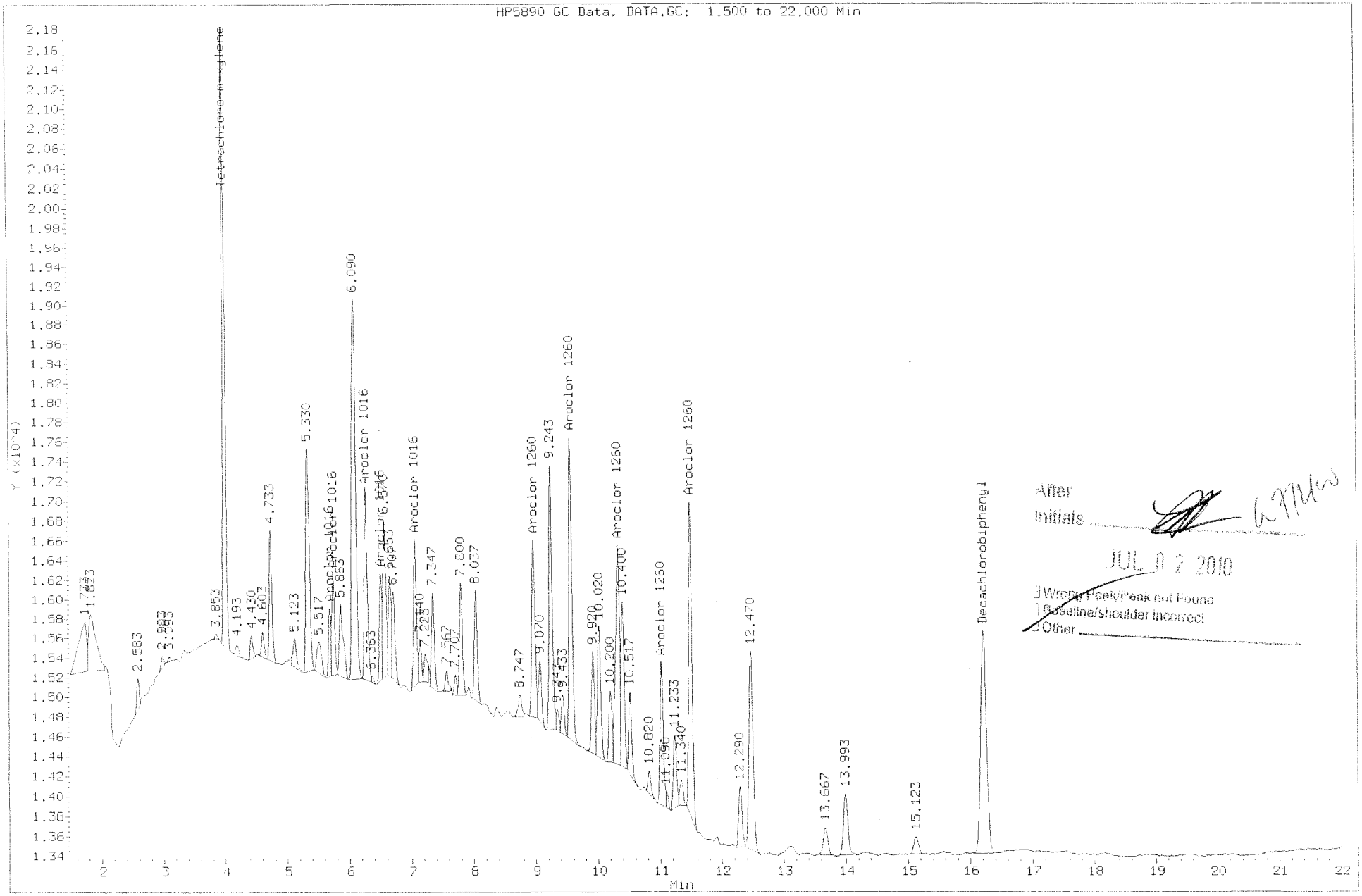
Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



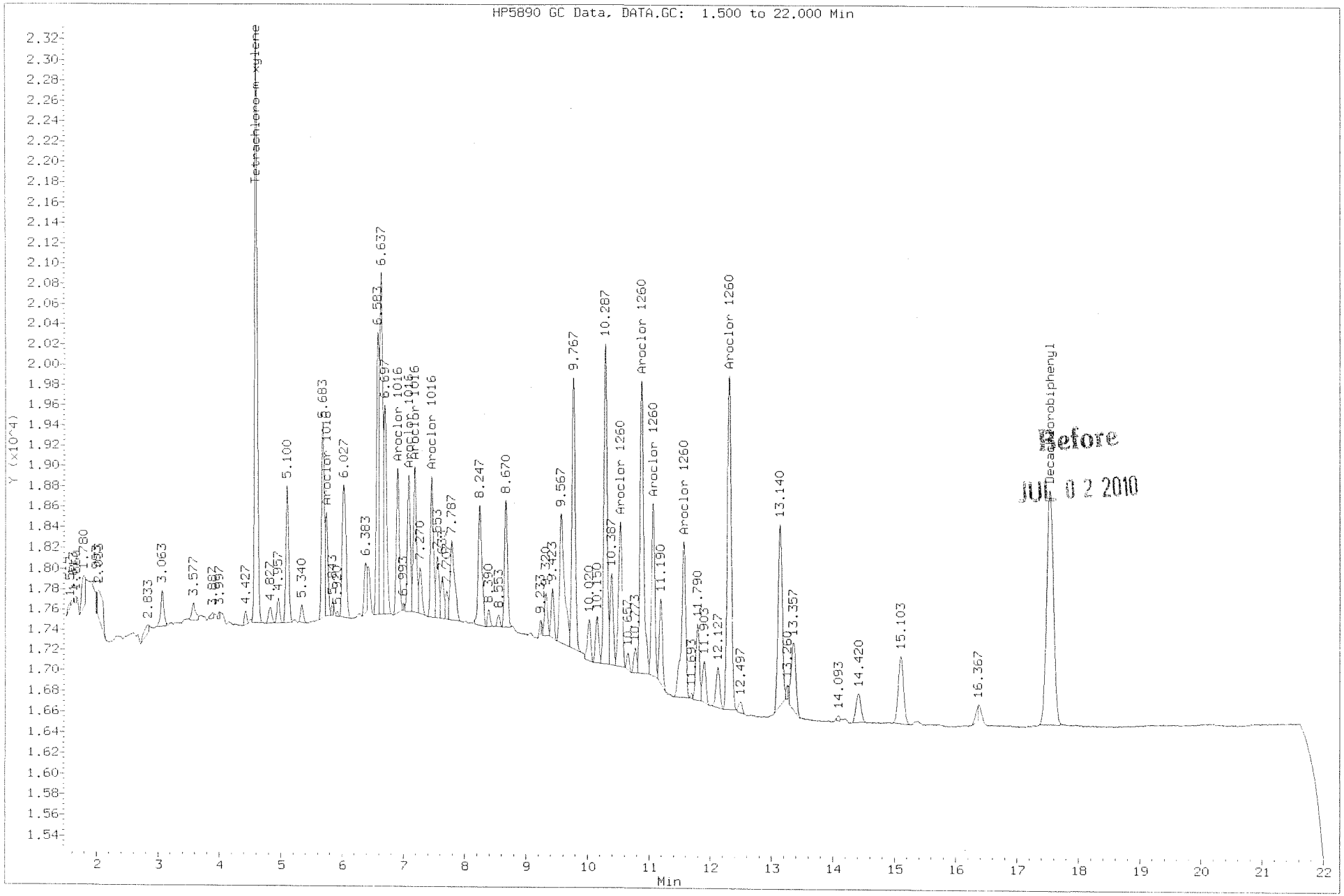
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
Injection Date: 01-JUL-2010 15:37
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F003.D
Injection Date: 01-JUL-2010 15:37
Instrument: GC09.i
Client Sample ID:

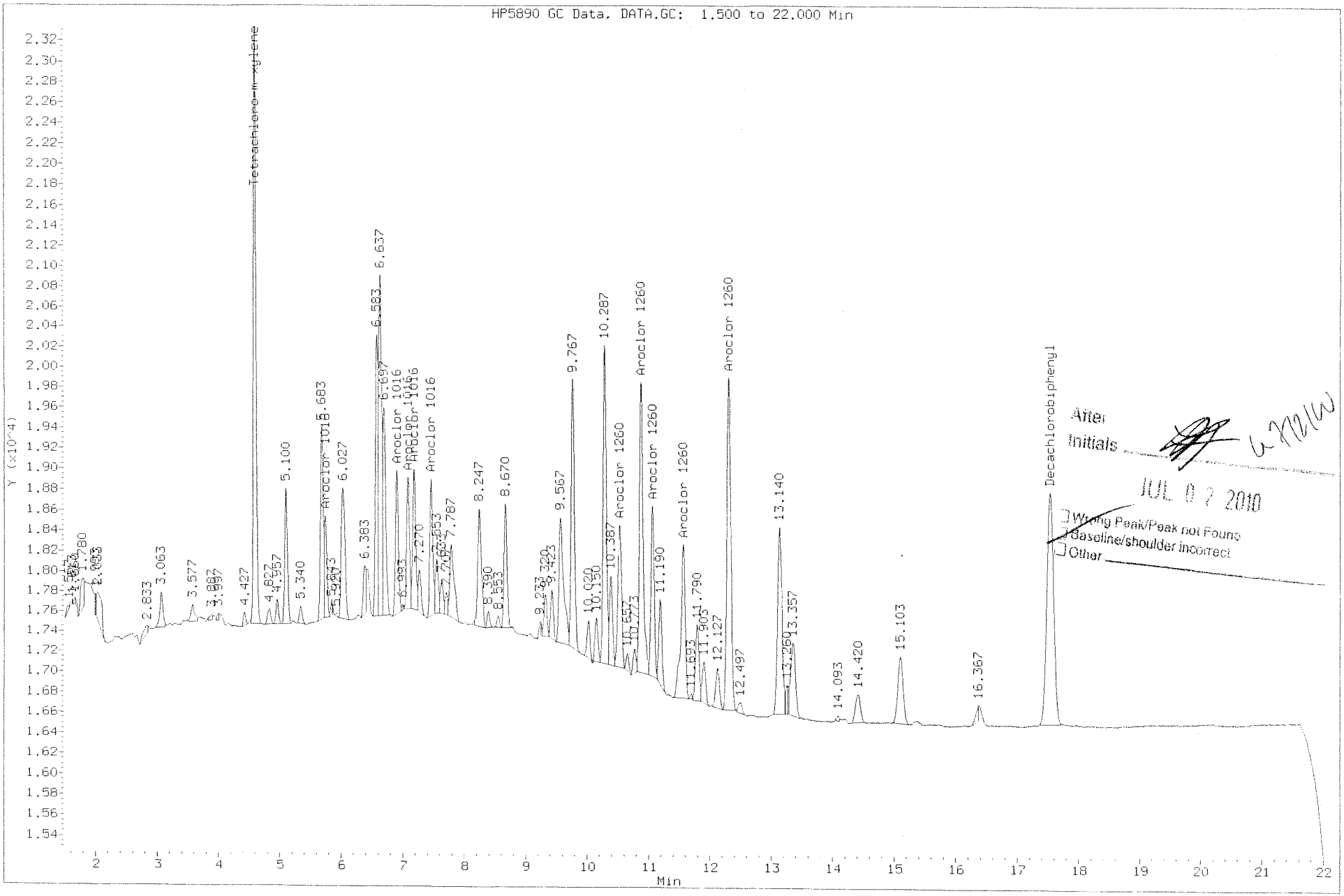


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R003.D
Injection Date: 01-JUL-2010 15:37
Instrument: GC09.i
Client Sample ID:



Before
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R003.D
Injection Date: 01-JUL-2010 15:37
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F004.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F004.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R004.D
Inj Date : 01-JUL-2010 16:03
Sample Info: 1016/1260 @ 50ppb | PCB5-55G
Misc Info :
Cal Date : 02-JUL-2010 08:13
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.593	33416	33247	5.89	5.74		100.00(M)
Aroclor 1016	5.687	5.743	3803	6194	57.6	60.0	80.00- 120.00	100.00(M)
	5.743	6.907	6590	9694	59.2	57.8	138.61- 207.92	173.26(M)
	6.267	7.087	13483	9013	60.7	61.6	283.61- 425.41	354.51(M)
	6.507	7.187	6433	9615	59.6	60.2	135.31- 202.97	169.14(M)
	7.060	7.463	9641	9272	61.1	60.2	202.79- 304.19	253.49(M)
			Average of Peak Amounts =		59.6	60.0		
Aroclor 1260	8.967	10.530	13747	11157	59.8	54.1	80.00- 120.00	100.00(M)
	9.563	10.880	20543	24704	58.0	58.8	119.55- 179.33	149.44(M)
	10.327	11.067	20146	13474	57.3	60.2	117.24- 175.86	146.55(M)
	11.023	11.567	10706	14868	55.3	55.3	62.30- 93.45	77.88(M)
	11.493	12.307	23864	28545	54.7	57.3	138.87- 208.31	173.59(M)
			Average of Peak Amounts =		57.0	57.1		
Decachlorobiphenyl	16.217	17.537	28892	34582	5.87	5.93		100.00

QC Flag Legend

M - Compound response manually integrated.

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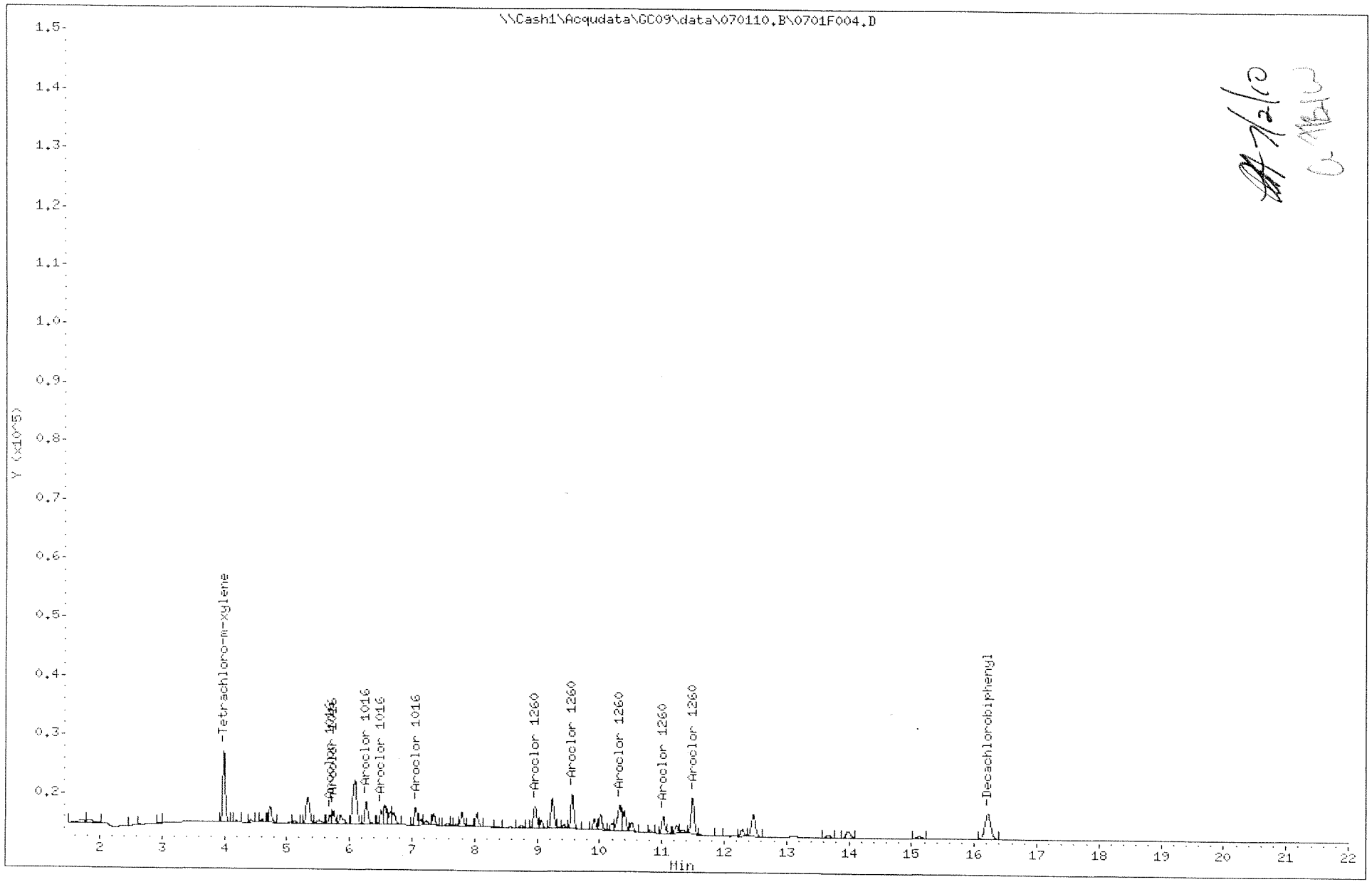
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F004.D
Date : 01-JUL-2010 16:03
Client ID:
Sample Info: 1016/1260 @ 50ppb | PCB5-55G

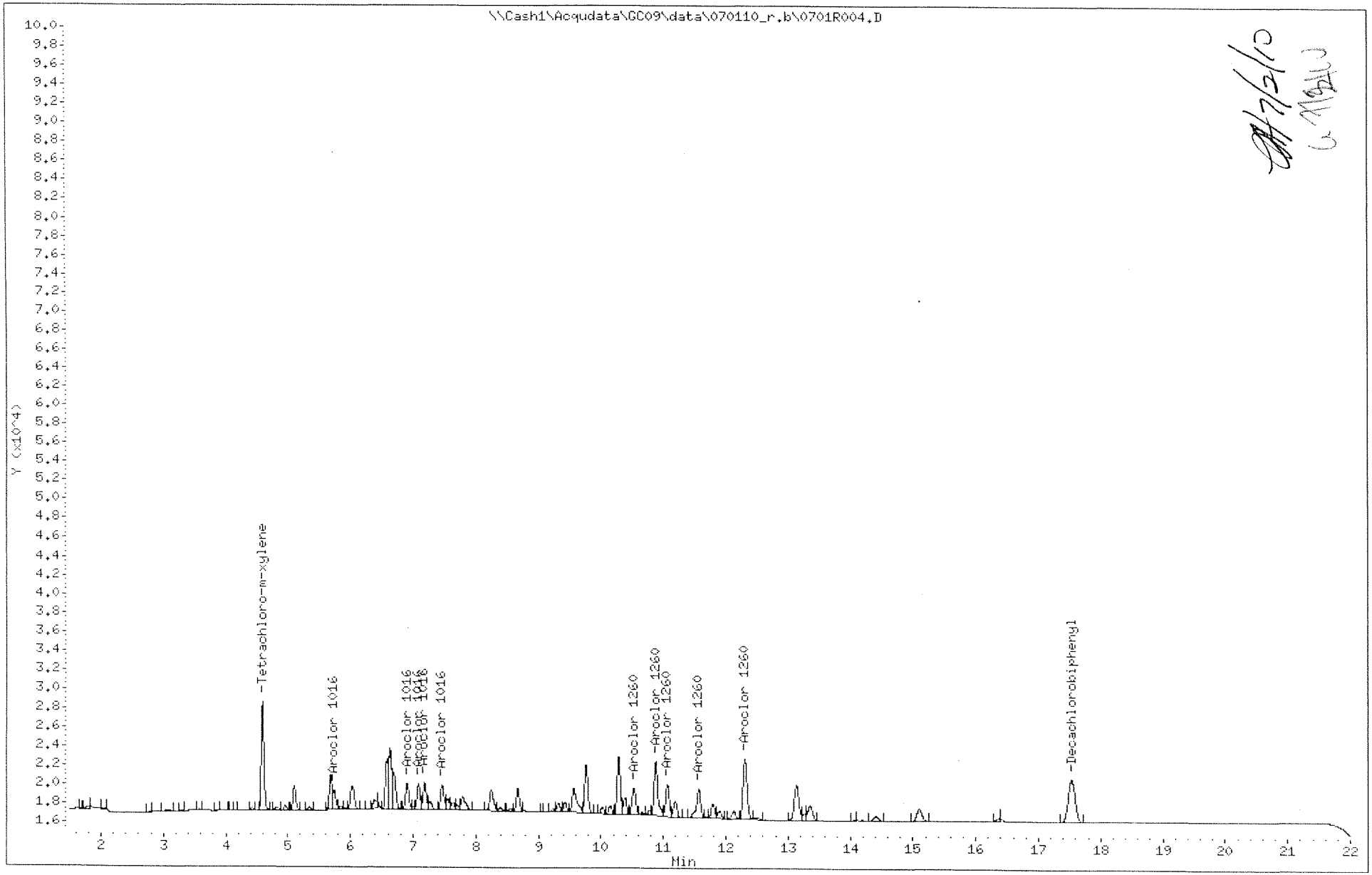
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r,b\0701R004,D
Date : 01-JUL-2010 16:03
Client ID:
Sample Info: 1016/1260 @ 50ppb | PCB5-55G

Instrument: GC09,i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



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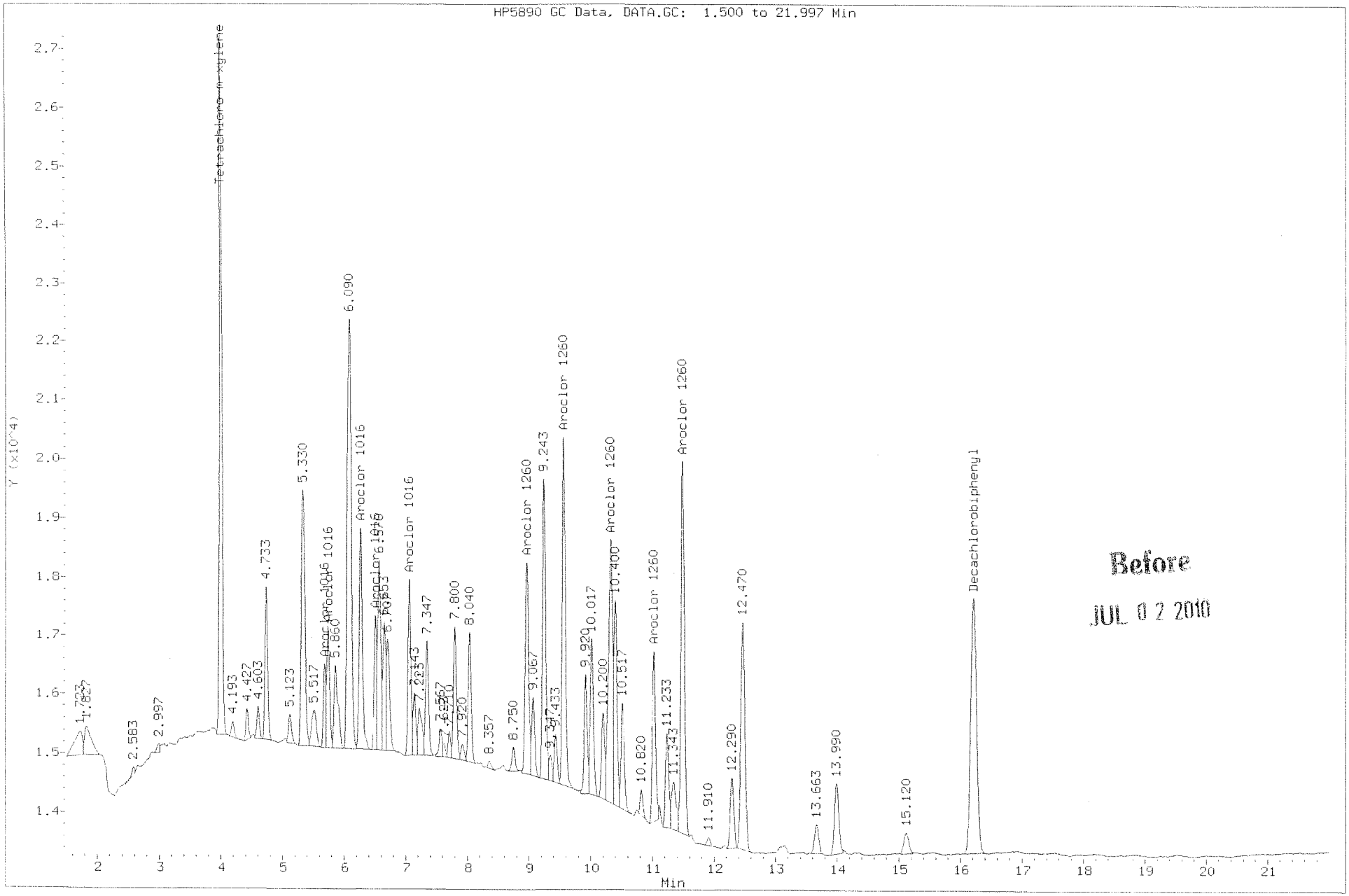
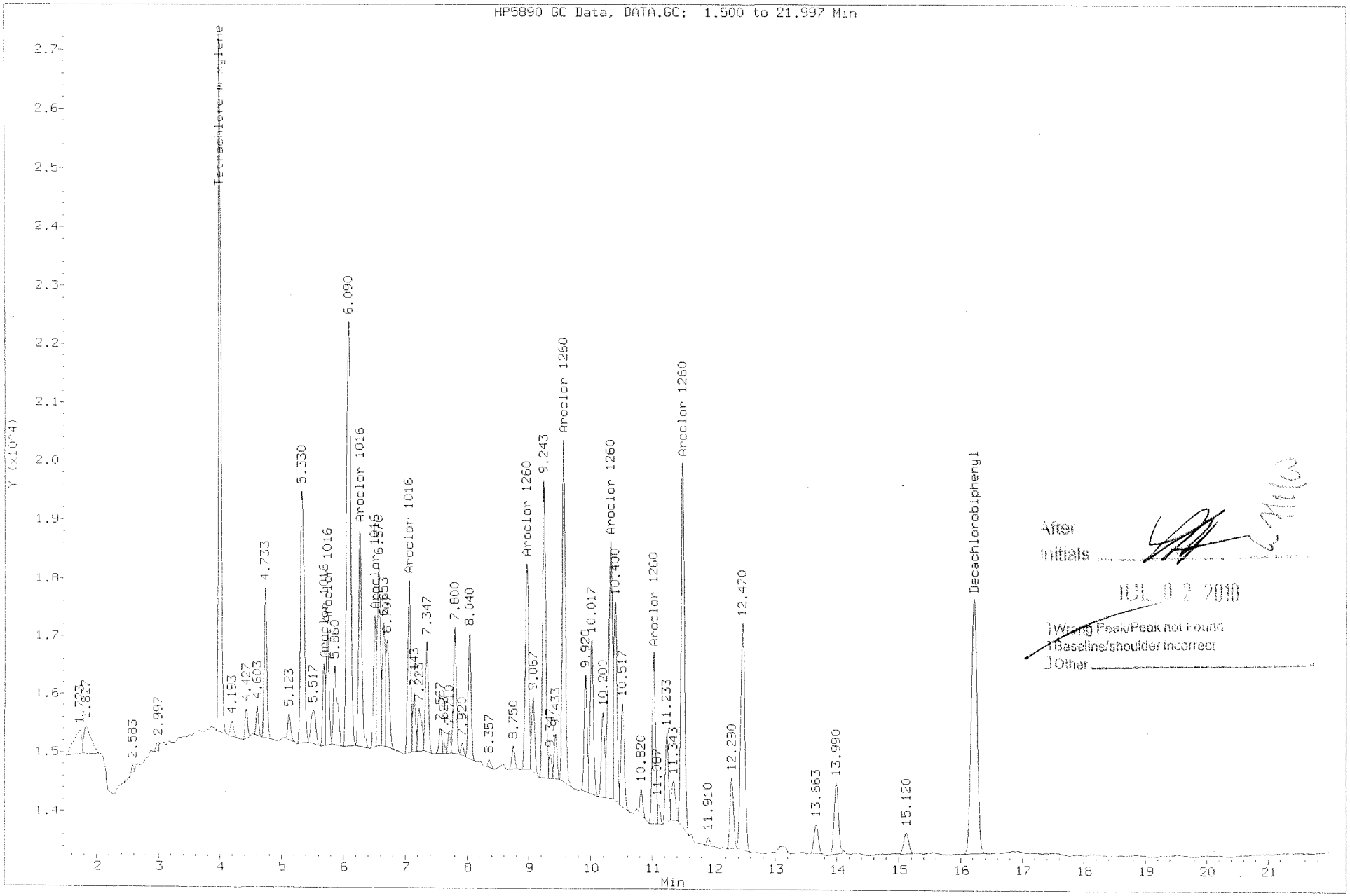
Injection Date: 01-JUL-2010 16:03
Instrument: GC09.i
Client Sample ID:



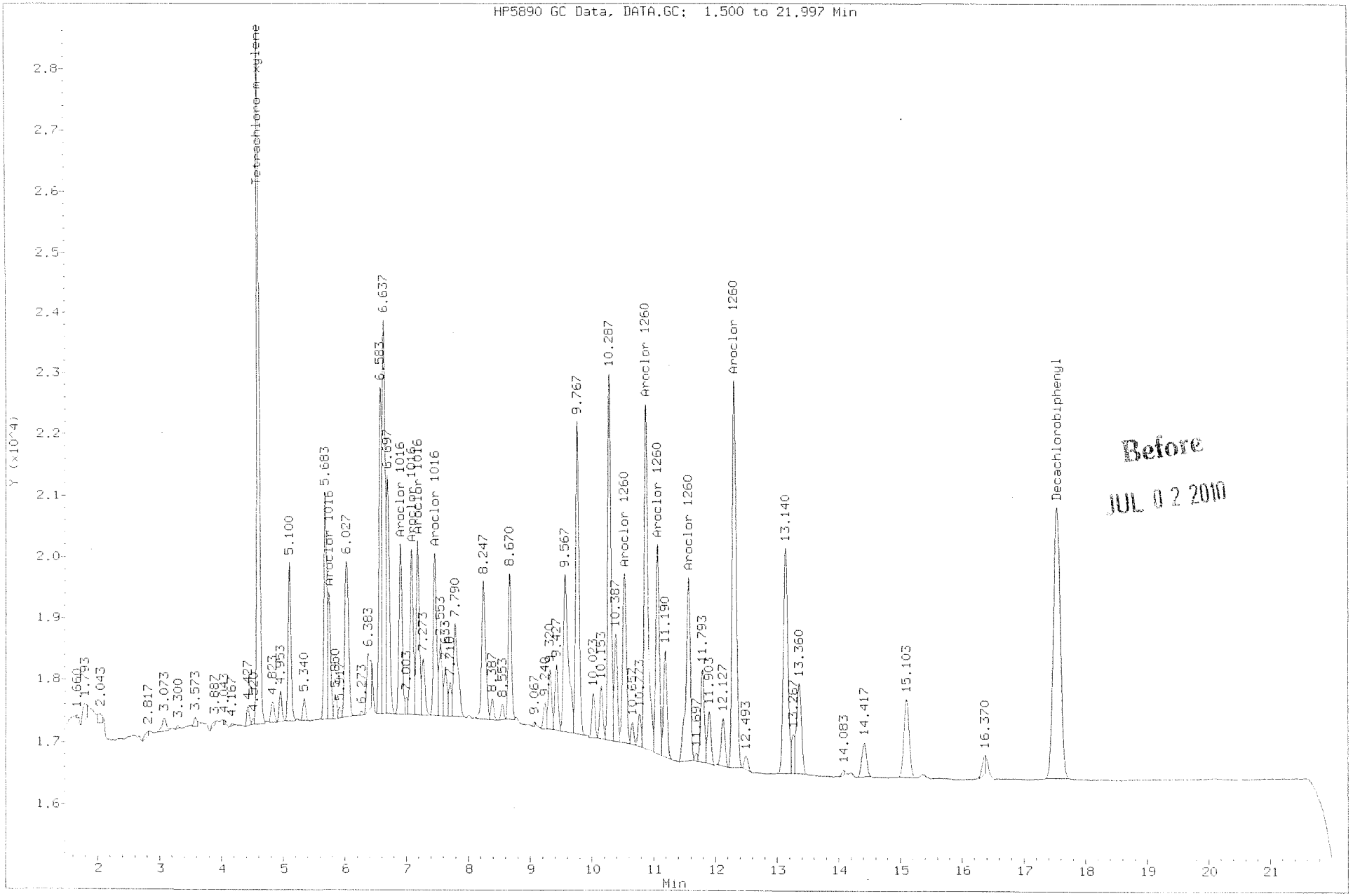
Before
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F004.D
Injection Date: 01-JUL-2010 16:03
Instrument: GC09.i
Client Sample ID:



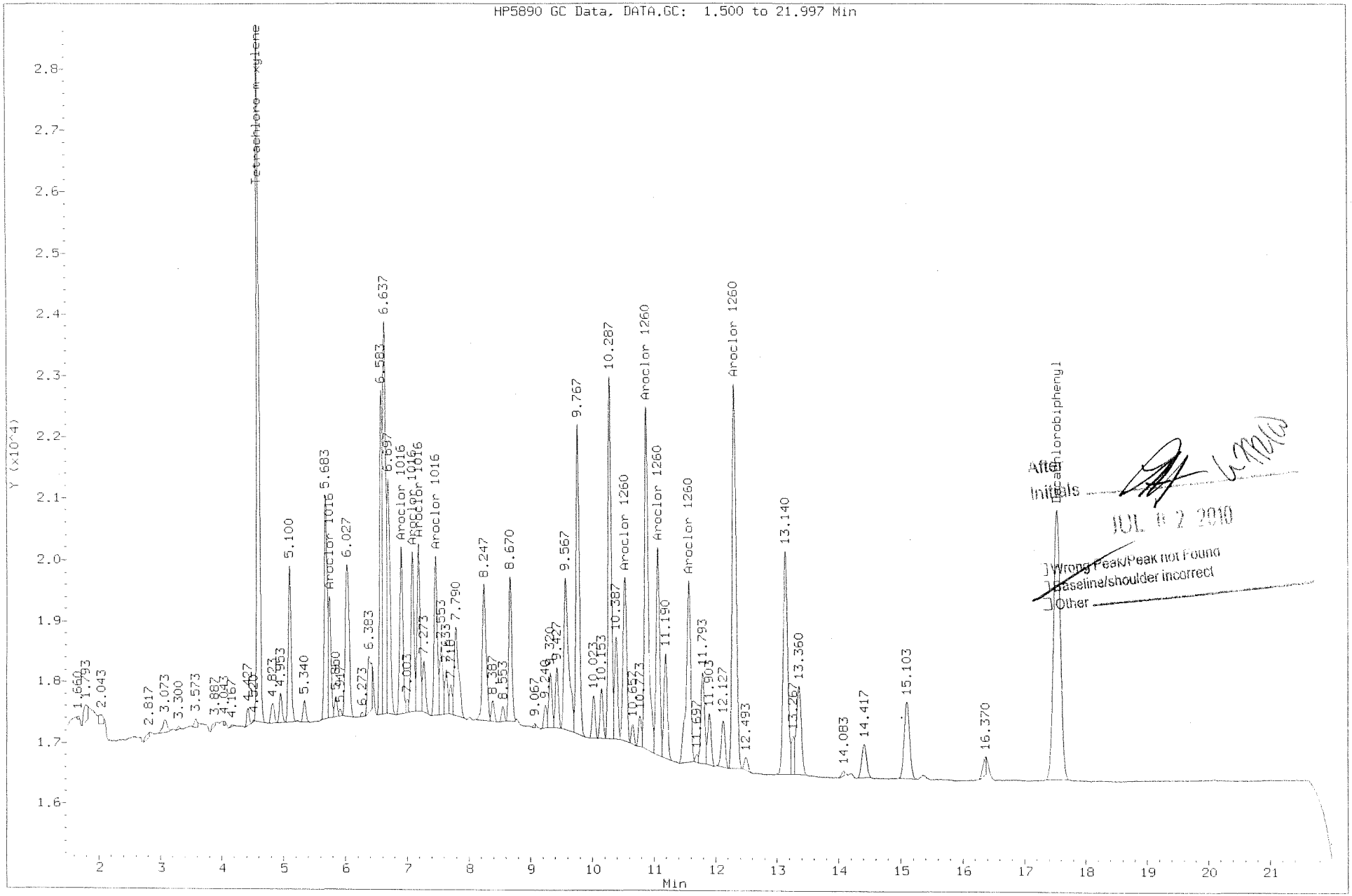
After
Initials
JUL 07 2010
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R004.D
Injection Date: 01-JUL-2010 16:03
Instrument: GC09.i
Client Sample ID:



Before
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R004.D
Injection Date: 01-JUL-2010 16:03
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F005.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F005.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R005.D
Inj Date : 01-JUL-2010 16:30
Sample Info: 1016/1260 @ 500ppb | PCB5-55H
Misc Info :
Cal Date : 02-JUL-2010 08:13
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.590	289346	299977	50.8	51.7		100.00
Aroclor 1016	5.687	5.743	33899	53451	517	518	80.00- 120.00	100.00
	5.743	6.907	56769	88293	508	524	138.61- 207.92	167.47
	6.267	7.087	113673	77010	509	516	283.61- 425.41	335.33
	6.510	7.183	55353	83364	509	513	135.31- 202.97	163.29
	7.060	7.463	80152	79802	507	512	202.79- 304.19	236.44
			Average of Peak Amounts =		510	517		
Aroclor 1260	8.967	10.533	117798	107600	502	517	80.00- 120.00	100.00
	9.563	10.877	169125	215524	476	512	119.55- 179.33	143.57
	10.327	11.063	177394	116723	504	522	117.24- 175.86	150.59
	11.023	11.567	100001	139020	526	517	62.30- 93.45	84.89
	11.490	12.307	227372	253375	517	509	138.87- 208.31	193.02
			Average of Peak Amounts =		505	515		
Decachlorobiphenyl	16.213	17.533	252714	301071	51.4	51.6		100.00

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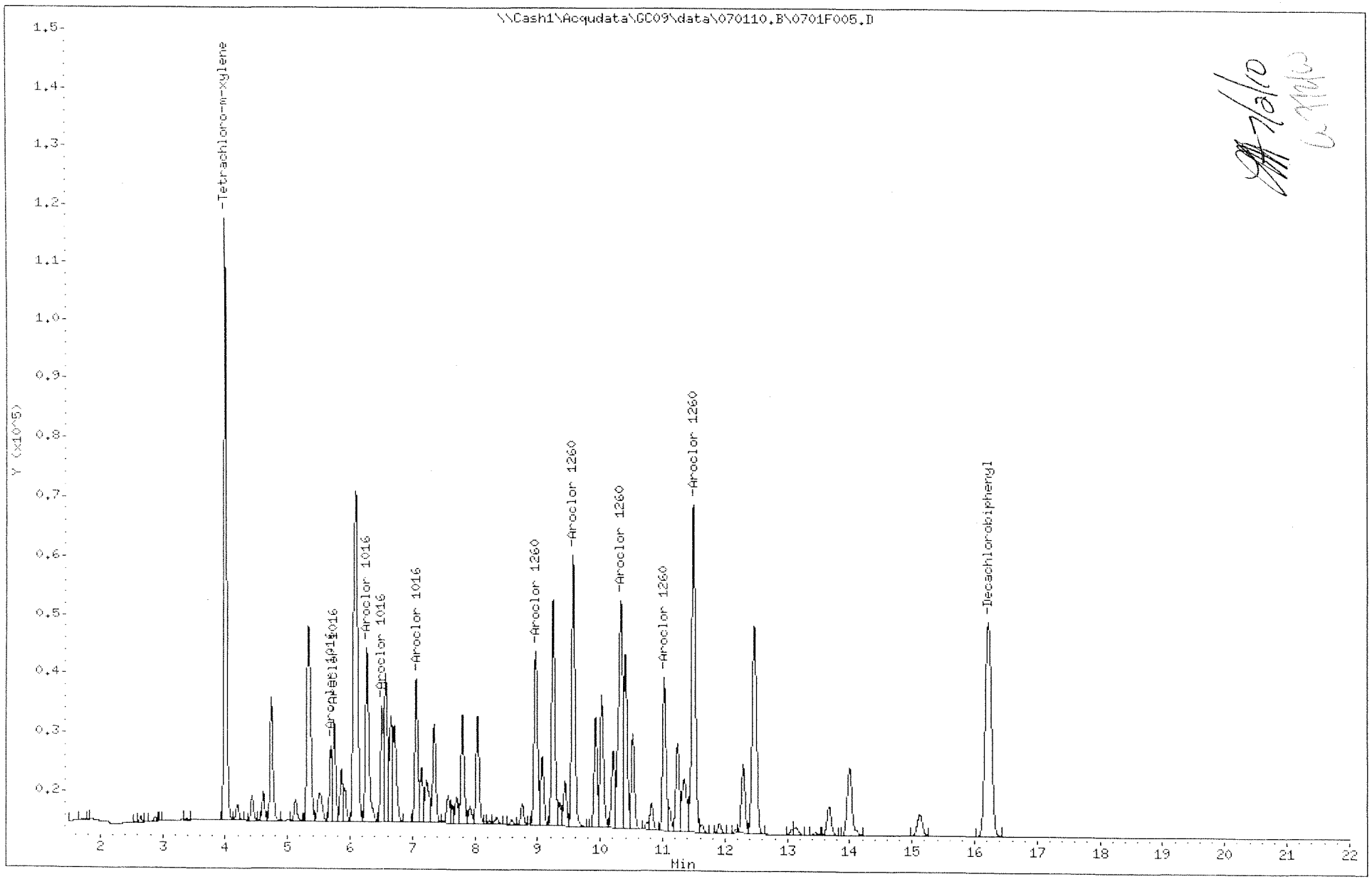
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F005.D
Date : 01-JUL-2010 16:30
Client ID:
Sample Info: 1016/1260 @ 500ppb | PCB5-55H

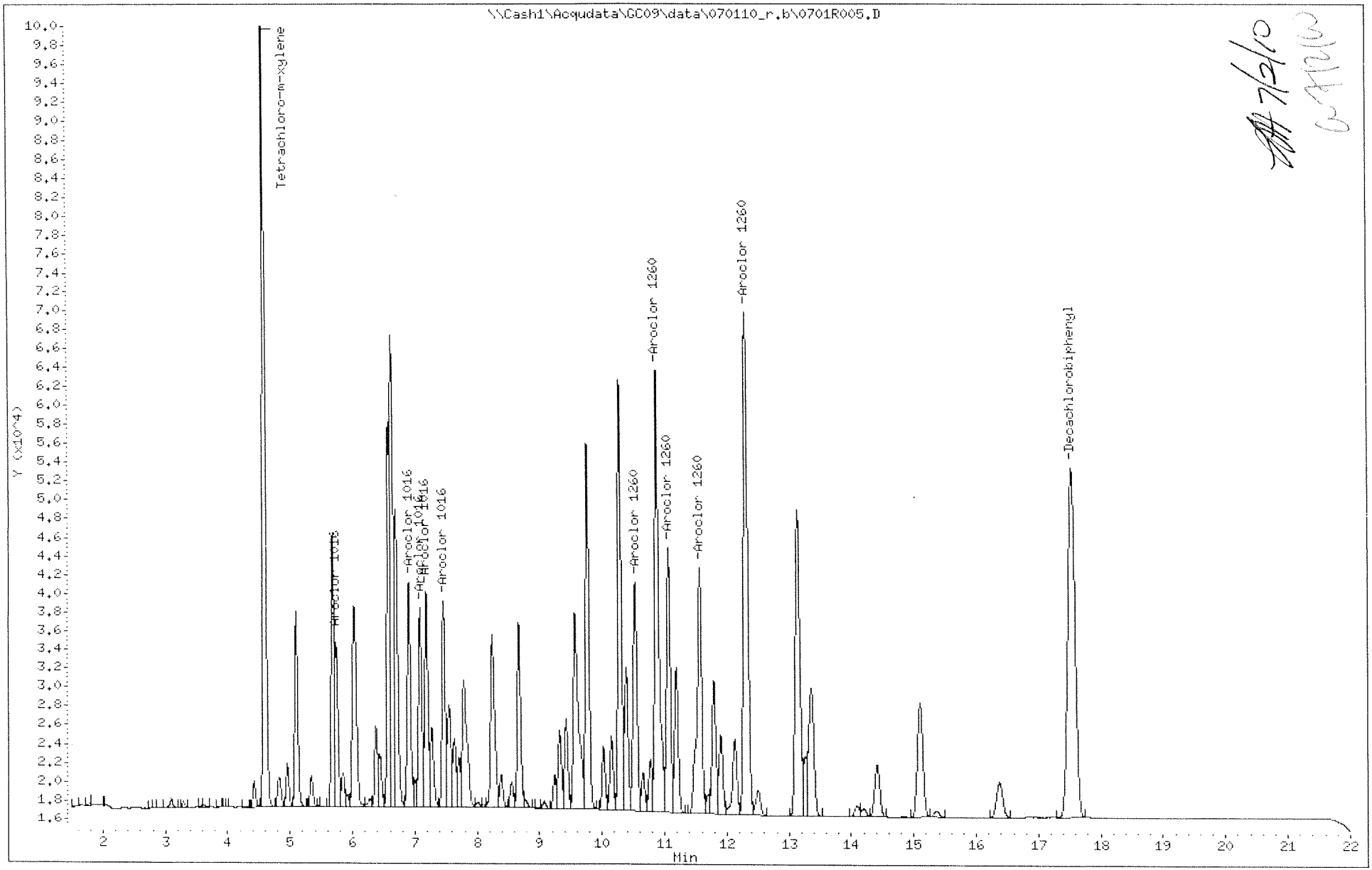
Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R005.D
Date : 01-JUL-2010 16:30
Client ID:
Sample Info: 1016/1260 @ 500ppb | PCB5-55H

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F006.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F006.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R006.D
Inj Date : 01-JUL-2010 16:56
Sample Info: 1016/1260 @ 1000ppb | PCB5-60G
Misc Info :
Cal Date : 02-JUL-2010 08:13
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.593	543609	562939	95.4	97.0		100.00
Aroclor 1016	5.687	5.743	64942	99940	991	968	80.00- 120.00	100.00
	5.743	6.907	106402	165248	953	980	138.61- 207.92	163.84
	6.267	7.087	210635	140049	943	939	283.61- 425.41	324.34
	6.507	7.187	104363	153099	960	942	135.31- 202.97	160.70
	7.060	7.463	148961	146892	942	943	202.79- 304.19	229.38
			Average of Peak Amounts =		958	954		
Aroclor 1260	8.967	10.533	218797	203681	932	980	80.00- 120.00	100.00
	9.563	10.877	312694	404527	879	961	119.55- 179.33	142.92
	10.327	11.067	345535	217281	981	971	117.24- 175.86	157.92
	11.023	11.567	190627	266348	1000	990	62.30- 93.45	87.13
	11.493	12.307	435259	479098	989	962	138.87- 208.31	198.93
			Average of Peak Amounts =		956	973		
Decachlorobiphenyl	16.217	17.537	470432	557831	95.6	95.7		100.00

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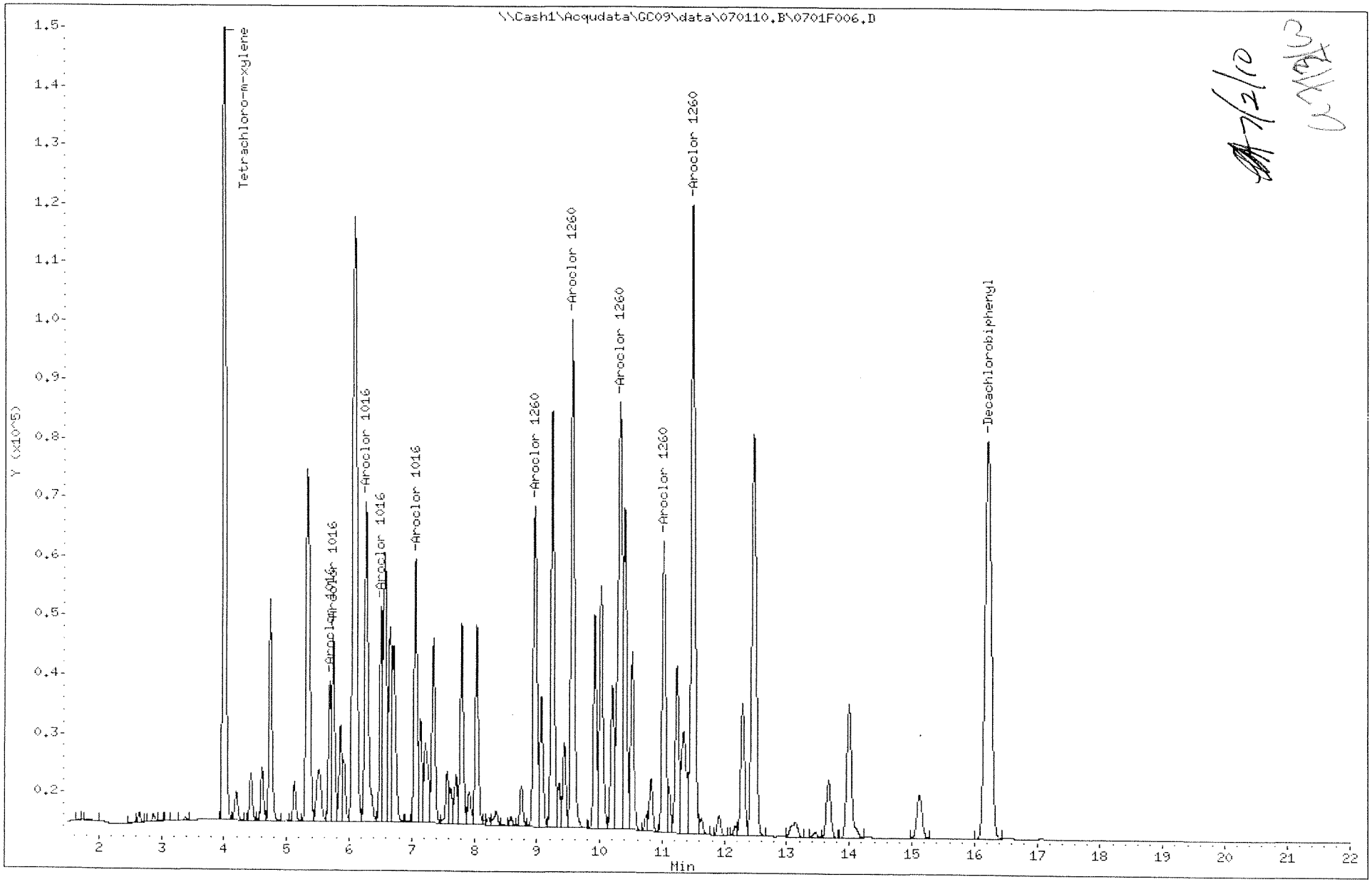
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F006.D
Date : 01-JUL-2010 16:56
Client ID:
Sample Info: 1016/1260 @ 1000ppb | PCB5-60G

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

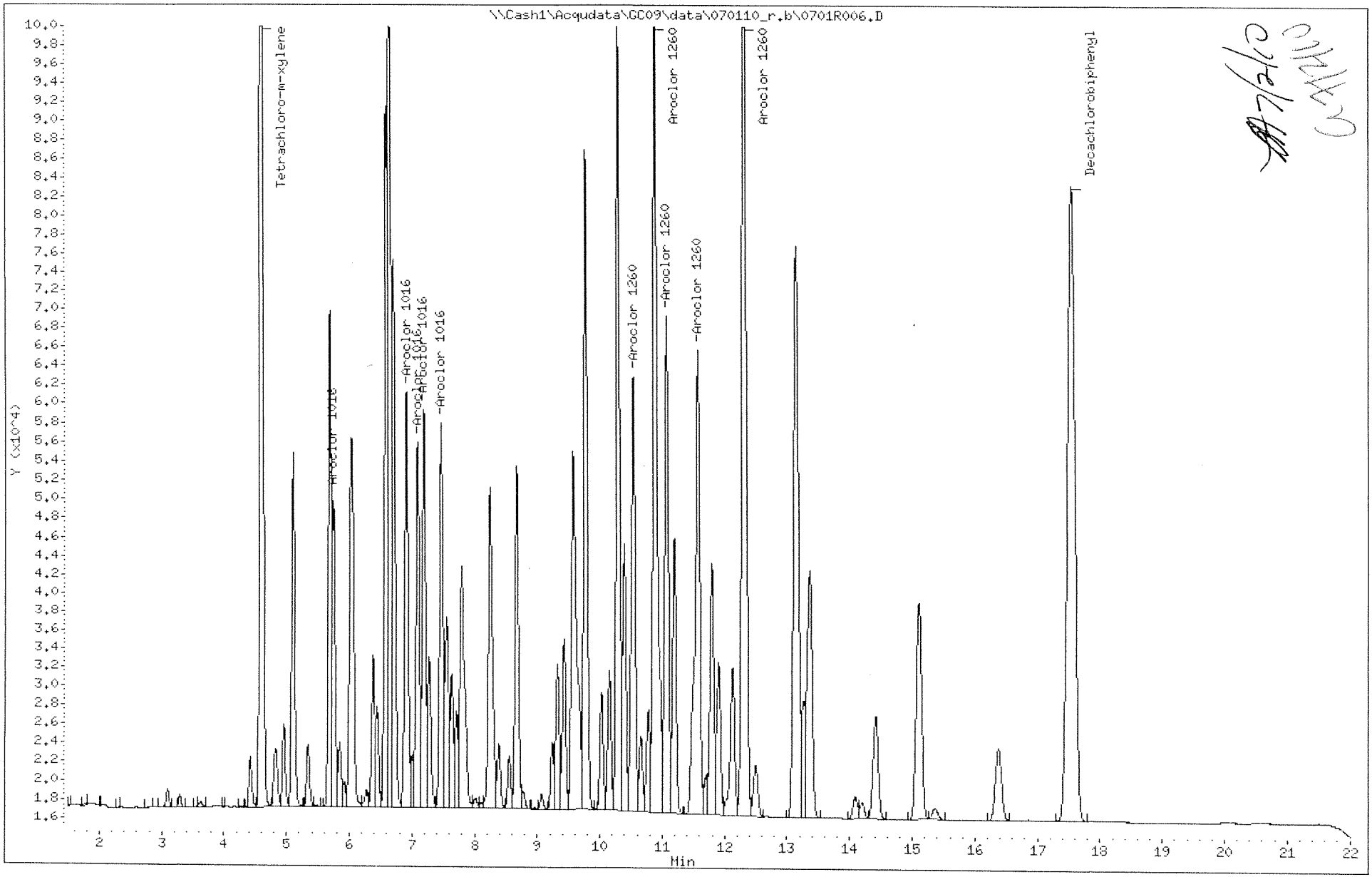
Column phase: DB-35MS



272

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R006.D
Date : 01-JUL-2010 16:56
Client ID:
Sample Info: 1016/1260 @ 1000ppb | PCB5-60G

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F007.D
Report Date: 02-Jul-2010 10:08

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Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F007.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R007.D
Inj Date : 01-JUL-2010 17:23
Sample Info: 1016/1260 @ 2000ppb | PCB5-55J
Misc Info :
Cal Date : 02-JUL-2010 08:13
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.593	985558	1028798	173	177		100.00
Aroclor 1016	5.687	5.743	118088	181796	1800	1760	80.00- 120.00	100.00
	5.743	6.907	194416	300824	1740	1780	138.61- 207.92	164.64
	6.267	7.087	379963	250678	1700	1680	283.61- 425.41	321.76
	6.510	7.187	189614	275910	1740	1700	135.31- 202.97	160.57
	7.060	7.463	271755	266232	1720	1710	202.79- 304.19	230.13
			Average of Peak Amounts =		1740	1730		
Aroclor 1260	8.967	10.533	395715	379436	1690	1820	80.00- 120.00	100.00
	9.563	10.880	565876	746528	1590	1770	119.55- 179.33	143.00
	10.327	11.067	638830	395876	1810	1770	117.24- 175.86	161.44
	11.023	11.570	357141	494880	1880	1840	62.30- 93.45	90.25
	11.490	12.310	808780	885672	1840	1780	138.87- 208.31	204.38
			Average of Peak Amounts =		1760	1800		
Decachlorobiphenyl	16.217	17.537	852579	1002517	173	172		100.00

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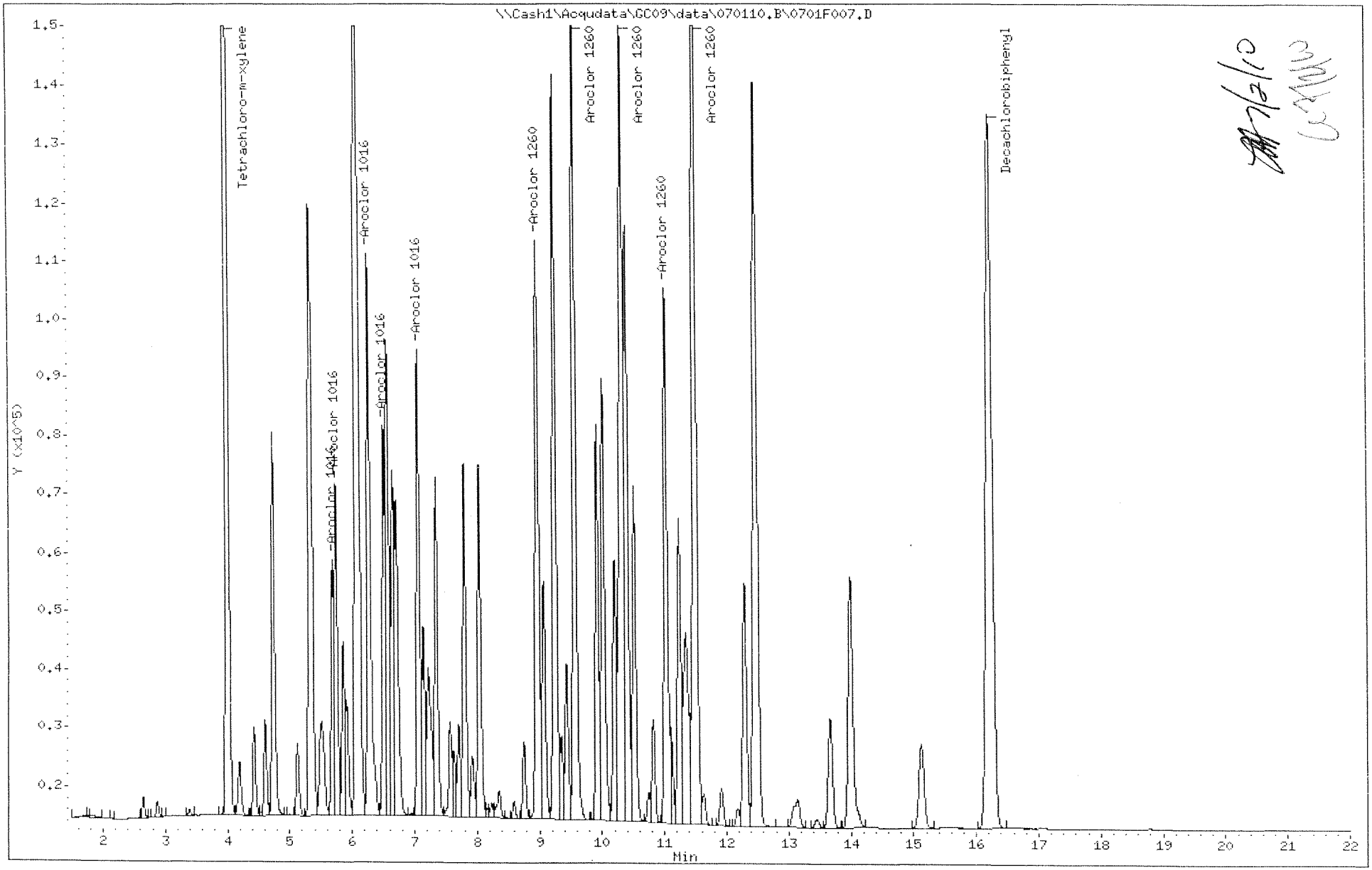
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F007.D
Date : 01-JUL-2010 17:23
Client ID:
Sample Info: 1016/1260 @ 2000ppb | PCB5-55J

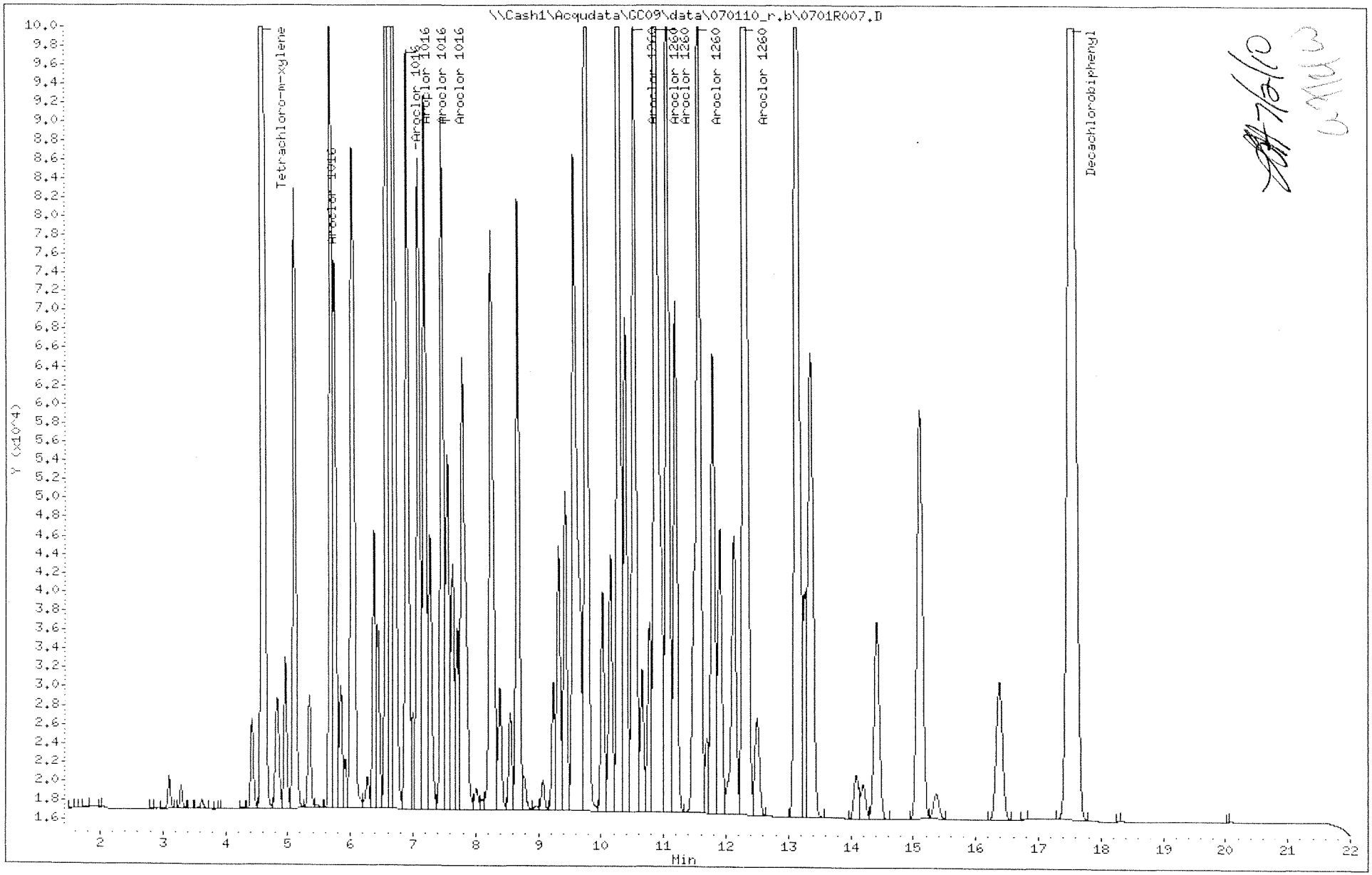
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R007.D
Date : 01-JUL-2010 17:23
Client ID:
Sample Info: 1016/1260 @ 2000ppb | PCB5-55J

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F008.D
Report Date: 02-Jul-2010 10:08

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Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F008.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R008.D
Inj Date : 01-JUL-2010 17:50
Sample Info: 1016/1260 @ 5000ppb | PCB5-55K
Misc Info :
Cal Date : 02-JUL-2010 08:13
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.590	2154441	2226883	378	384		100.00
Aroclor 1016	5.687	5.740	268272	404014	4090	3910	80.00- 120.00	100.00
	5.743	6.907	422615	653919	3780	3880	138.61- 207.92	157.53
	6.267	7.083	831988	535982	3730	3590	283.61- 425.41	310.13
	6.507	7.183	430908	596438	3960	3670	135.31- 202.97	160.62
	7.060	7.460	595978	583668	3770	3750	202.79- 304.19	222.15
			Average of Peak Amounts =		3870	3760		
Aroclor 1260	8.963	10.533	876642	851306	3740	4090	80.00- 120.00	100.00
	9.560	10.877	1257657	1676188	3540	3980	119.55- 179.33	143.46
	10.327	11.063	1442433	879135	4100	3930	117.24- 175.86	164.54
	11.023	11.567	809170	1125449	4250	4180	62.30- 93.45	92.30
	11.490	12.307	1855607	1995401	4220	4010	138.87- 208.31	211.67
			Average of Peak Amounts =		3970	4040		
Decachlorobiphenyl	16.213	17.533	1883074	2179589	383	374		100.00

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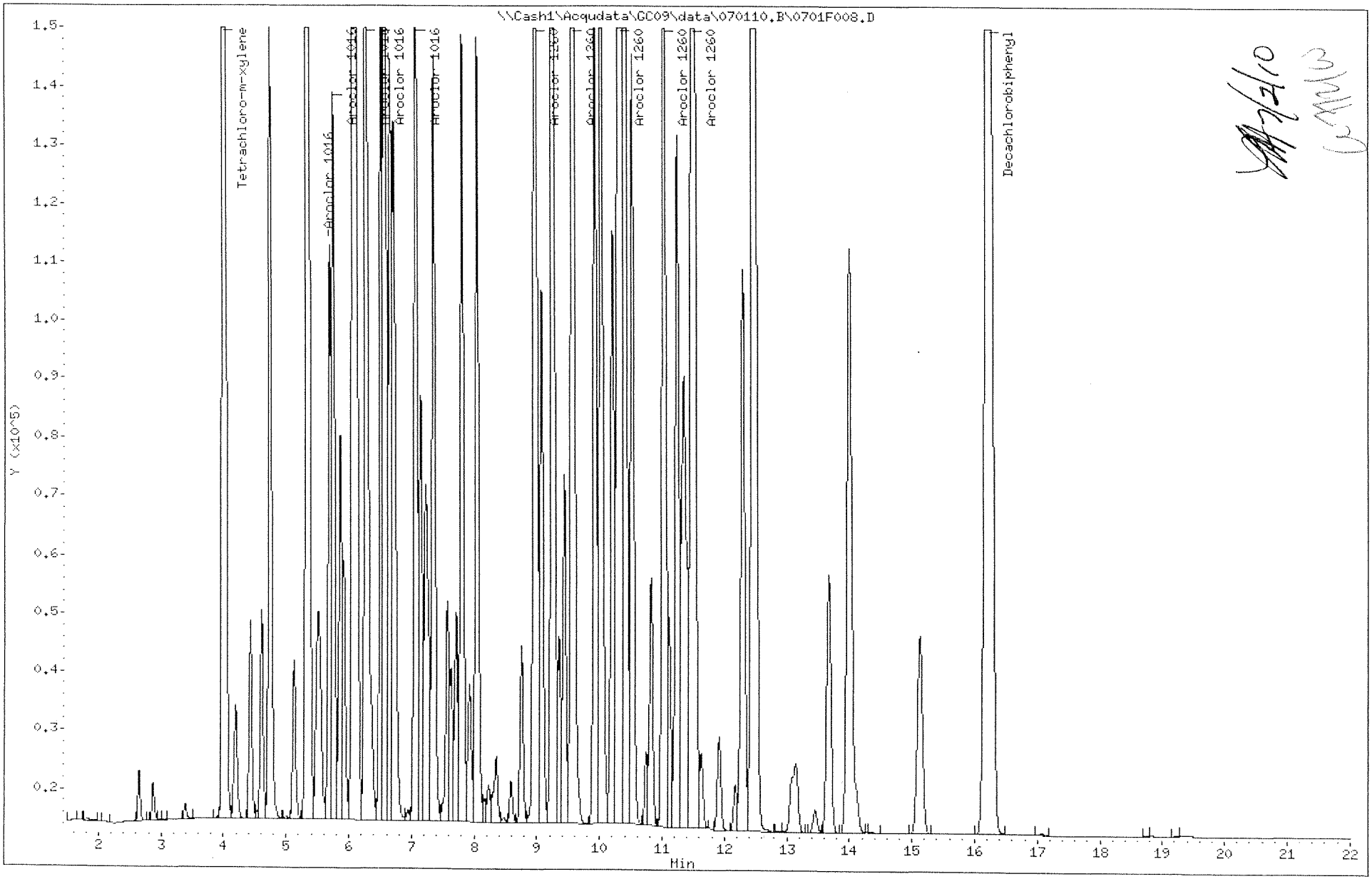
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F008.D
Date : 01-JUL-2010 17:50
Client ID:
Sample Info: 1016/1260 @ 5000ppb | PCB5-55K

Instrument: GC09.i

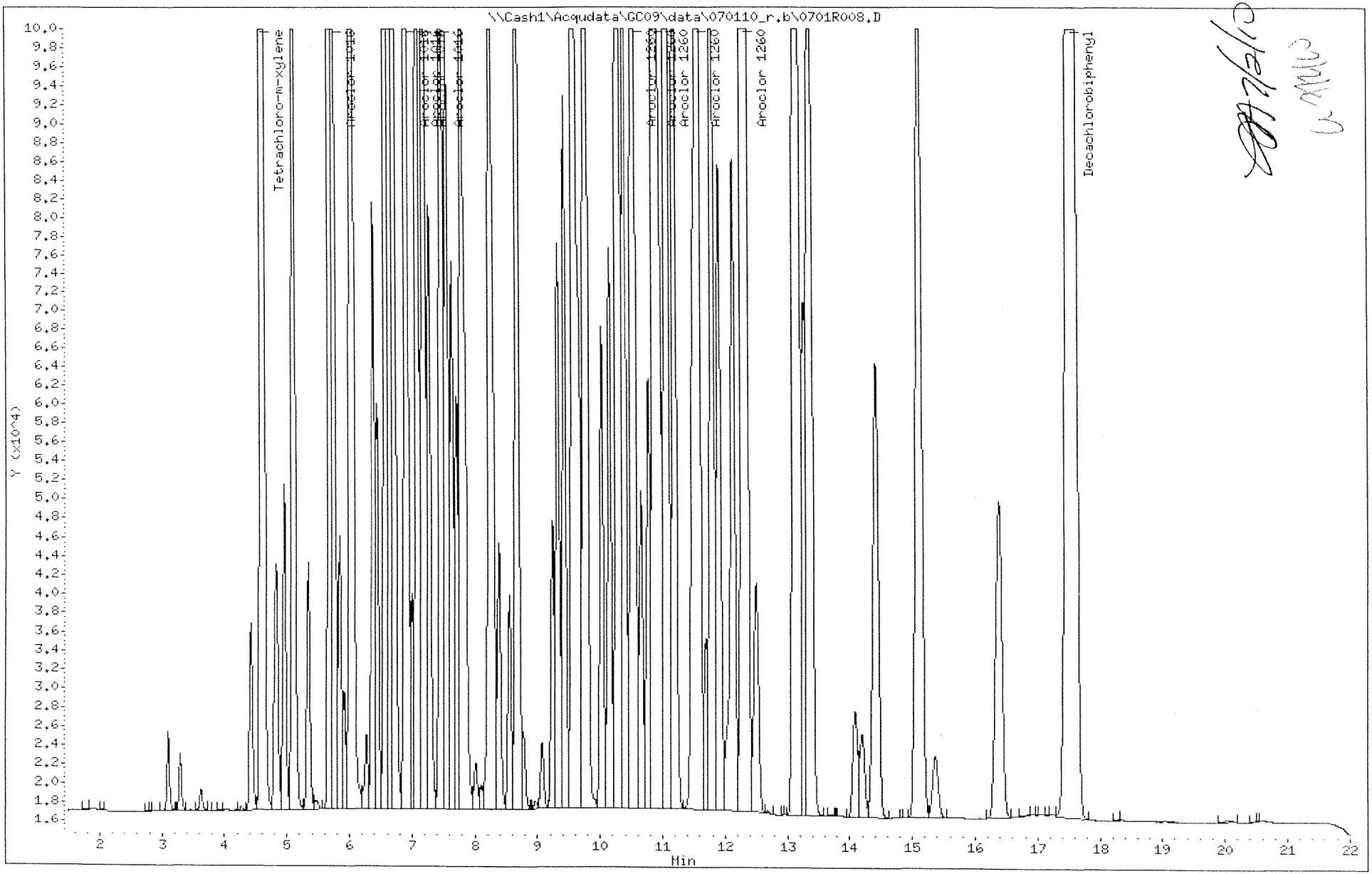
Operator: LHarris

Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R008.D
Date : 01-JUL-2010 17:50
Client ID:
Sample Info: 1016/1260 @ 5000ppb | PCB5-55K

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R009.D
Inj Date : 01-JUL-2010 18:16
Sample Info: 1221/1254 @ 50/25ppb | PCB5-52D
Misc Info :
Cal Date : 02-JUL-2010 08:41
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1221+1254.sub
Sub List #2 : 1221+1254.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.387	4.270	4409	1152	71.9	60.1	80.00- 120.00	100.00(M)
	4.427	4.423	5766	1811	66.1	54.3	123.27- 184.91	130.77(M)
	4.607	4.833	3444	5207	58.9	60.6	79.54- 119.30	78.11(M)
	4.737	4.957	13264	3333	69.5	21.4	253.26- 379.90	300.82(M)
			Average of Peak Amounts =		66.6	49.1		
Aroclor 1254	7.800	9.240	8955	6905	29.9	31.6	80.00- 120.00	100.00(M)
	8.750	9.427	6131	12428	29.0	31.2	65.70- 98.55	68.46(M)
	8.953	9.767	12797	5321	29.9	28.7	127.75- 191.62	142.90(M)
	9.350	10.023	10329	9919	28.8	30.2	108.11- 162.16	115.34(M)
	9.563	10.287	5588	6084	29.8	31.4	56.14- 84.21	62.40(M)
			Average of Peak Amounts =		29.5	30.6		

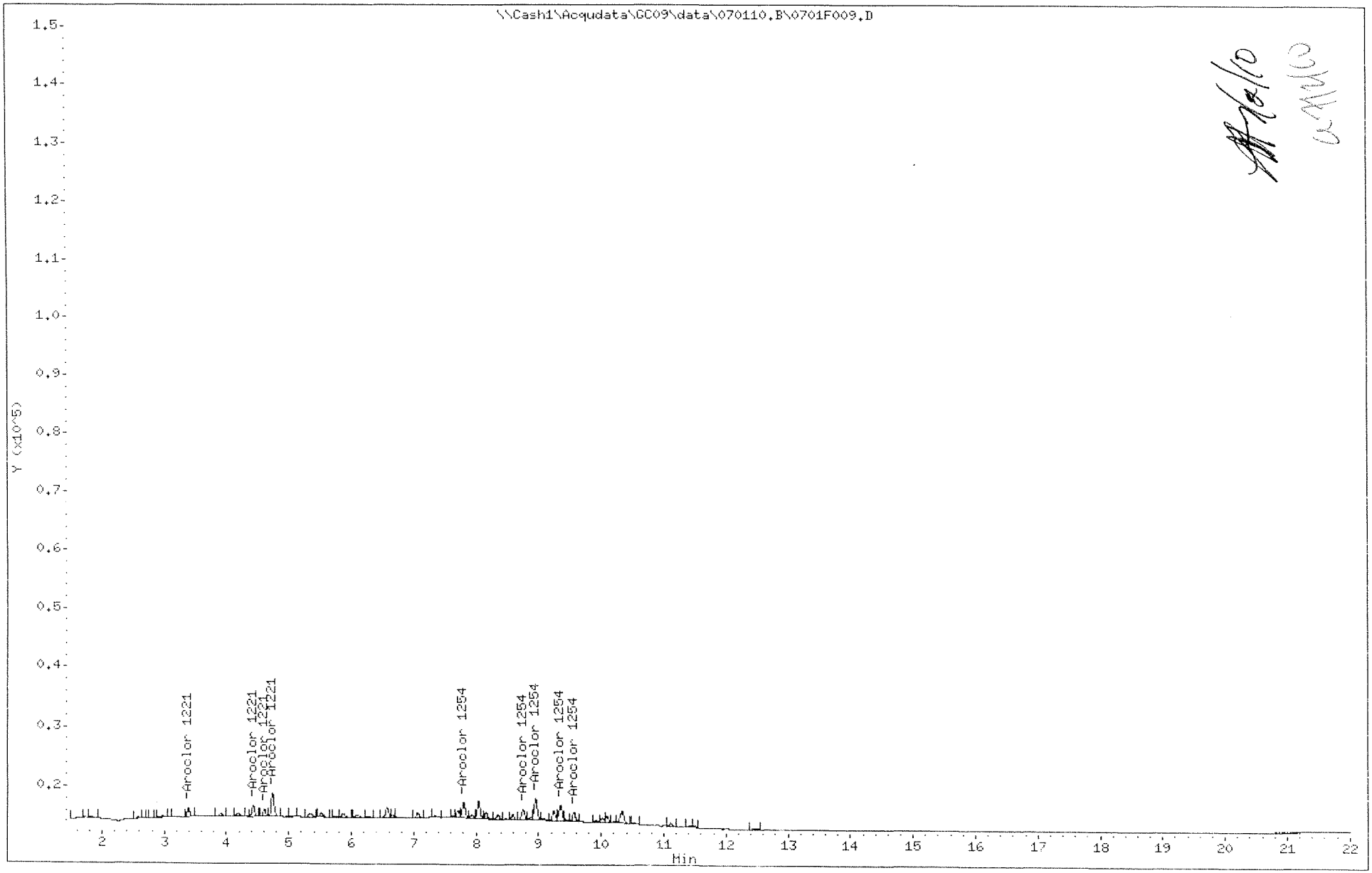
QC Flag Legend

M - Compound response manually integrated.

7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
Date : 01-JUL-2010 18:16
Client ID:
Sample Info: 1221/1254 @ 50/25ppb | PCB5-52D

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

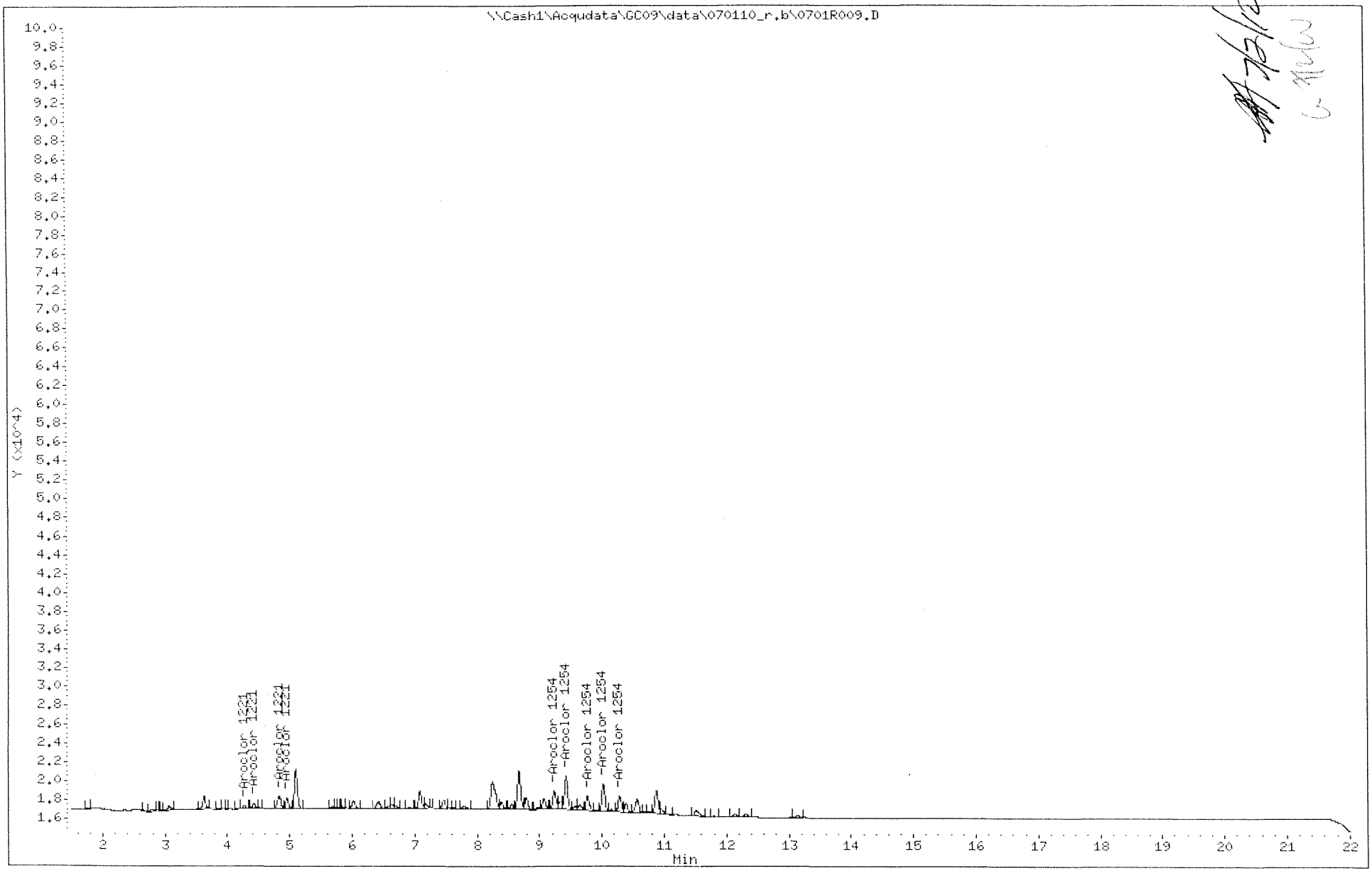


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R009.D
Date : 01-JUL-2010 18:16
Client ID:
Sample Info: 1221/1254 @ 50/25ppb | PCB5-52D

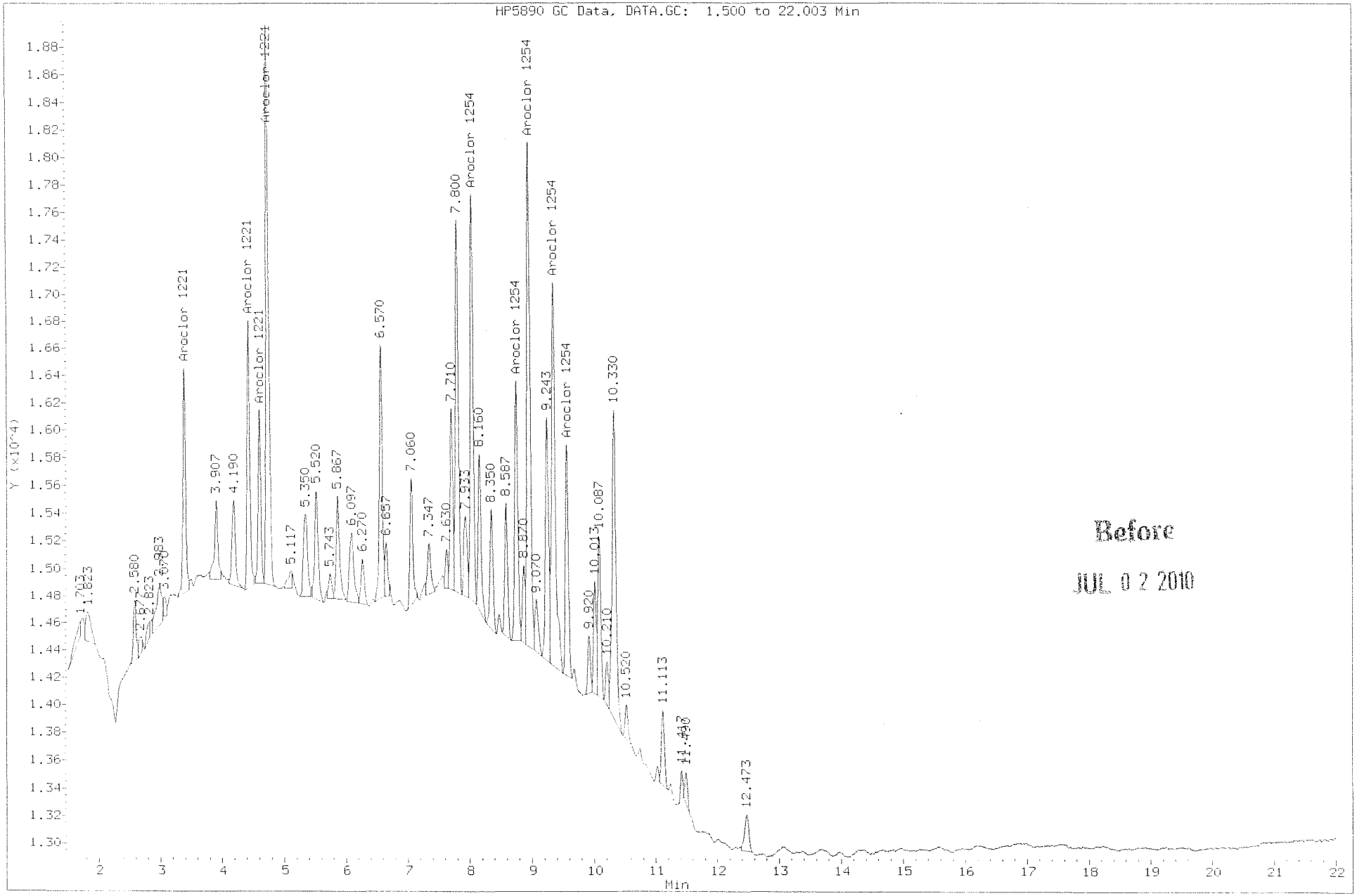
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



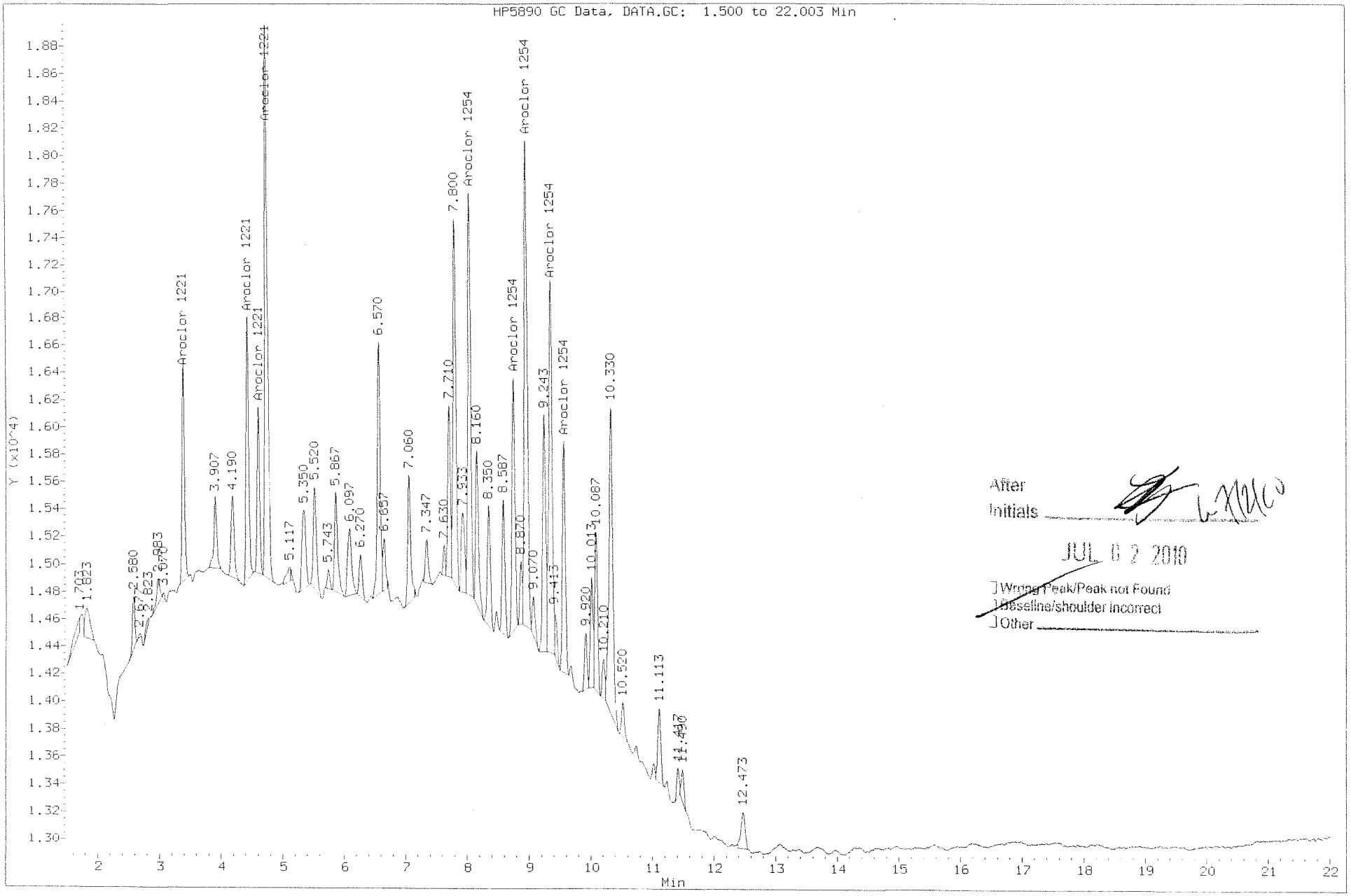
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
Injection Date: 01-JUL-2010 18:16
Instrument: GC09.i
Client Sample ID:



Before

JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F009.D
Injection Date: 01-JUL-2010 18:16
Instrument: GC09.i
Client Sample ID:

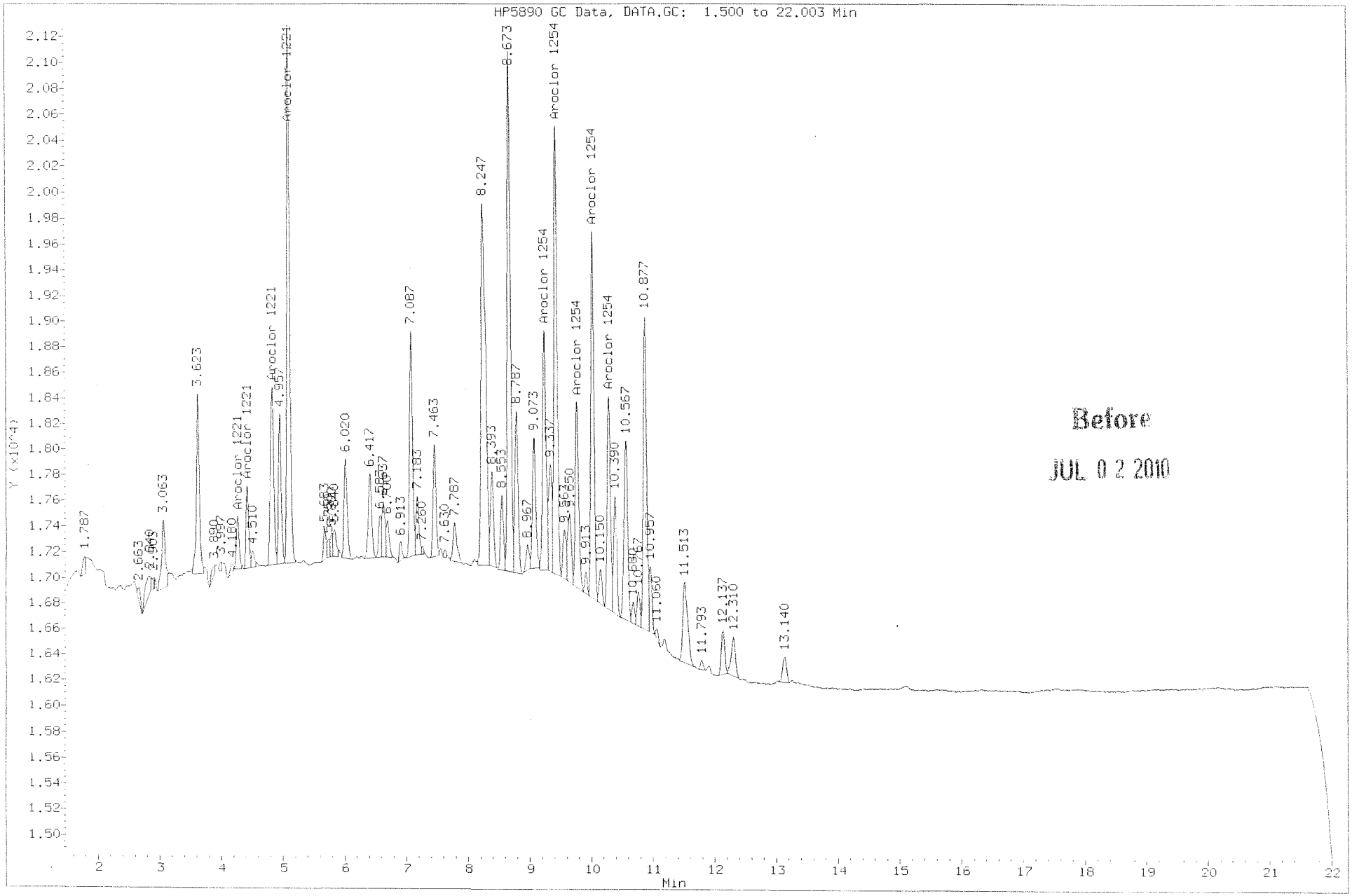


After
Initials

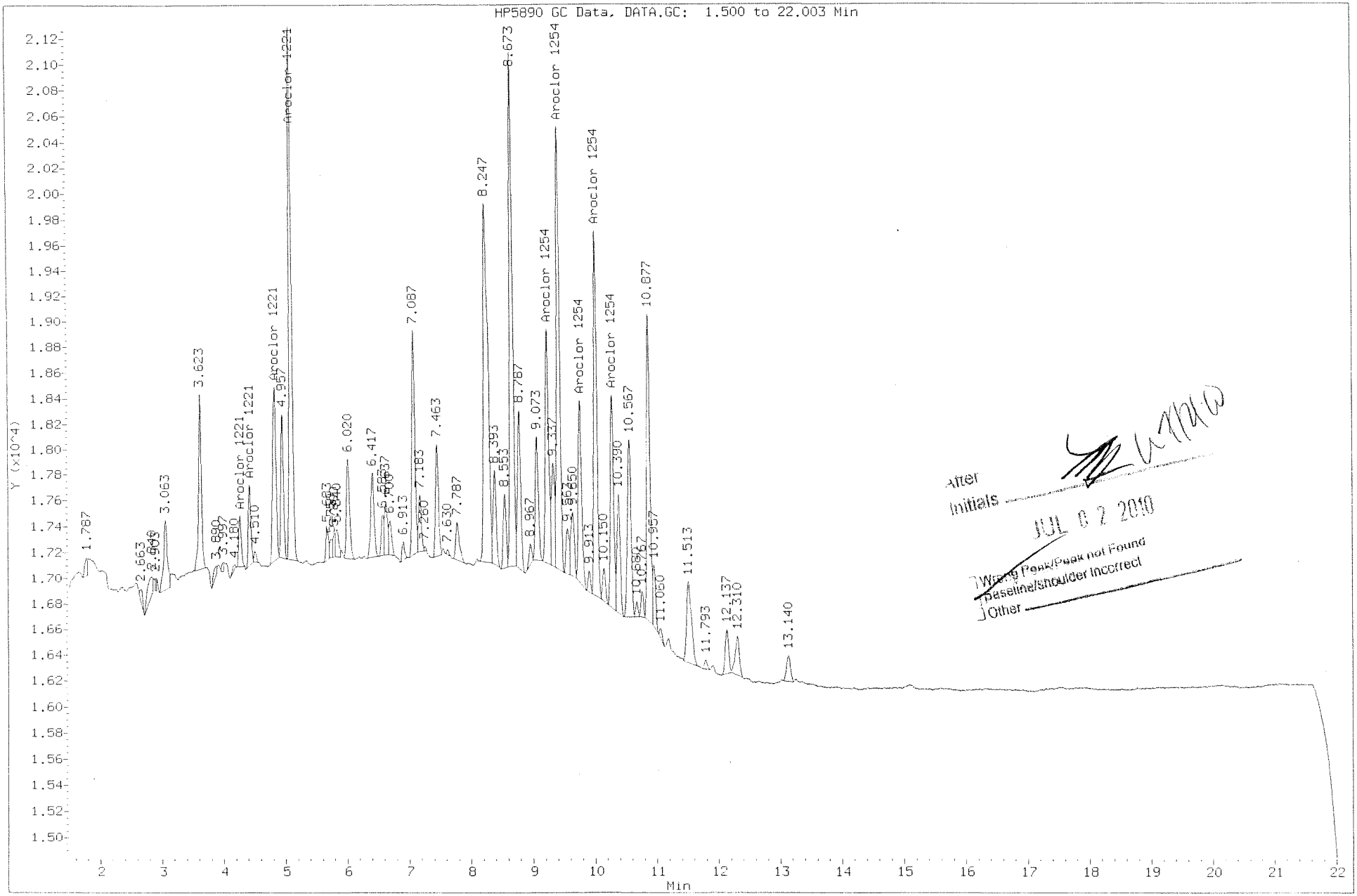
JUL 02 2010

Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R009.D
Injection Date: 01-JUL-2010 18:16
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R009.D
Injection Date: 01-JUL-2010 18:16
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R010.D
Inj Date : 01-JUL-2010 18:43
Sample Info: 1221/1254 @ 100/50ppb | PCB5-52E
Misc Info :
Cal Date : 02-JUL-2010 08:41
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1221+1254.sub
Sub List #2 : 1221+1254.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.387	4.270	8198	2320	134	121	80.00- 120.00	100.00(M)
	4.427	4.423	10533	3895	121	117	123.27- 184.91	128.48(M)
	4.607	4.833	6852	10266	117	120	79.54- 119.30	83.58(M)
	4.737	4.957	25033	6531	131	52.4	253.26- 379.90	305.35(M)
		Average of Peak Amounts =			126	103		
Aroclor 1254	7.800	9.237	17569	12577	59.4	57.6	80.00- 120.00	100.00
	8.750	9.427	12328	24068	58.2	60.5	65.70- 98.55	70.17
	8.950	9.767	25762	10763	60.2	58.1	127.75- 191.62	146.63
	9.350	10.020	21802	18818	60.7	57.2	108.11- 162.16	124.09
	9.563	10.287	10849	11282	57.9	58.3	56.14- 84.21	61.75
		Average of Peak Amounts =			59.3	58.3		

QC Flag Legend

M - Compound response manually integrated.

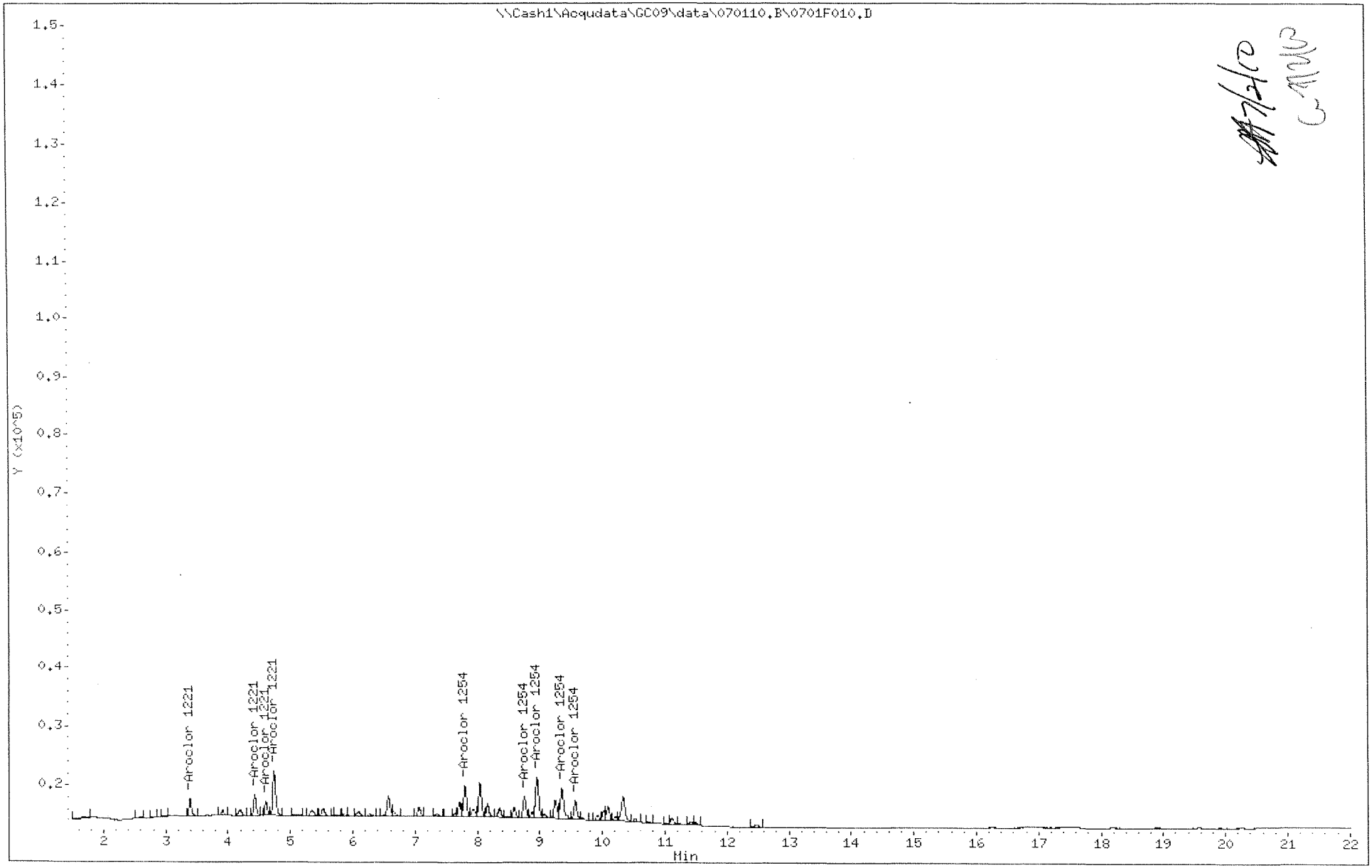
7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
Date : 01-JUL-2010 18:43
Client ID:
Sample Info: 1221/1254 @ 100/50ppb | PCB5-52E

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

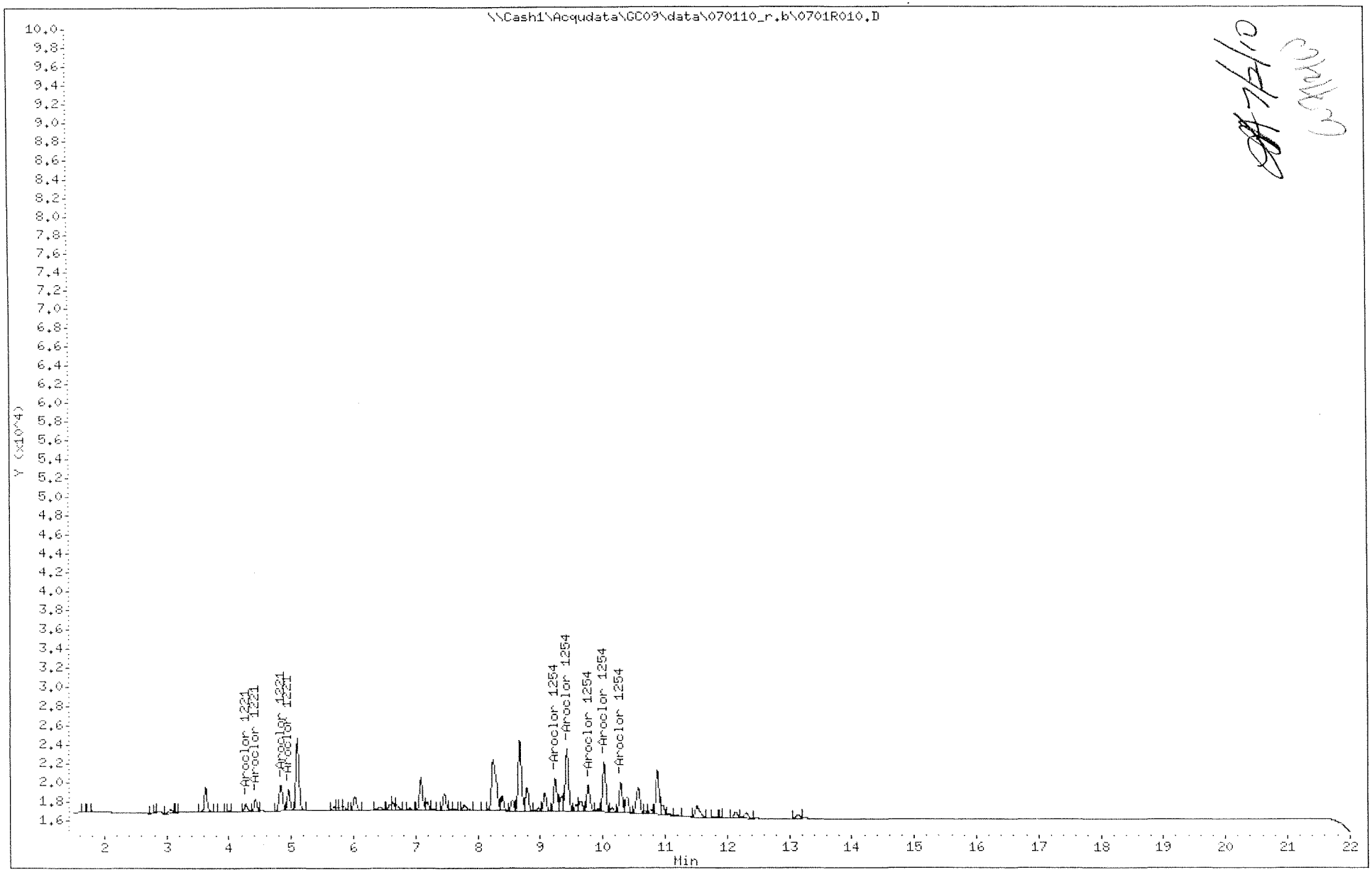


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R010.D
Date : 01-JUL-2010 18:43
Client ID:
Sample Info: 1221/1254 @ 100/50ppb | PCB5-52E

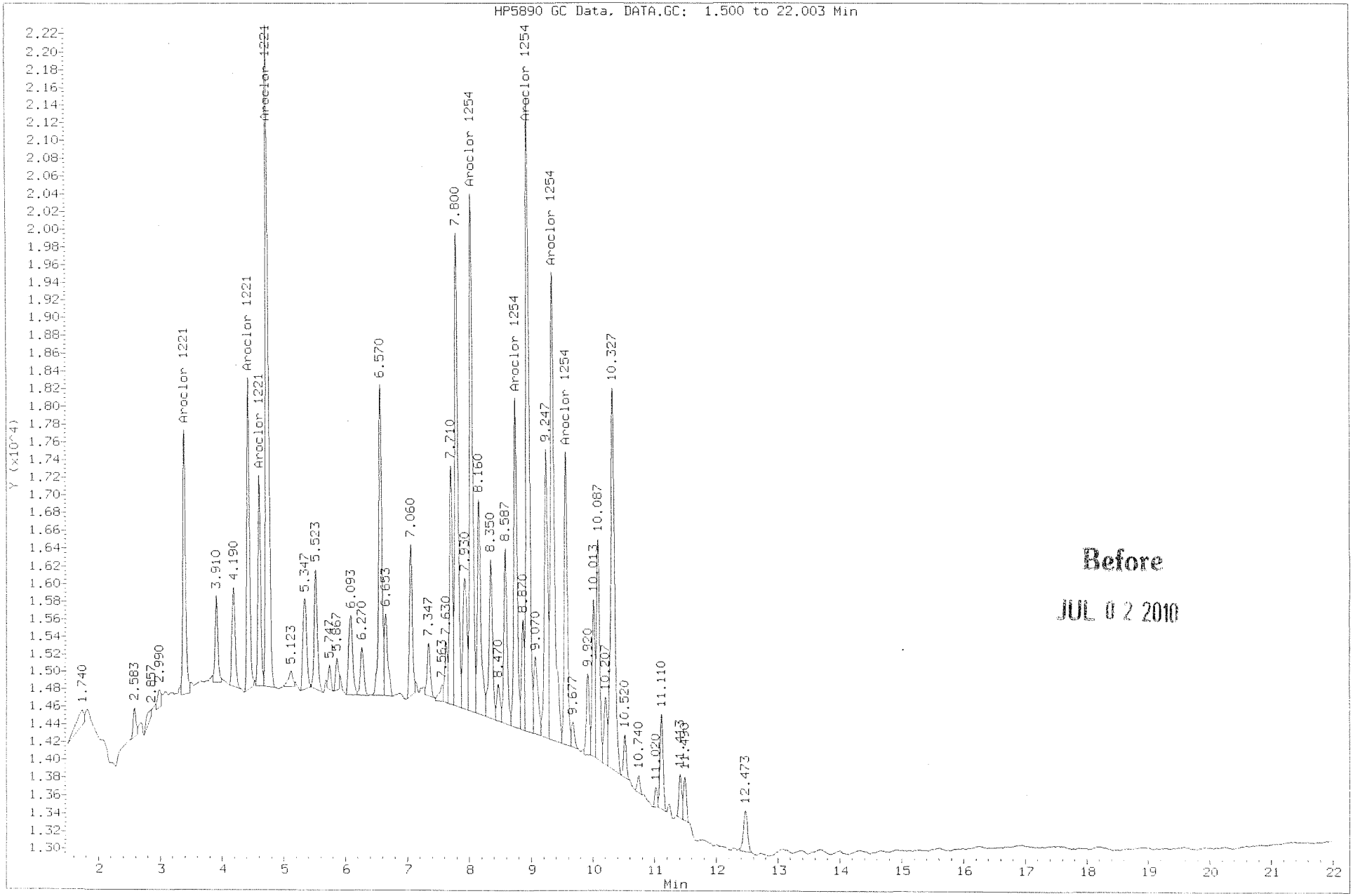
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



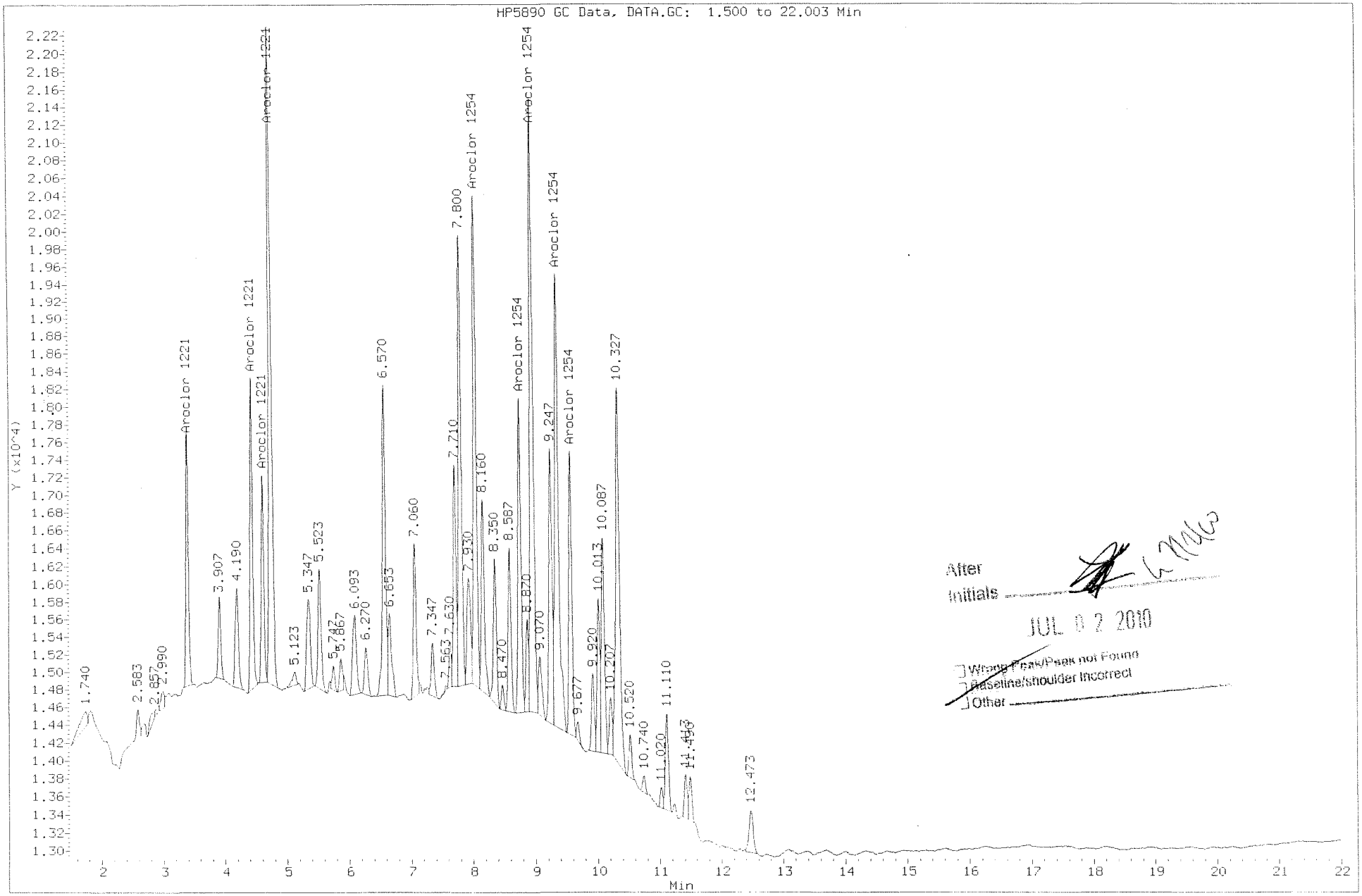
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
Injection Date: 01-JUL-2010 18:43
Instrument: GC09.i
Client Sample ID:



Before

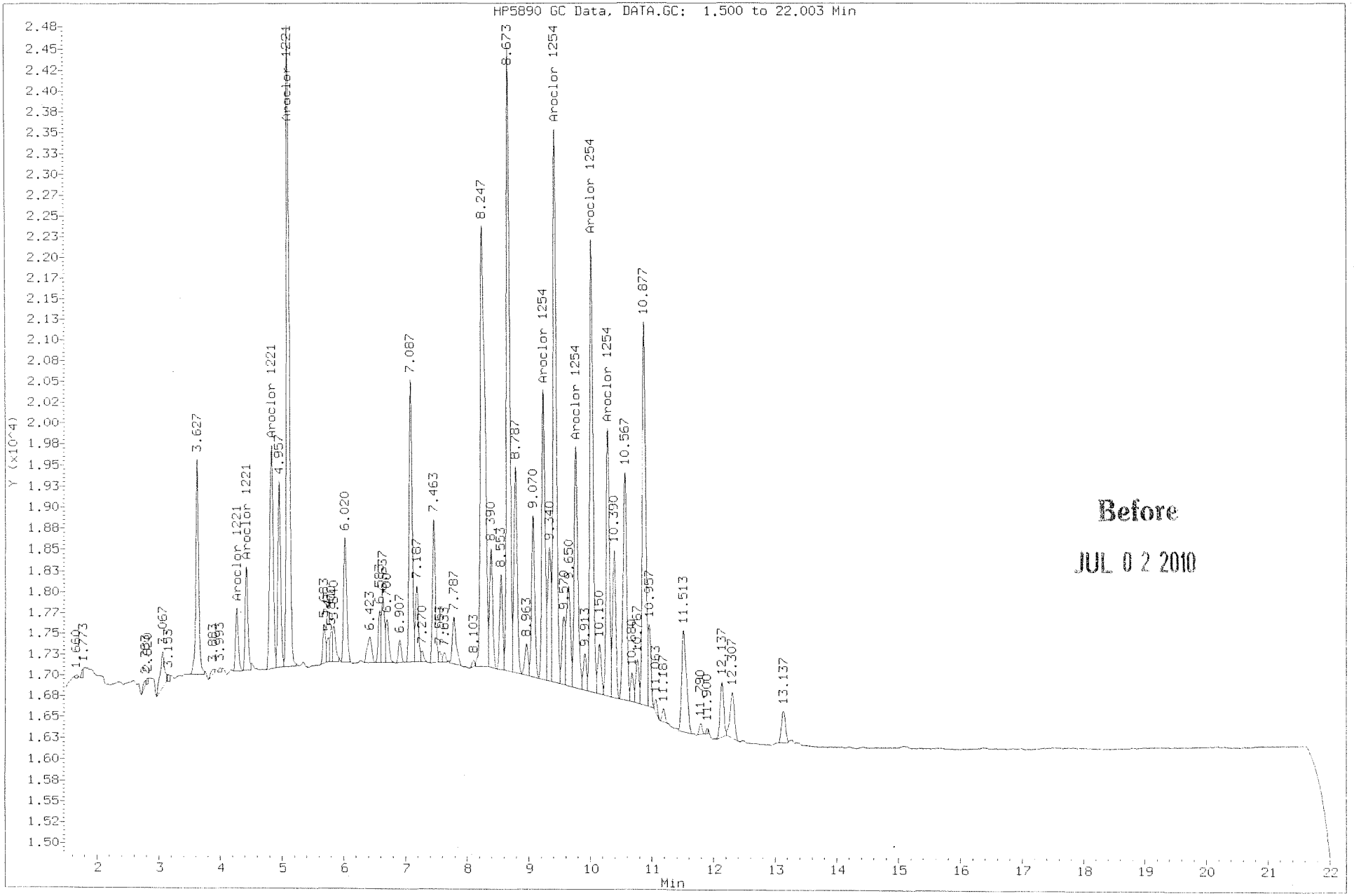
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F010.D
Injection Date: 01-JUL-2010 18:43
Instrument: GC09.1
Client Sample ID:

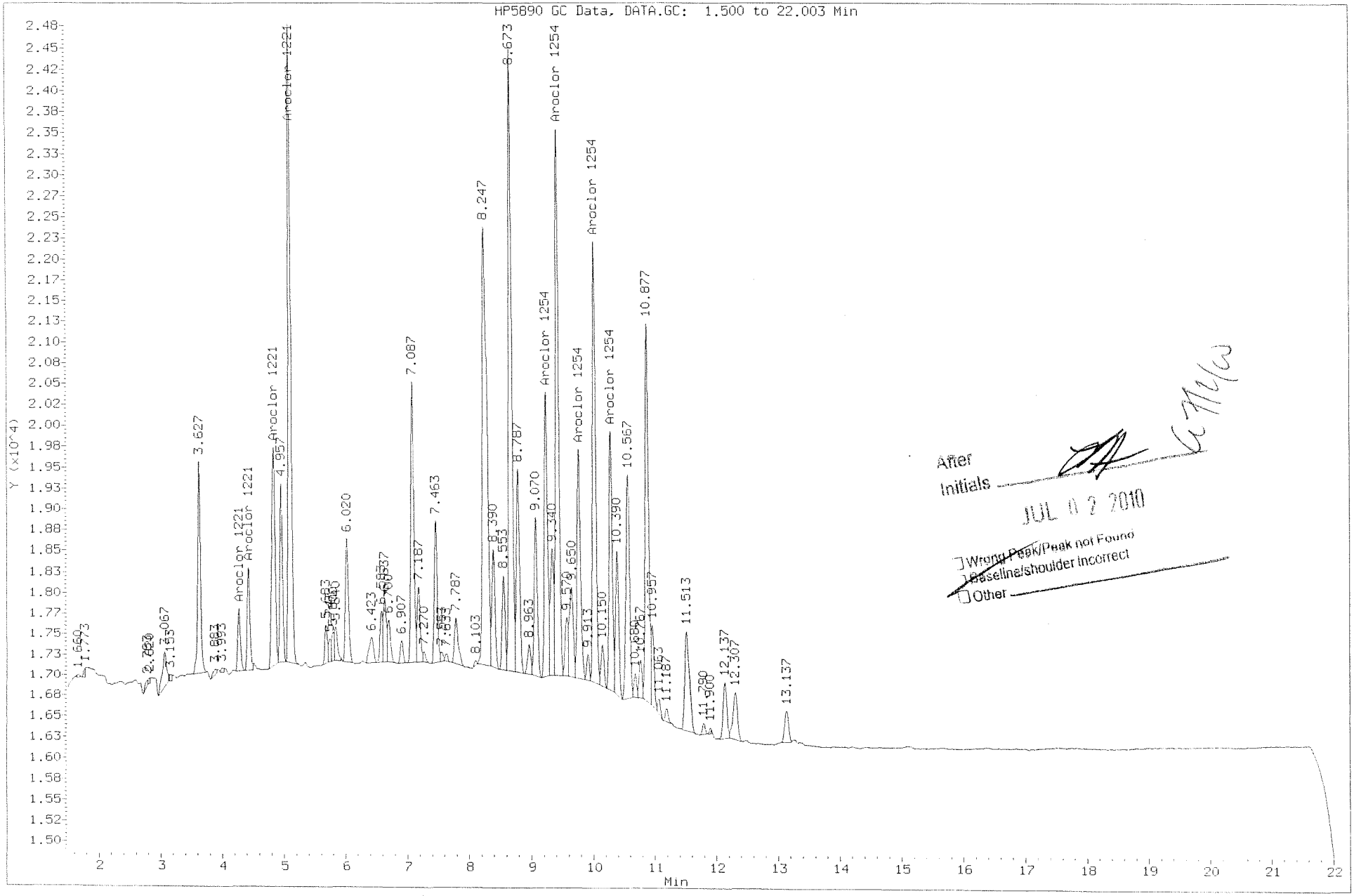


After
Initials
JUL 0 2 2010
Wrong Peak/Peak not Found
Baseline/shoulder Incorrect
Other

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R010.D
Injection Date: 01-JUL-2010 18:43
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R010.D
Injection Date: 01-JUL-2010 18:43
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R011.D
Inj Date : 01-JUL-2010 19:09
Sample Info: 1221/1254 @ 1000/500ppb | PCB5-52F
Misc Info :
Cal Date : 02-JUL-2010 08:41
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1221+1254.sub
Sub List #2 : 1221+1254.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.390	4.270	61318	20227	1000	1060	80.00- 120.00	100.00
	4.430	4.427	87256	34699	1000	1040	123.27- 184.91	142.30
	4.607	4.837	58507	91044	1000	1060	79.54- 119.30	95.42
	4.737	4.957	190748	59208	1000	576	253.26- 379.90	311.08
			Average of Peak Amounts =		1000	934		
Aroclor 1254	7.800	9.240	149317	111656	505	511	80.00- 120.00	100.00
	8.753	9.427	109303	202424	516	509	65.70- 98.55	73.20
	8.953	9.767	219883	99611	514	538	127.75- 191.62	147.26
	9.350	10.023	186343	161199	519	490	108.11- 162.16	124.80
	9.563	10.287	98715	100336	527	519	56.14- 84.21	66.11
			Average of Peak Amounts =		516	513		

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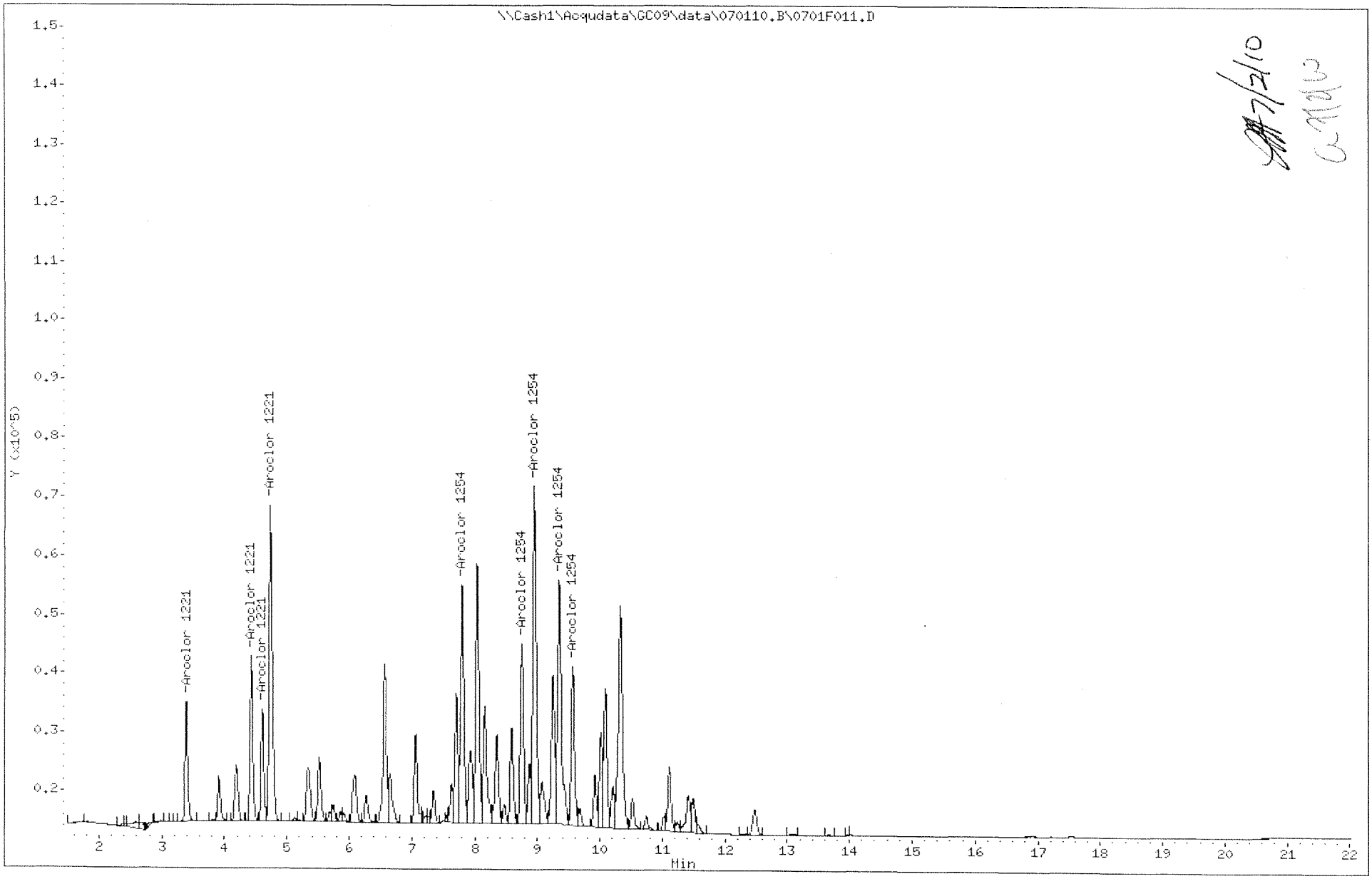
7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
Date : 01-JUL-2010 13:09
Client ID:
Sample Info: 1221/1254 @ 1000/500ppb | PCB5-52F

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

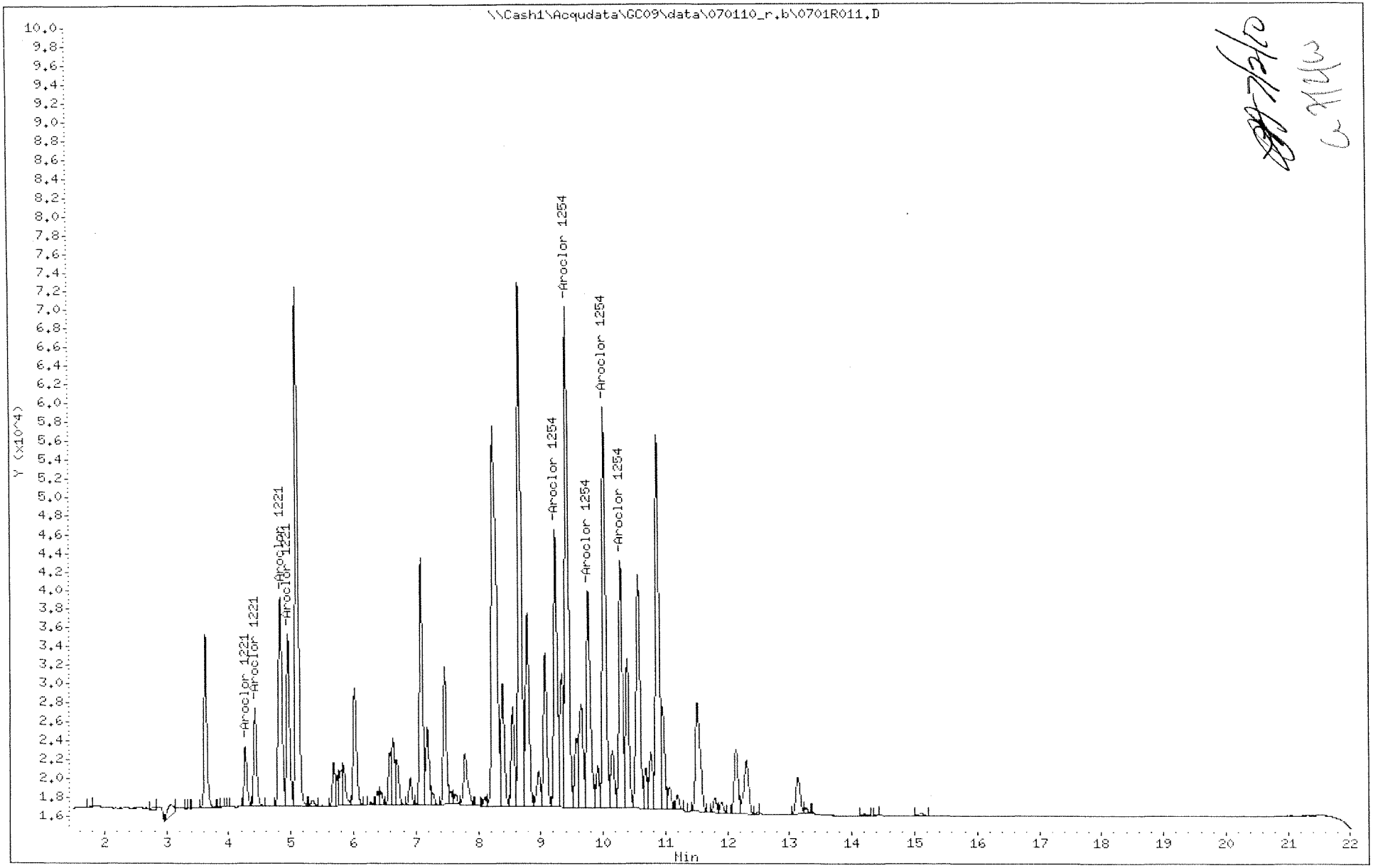


7/1/10

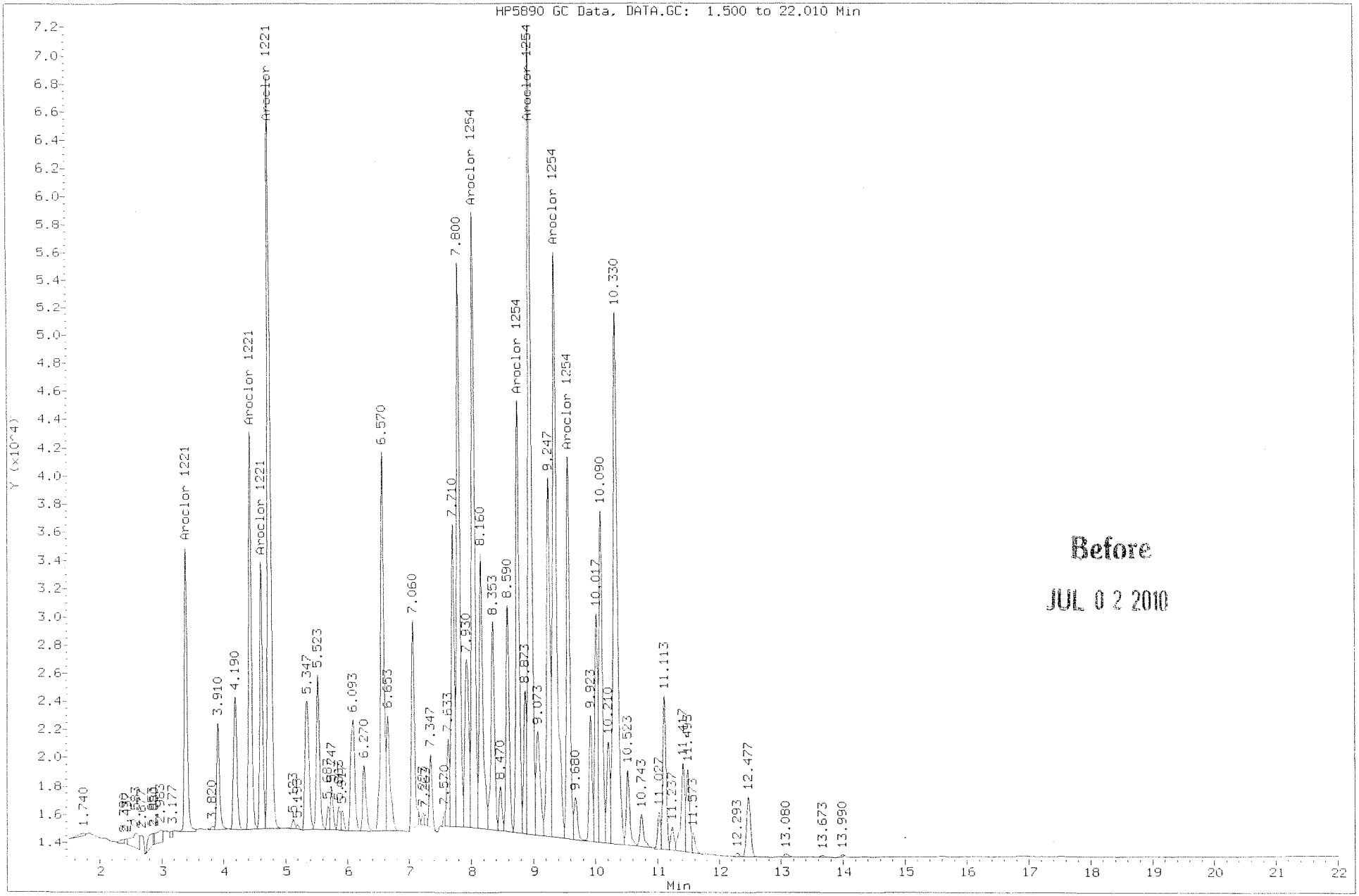
Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R011.D
Date : 01-JUL-2010 19:09
Client ID:
Sample Info: 1221/1254 @ 1000/500ppb | PCB5-52F

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



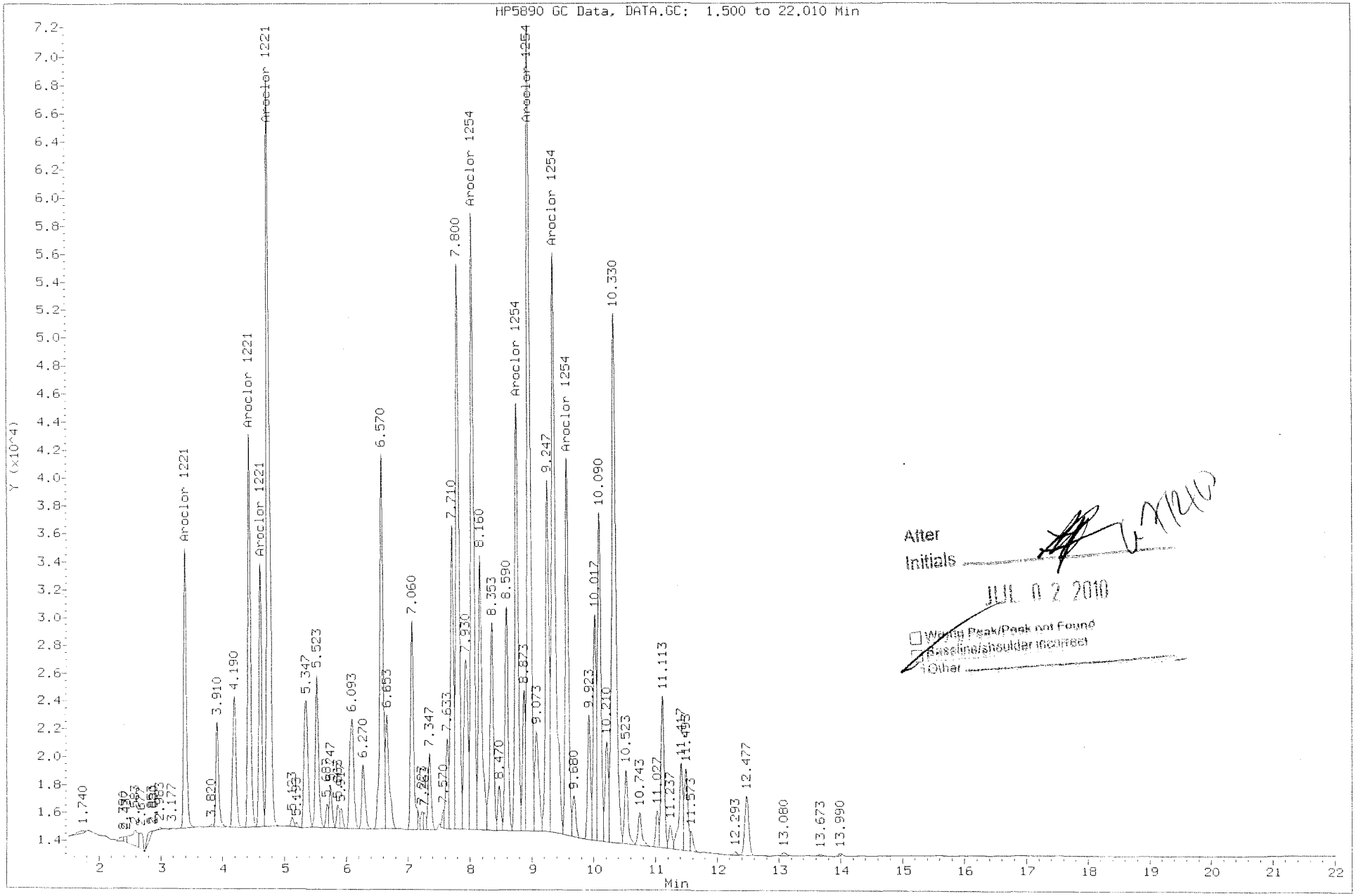
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
Injection Date: 01-JUL-2010 19:09
Instrument: GC09.i
Client Sample ID:



Before

JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F011.D
Injection Date: 01-JUL-2010 19:09
Instrument: GC09.i
Client Sample ID:



After
Initials
JUL 0 2 2010
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F012.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F012.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R012.D
Inj Date : 01-JUL-2010 19:36
Sample Info: 1221/1254 @ 2000/1000ppb | PCB5-52G
Misc Info :
Cal Date : 02-JUL-2010 08:41
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1221+1254.sub
Sub List #2 : 1221+1254.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.387	4.270	105298	36325	1720	1900	80.00- 120.00	100.00
	4.430	4.427	156043	60737	1790	1820	123.27- 184.91	148.19
	4.607	4.837	103976	163558	1780	1900	79.54- 119.30	98.74
	4.737	4.957	333982	104447	1750	1240	253.26- 379.90	317.18
			Average of Peak Amounts =		1760	1720		
Aroclor 1254	7.800	9.240	262854	201472	901	922	80.00- 120.00	100.00
	8.753	9.427	203125	366019	959	920	65.70- 98.55	77.28
	8.953	9.767	401247	176510	937	953	127.75- 191.62	152.65
	9.350	10.023	341362	286030	950	870	108.11- 162.16	129.87
	9.567	10.287	178849	179891	954	930	56.14- 84.21	68.04
			Average of Peak Amounts =		940	919		

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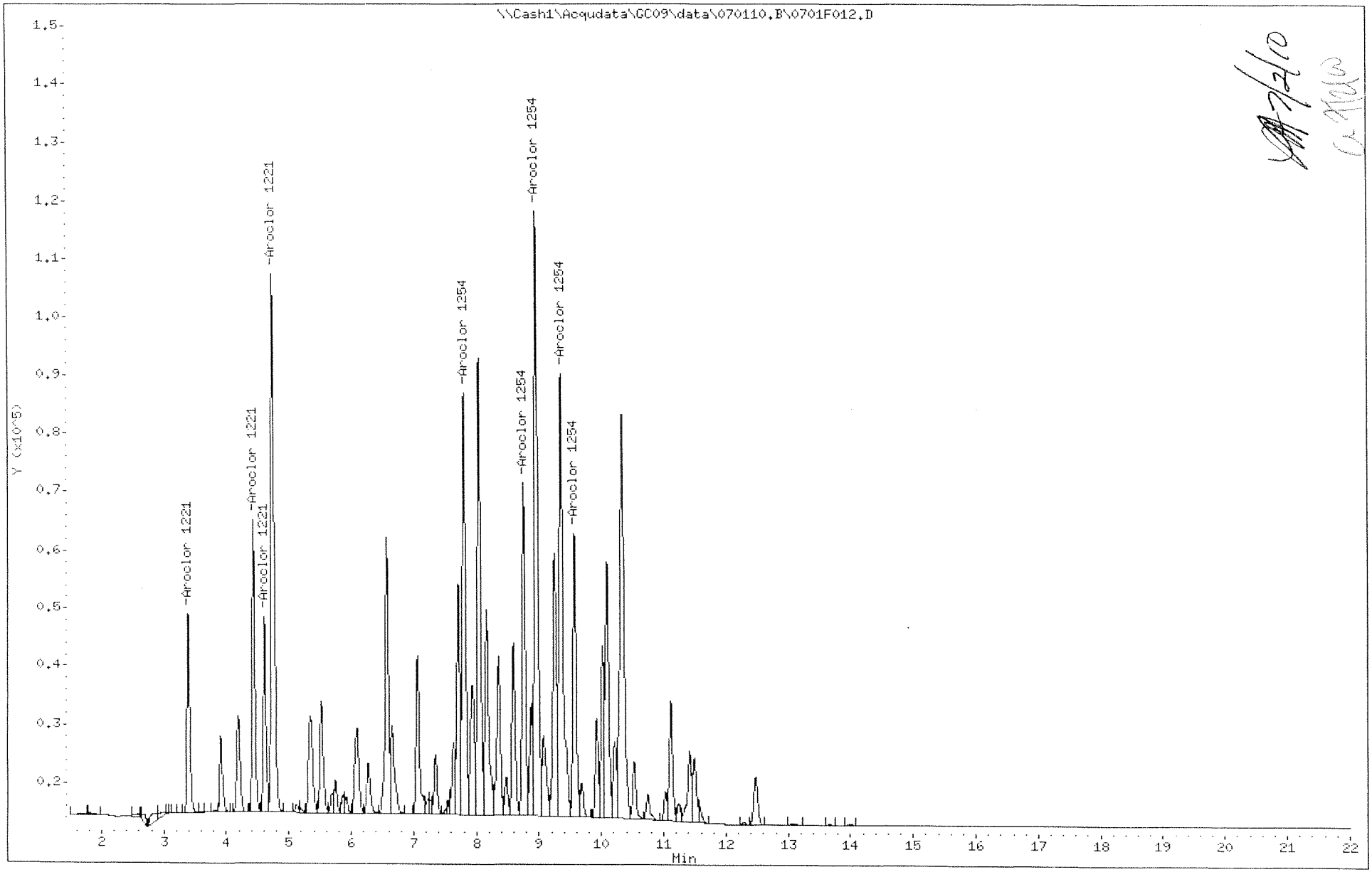
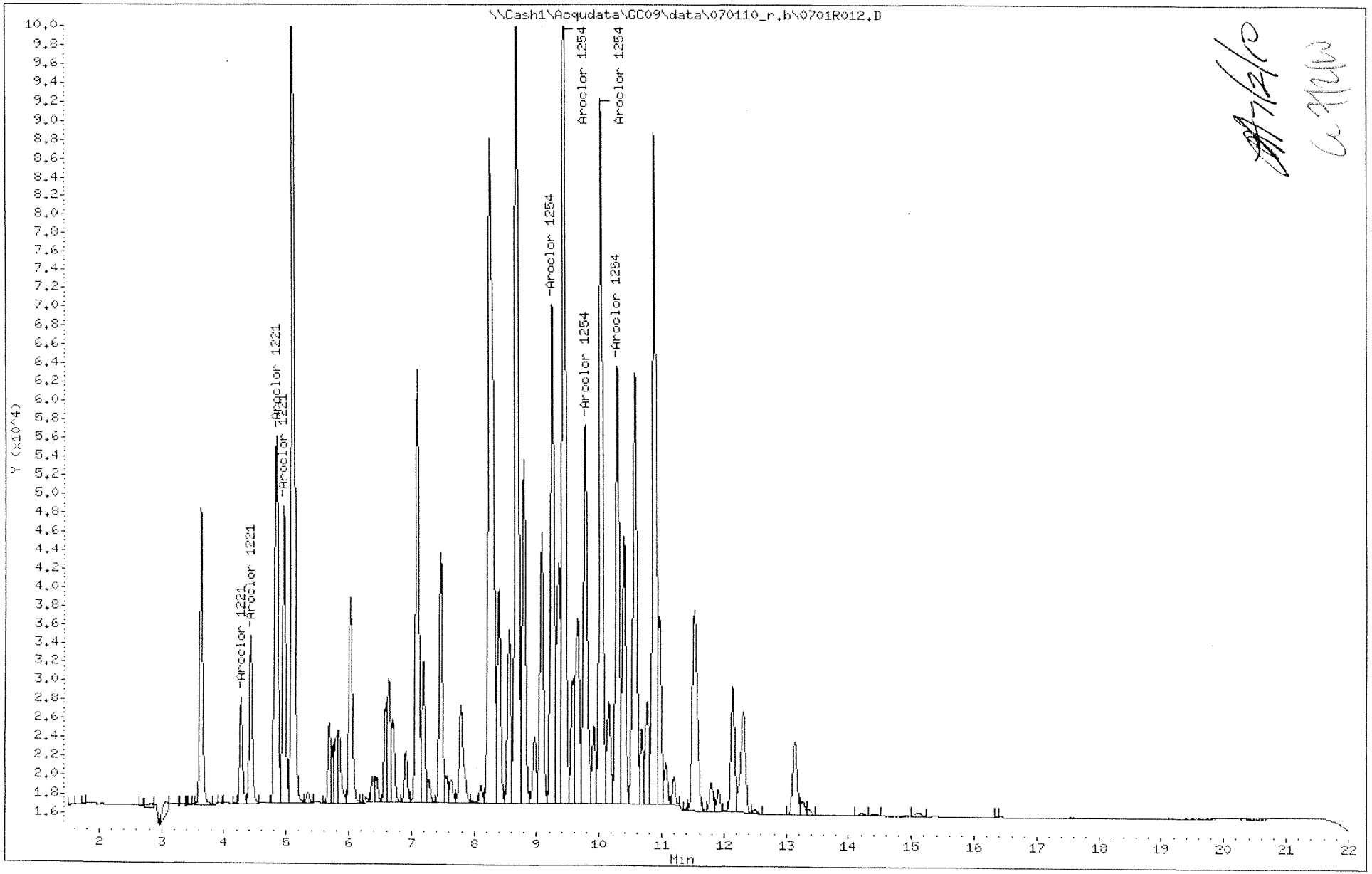
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F012.D
Date : 01-JUL-2010 19:36
Client ID:
Sample Info: 1221/1254 @ 2000/1000ppb | PCB5-52G

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

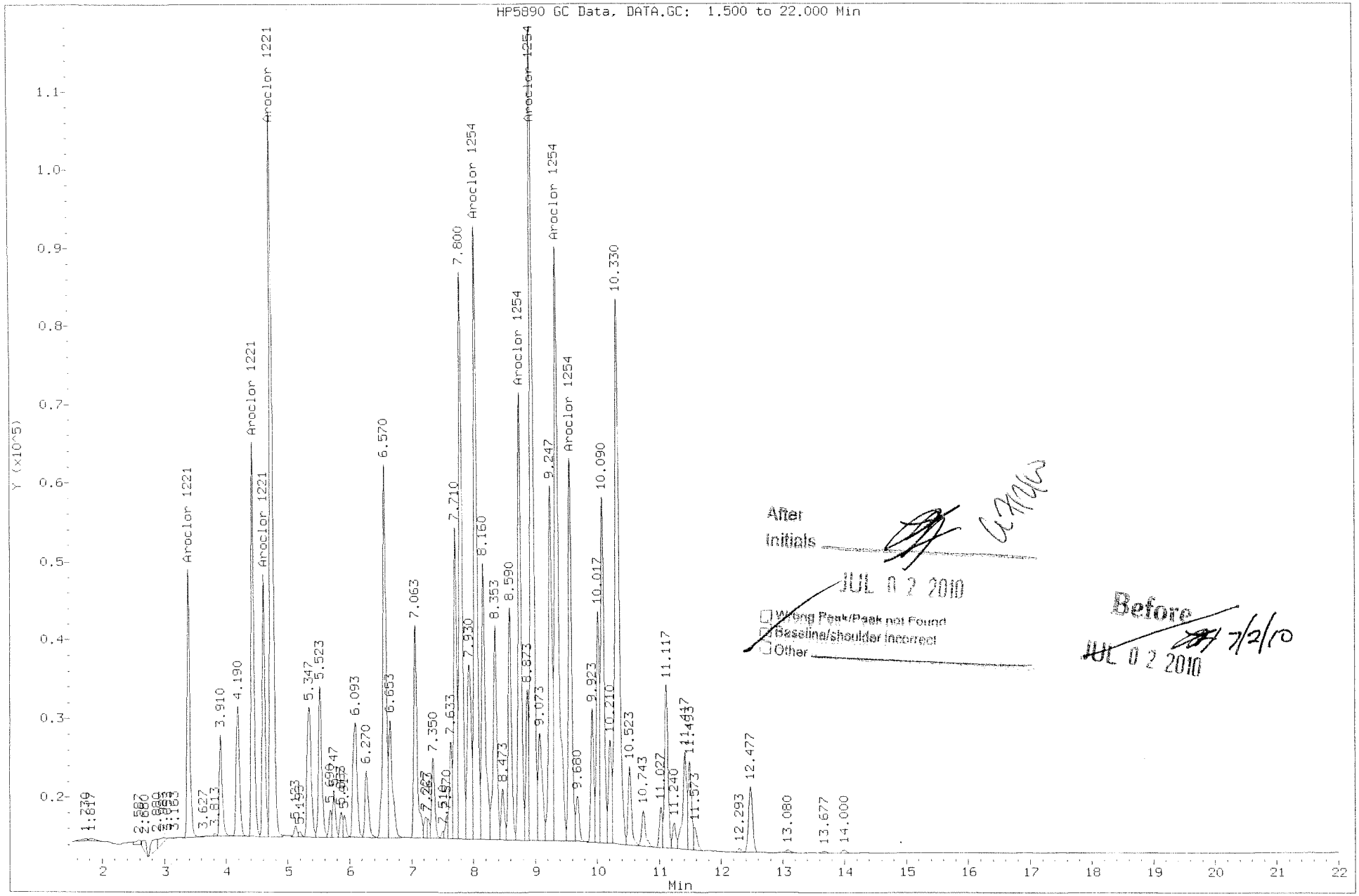


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R012.D
Date : 01-JUL-2010 19:36
Client ID:
Sample Info: 1221/1254 @ 2000/1000ppb | PCB5-52G

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F012.D
Injection Date: 01-JUL-2010 19:36
Instrument: GC09.i
Client Sample ID:



After
Initials
JUL 02 2010
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other

Before
7/2/10
JUL 02 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
Report Date: 02-Jul-2010 10:08

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R013.D
Inj Date : 01-JUL-2010 20:02
Sample Info: 1221/1254 @ 4000/2000ppb | PCB5-52H
Misc Info :
Cal Date : 02-JUL-2010 08:41
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1221+1254.sub
Sub List #2 : 1221+1254.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.387	4.270	182681	64910	2980	3390	80.00- 120.00	100.00
	4.430	4.427	279070	105585	3200	3170	123.27- 184.91	152.76
	4.607	4.837	182510	293199	3120	3420	79.54- 119.30	99.91
	4.737	4.957	581196	184695	3050	2720	253.26- 379.90	318.15
			Average of Peak Amounts =		3090	3180		
Aroclor 1254	7.800	9.240	481260	376232	1660	1720	80.00- 120.00	100.00
	8.753	9.427	373322	675625	1760	1700	65.70- 98.55	77.57
	8.953	9.767	737926	326831	1720	1760	127.75- 191.62	153.33
	9 350	10.023	622790	525334	1730	1600	108.11- 162.16	129.41
	9.563	10.287	324838	330390	1730	1710	56.14- 84.21	67.50
			Average of Peak Amounts =		1720	1700		

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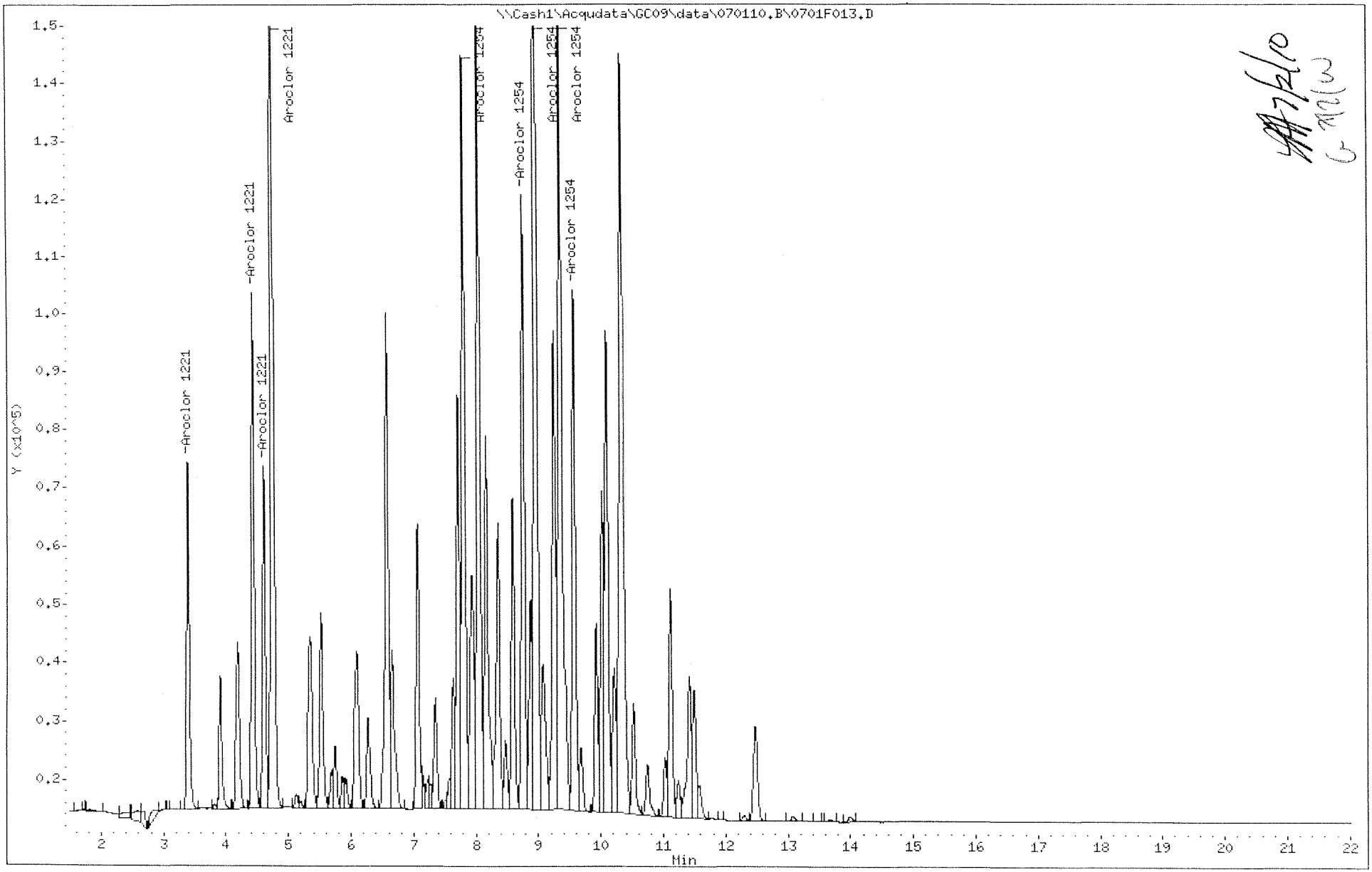
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
Date : 01-JUL-2010 20:02
Client ID:
Sample Info: 1221/1254 @ 4000/2000ppb | PCB5-52H

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

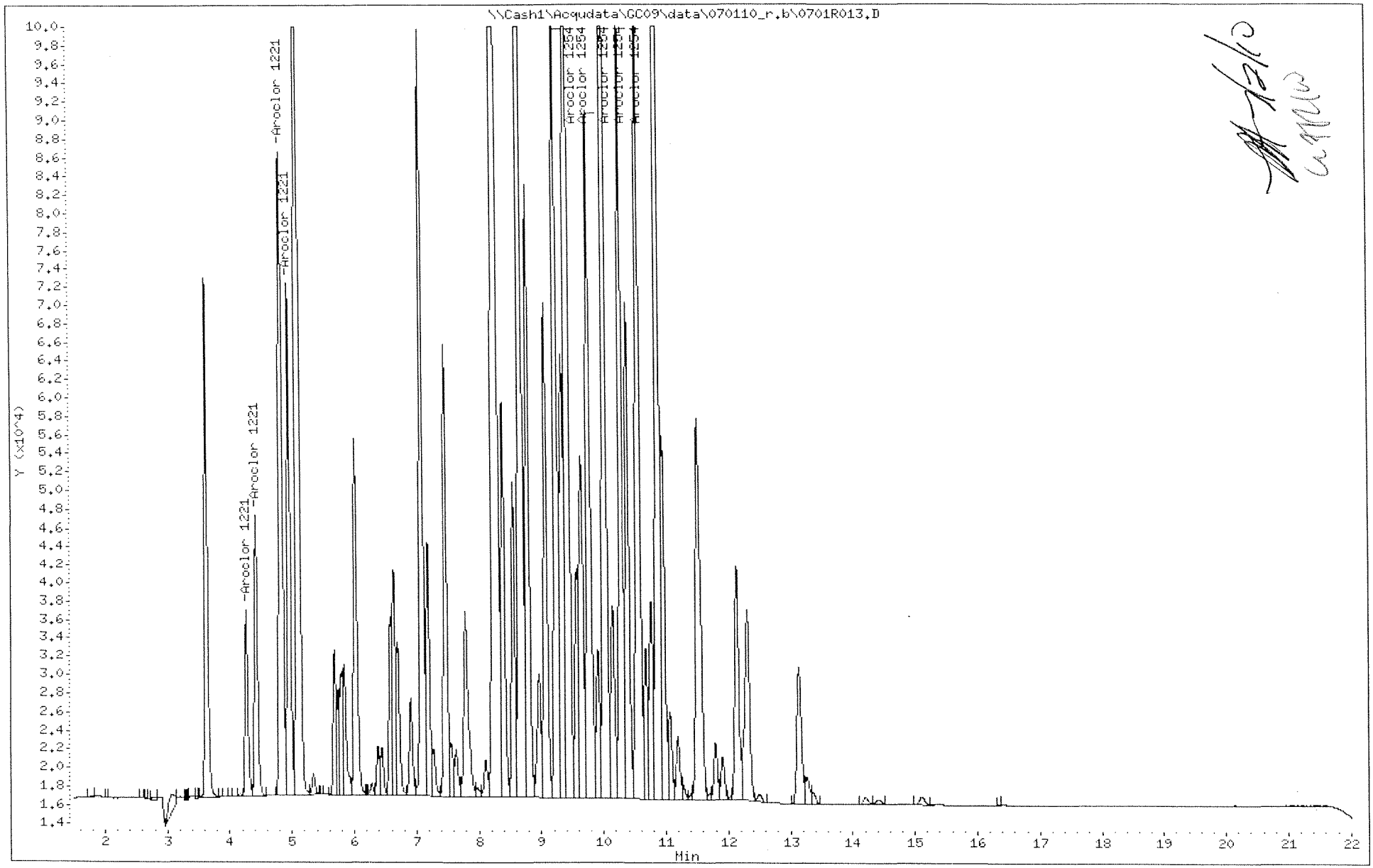


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R013.D
Date : 01-JUL-2010 20:02
Client ID:
Sample Info: 1221/1254 @ 4000/2000ppb | PCB5-52H

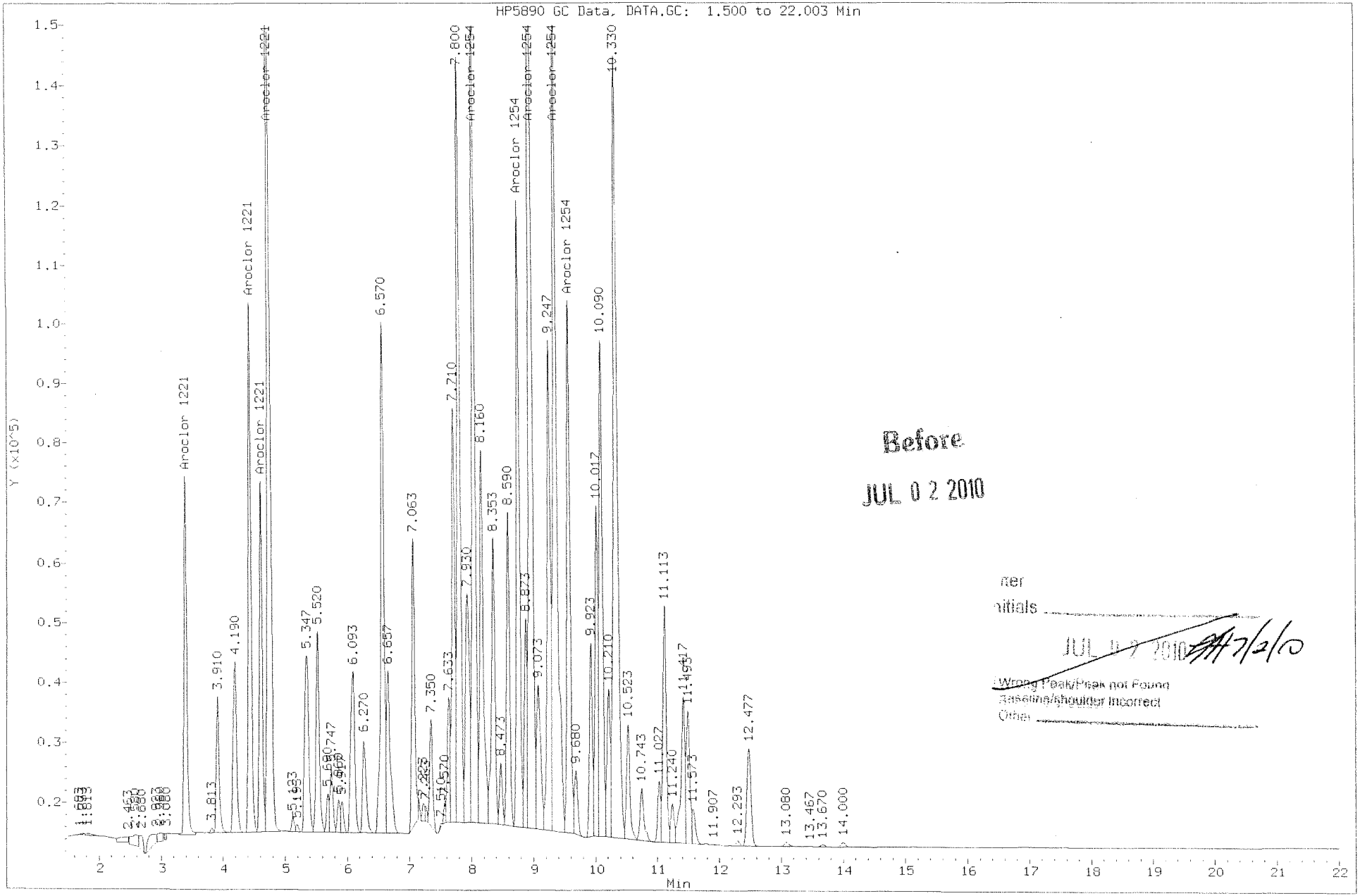
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
Injection Date: 01-JUL-2010 20:02
Instrument: GC09.i
Client Sample ID:



Before

JUL 0 2 2010

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nitials

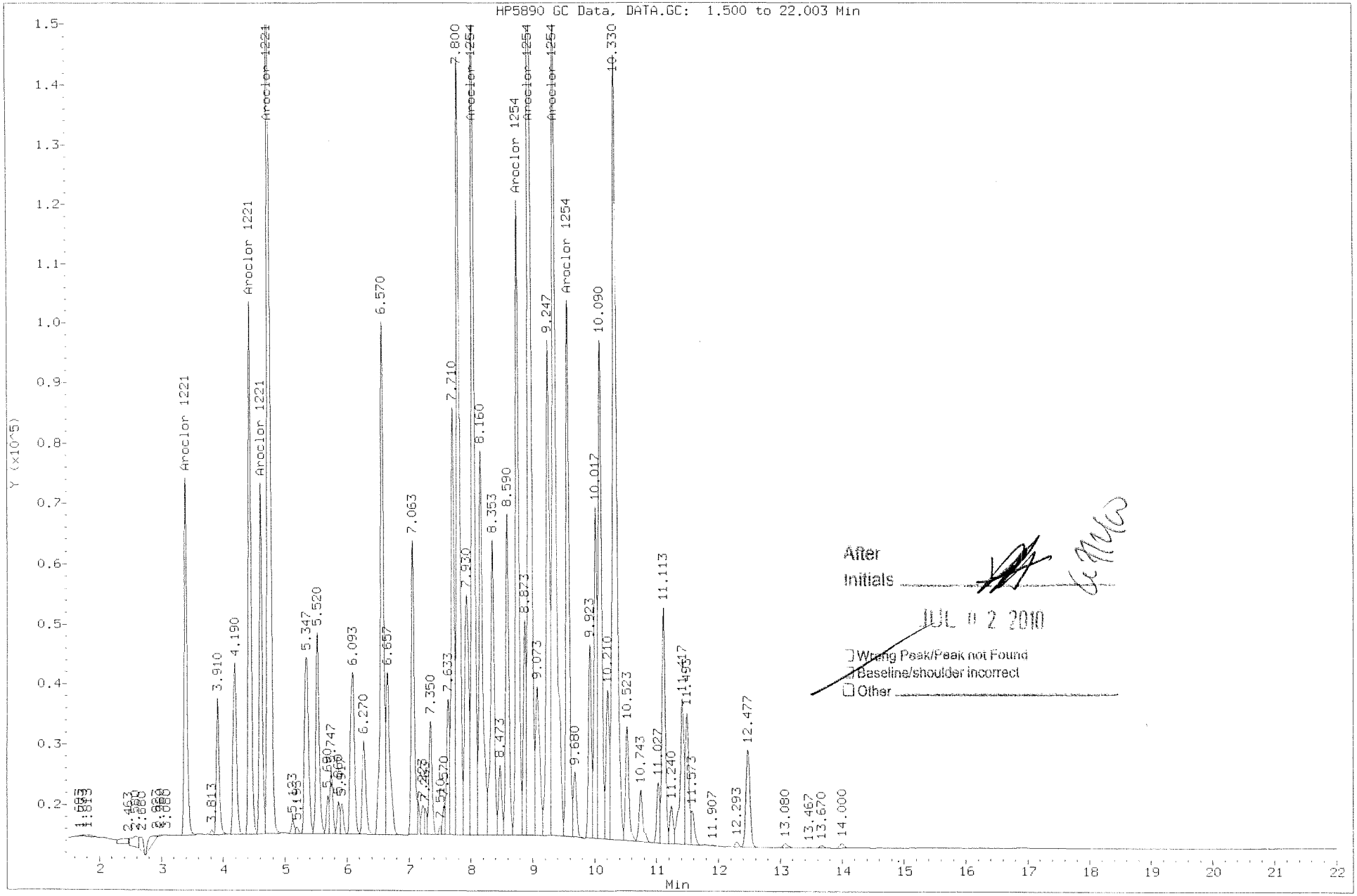
JUL 0 2 2010 7/2/10

Wrong Peak/Peak not Found

Baseline/shoulder Incorrect

Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F013.D
Injection Date: 01-JUL-2010 20:02
Instrument: GC09.i
Client Sample ID:



After
Initials

JUL 12 2010

- ☐ Wrong Peak/Peak not Found
- ☐ Baseline/shoulder incorrect
- ☐ Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F014.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F014.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R014.D
Inj Date : 01-JUL-2010 20:29
Sample Info: 1221/1254 @ 10000/5000ppb | PCB5-52I
Misc Info :
Cal Date : 02-JUL-2010 08:41
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1221+1254.sub
Sub List #2 : 1221+1254.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.390	4.270	383734	141029	6260	7360	80.00- 120.00	100.00(A)
	4.430	4.427	591293	216802	6780	6500	123.27- 184.91	154.09(A)
	4.607	4.837	381506	621332	6520	7240	79.54- 119.30	99.42(A)
	4.737	4.957	1214835	386802	6370	7070	253.26- 379.90	316.58(A)
			Average of Peak Amounts =		6480	7040		
Aroclor 1254	7.803	9.240	1036304	849909	3620	3890	80.00- 120.00	100.00
	8.753	9.427	851032	1500799	4020	3770	65.70- 98.55	82.12
	8.953	9.770	1654847	718327	3870	3880	127.75- 191.62	159.69
	9.350	10.023	1400395	1159605	3900	3530	108.11- 162.16	135.13
	9.567	10.287	727199	728126	3880	3760	56.14- 84.21	70.17
			Average of Peak Amounts =		3860	3770		

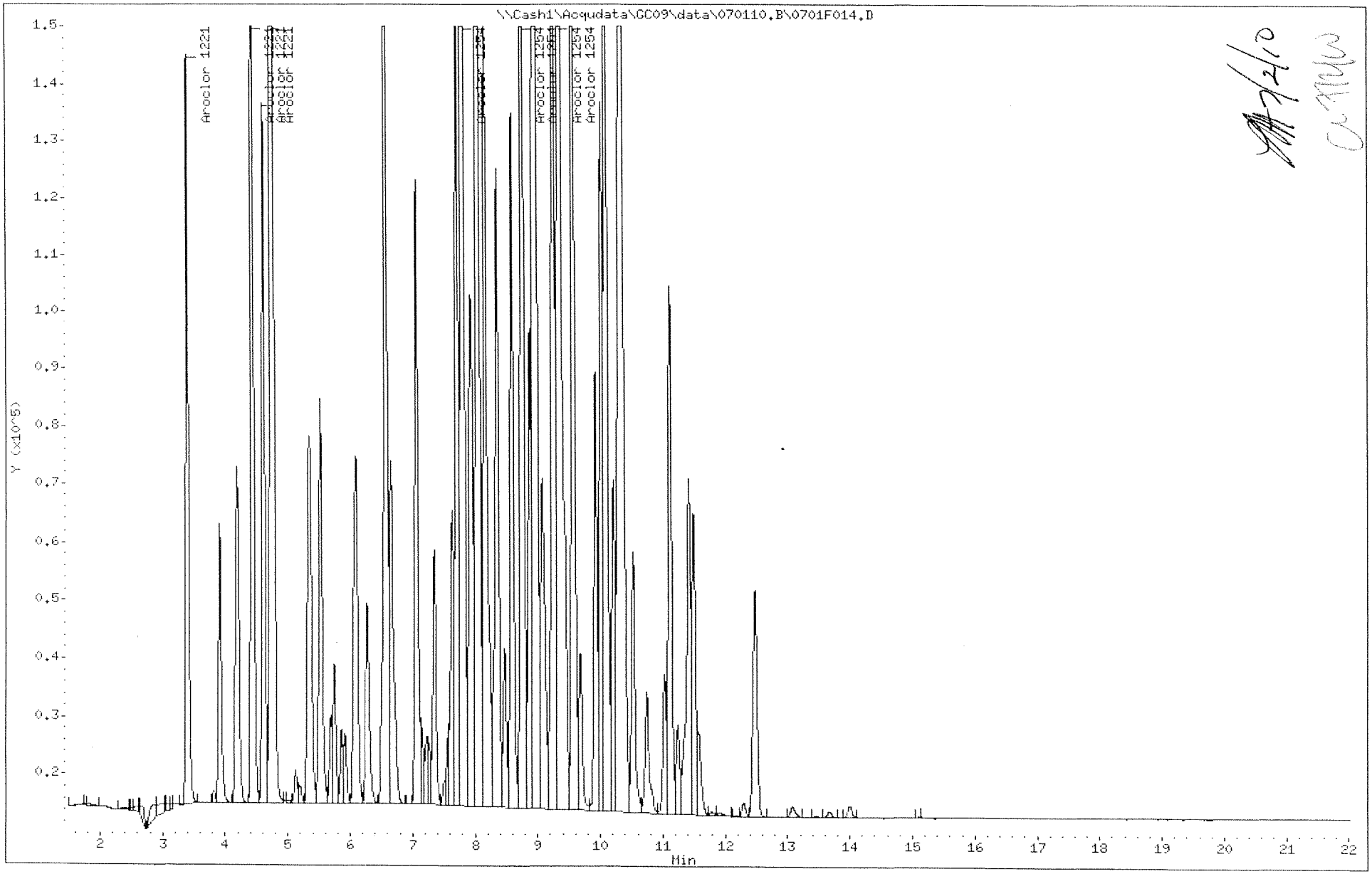
QC Flag Legend

A - Target compound detected but,. quantitated amount exceeded maximum amount.

7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F014.D
Date : 01-JUL-2010 20:29
Client ID:
Sample Info: 1221/1254 @ 10000/5000ppb | PCB5-52I

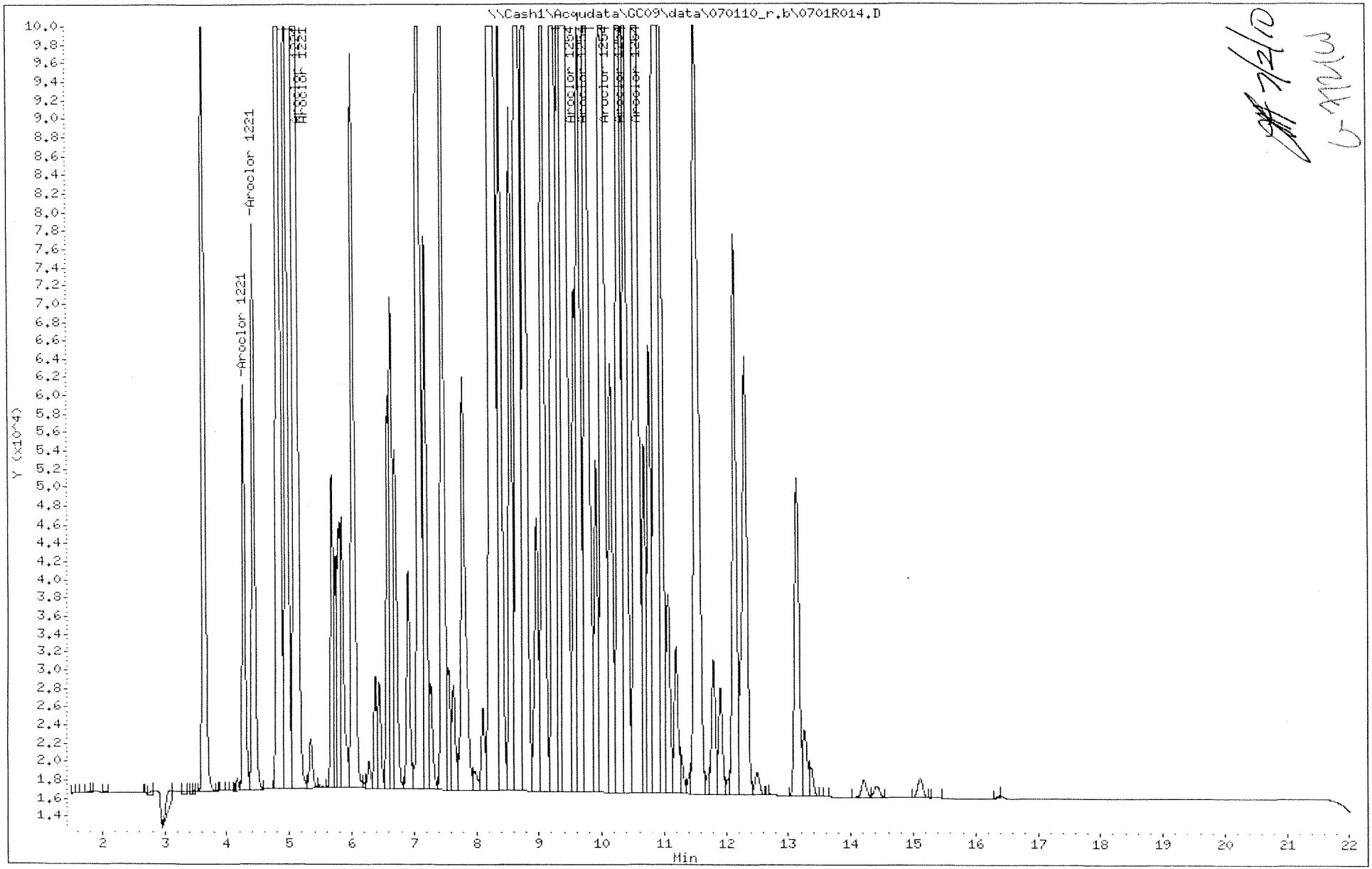
Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

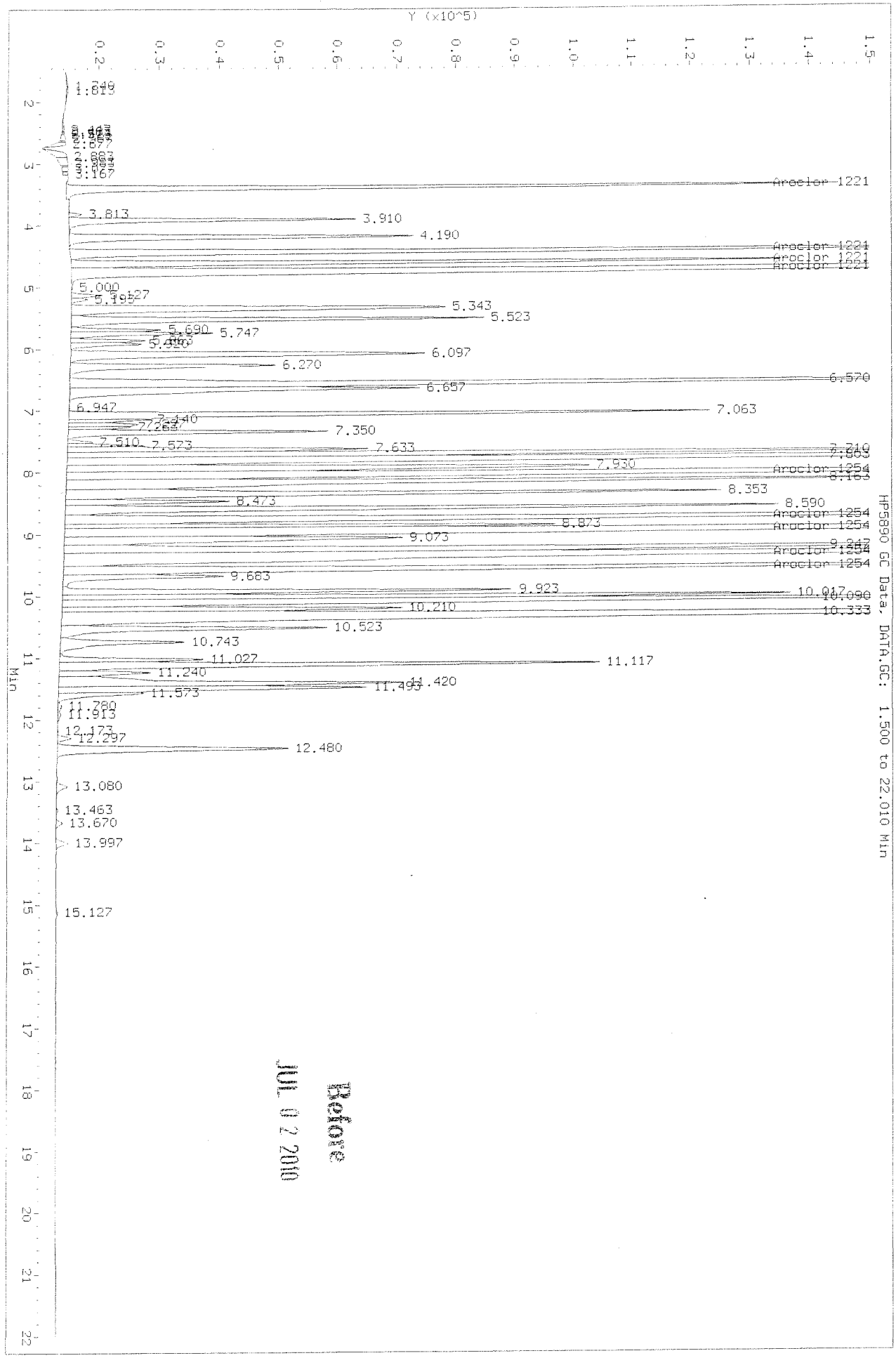


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R014.D
Date : 01-JUL-2010 20:29
Client ID:
Sample Info: 1221/1254 @ 10000/5000ppb | PCB5-52I

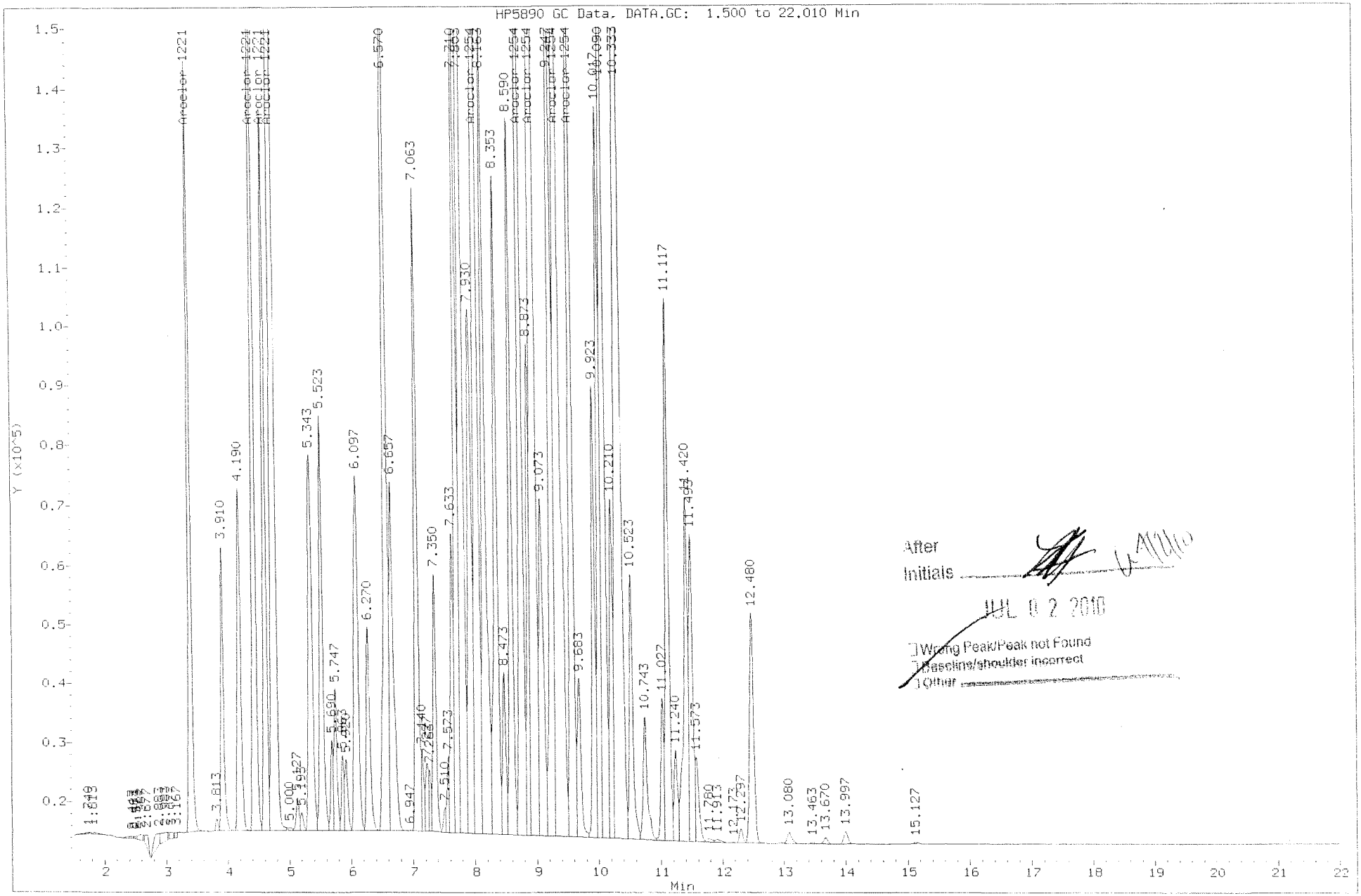
Instrument: GC09.i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53




Data File: \\Cash1\Acqudata\GC09\data\070110.B\070IF014.D
Injection Date: 01-JUL-2010 20:29
Instrument: GC09:1
Client Sample ID:
HP5890 GC Data, DATA.GC; 1.500 to 22.010 Min
Y (x10^5)
Min
1.849
3.167
Aroclor 1221
3.813
3.910
4.190
Aroclor 1221
Aroclor 1221
Aroclor 1221
5.000
5.343
5.523
5.747
6.097
6.270
6.570
6.657
6.947
7.063
7.350
7.510
7.523
7.633
7.930
Aroclor 1254
8.353
8.473
8.590
Aroclor 1254
Aroclor 1254
8.873
9.073
Aroclor 1254
Aroclor 1254
9.683
9.923
10.047
10.090
10.210
10.333
10.523
10.743
11.027
11.117
11.240
11.420
11.573
11.780
11.913
12.173
12.297
12.480
13.080
13.463
13.670
13.997
15.127

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F014.D
Injection Date: 01-JUL-2010 20:29
Instrument: GC09.i
Client Sample ID:



After
Initials

JUL 02 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R015.D
Inj Date : 01-JUL-2010 20:55
Sample Info: 1232/1262 @ 25ppb | PCB5-52J
Misc Info :
Cal Date : 02-JUL-2010 08:14
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1232+1262.sub
Sub List #2 : 1232+1262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.737	5.103	5595	5630	29.5	29.8	80.00- 120.00	100.00(M)
	5.333	5.687	4801	2903	29.8	29.8	71.62- 107.42	85.81(M)
	6.093	6.030	8926	3212	31.3	28.0	125.66- 188.50	159.54(M)
	6.270	6.587	3305	3894	27.9	30.0	48.59- 72.89	59.08(M)
			Average of Peak Amounts =		29.6	29.4		
Aroclor 1262	10.403	10.887	10092	6690	28.0	27.0	80.00- 120.00	100.00(M)
	11.023	11.070	8145	11430	27.8	29.7	62.54- 93.81	80.70(M)
	11.493	11.573	15568	7930	28.0	28.0	115.93- 173.89	154.25(M)
	12.293	12.313	6672	18694	27.3	29.5	50.73- 76.10	66.11(M)
	12.470	13.150	12411	13653	28.2	29.0	91.68- 137.52	122.97(M)
			Average of Peak Amounts =		27.9	28.6		

QC Flag Legend

M - Compound response manually integrated.

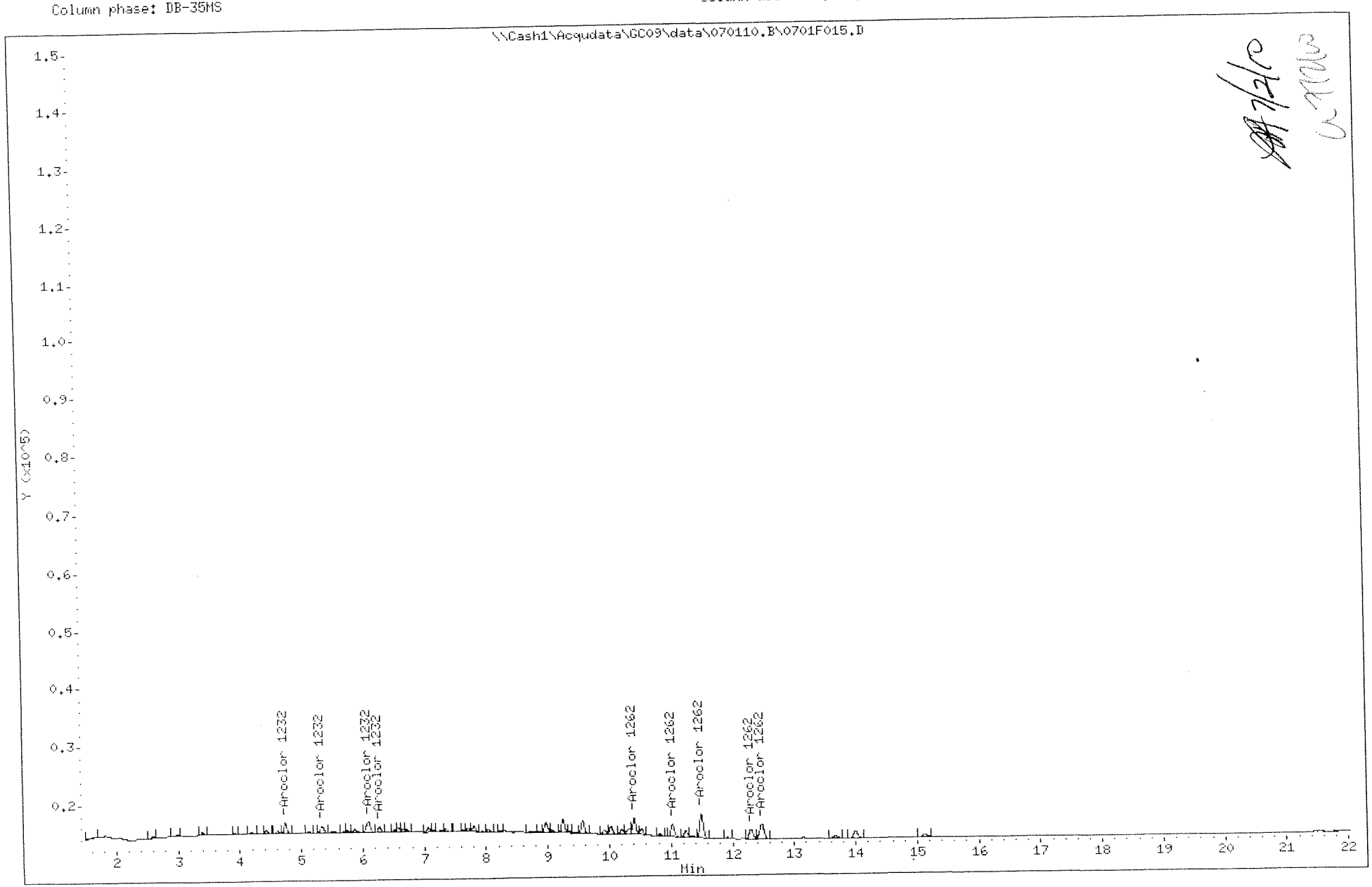
7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
Date : 01-JUL-2010 20:55
Client ID:
Sample Info: 1232/1262 @ 25ppb | PCB5-52J

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

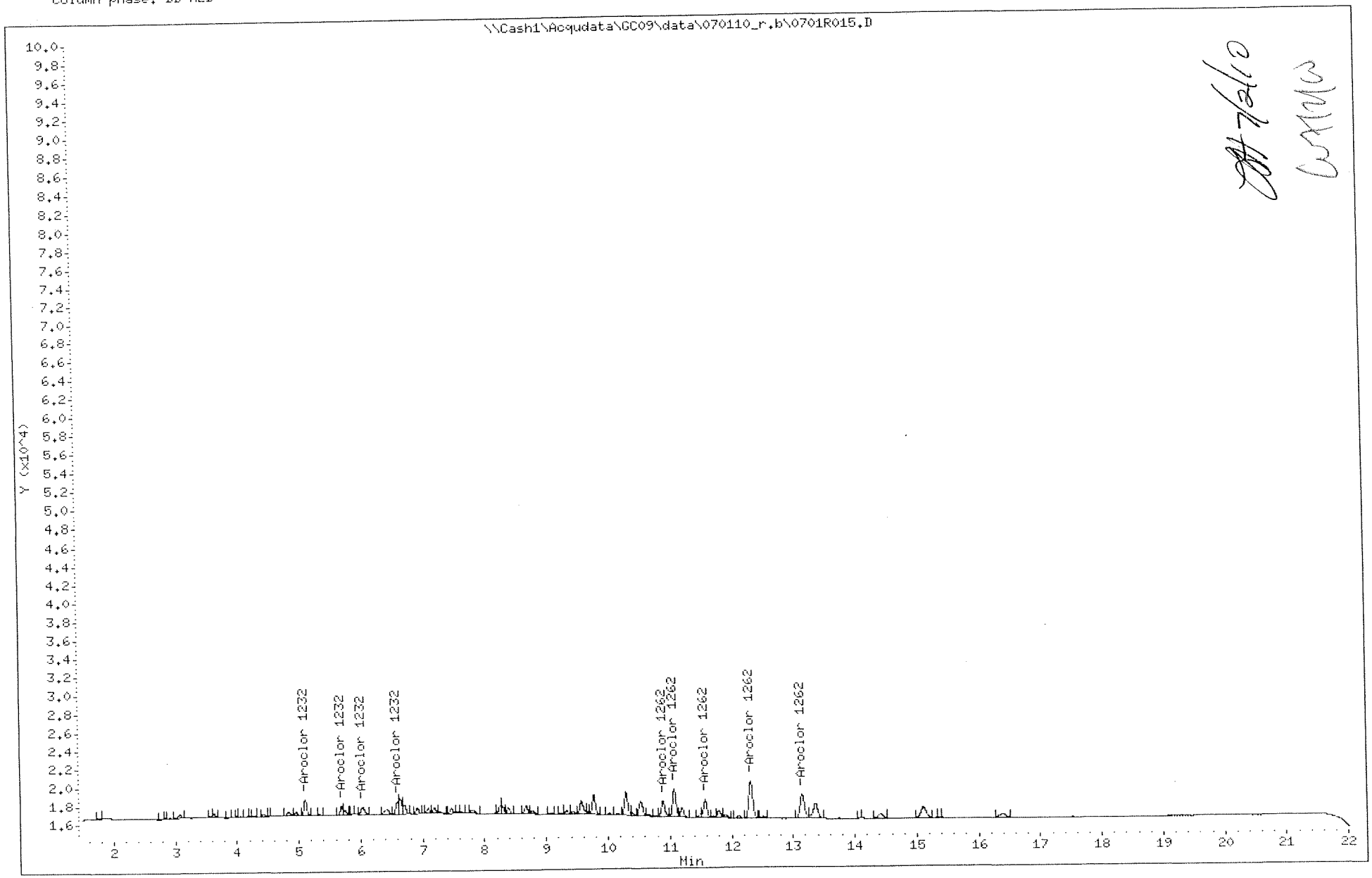


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R015.D
Date : 01-JUL-2010 20:55
Client ID:
Sample Info: 1232/1262 @ 25ppb | PCB5-52J

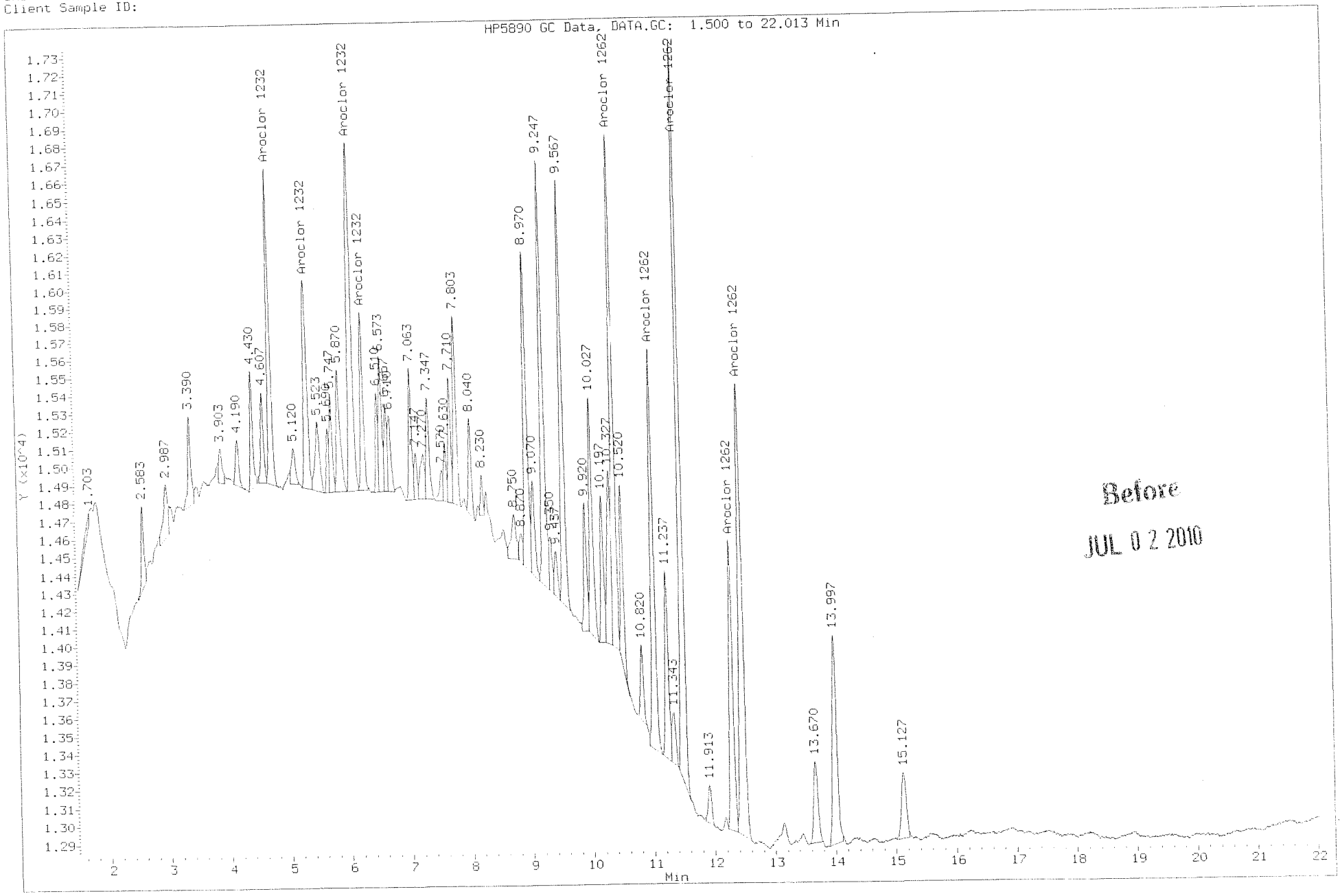
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB

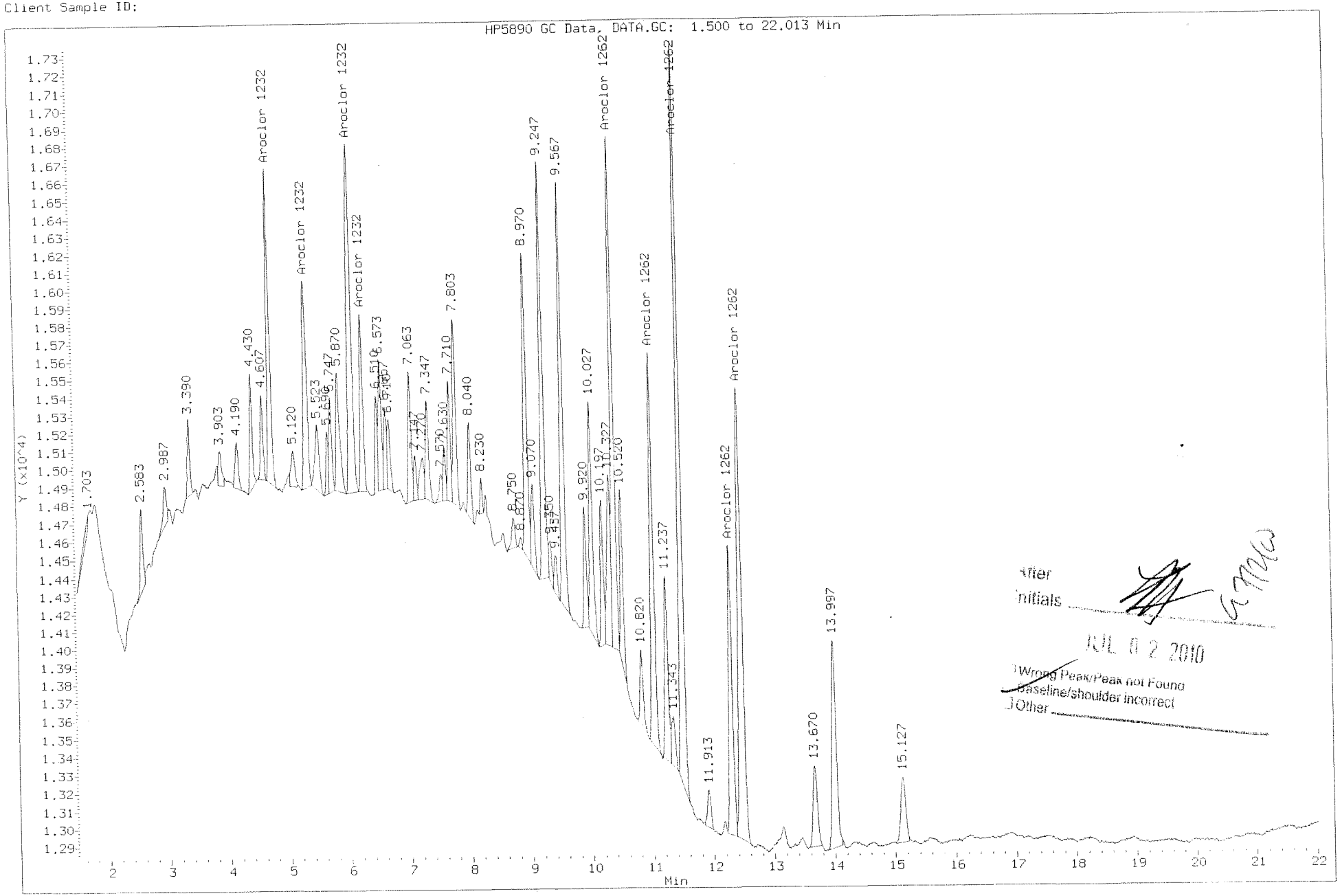


Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
Injection Date: 01-JUL-2010 20:55
Instrument: GC09.i
Client Sample ID:



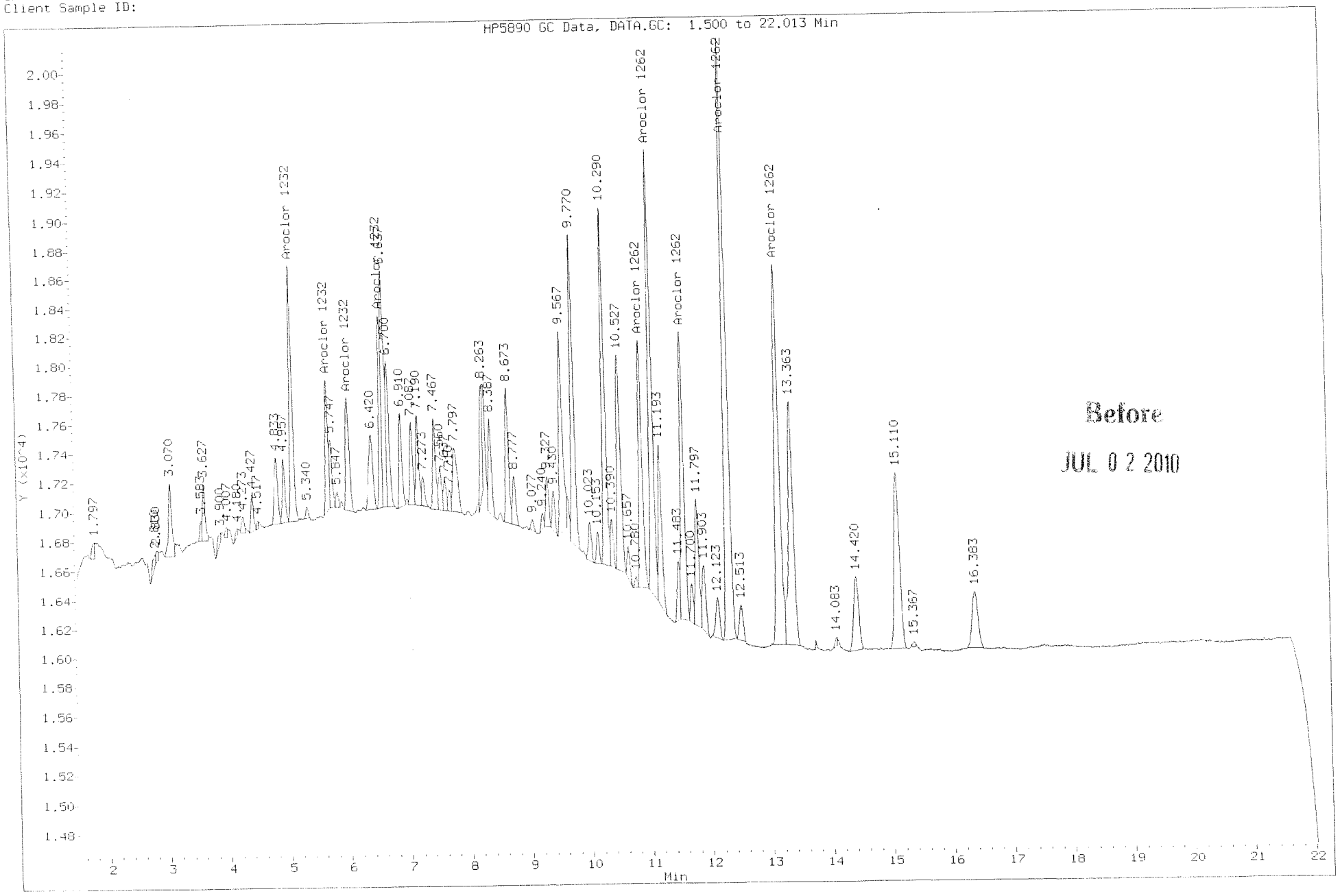
Before
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F015.D
Injection Date: 01-JUL-2010 20:55
Instrument: GC09.i
Client Sample ID:

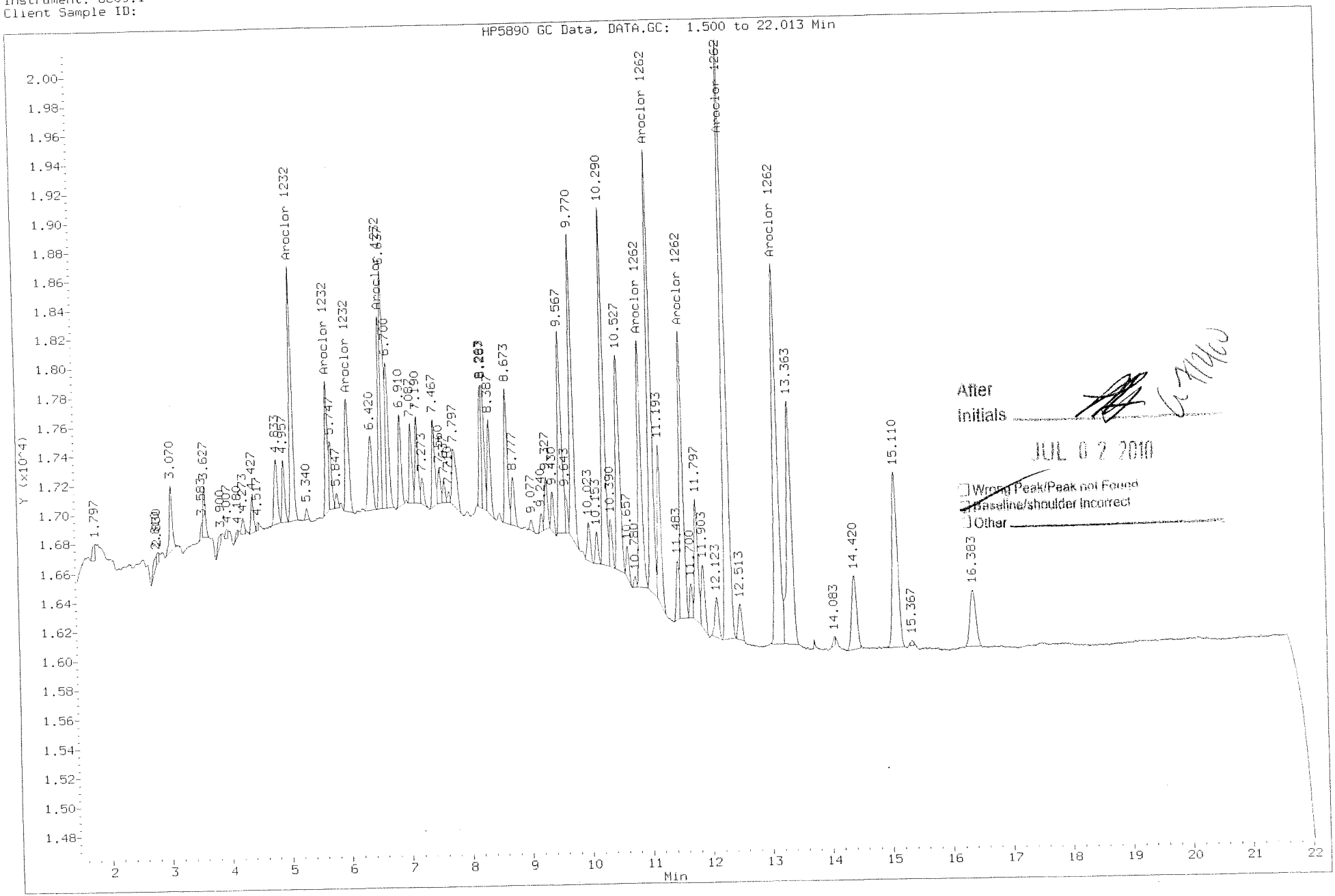


After
Initials
JUL 12 2010
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R015.D
Injection Date: 01-JUL-2010 20:55
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R015.D
Injection Date: 01-JUL-2010 20:55
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R016.D
Inj Date : 01-JUL-2010 21:22
Sample Info: 1232/1262 @ 50ppb | PCB5-52K
Misc Info :
Cal Date : 02-JUL-2010 08:14
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1232+1262.sub
Sub List #2 : 1232+1262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.737	5.103	10919	10823	57.9	57.5	80.00- 120.00	100.00(M)
	5.330	5.687	9775	5772	60.8	59.0	71.62- 107.42	89.52(M)
	6.093	6.027	17153	6401	60.2	55.9	125.66- 188.50	157.08(M)
	6.270	6.583	6632	7546	56.5	58.2	48.59- 72.89	60.74(M)
			Average of Peak Amounts =		58.8	57.6		
Aroclor 1262	10.403	10.883	21208	14188	59.3	57.4	80.00- 120.00	100.00(M)
	11.023	11.070	16580	23396	57.0	61.0	62.54- 93.81	78.18(M)
	11.493	11.570	30733	16346	55.4	57.3	115.93- 173.89	144.91(M)
	12.293	12.310	13450	37079	55.0	58.5	50.73- 76.10	63.42(M)
	12.467	13.147	24305	27150	55.3	57.8	91.68- 137.52	114.60(M)
			Average of Peak Amounts =		56.4	58.4		

QC Flag Legend

M - Compound response manually integrated.

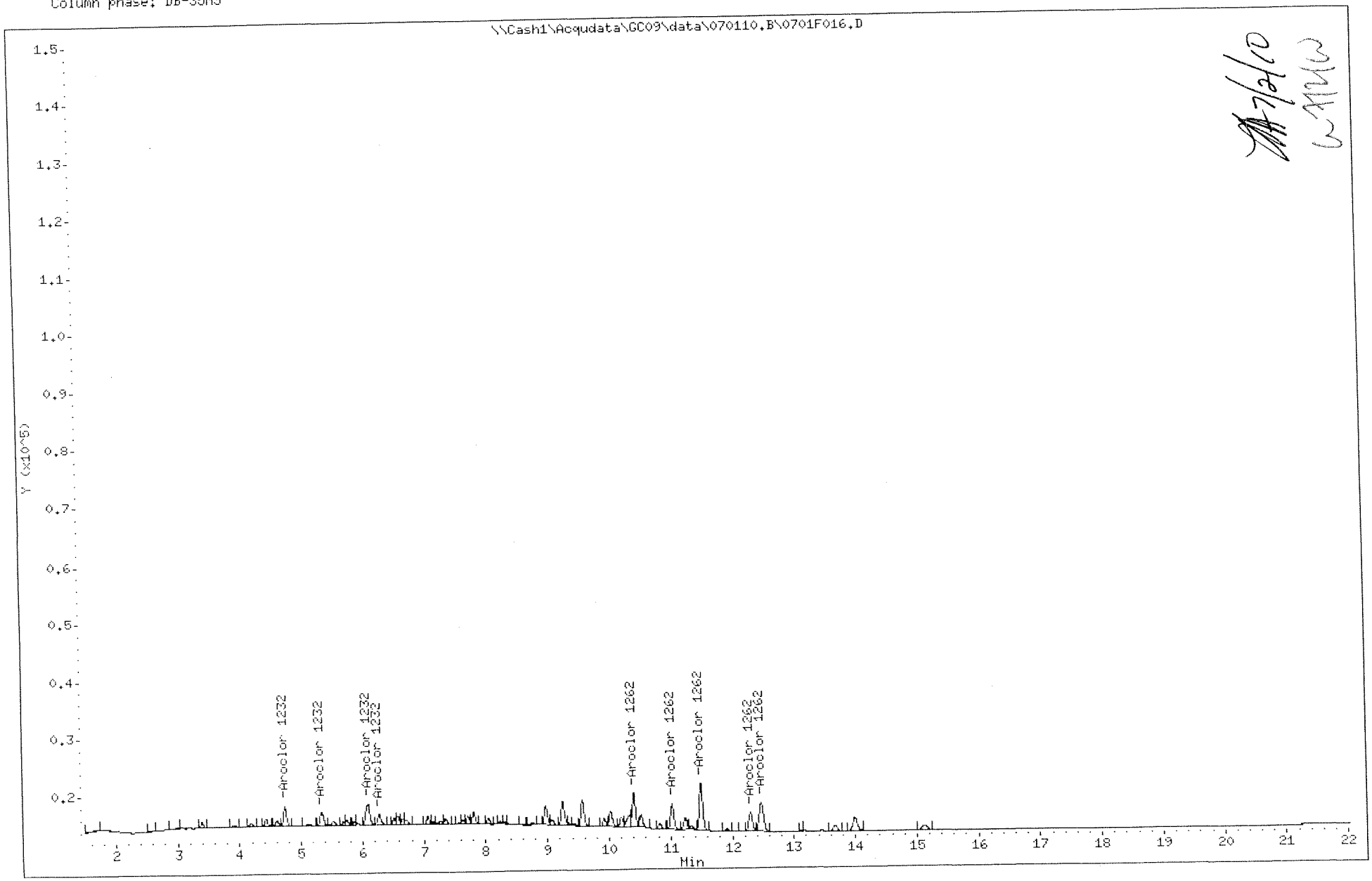
7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
Date : 01-JUL-2010 21:22
Client ID:
Sample Info: 1232/1262 @ 50ppb | PCB5-52K

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



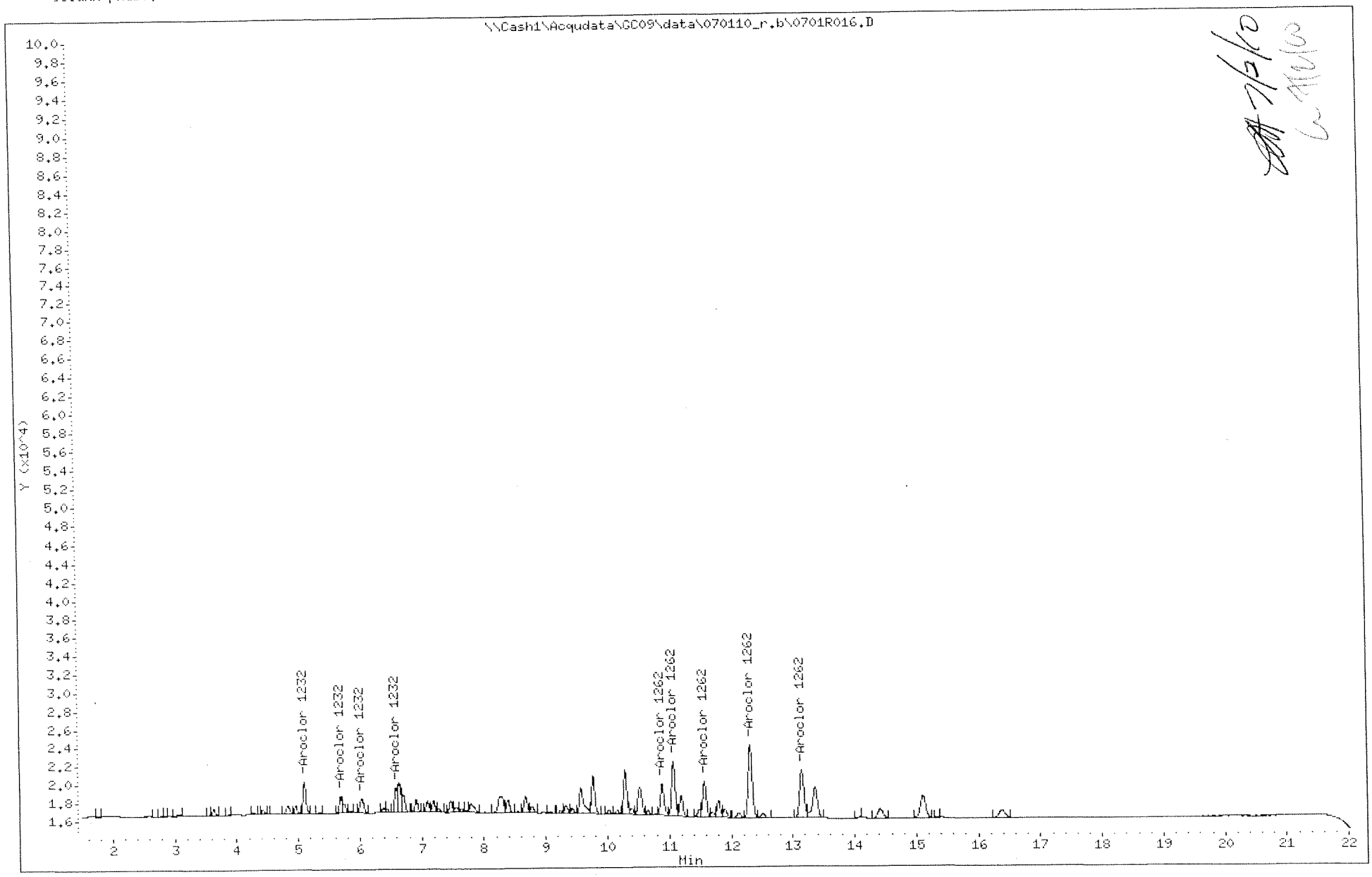
7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R016.D
Date : 01-JUL-2010 21:22
Client ID:
Sample Info: 1232/1262 @ 50ppb | PCB5-52K

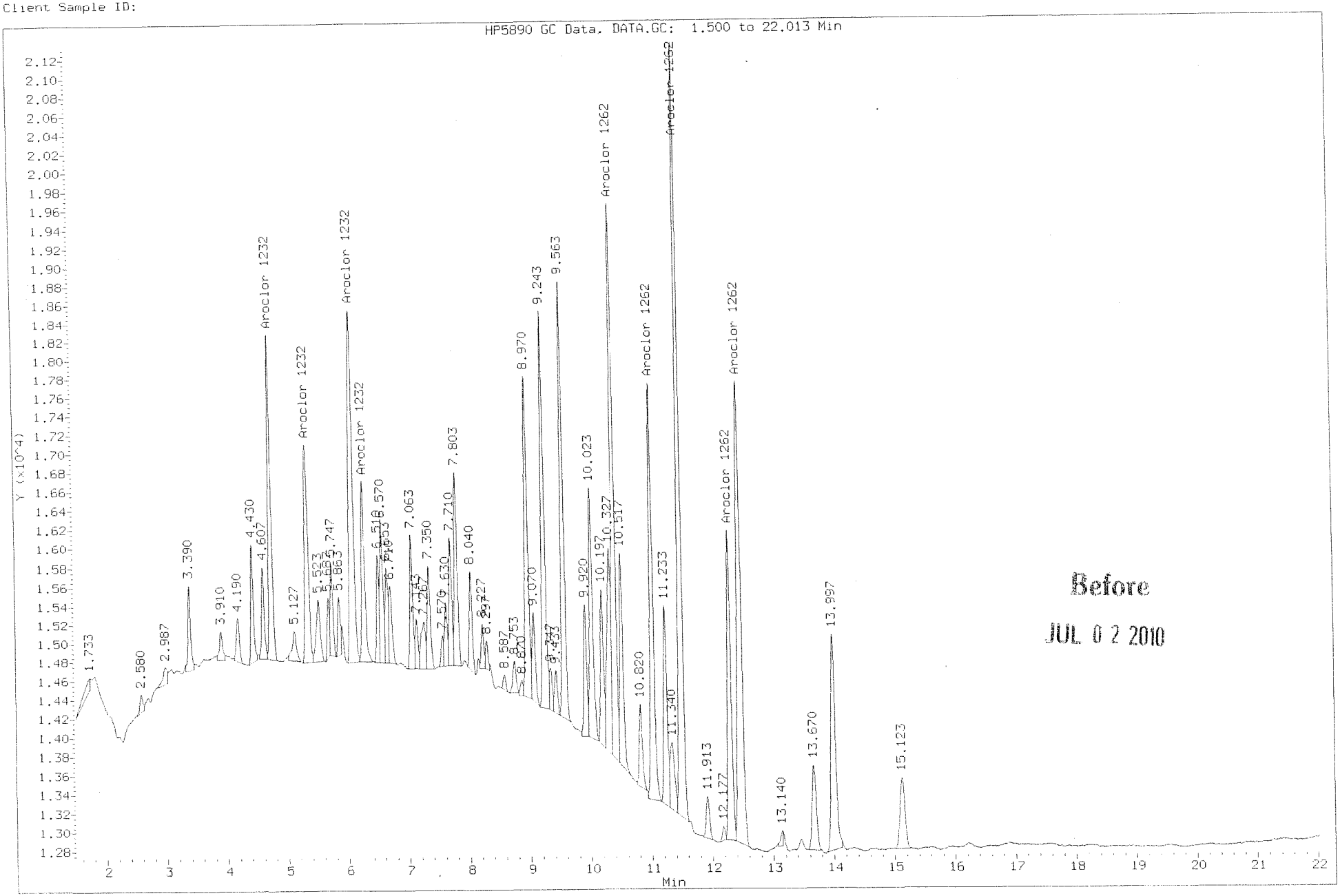
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

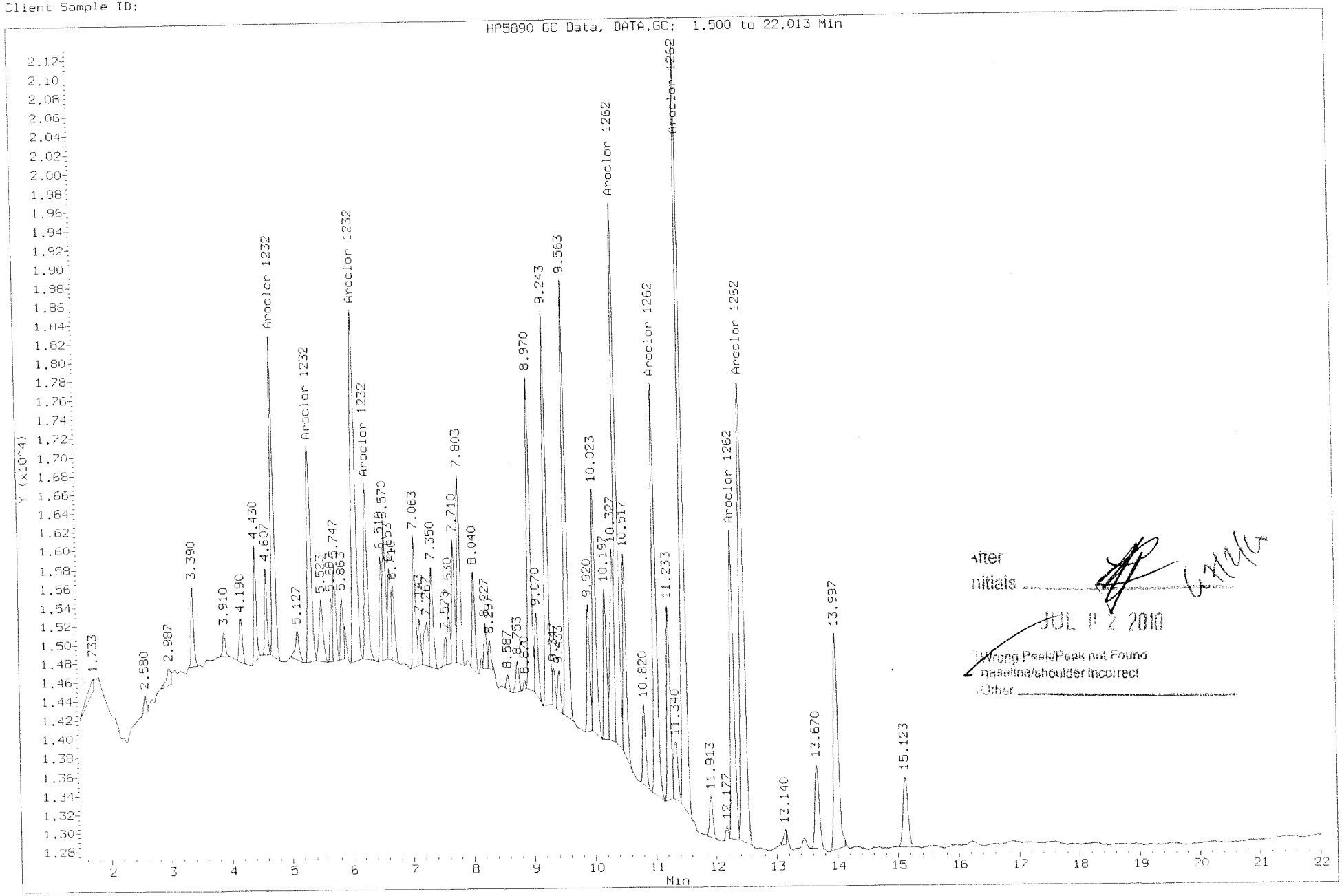
Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
Injection Date: 01-JUL-2010 21:22
Instrument: GC09.i
Client Sample ID:

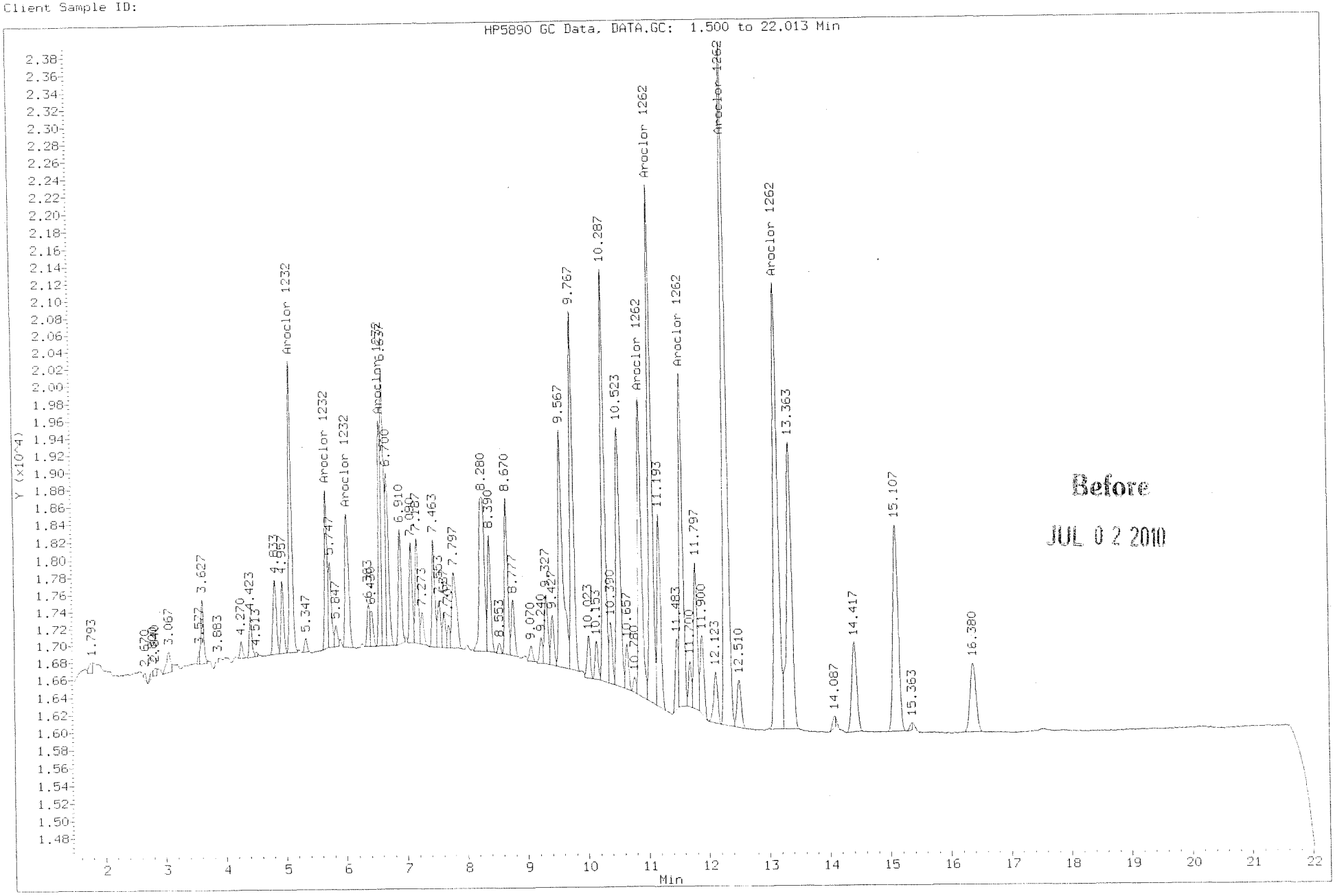


Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F016.D
Injection Date: 01-JUL-2010 21:22
Instrument: GC09.i
Client Sample ID:

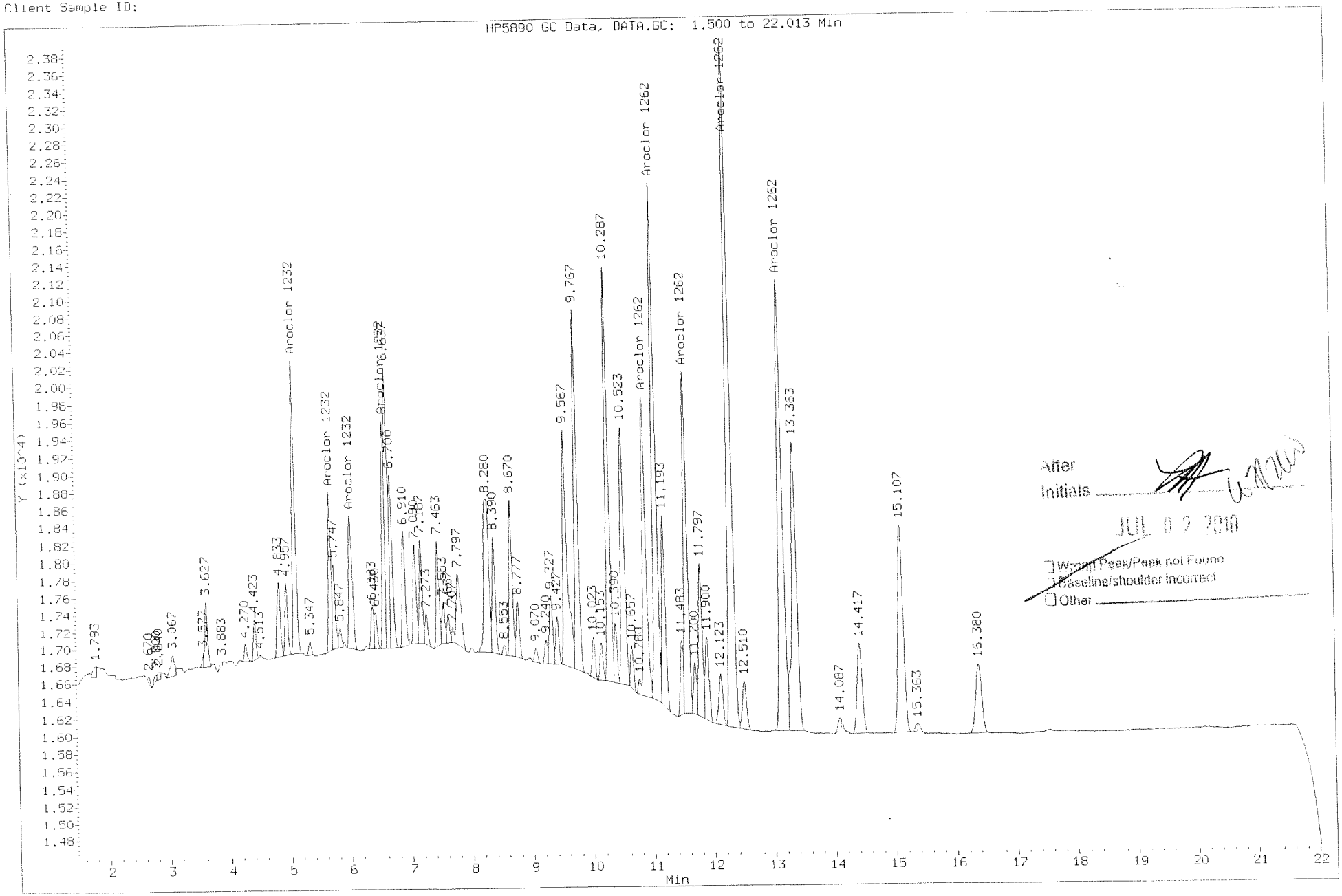


After
Initials
6/7/16
JUL 12 2010
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R016.D
Injection Date: 01-JUL-2010 21:22
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R016.D
Injection Date: 01-JUL-2010 21:22
Instrument: GC09.1
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F017.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F017.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R017.D
Inj Date : 01-JUL-2010 21:49
Sample Info: 1232/1262 @ 500ppb | PCB5-52L
Misc Info :
Cal Date : 02-JUL-2010 08:14
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1232+1262.sub
Sub List #2 : 1232+1262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.737	5.100	96514	96302	542	510	80.00- 120.00	100.00
	5.333	5.687	88357	53870	598	562	71.62- 107.42	91.55
	6.093	6.027	151979	63582	582	561	125.66- 188.50	157.47
	6.270	6.583	65430	64045	612	503	48.59- 72.89	67.79
			Average of Peak Amounts =		584	534		
Aroclor 1262	10.403	10.883	196327	137854	588	556	80.00- 120.00	100.00
	11.023	11.067	159307	207873	580	540	62.54- 93.81	81.14
	11.493	11.570	302961	156700	580	554	115.93- 173.89	154.31
	12.293	12.310	135400	338830	598	534	50.73- 76.10	68.97
	12.470	13.147	239378	256517	583	546	91.68- 137.52	121.93
			Average of Peak Amounts =		586	546		

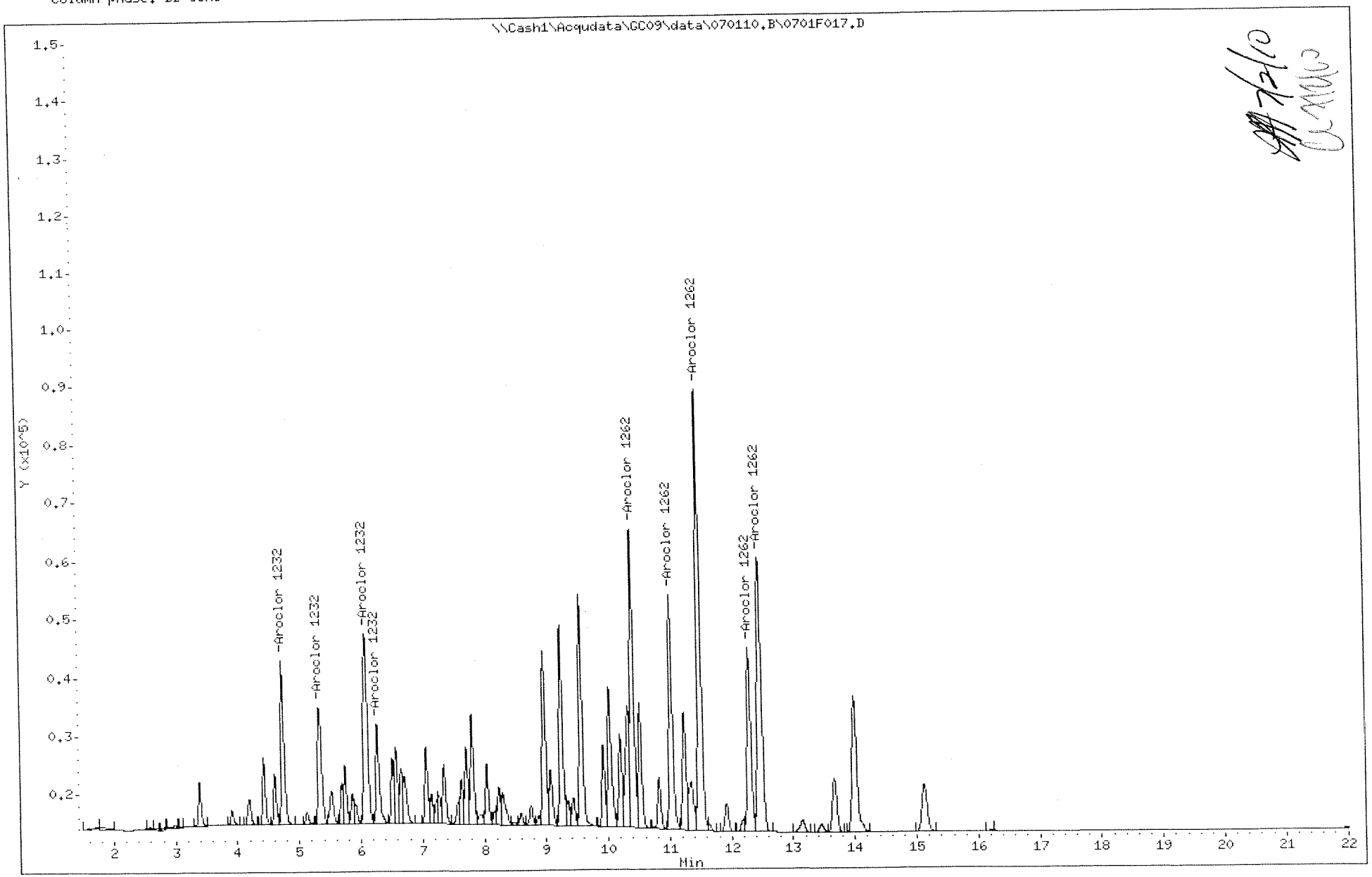
7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F017.D
Date : 01-JUL-2010 21:49
Client ID:
Sample Info: 1232/1262 @ 500ppb | PCB5-52L

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

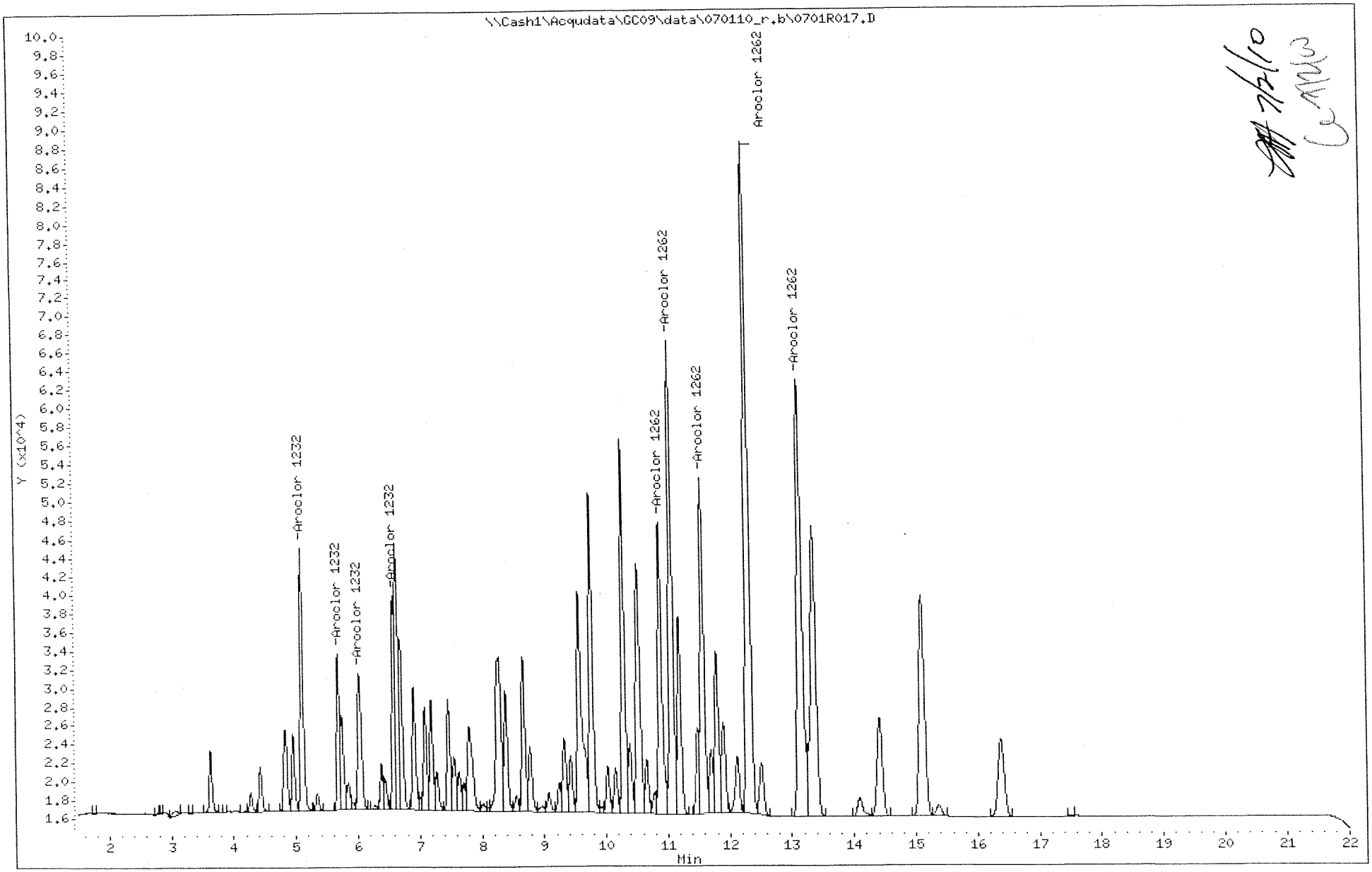


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R017.D
Date : 01-JUL-2010 21:49
Client ID:
Sample Info: 1232/1262 @ 500ppb | PCB5-52L

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F018.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F018.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R018.D
Inj Date : 01-JUL-2010 22:15
Sample Info: 1232/1262 @ 1000ppb | PCB5-52M
Misc Info :
Cal Date : 02-JUL-2010 08:14
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1232+1262.sub
Sub List #2 : 1232+1262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.737	5.100	165883	164763	895	869	80.00- 120.00	100.00
	5.330	5.687	153998	95033	1000	985	71.62- 107.42	92.84
	6.093	6.027	266344	115581	982	1010	125.66- 188.50	160.56
	6.270	6.583	115923	113489	1040	888	48.59- 72.89	69.88
			Average of Peak Amounts =		979	938		
Aroclor 1262	10.400	10.883	344173	244493	1000	984	80.00- 120.00	100.00
	11.023	11.067	283831	362887	1000	941	62.54- 93.81	82.47
	11.493	11.570	543446	279980	1010	987	115.93- 173.89	157.90
	12.293	12.307	243474	607240	1040	956	50.73- 76.10	70.74
	12.467	13.143	431087	453461	1020	964	91.68- 137.52	125.25
			Average of Peak Amounts =		1010	966		

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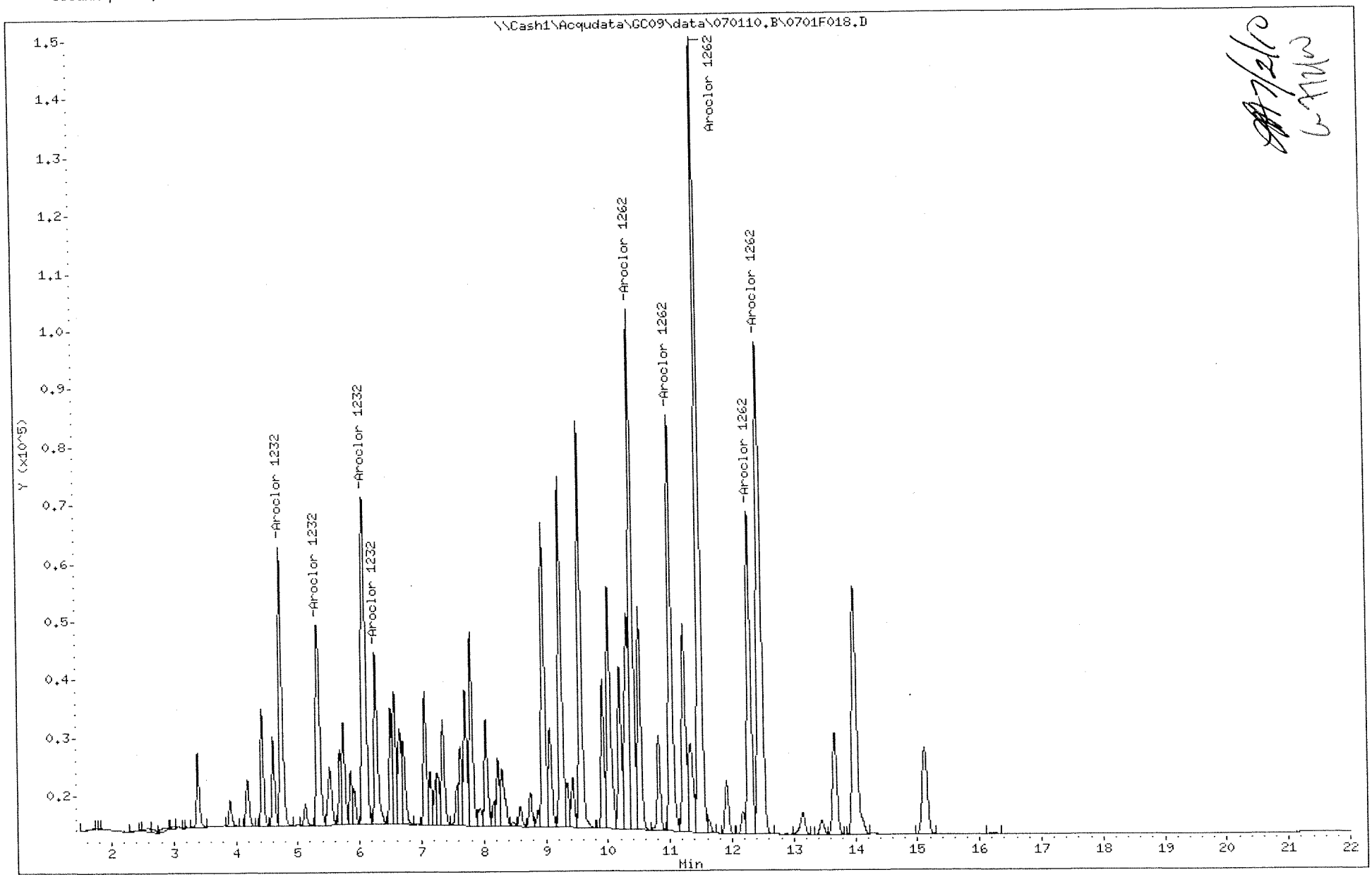
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F018.D
Date : 01-JUL-2010 22:15
Client ID:
Sample Info: 1232/1262 @ 1000ppb | PCB5-52M

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

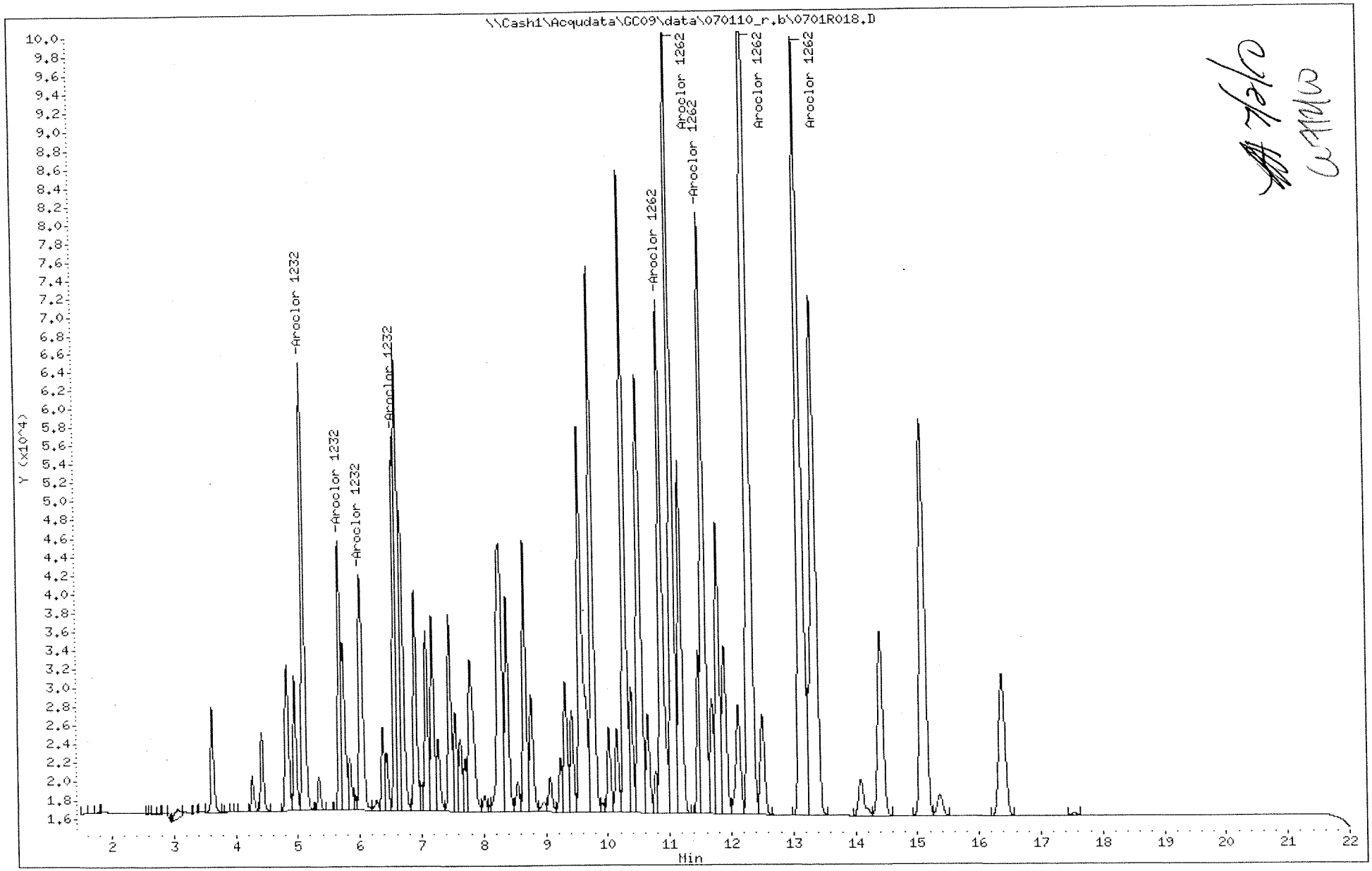


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R018.D
Date : 01-JUL-2010 22:15
Client ID:
Sample Info: 1232/1262 @ 1000ppb | PCB5-52M

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F019.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F019.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R019.D
Inj Date : 01-JUL-2010 22:42
Sample Info: 1232/1262 @ 2000ppb | PCB5-52N
Misc Info :
Cal Date : 02-JUL-2010 08:14
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1232+1262.sub
Sub List #2 : 1232+1262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.733	5.100	284741	282763	1490	1490	80.00- 120.00	100.00
	5.330	5.687	266958	166715	1680	1710	71.62- 107.42	93.75
	6.093	6.027	469122	202854	1680	1770	125.66- 188.50	164.75
	6.267	6.583	205700	199948	1770	1550	48.59- 72.89	72.24
			Average of Peak Amounts =		1660	1630		
Aroclor 1262	10.400	10.883	612030	435187	1730	1750	80.00- 120.00	100.00
	11.020	11.067	512423	639408	1760	1660	62.54- 93.81	83.73
	11.493	11.570	989079	502800	1800	1770	115.93- 173.89	161.61
	12.290	12.310	439750	1086824	1830	1710	50.73- 76.10	71.85
	12.467	13.147	783845	809369	1810	1720	91.68- 137.52	128.07
			Average of Peak Amounts =		1790	1720		

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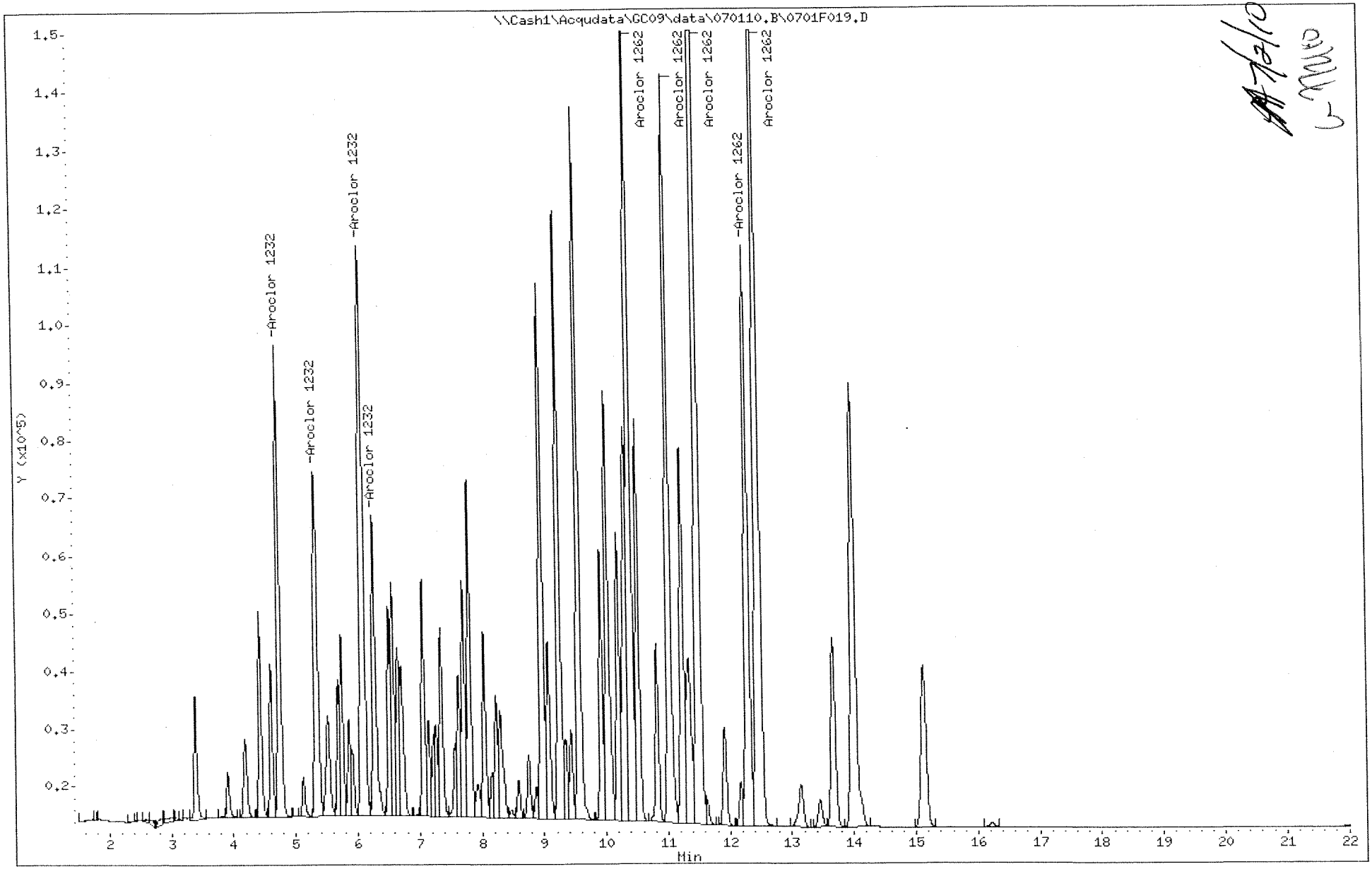
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F019.D
Date : 01-JUL-2010 22:42
Client ID:
Sample Info: 1232/1262 @ 2000ppb | PCB5-52N

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

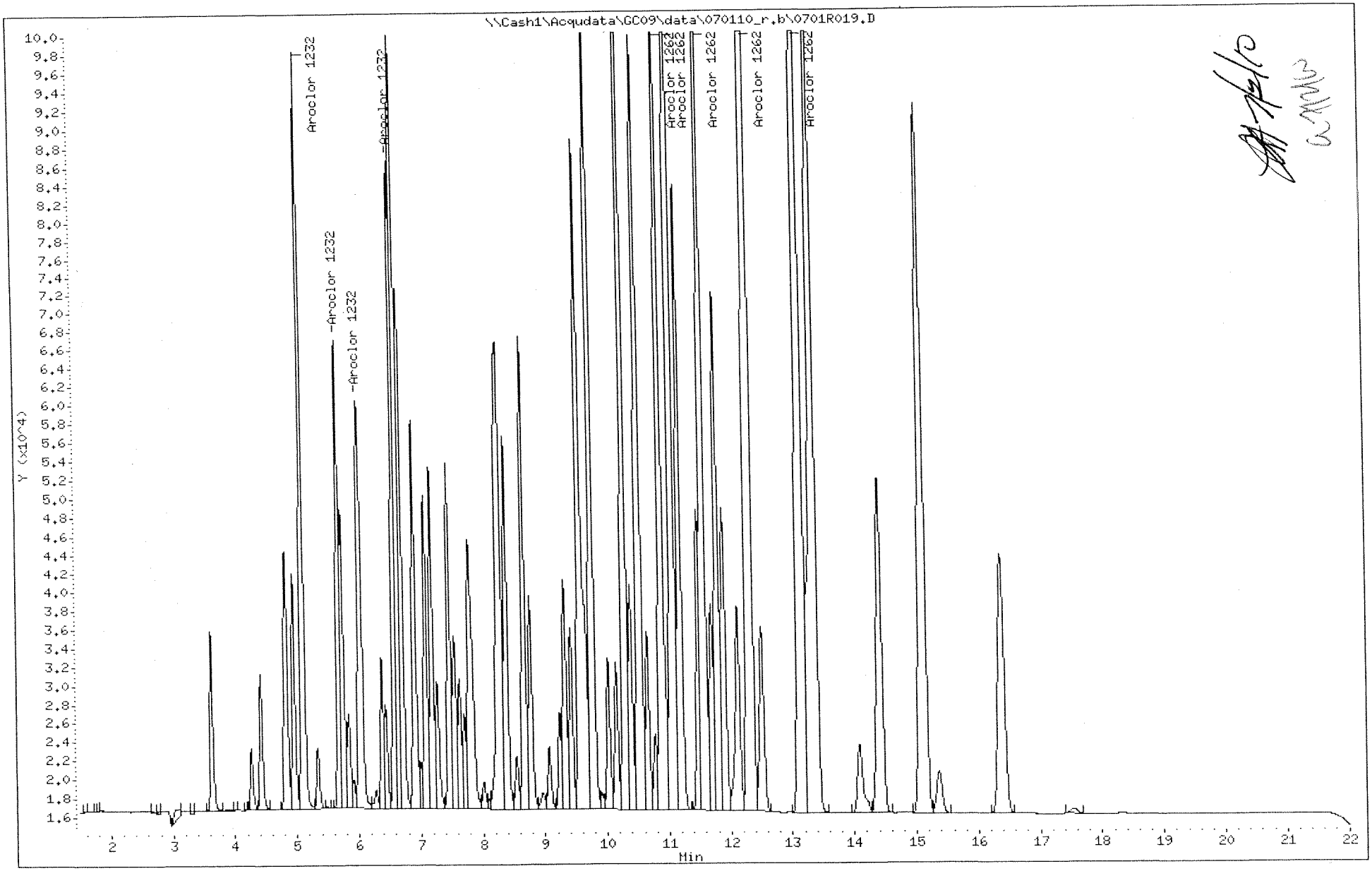


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R019.D
Date : 01-JUL-2010 22:42
Client ID:
Sample Info: 1232/1262 @ 2000ppb | PCB5-52N

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F020.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F020.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R020.D
Inj Date : 01-JUL-2010 23:09
Sample Info: 1232/1262 @ 5000ppb | PCB5-520
Misc Info :
Cal Date : 02-JUL-2010 08:14
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1232+1262.sub
Sub List #2 : 1232+1262.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.737	5.100	594379	580202	3110	3050	80.00- 120.00	100.00
	5.333	5.687	567340	344268	3490	3540	71.62- 107.42	95.45
	6.093	6.027	1018356	433089	3560	3770	125.66- 188.50	171.33
	6.270	6.587	451028	413489	3780	3210	48.59- 72.89	75.88
			Average of Peak Amounts =		3480	3390		
Aroclor 1262	10.403	10.883	1373493	969443	3810	3910	80.00- 120.00	100.00
	11.023	11.067	1149204	1395390	3880	3620	62.54- 93.81	83.67
	11.493	11.570	2233281	1113258	4010	3920	115.93- 173.89	162.60
	12.293	12.310	983792	2417031	4020	3820	50.73- 76.10	71.63
	12.470	13.147	1769054	1796537	4020	3820	91.68- 137.52	128.80
			Average of Peak Amounts =		3950	3820		

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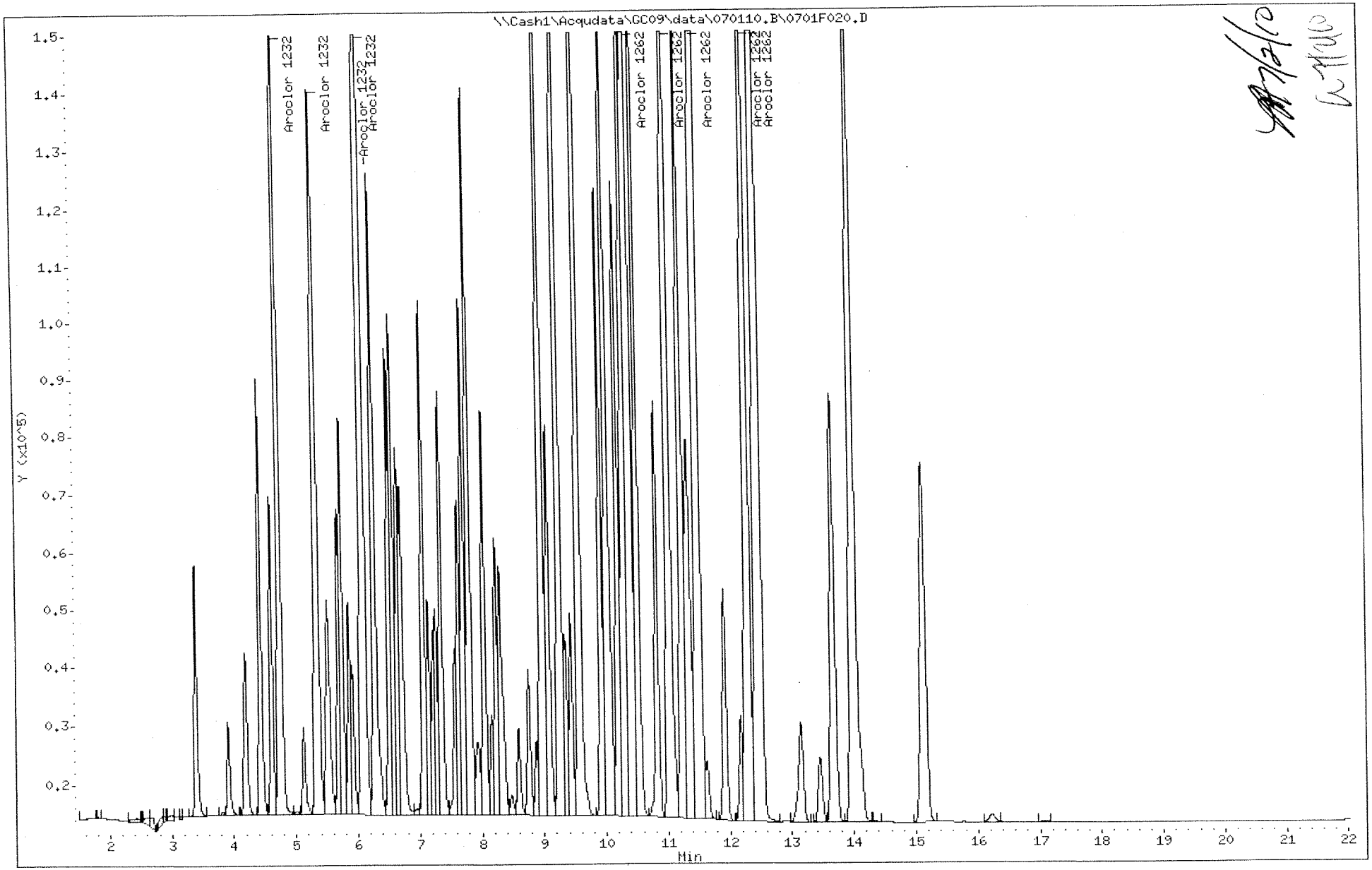
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F020.D
Date : 01-JUL-2010 23:09
Client ID:
Sample Info: 1232/1262 @ 5000ppb | PCB5-520

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

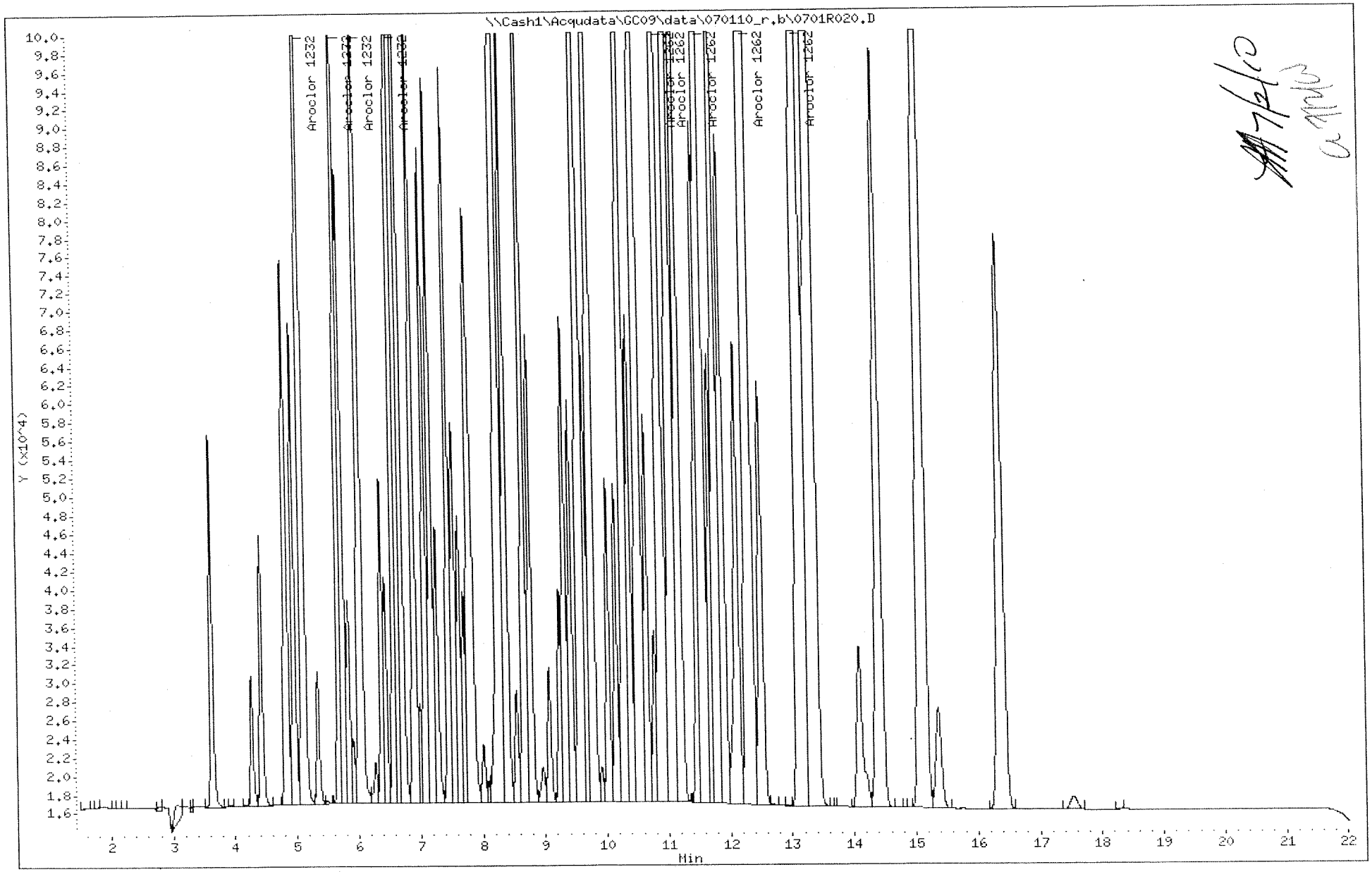
Column phase: DB-35MS



Data File: \\Cash1\Acqudata\GC09\data\070110_r,b\0701R020.D
Date : 01-JUL-2010 23:09
Client ID:
Sample Info: 1232/1262 @ 5000ppb | PCB5-520

Instrument: GC09,i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F021.D
Report Date: 02-Jul-2010 10:09

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Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F021.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R021.D
Inj Date : 01-JUL-2010 23:35
Sample Info: 1242/1268 @ 25ppb | PCB5-52P
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1242+1268.sub
Sub List #2 : 1242+1268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	3303	2562	31.9	27.5	80.00- 120.00	100.00
	6.093	6.700	16422	6044	56.4	30.1	354.70- 532.06	497.19
	6.657	7.090	3333	3934	30.0	30.9	79.49- 119.23	100.94
	7.063	7.190	4760	4469	31.5	31.1	116.46- 174.68	144.11
	7.350	7.467	3791	4249	29.2	29.9	108.43- 162.65	114.80
			Average of Peak Amounts =		35.8	29.9		
Aroclor 1268	12.457	13.157	22711	31198	30.8	35.4	80.00- 120.00	100.00
	13.150	13.373	18489	26915	30.8	36.5	65.26- 97.89	81.41
	13.457	14.097	4243	21968	27.8	71.7	18.12- 27.17	18.68
	14.000	14.387	7169	5615	28.0	19.7	30.22- 45.34	31.57
	15.130	15.113	56104	8928	30.8	5.46	178.84- 268.26	247.03
			Average of Peak Amounts =		29.6	33.8		

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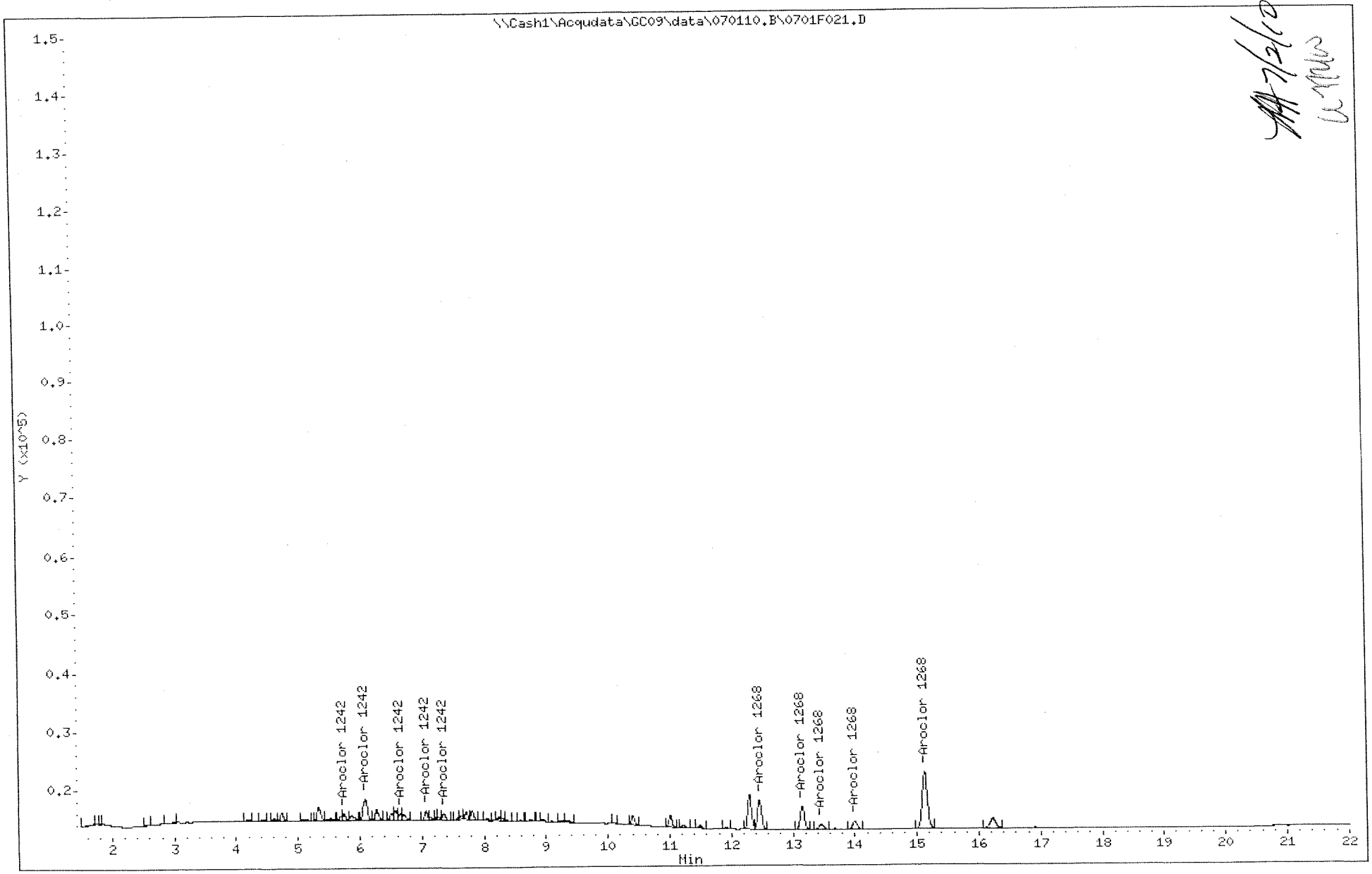
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F021.D
Date : 01-JUL-2010 23:35
Client ID:
Sample Info: 1242/1268 @ 25ppb | PCB5-52P

Column phase: DB-35MS

Instrument: GC09.i

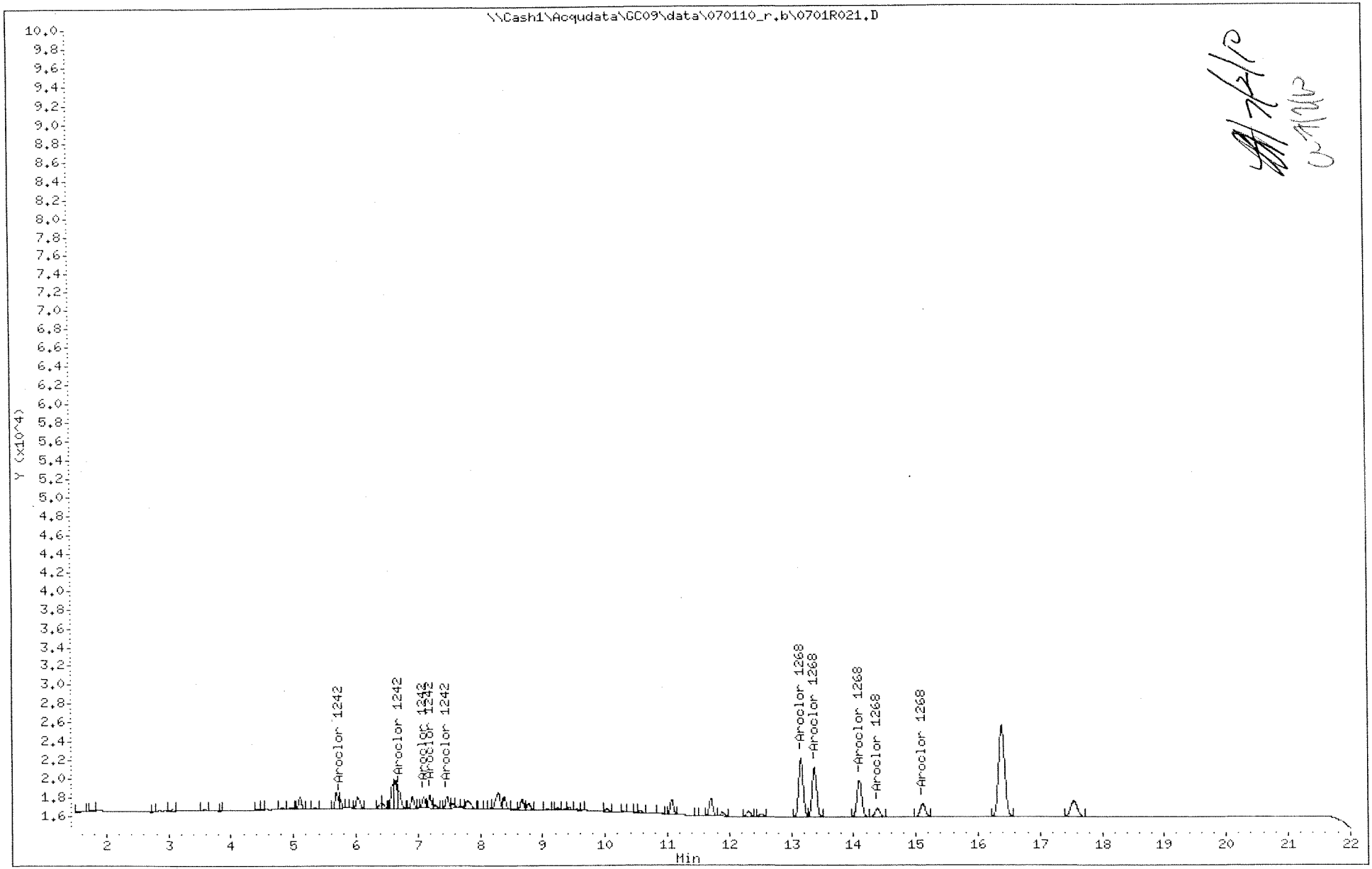
Operator: LHarris
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R021.D
Date : 01-JUL-2010 23:35
Client ID:
Sample Info: 1242/1268 @ 25ppb | PCB5-52P

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



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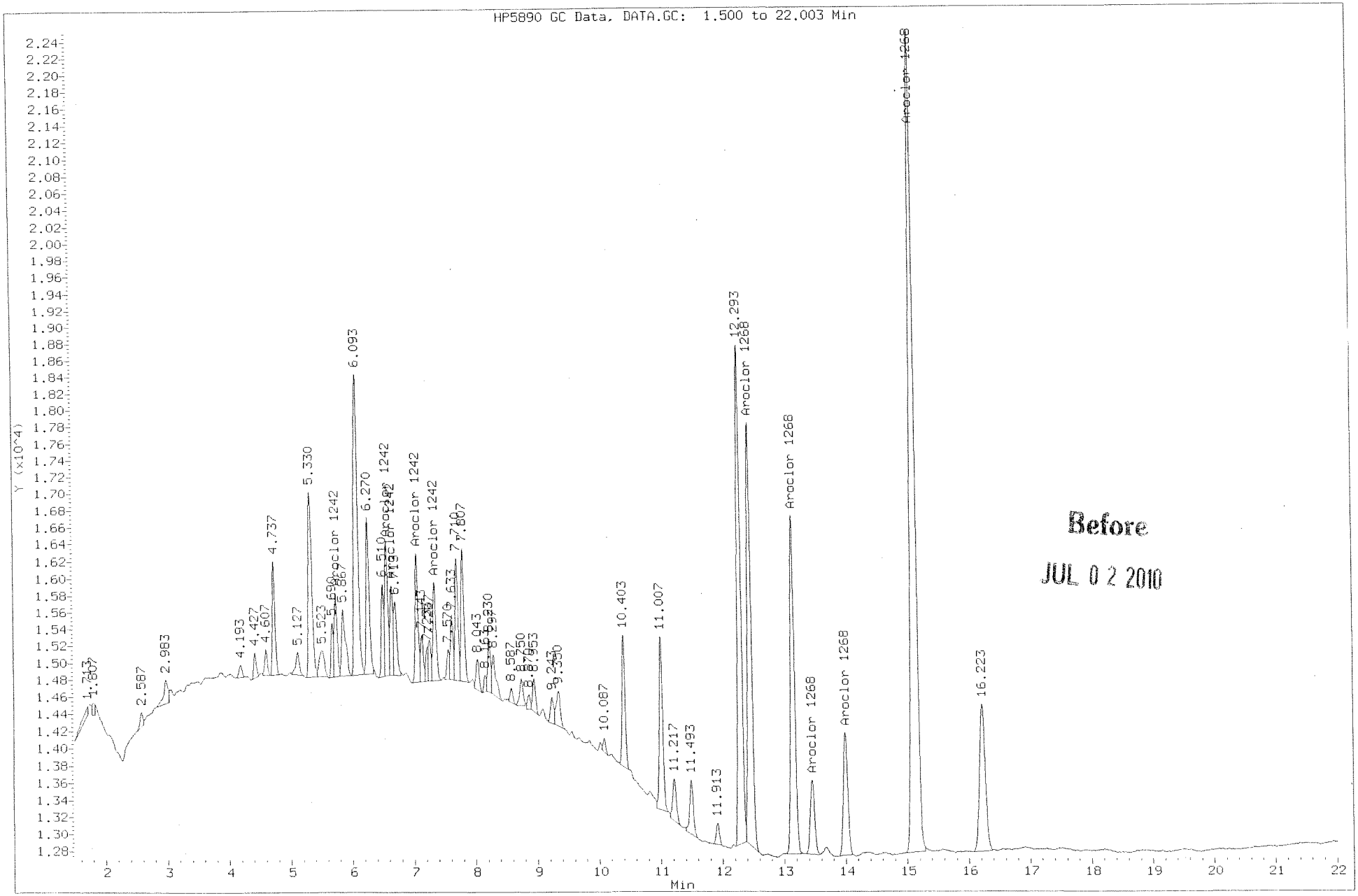
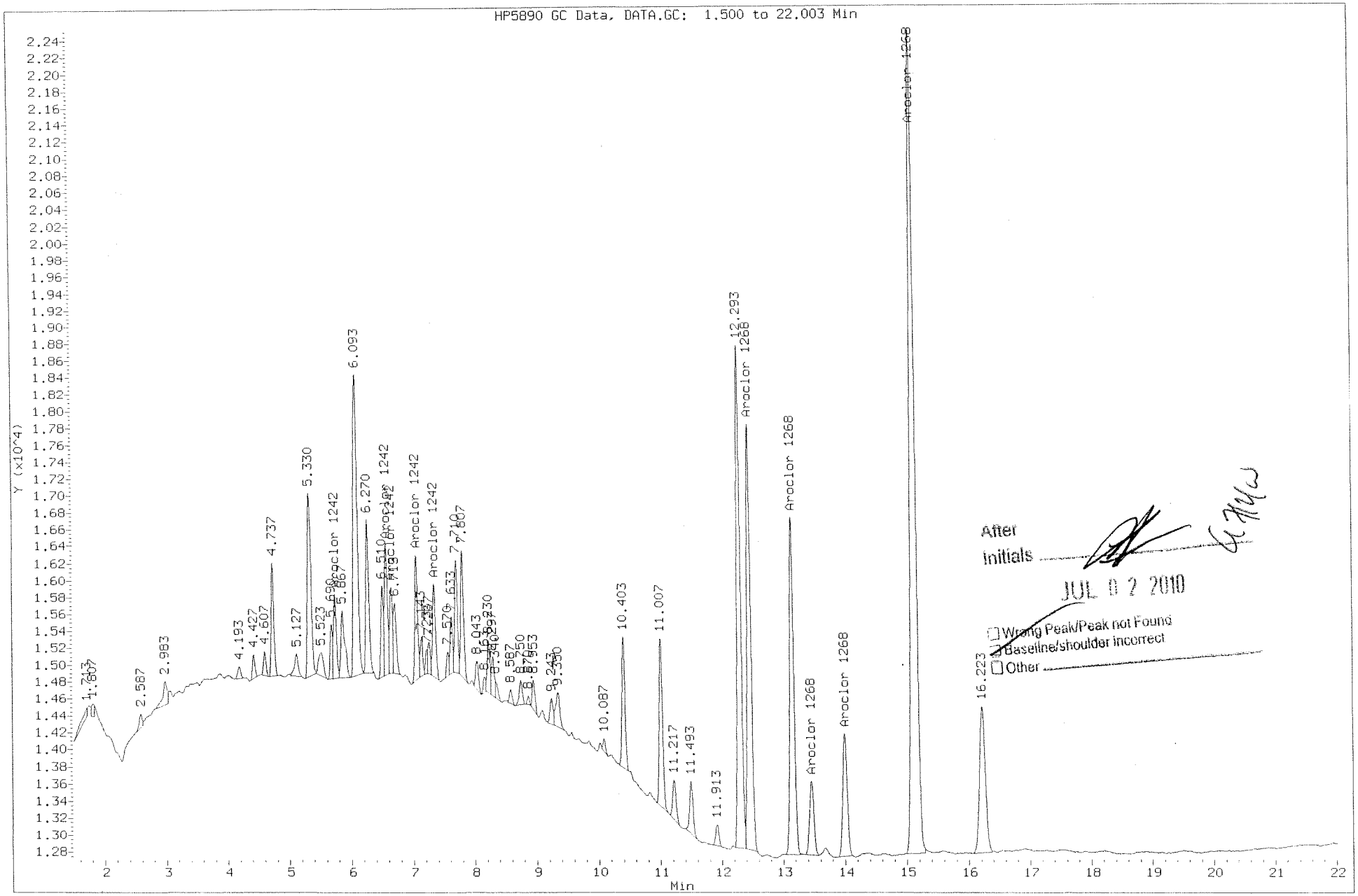
Injection Date: 01-JUL-2010 23:35
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F021.D
Injection Date: 01-JUL-2010 23:35
Instrument: GC09.i
Client Sample ID:



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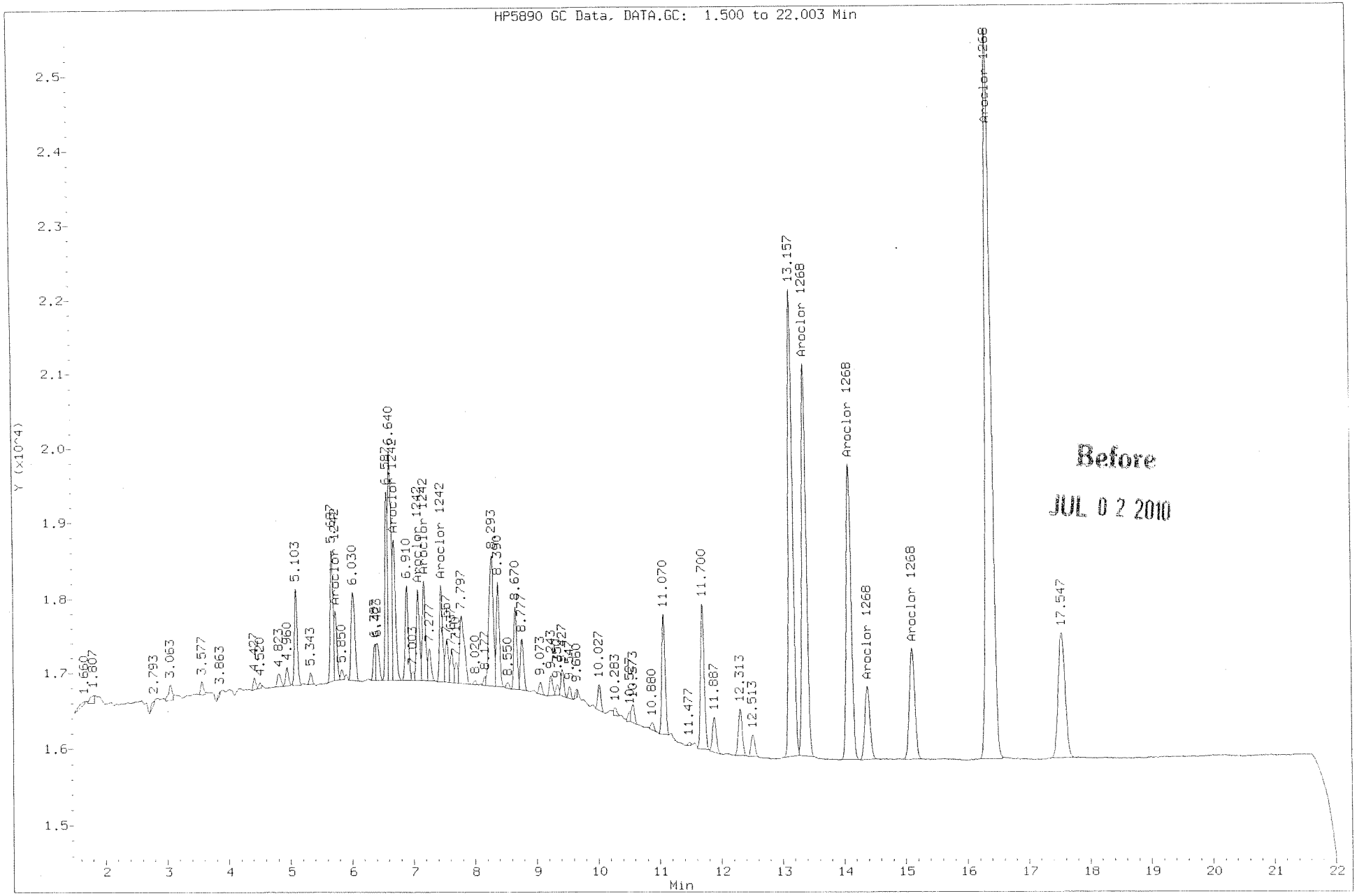
Injection Date: 01-JUL-2010 23:35
Instrument: GC09.i
Client Sample ID:



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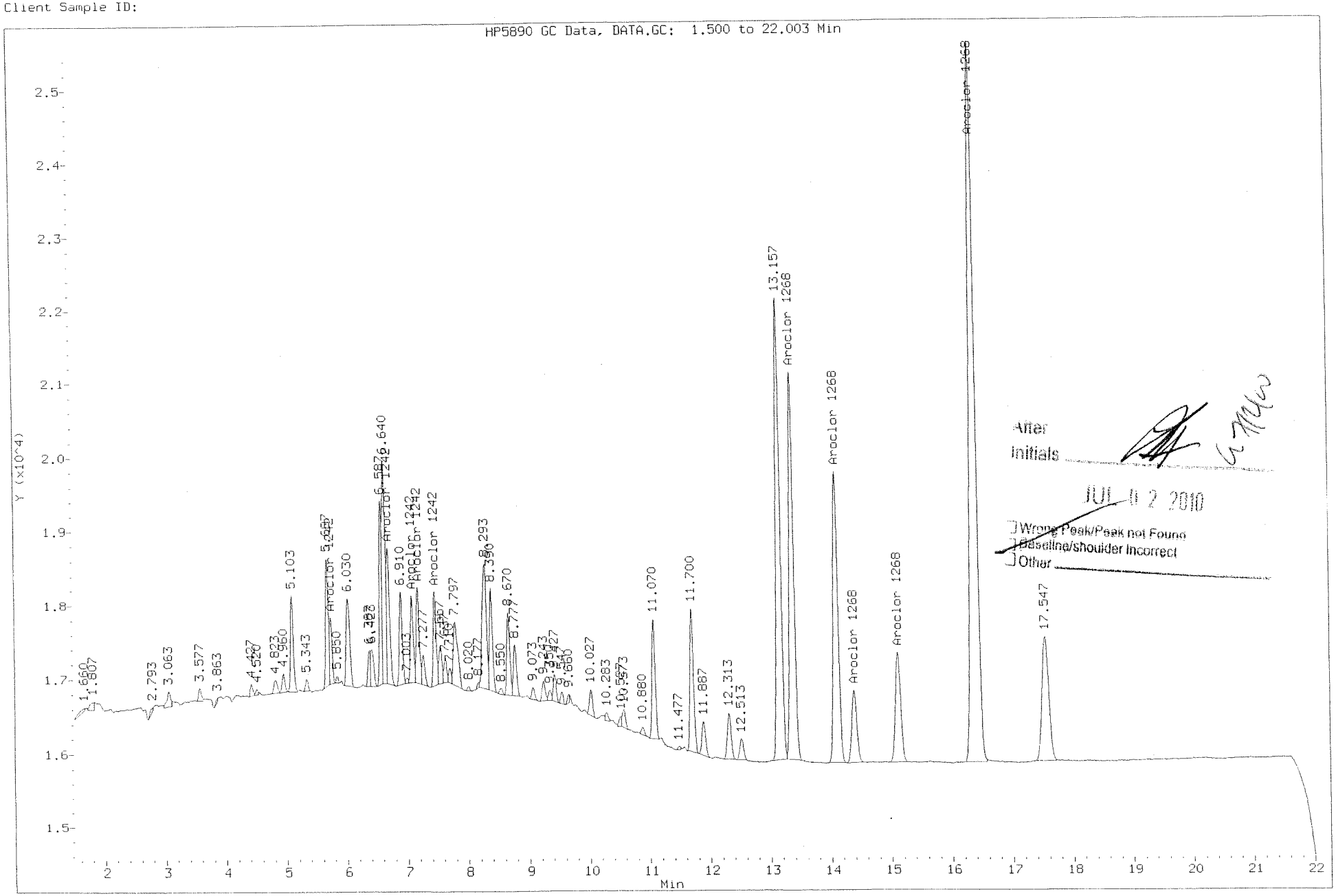
Injection Date: 01-JUL-2010 23:35
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F022.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F022.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R022.D
Inj Date : 02-JUL-2010 00:02
Sample Info: 1242/1268 @ 50ppb | PCB5-52Q
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1242+1268.sub
Sub List #2 : 1242+1268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	5688	5650	55.0	60.6	80.00- 120.00	100.00
	6.097	6.703	30305	11759	84.6	58.5	354.70- 532.06	532.76
	6.657	7.090	6244	7397	56.1	58.0	79.49- 119.23	109.77
	7.063	7.190	8804	8394	58.3	58.4	116.46- 174.68	154.79
	7.350	7.467	7054	8404	54.4	59.2	108.43- 162.65	124.01
			Average of Peak Amounts =		61.7	58.9		
Aroclor 1268	12.457	13.157	42834	58159	58.2	64.3	80.00- 120.00	100.00
	13.153	13.373	34758	50822	58.0	66.2	65.26- 97.89	81.15
	13.460	14.097	8055	41476	52.8	101	18.12- 27.17	18.81
	14.000	14.387	13783	10698	53.9	40.4	30.22- 45.34	32.18
	15.130	15.110	104449	16873	57.3	13.3	178.84- 268.26	243.85
			Average of Peak Amounts =		56.0	57.0		

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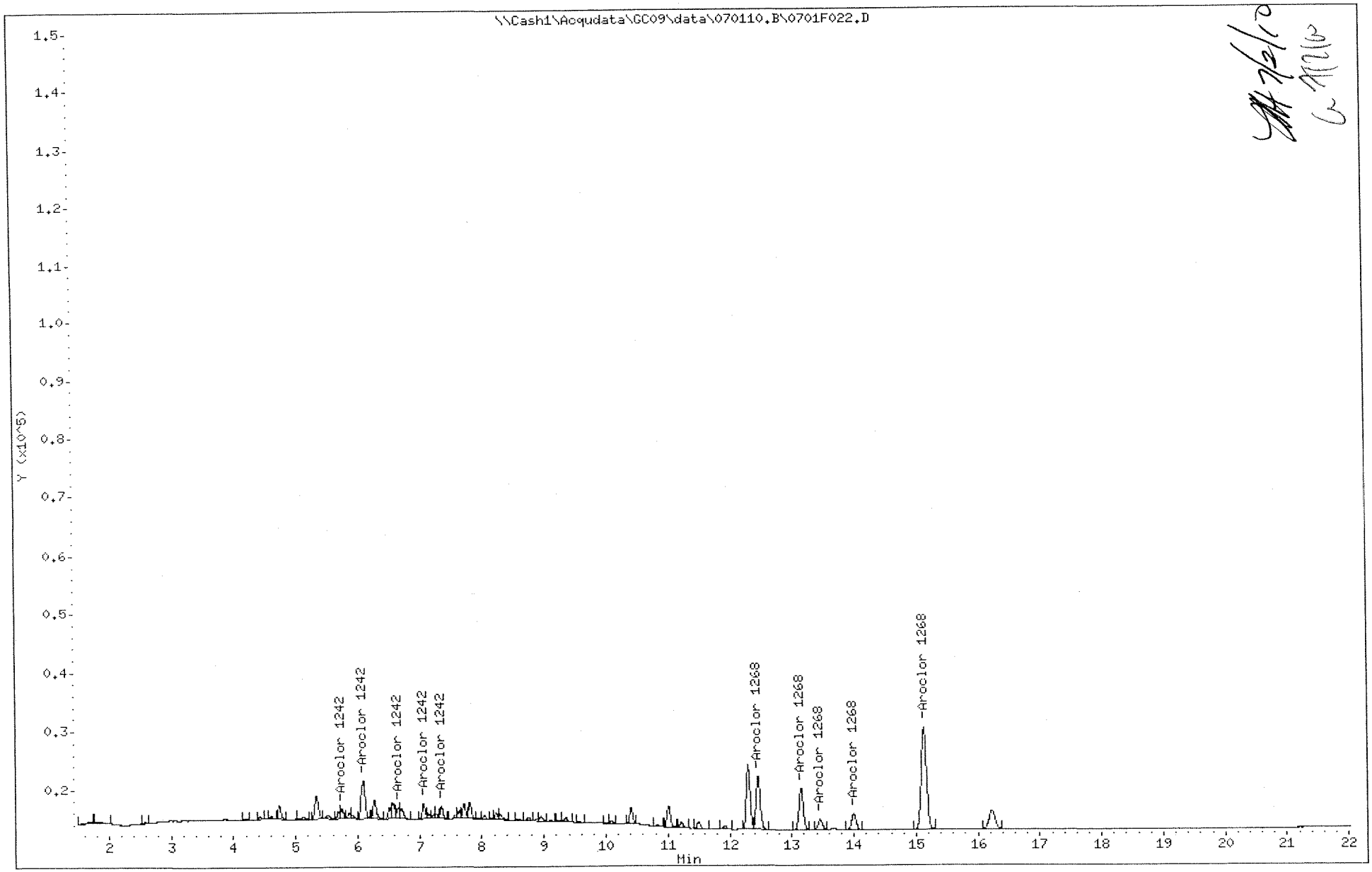
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F022.D
Date : 02-JUL-2010 00:02
Client ID:
Sample Info: 1242/1268 @ 50ppb | PCB5-52Q

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

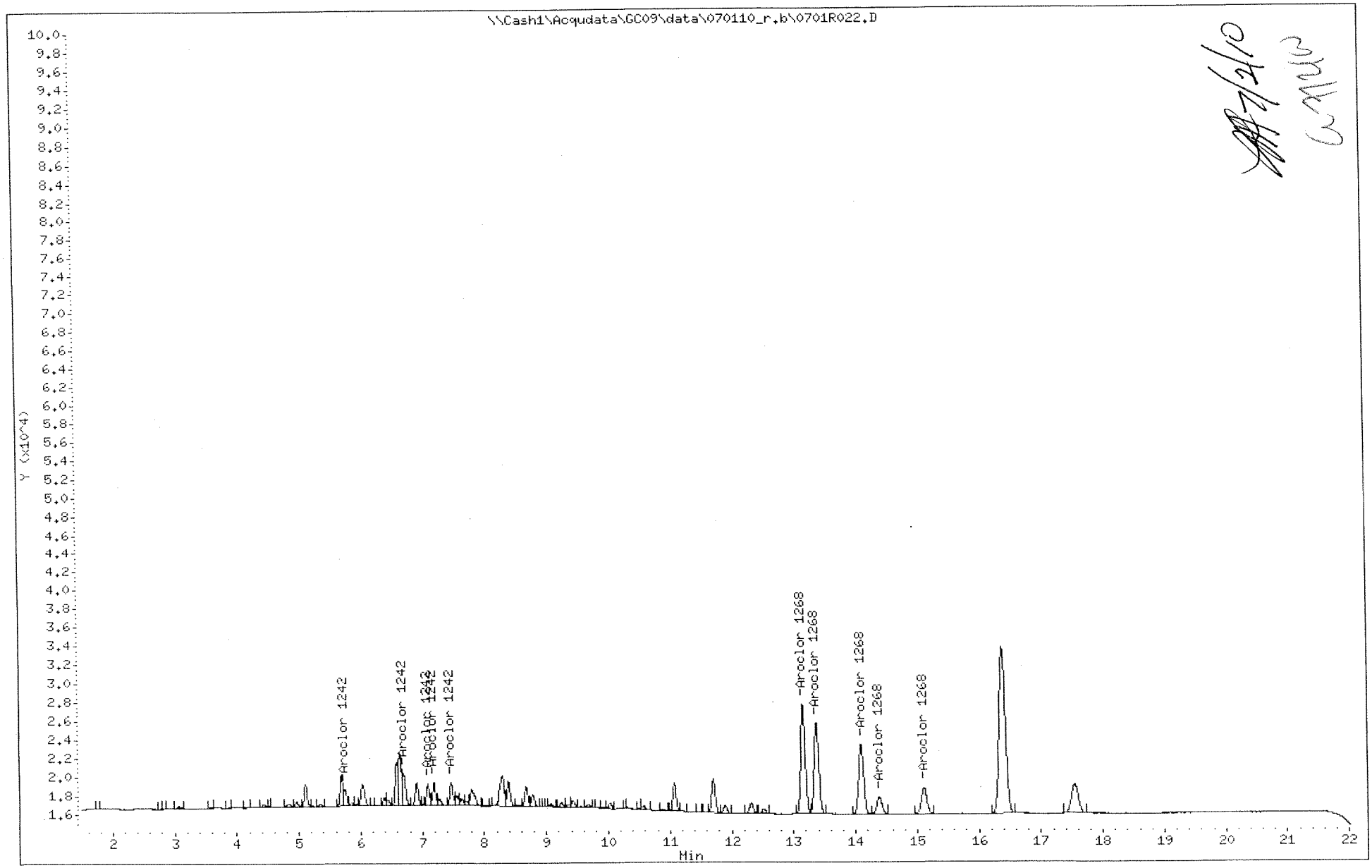


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R022.D
Date : 02-JUL-2010 00:02
Client ID:
Sample Info: 1242/1268 @ 50ppb | PCB5-52Q

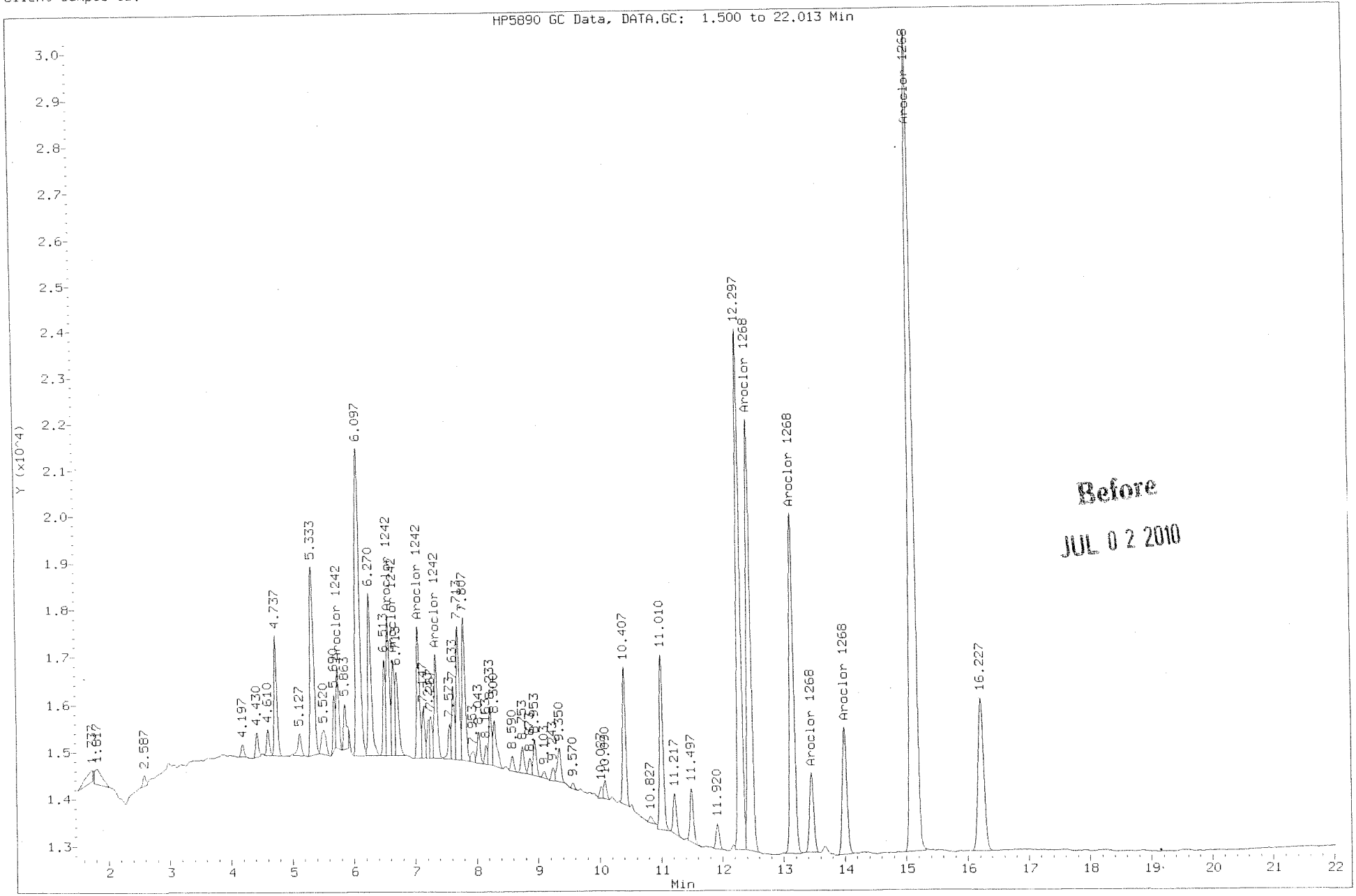
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F022.D
Injection Date: 02-JUL-2010 00:02
Instrument: GC09.i
Client Sample ID:



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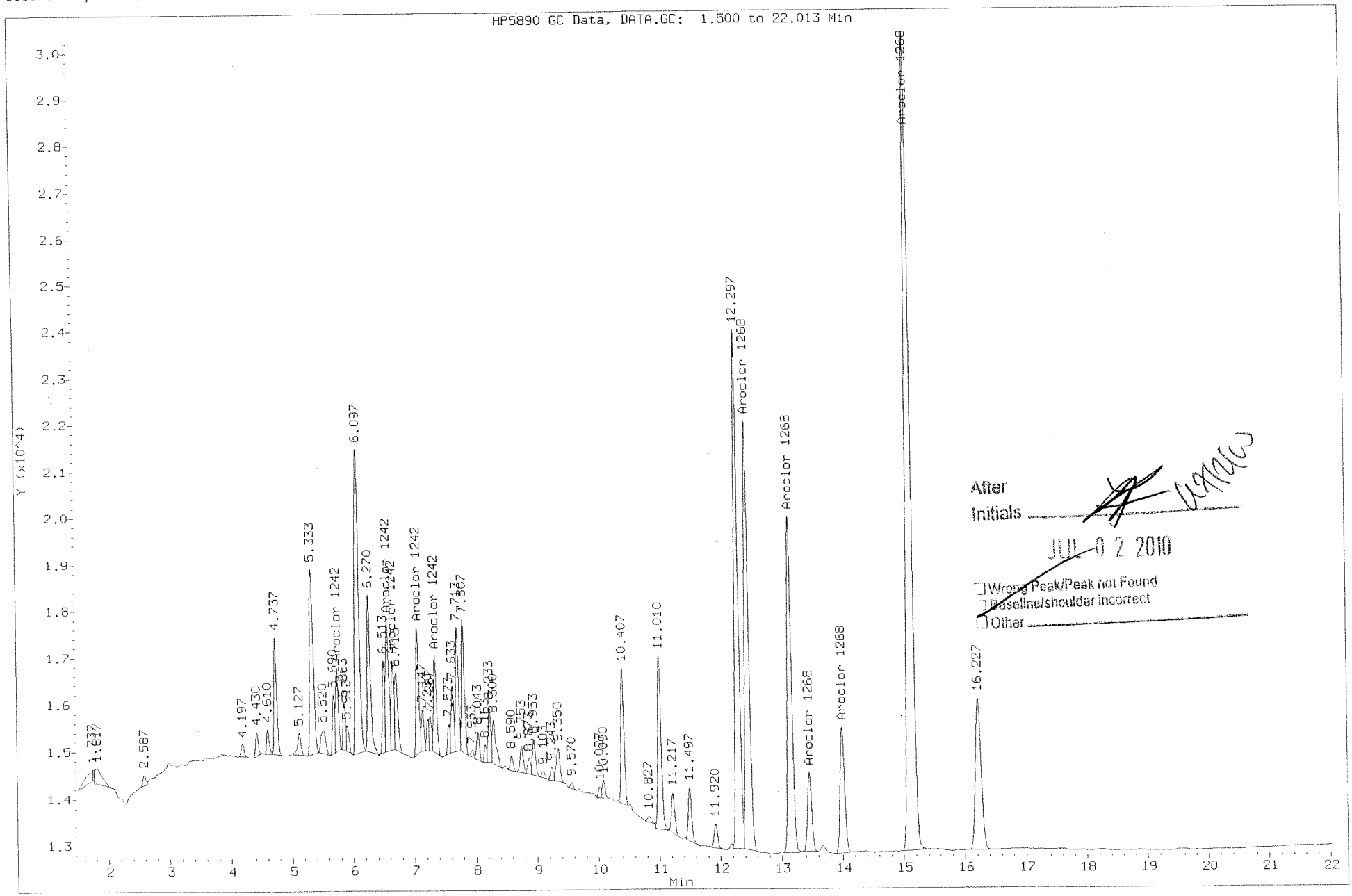
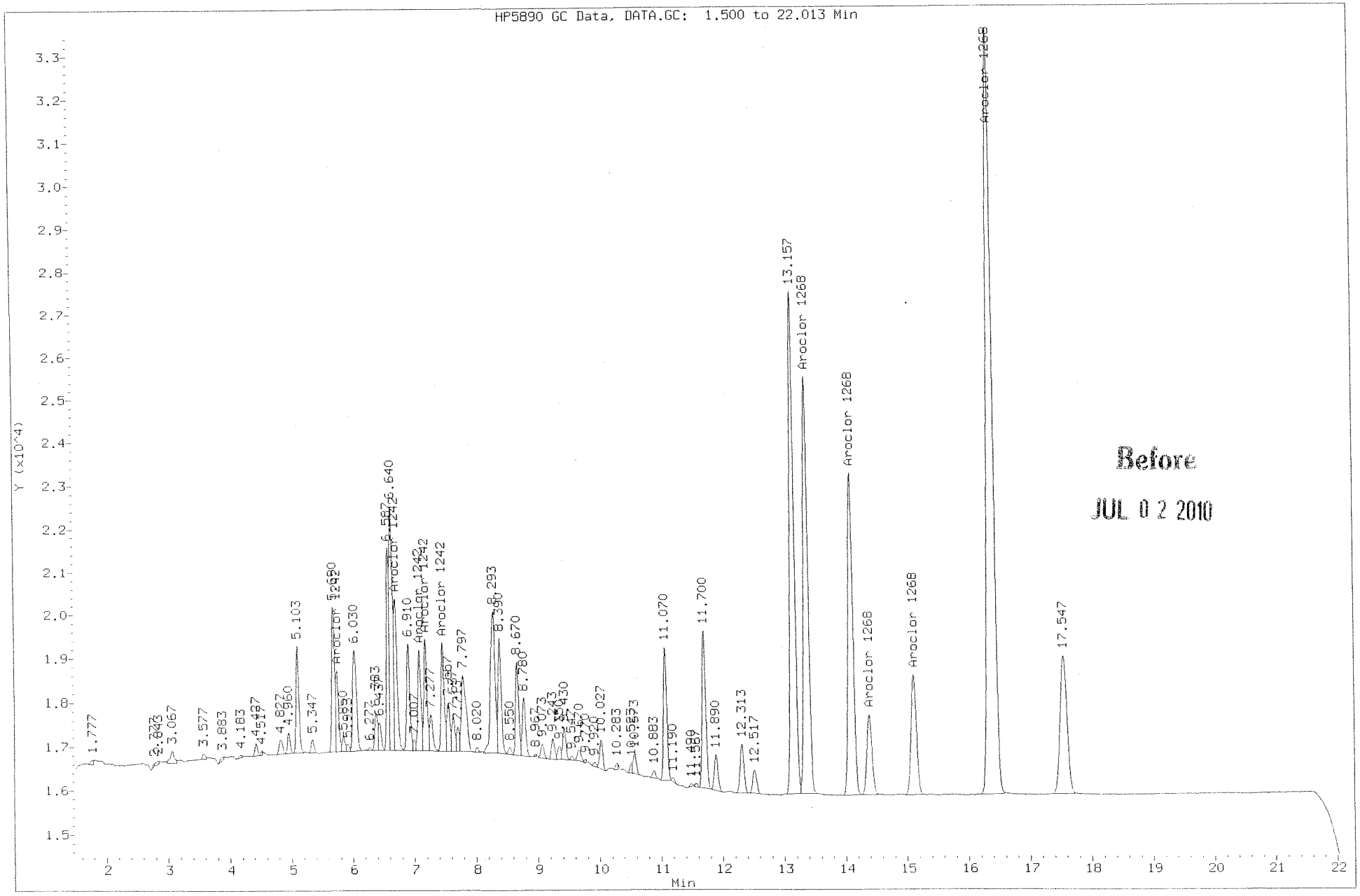
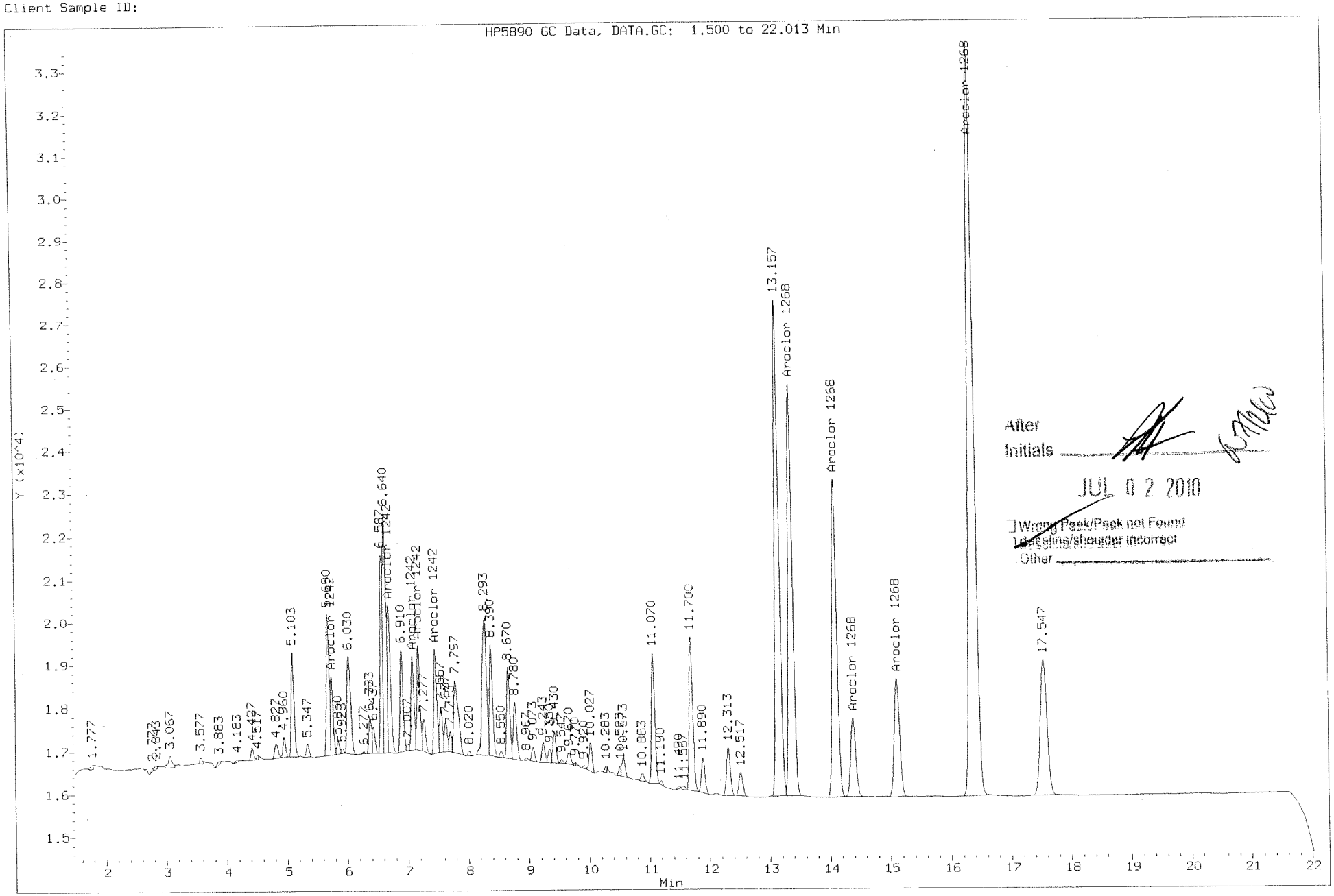
Injection Date: 02-JUL-2010 00:02
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R022.D
Injection Date: 02-JUL-2010 00:02
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R022.D
Injection Date: 02-JUL-2010 00:02
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F023.D
Report Date: 02-Jul-2010 10:09

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Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F023.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R023.D
Inj Date : 02-JUL-2010 00:28
Sample Info: 1242/1268 @ 500ppb | PCB5-52R
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1242+1268.sub
Sub List #2 : 1242+1268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	53820	49467	520	531	80.00- 120.00	100.00
	6.093	6.700	244231	97368	682	485	354.70- 532.06	453.79
	6.657	7.090	54604	68275	491	536	79.49- 119.23	101.46
	7.063	7.190	78536	76110	520	530	116.46- 174.68	145.92
	7.350	7.467	68514	75812	528	534	108.43- 162.65	127.30
			Average of Peak Amounts =		548	523		
Aroclor 1268	12.457	13.157	375510	479477	510	522	80.00- 120.00	100.00
	13.150	13.373	305966	436201	510	550	65.26- 97.89	81.48
	13.457	14.093	79924	361161	524	730	18.12- 27.17	21.28
	14.000	14.387	133436	103086	522	419	30.22- 45.34	35.53
	15.127	15.113	870828	160411	478	163	178.84- 268.26	231.91
			Average of Peak Amounts =		509	477		

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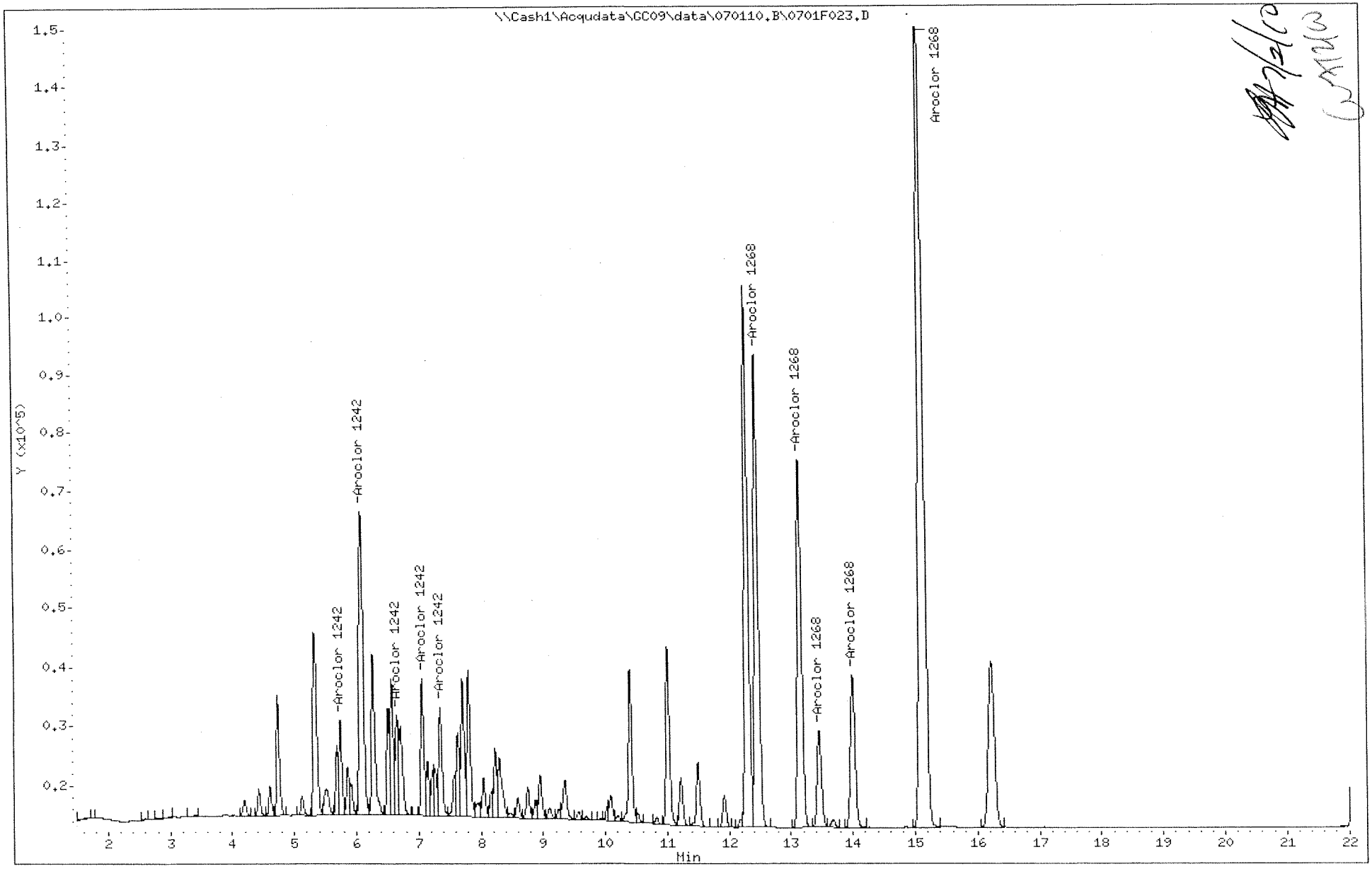
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F023.D
Date : 02-JUL-2010 00:28
Client ID:
Sample Info: 1242/1268 @ 500ppb | PCB5-52R

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

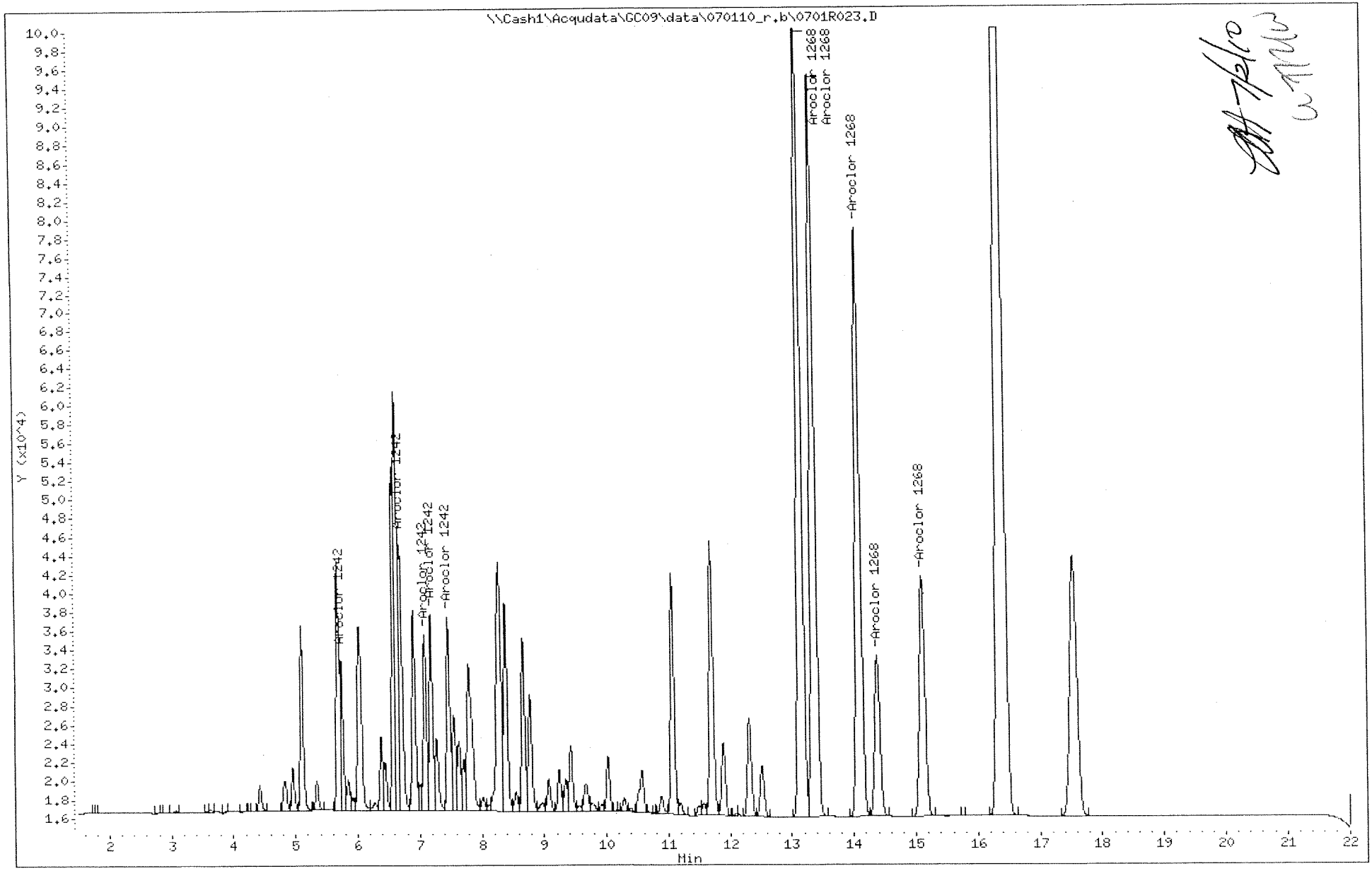


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R023.D
Date : 02-JUL-2010 00:28
Client ID:
Sample Info: 1242/1268 @ 500ppb | PCB5-52R

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F024.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F024.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R024.D
Inj Date : 02-JUL-2010 00:55
Sample Info: 1242/1268 @ 1000ppb | PCB5-52S
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1242+1268.sub
Sub List #2 : 1242+1268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	100796	92571	974	993	80.00- 120.00	100.00
	6.097	6.700	445329	177111	1090	882	354.70- 532.06	441.81
	6.657	7.090	99399	121908	893	956	79.49- 119.23	98.61
	7.063	7.190	142808	136999	945	954	116.46- 174.68	141.68
	7.353	7.467	127095	136277	980	959	108.43- 162.65	126.09
			Average of Peak Amounts =		976	949		
Aroclor 1268	12.457	13.157	697475	874842	947	939	80.00- 120.00	100.00
	13.153	13.373	568515	798303	948	979	65.26- 97.89	81.51
	13.457	14.097	153603	664898	1010	1160	18.12- 27.17	22.02
	14.000	14.387	254386	196571	995	862	30.22- 45.34	36.47
	15.127	15.113	1595759	303531	876	417	178.84- 268.26	228.79
			Average of Peak Amounts =		955	871		

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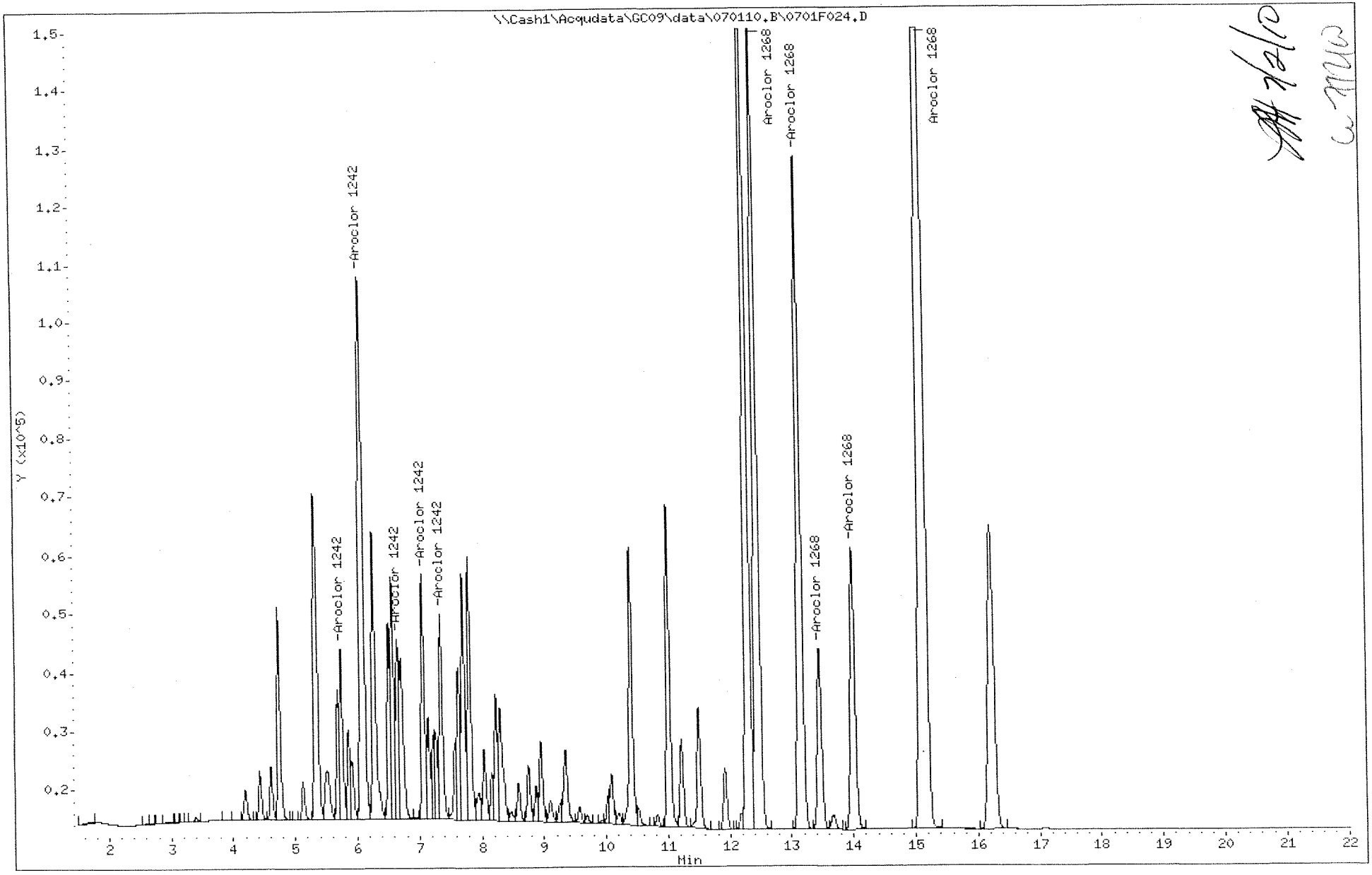
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F024.D
Date : 02-JUL-2010 00:55
Client ID:
Sample Info: 1242/1268 @ 1000ppb | PCB5-52S

Instrument: GC09.i

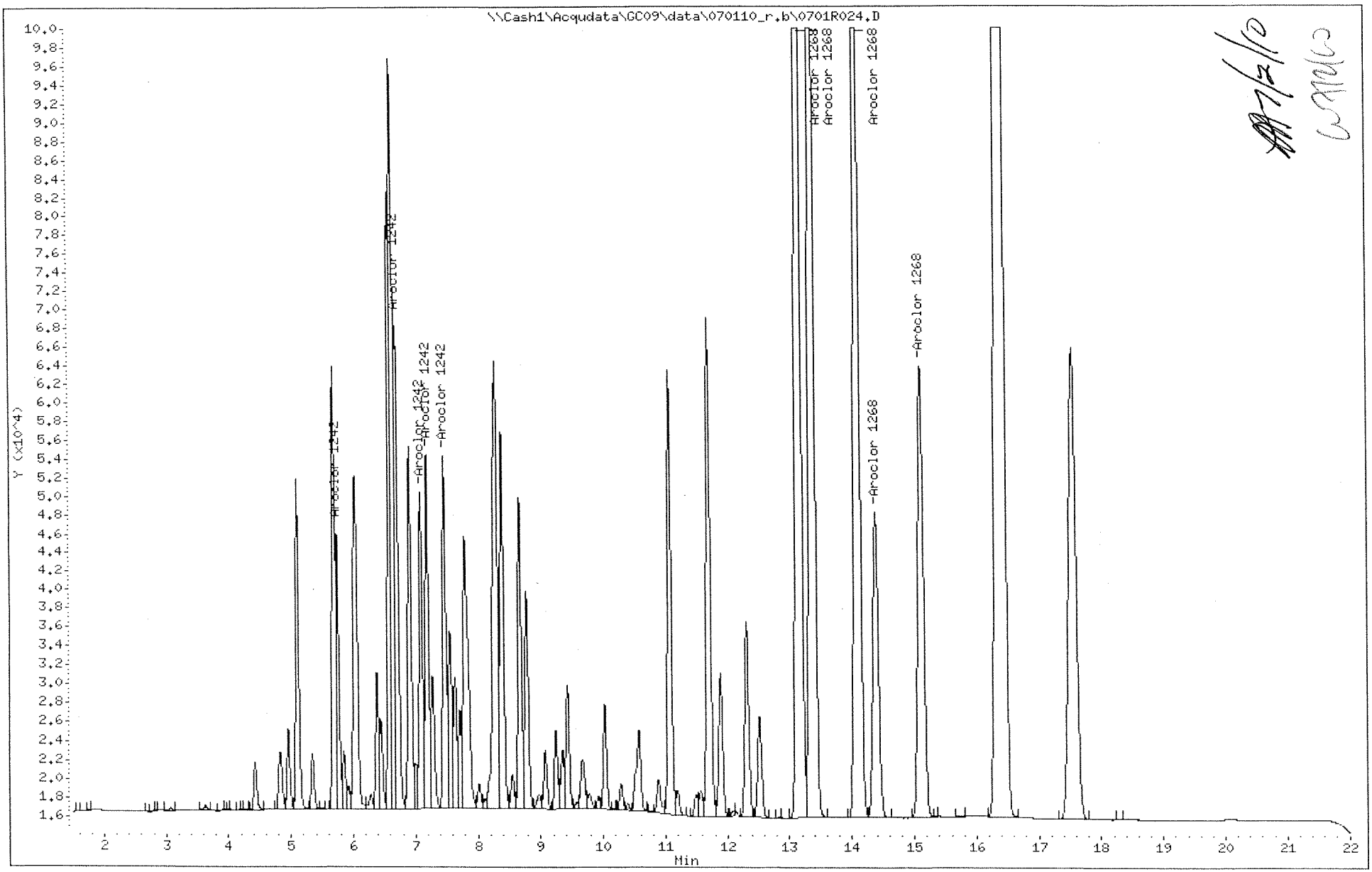
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\Cash1\Acqudata\GC09\data\070110_r,b\0701R024.D
Date : 02-JUL-2010 00:55
Client ID:
Sample Info: 1242/1268 @ 1000ppb | PCB5-52S

Instrument: GC09,i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F025.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F025.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R025.D
Inj Date : 02-JUL-2010 01:22
Sample Info: 1242/1268 @ 2000ppb | PCB5-52T
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1242+1268.sub
Sub List #2 : 1242+1268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	179493	161515	1730	1730	80.00- 120.00	100.00
	6.093	6.700	793740	310914	1760	1550	354.70- 532.06	442.21
	6.657	7.090	179122	217162	1610	1700	79.49- 119.23	99.79
	7.063	7.190	256690	245122	1700	1710	116.46- 174.68	143.01
	7.353	7.467	234173	242542	1810	1710	108.43- 162.65	130.46
			Average of Peak Amounts =		1720	1680		
Aroclor 1268	12.457	13.157	1270857	1567434	1730	1660	80.00- 120.00	100.00
	13.150	13.373	1036746	1433314	1730	1720	65.26- 97.89	81.58
	13.457	14.093	284872	1198517	1870	1860	18.12- 27.17	22.42
	13.997	14.387	471983	361226	1840	1700	30.22- 45.34	37.14
	15.127	15.110	2875716	556402	1580	1110	178.84- 268.26	226.28
			Average of Peak Amounts =		1750	1610		

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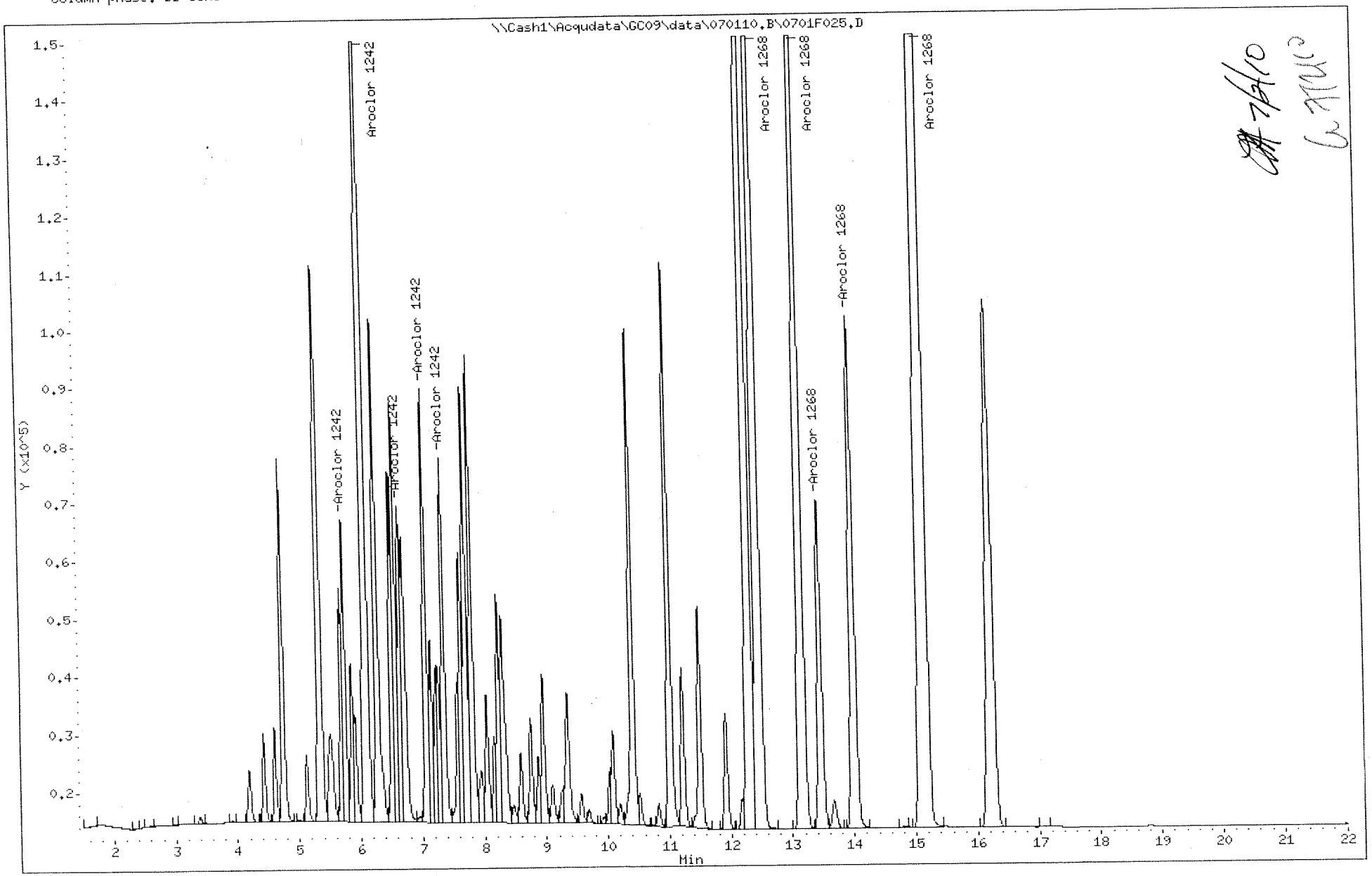
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F025.D
Date : 02-JUL-2010 01:22
Client ID:
Sample Info: 1242/1268 @ 2000ppb | PCB5-52T

Instrument: GC09.i

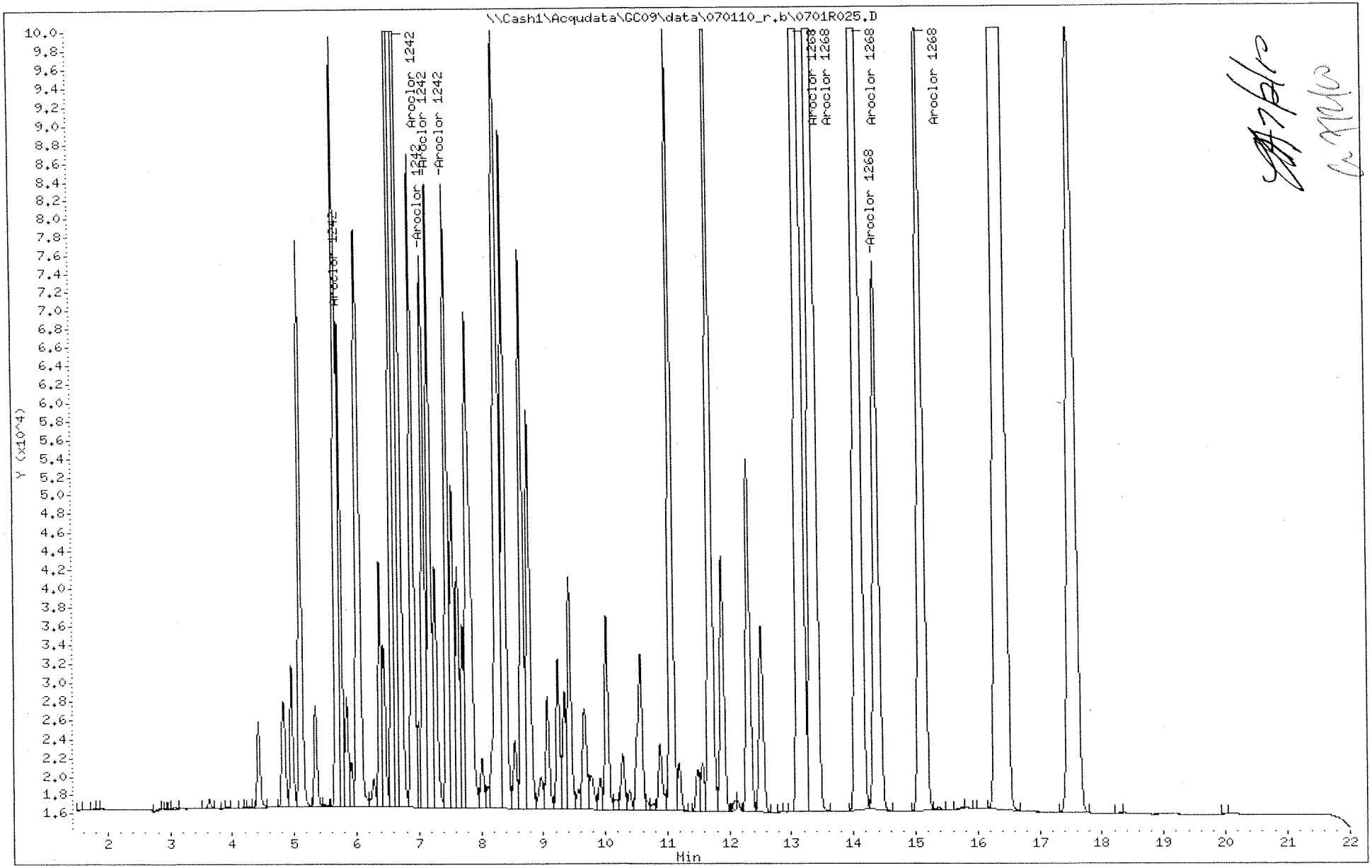
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R025.D
Date : 02-JUL-2010 01:22
Client ID:
Sample Info: 1242/1268 @ 2000ppb | PCB5-52T

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F026.D
Report Date: 02-Jul-2010 10:09

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F026.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R026.D
Inj Date : 02-JUL-2010 01:48
Sample Info: 1242/1268 @ 5000ppb | PCB5-53A
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : 1242+1268.sub
Sub List #2 : 1242+1268.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	383404	357579	3700	3840	80.00- 120.00	100.00
	6.093	6.697	1699918	680337	3480	3390	354.70- 532.06	443.38
	6.657	7.087	380943	462232	3420	3630	79.49- 119.23	99.36
	7.063	7.187	558133	518201	3690	3610	116.46- 174.68	145.57
	7.350	7.467	519654	525894	4010	3700	108.43- 162.65	135.54
			Average of Peak Amounts =		3660	3630		
Aroclor 1268	12.453	13.153	2841702	3427171	3860	3600	80.00- 120.00	100.00
	13.147	13.370	2318219	3136627	3870	3680	65.26- 97.89	81.58
	13.453	14.093	643482	2636169	4220	3750	18.12- 27.17	22.64
	13.997	14.383	1073619	812455	4200	4120	30.22- 45.34	37.78
	15.123	15.107	6352604	1243100	3490	4040	178.84- 268.26	223.55
			Average of Peak Amounts =		3930	3840		

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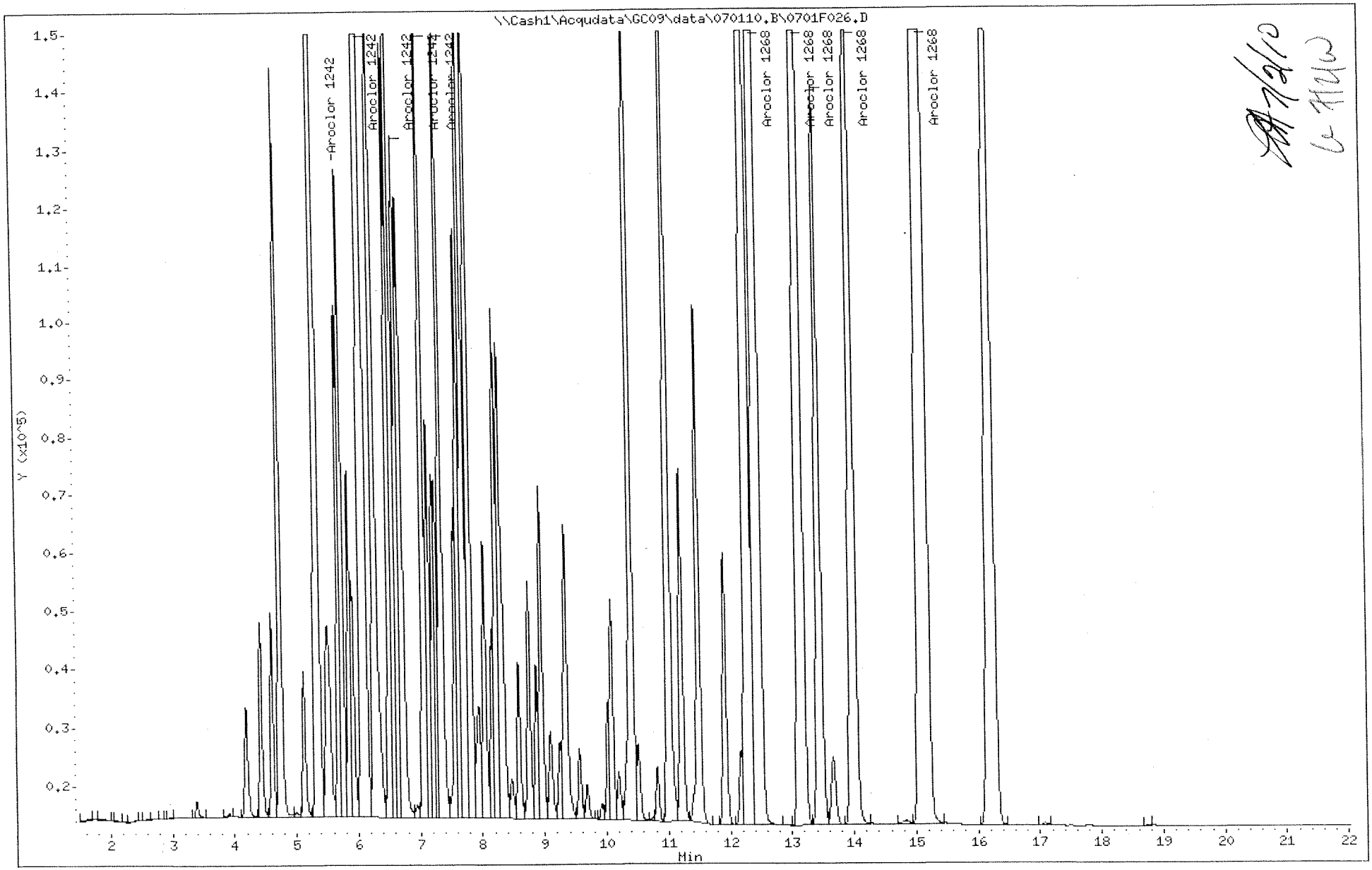
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F026.D
Date : 02-JUL-2010 01:48
Client ID:
Sample Info: 1242/1268 @ 5000ppb | PCB5-53A

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

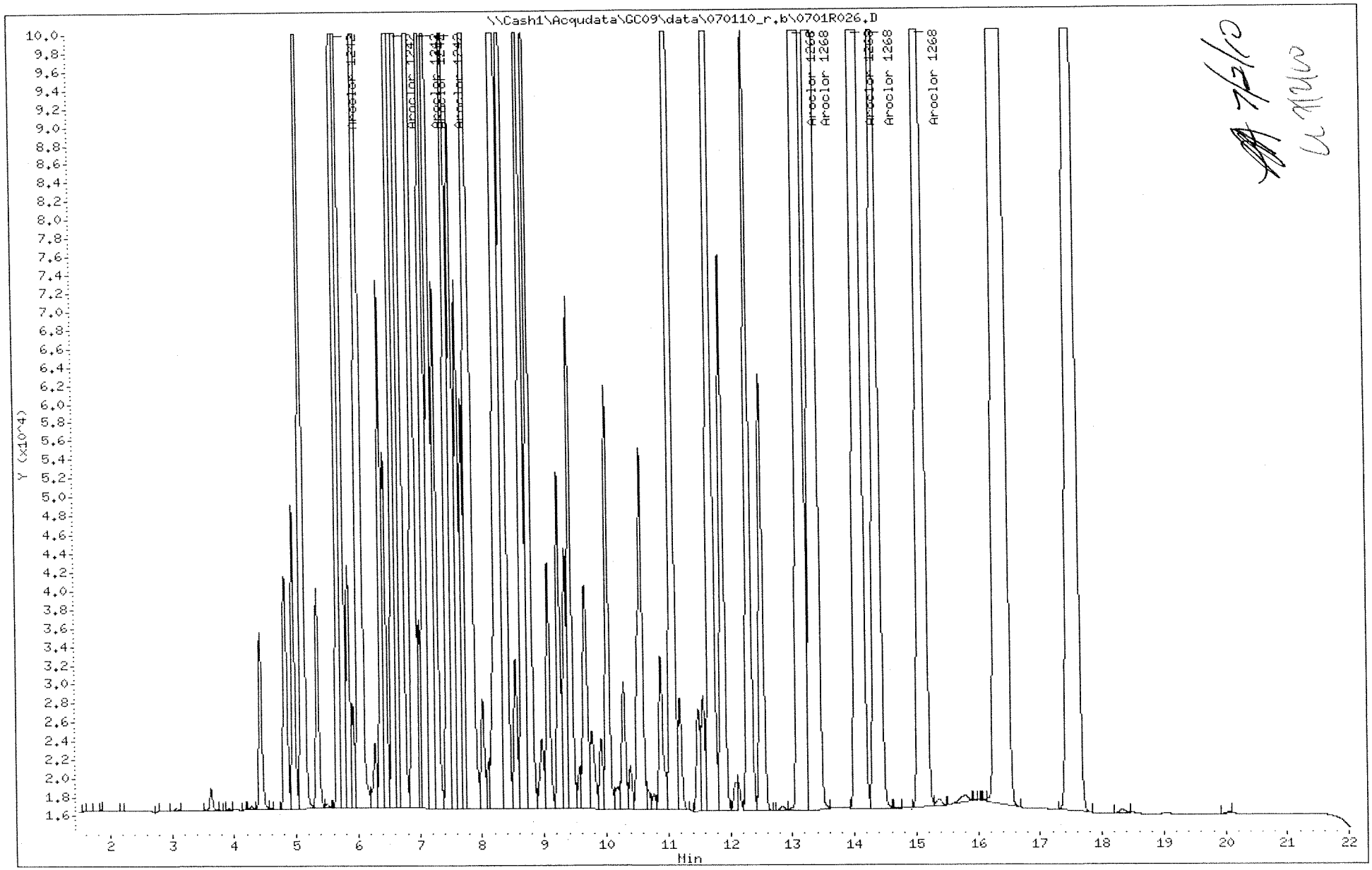


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R026.D
Date : 02-JUL-2010 01:48
Client ID:
Sample Info: 1242/1268 @ 5000ppb | PCB5-53A

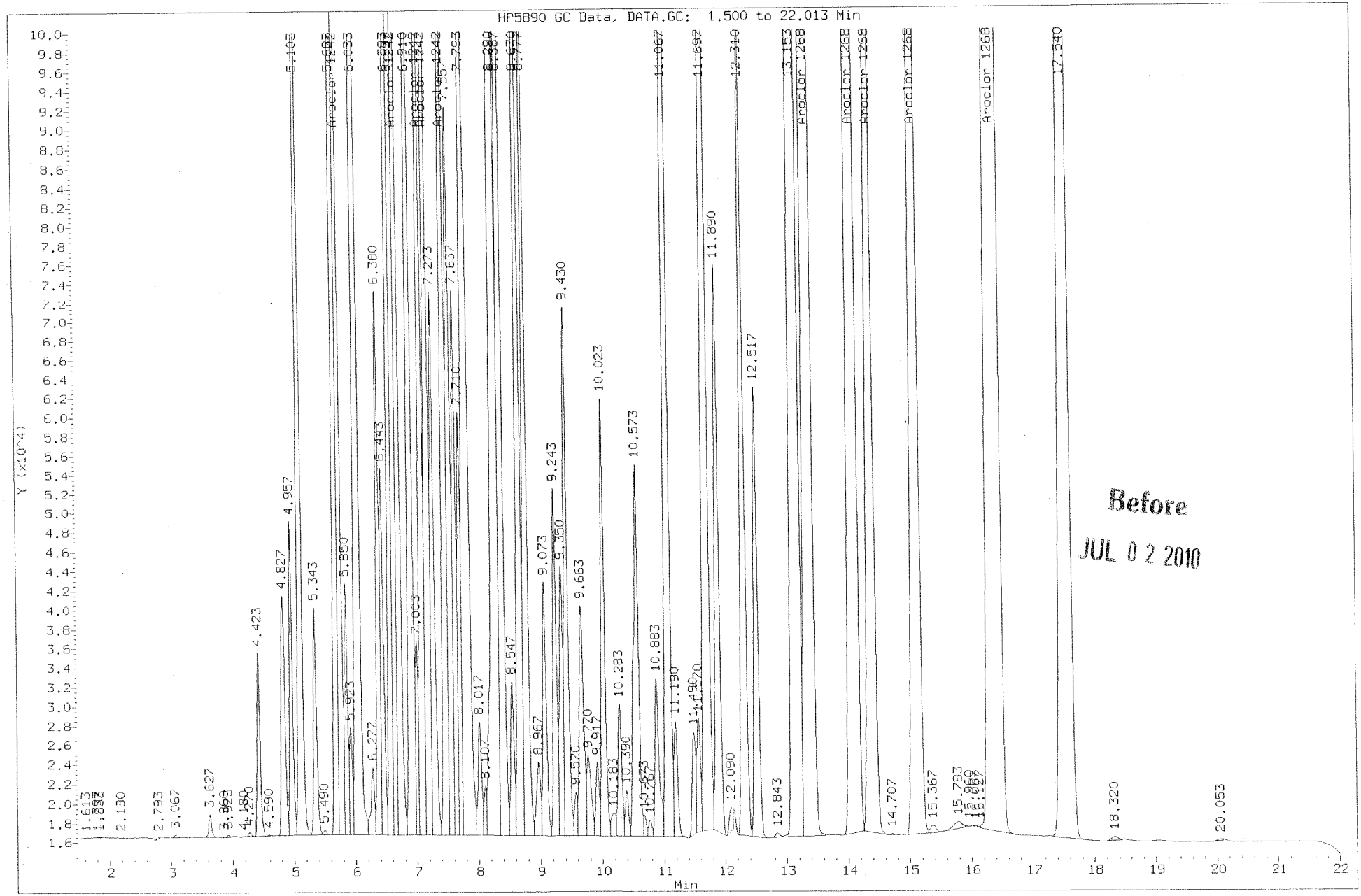
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

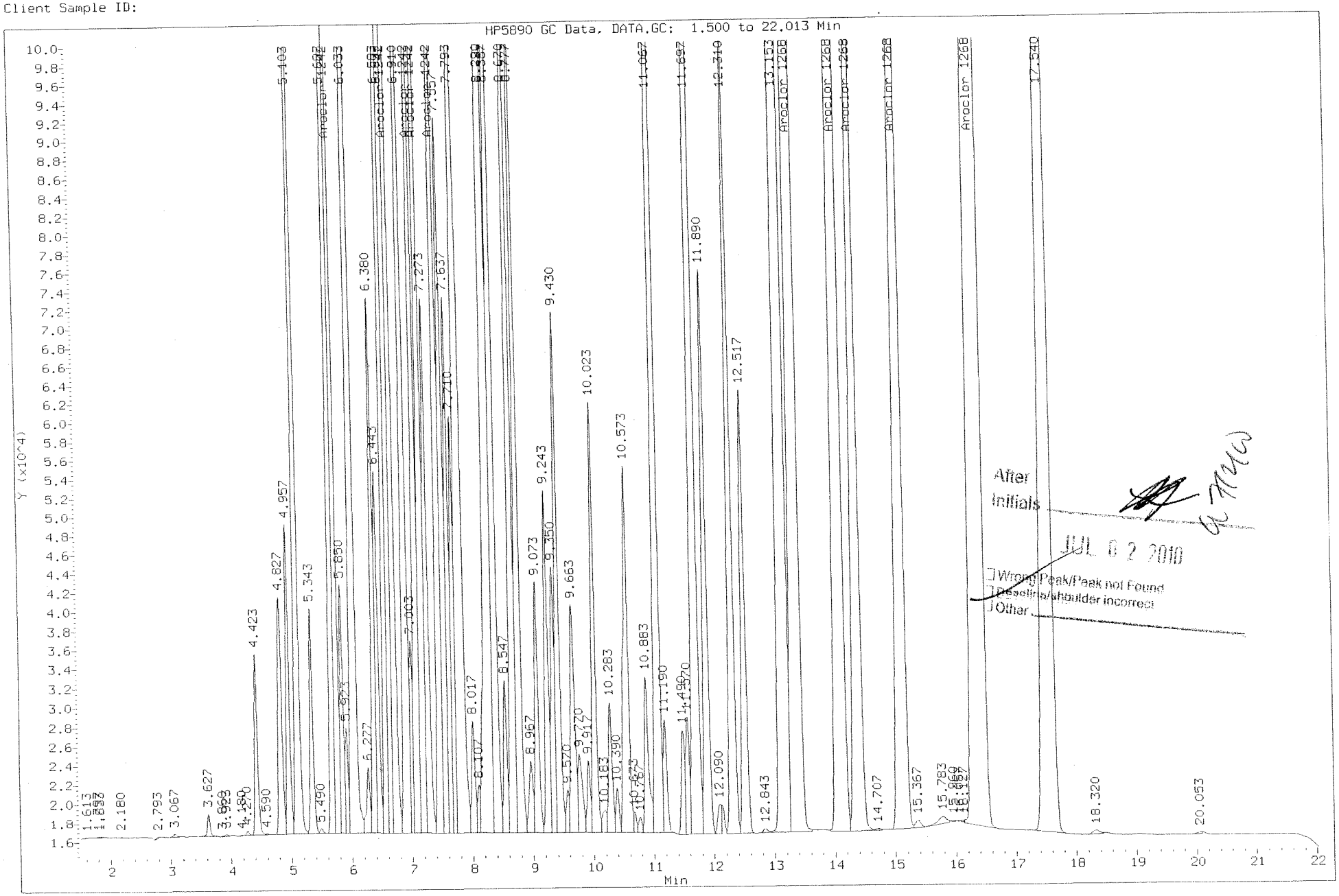
Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R026.D
Injection Date: 02-JUL-2010 01:48
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R026.D
Injection Date: 02-JUL-2010 01:48
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Report Date: 02-Jul-2010 10:10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R027.D
Inj Date : 02-JUL-2010 02:15
Sample Info: 1248 @ 25ppb | PCB5-53B
Misc Info :
Cal Date : 02-JUL-2010 08:15
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.710	7.187	4579	6922	29.2	32.8	80.00- 120.00	100.00(M)
	7.347	7.467	5621	7519	30.2	32.2	103.33- 155.00	122.74(M)
	7.630	8.293	4060	16517	28.8	33.1	78.37- 117.55	88.65(M)
	7.710	8.390	8732	8380	29.9	31.4	142.65- 213.98	190.67(M)
	7.807	8.670	9567	8235	29.6	31.9	158.37- 237.55	208.90(M)
			Average of Peak Amounts =		29.5	32.3		

QC Flag Legend

M - Compound response manually integrated.

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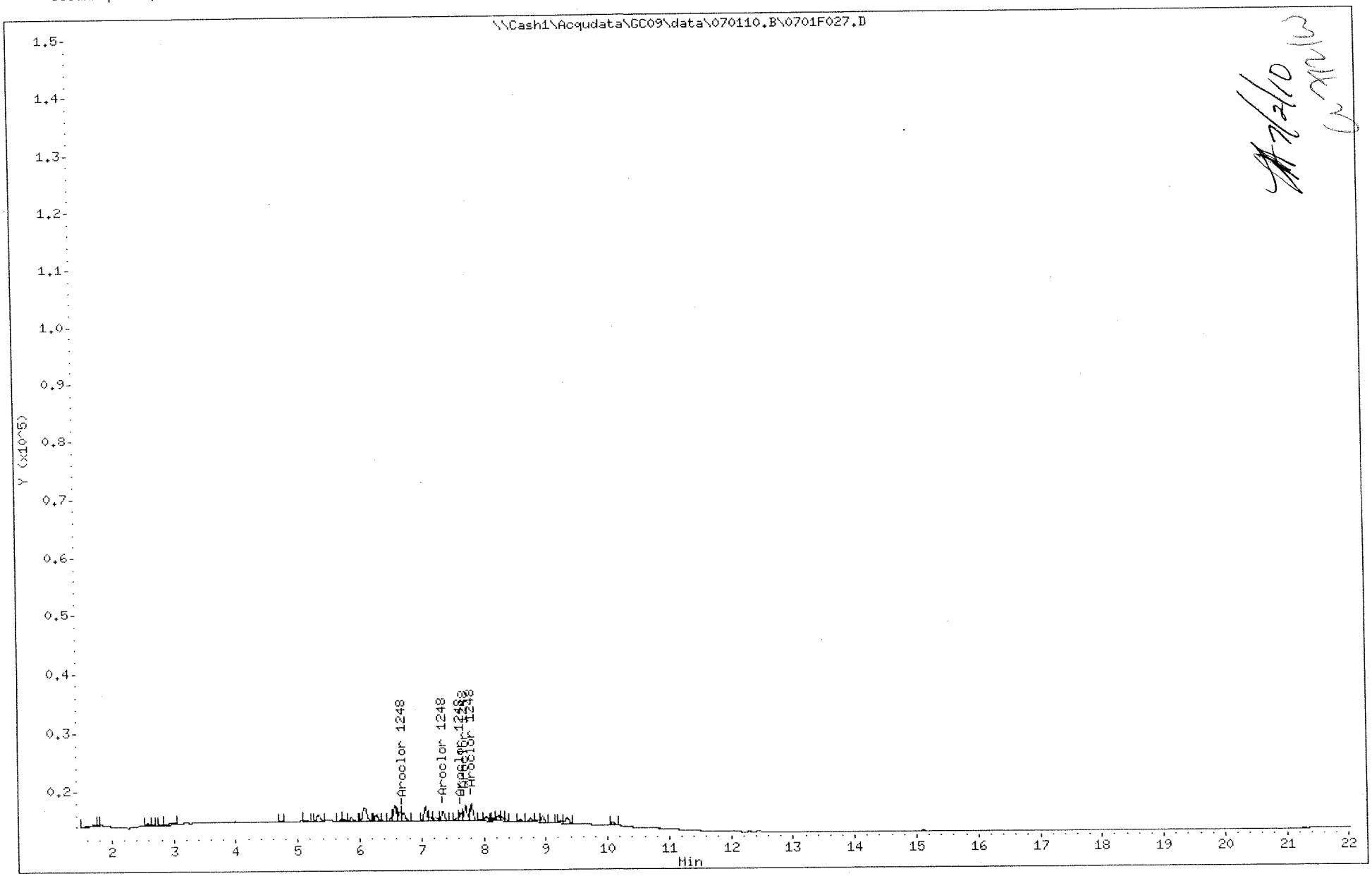
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Date : 02-JUL-2010 02:15
Client ID:
Sample Info: 1248 @ 25ppb | PCB5-53B

Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

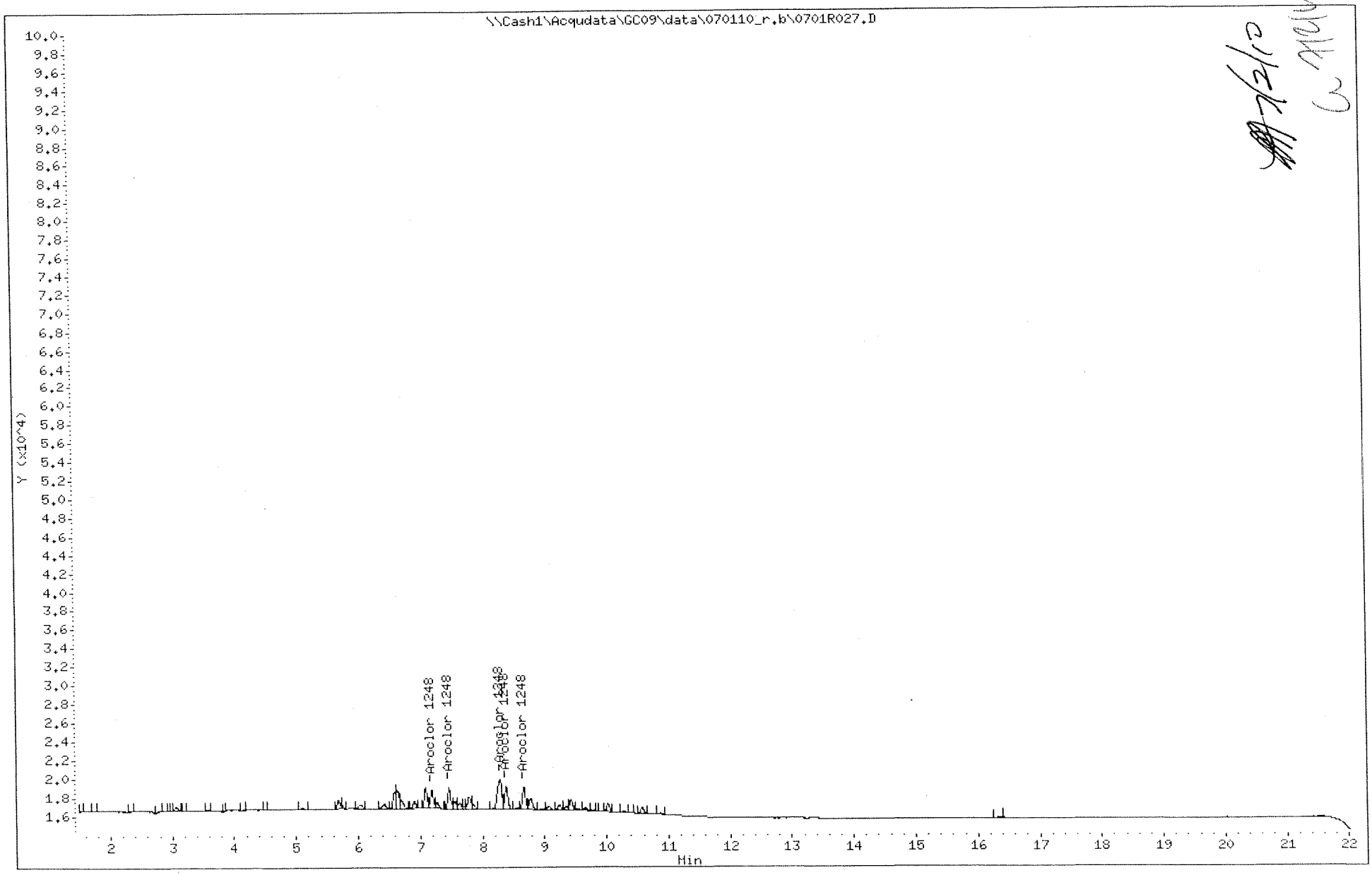


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R027.D
Date : 02-JUL-2010 02:15
Client ID:
Sample Info: 1248 @ 25ppb | PCB5-53B

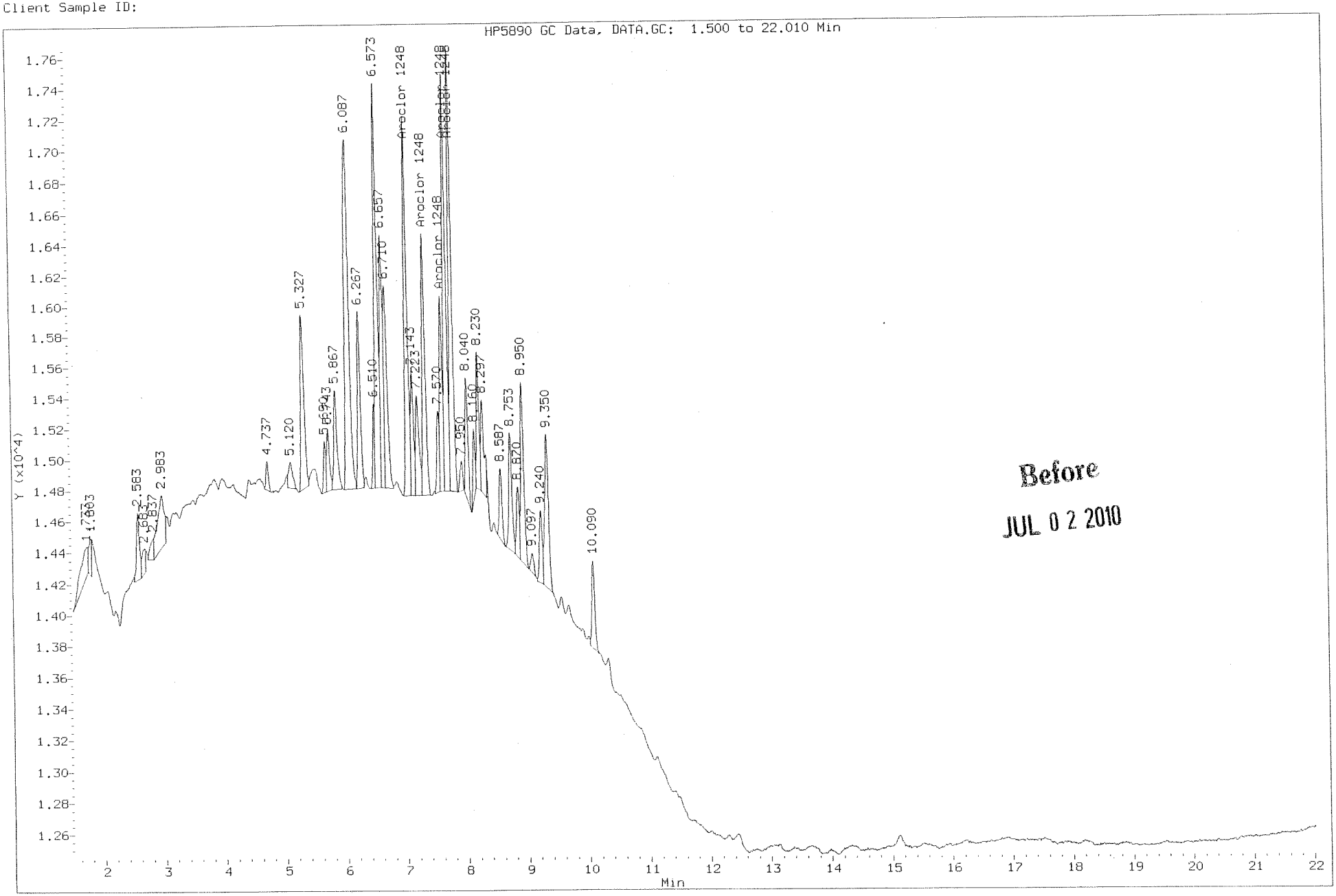
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



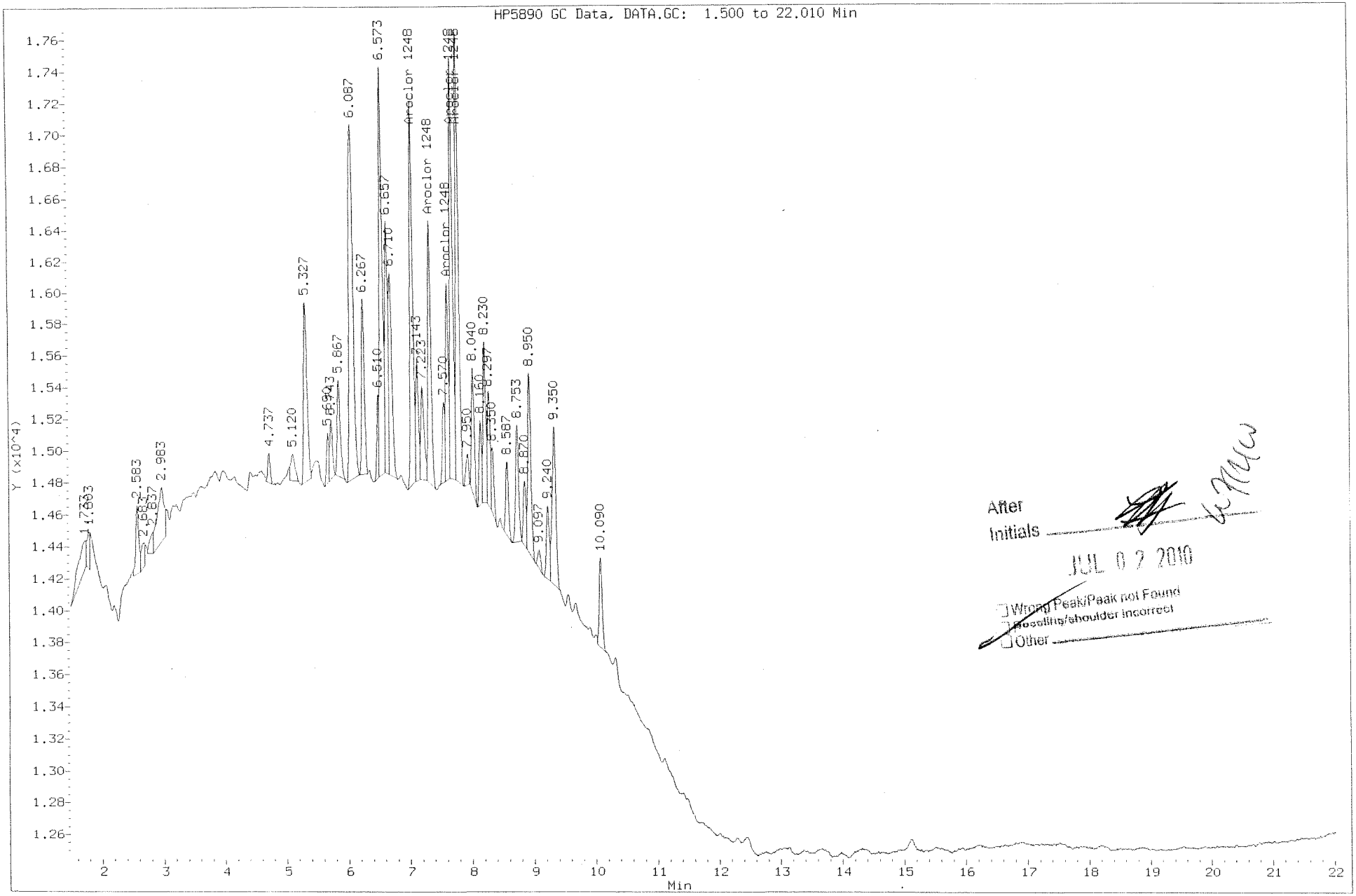
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Injection Date: 02-JUL-2010 02:15
Instrument: GC09.i
Client Sample ID:



Before

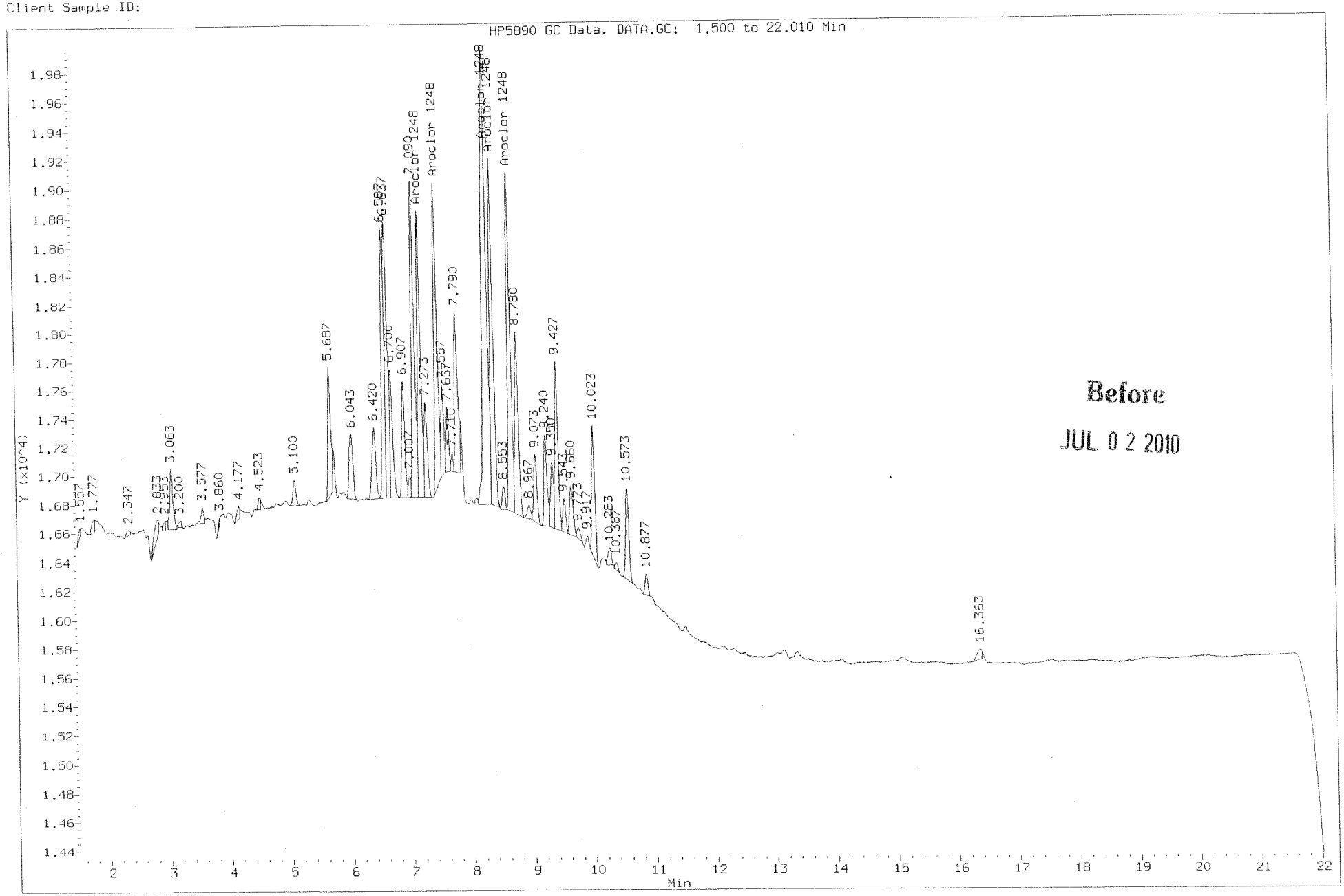
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F027.D
Injection Date: 02-JUL-2010 02:15
Instrument: GC09.i
Client Sample ID:



After
Initials
JUL 0 2 2010
Wrong Peak/Peak not Found
Resetting/shoulder incorrect
Other

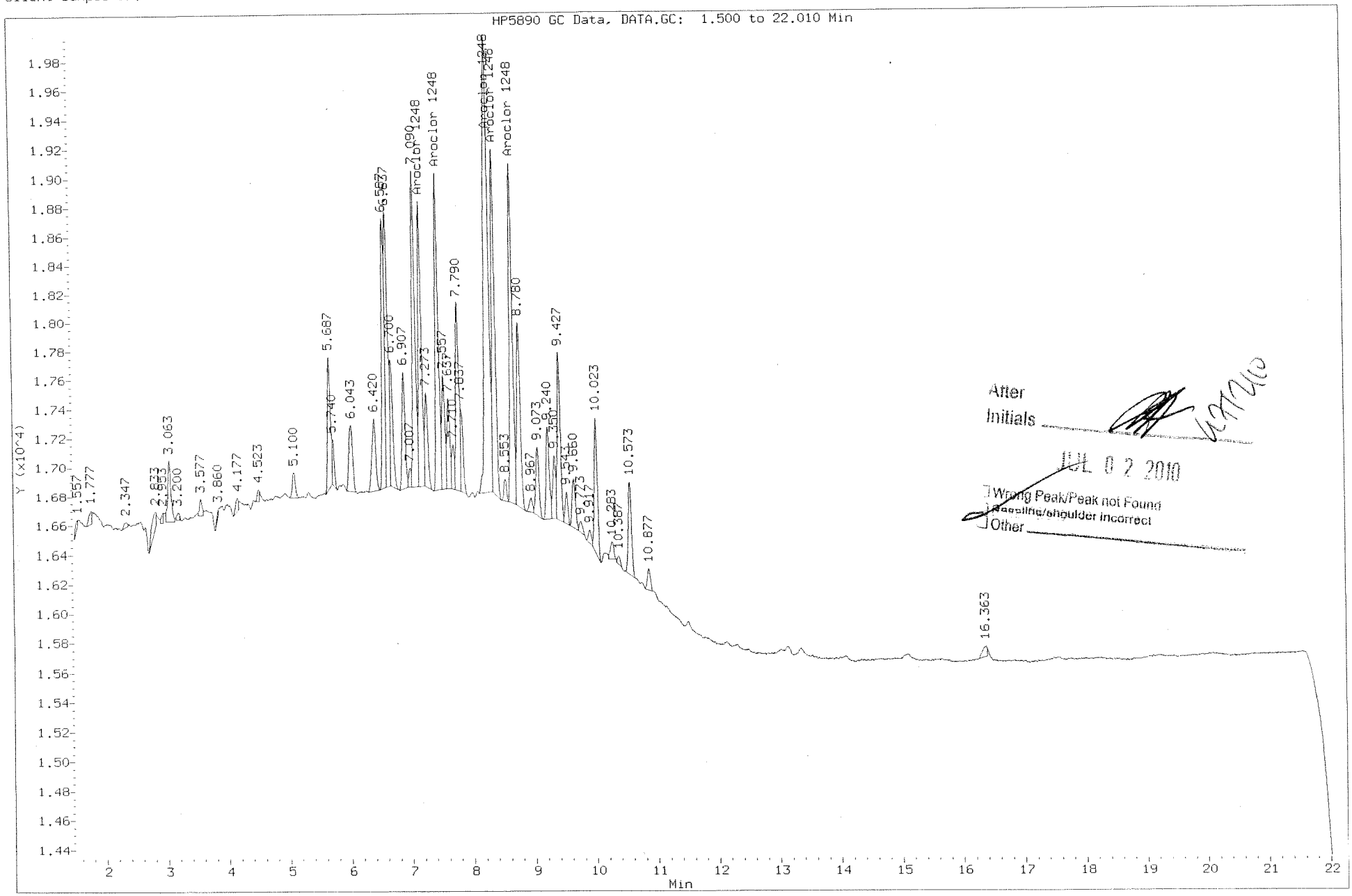
Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R027.D
Injection Date: 02-JUL-2010 02:15
Instrument: GC09.i
Client Sample ID:



Before

JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R027.D
Injection Date: 02-JUL-2010 02:15
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
Report Date: 02-Jul-2010 10:10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R028.D
Inj Date : 02-JUL-2010 02:41
Sample Info: 1248 @ 50ppb | PCB5-53C
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.710	7.187	9100	13097	59.7	62.1	80.00- 120.00	100.00
	7.347	7.463	10839	14456	58.3	61.9	103.33- 155.00	119.11
	7.630	8.290	8409	31864	59.6	63.8	78.37- 117.55	92.41
	7.710	8.390	17329	16354	59.4	61.4	142.65- 213.98	190.43
	7.807	8.670	18907	15730	58.6	61.2	158.37- 237.55	207.77
			Average of Peak Amounts =		59.1	62.1		

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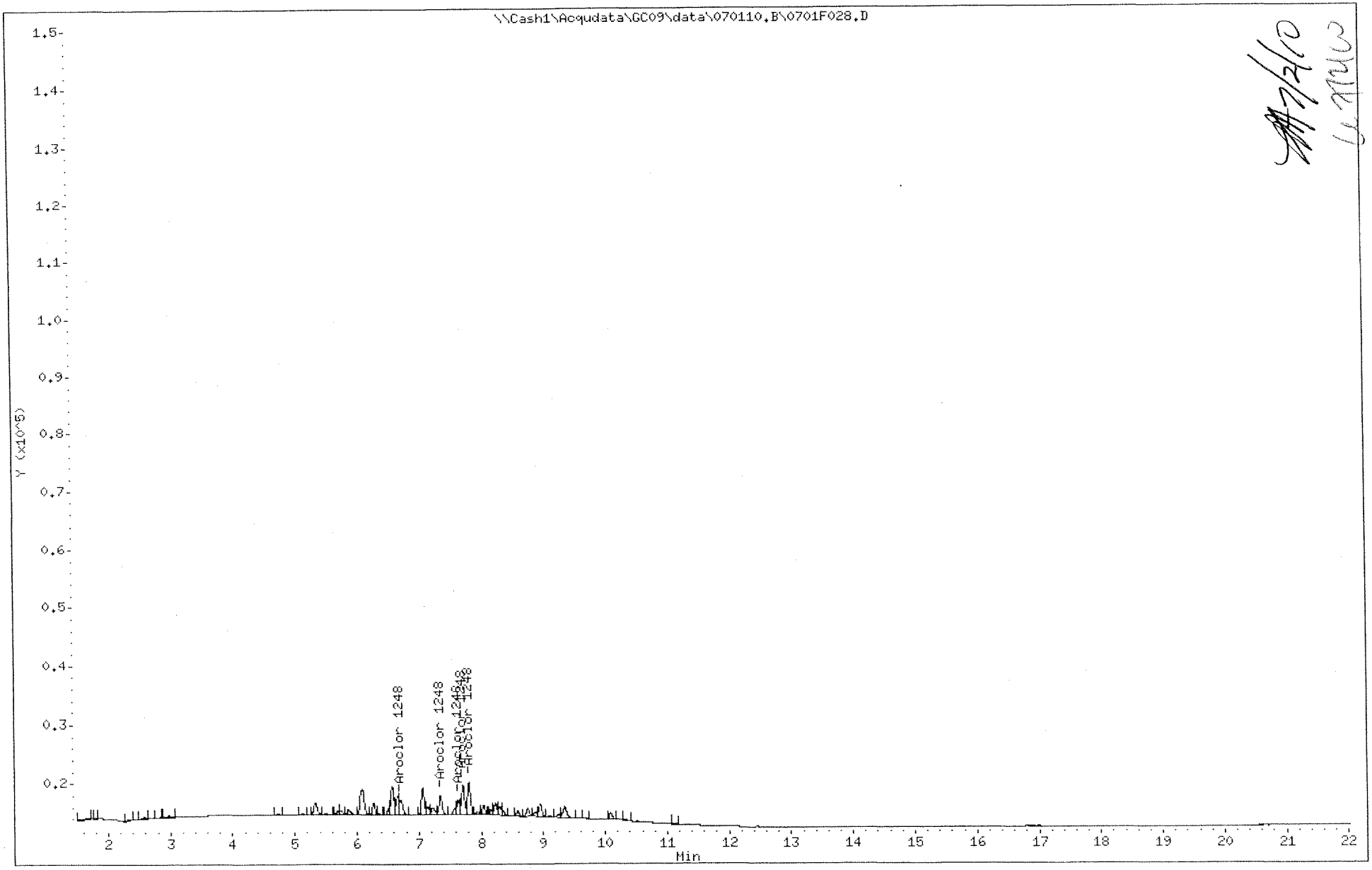
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
Date : 02-JUL-2010 02:41
Client ID:
Sample Info: 1248 @ 50ppb | PCB5-53C

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



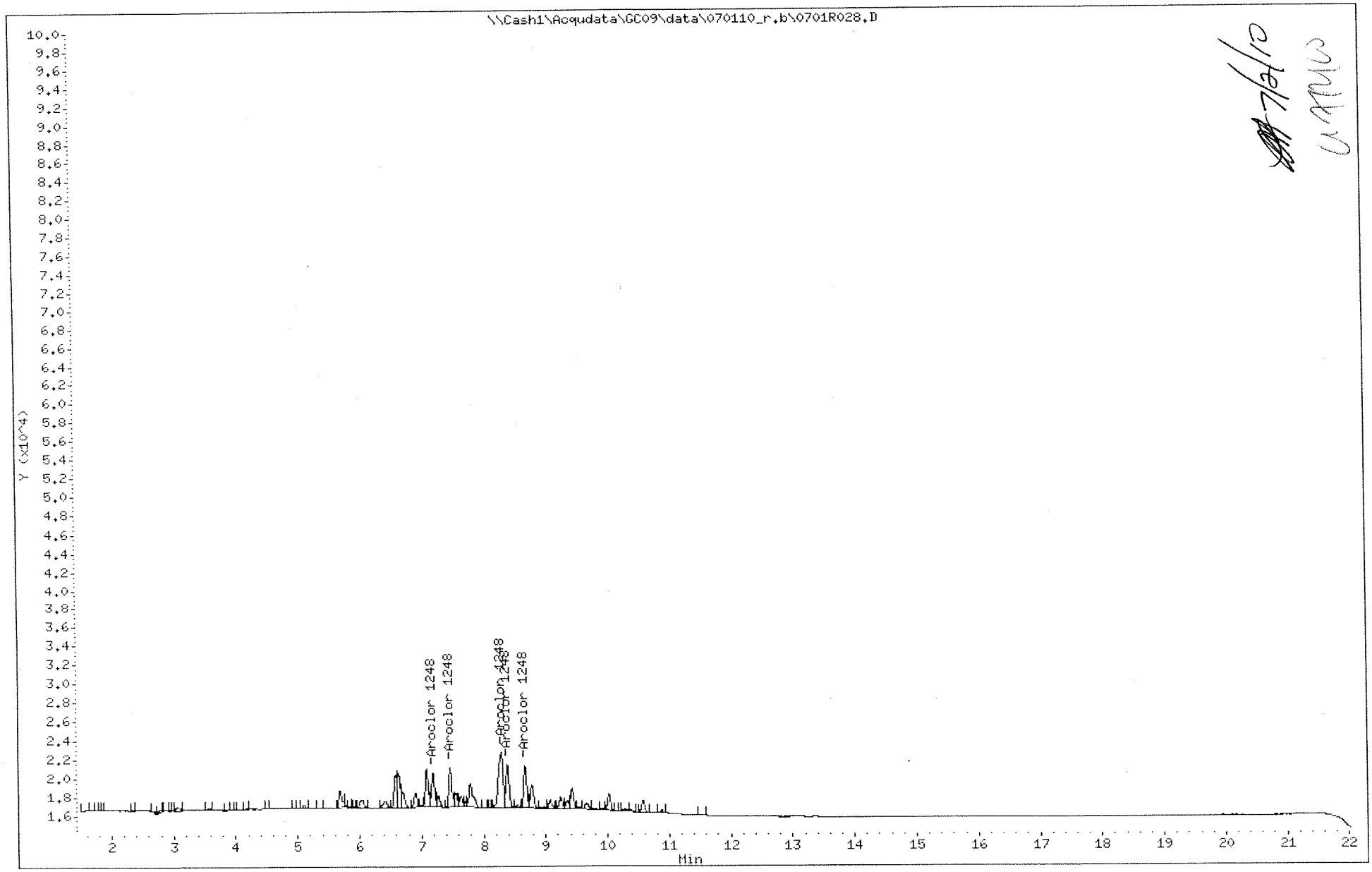
375

Data File: \\Cash1\Acqudata\GC09\data\070110_r,b\0701R028.D
Date : 02-JUL-2010 02:41
Client ID:
Sample Info: 1248 @ 50ppb | PCB5-53C

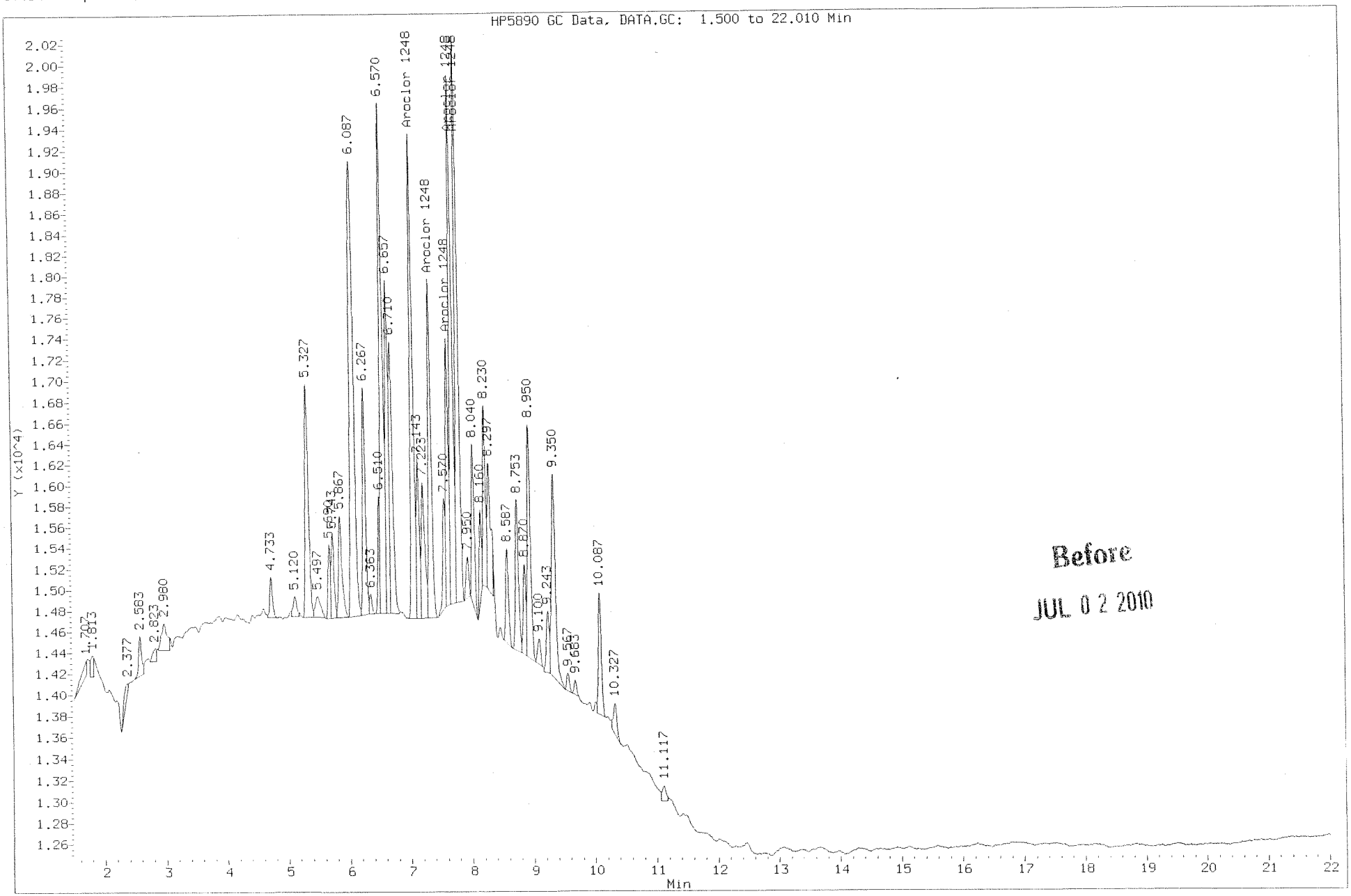
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



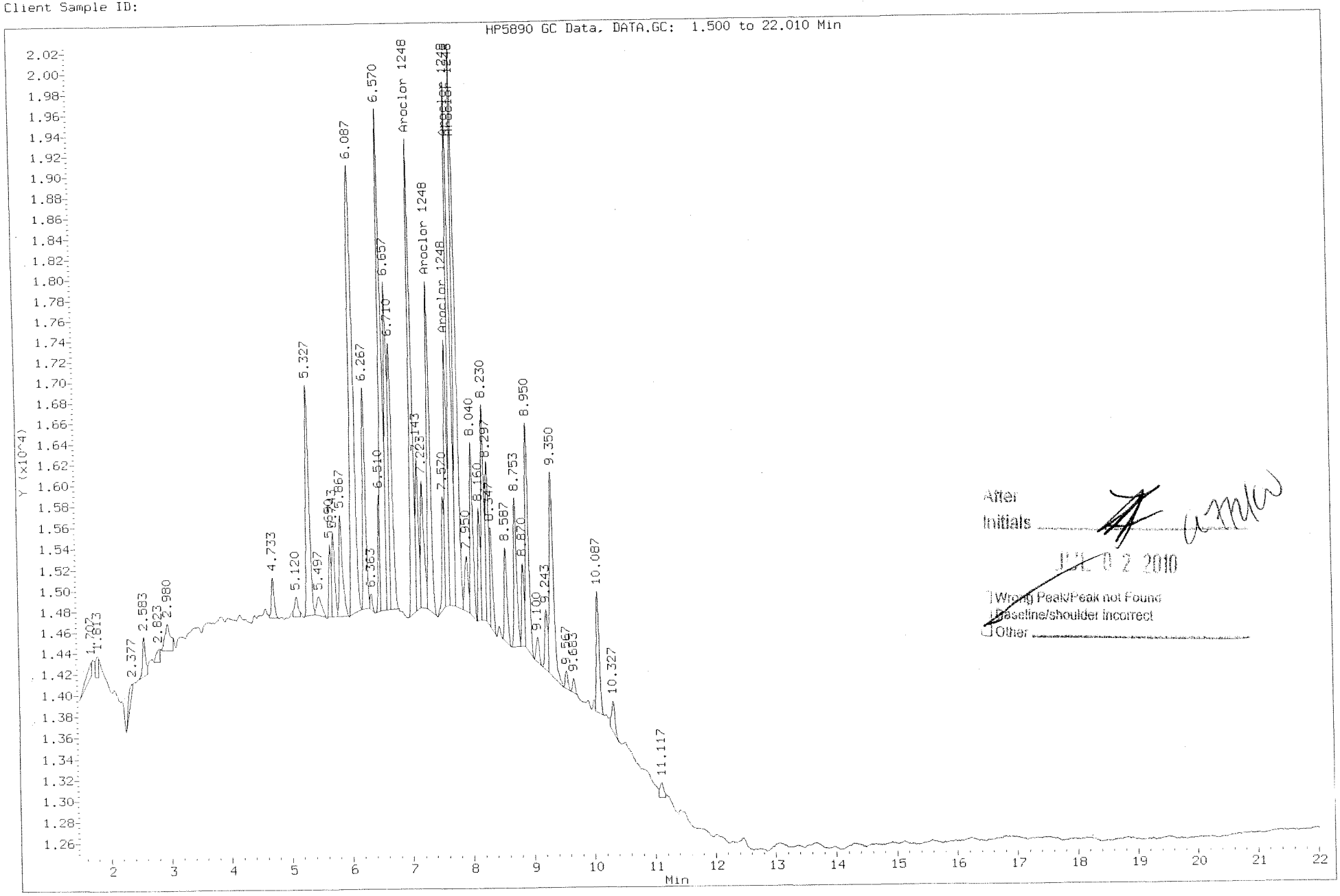
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
Injection Date: 02-JUL-2010 02:41
Instrument: GC09.i
Client Sample ID:



Before

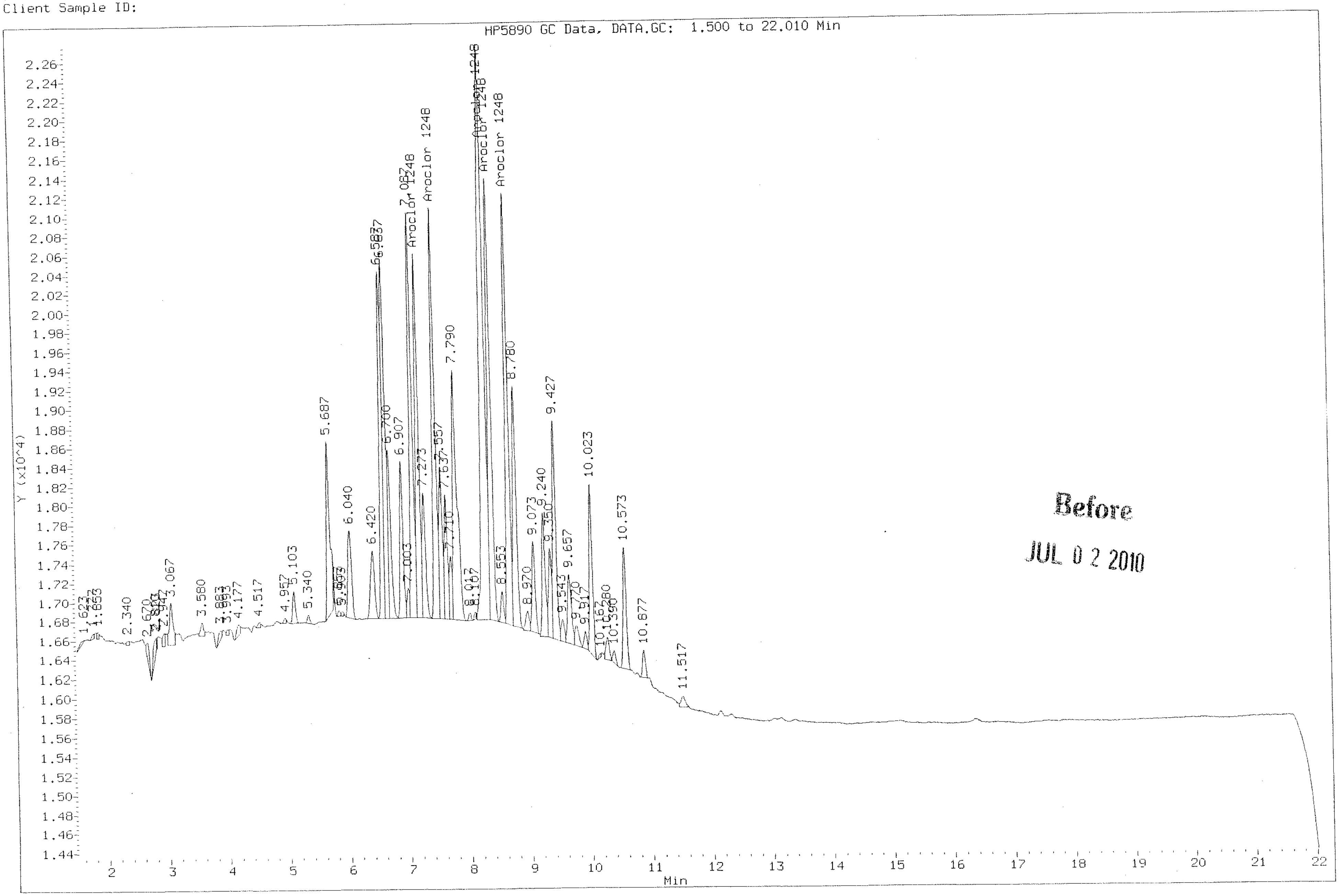
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F028.D
Injection Date: 02-JUL-2010 02:41
Instrument: GC09.i
Client Sample ID:



After
Initials
JUL 0 2 2010
Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

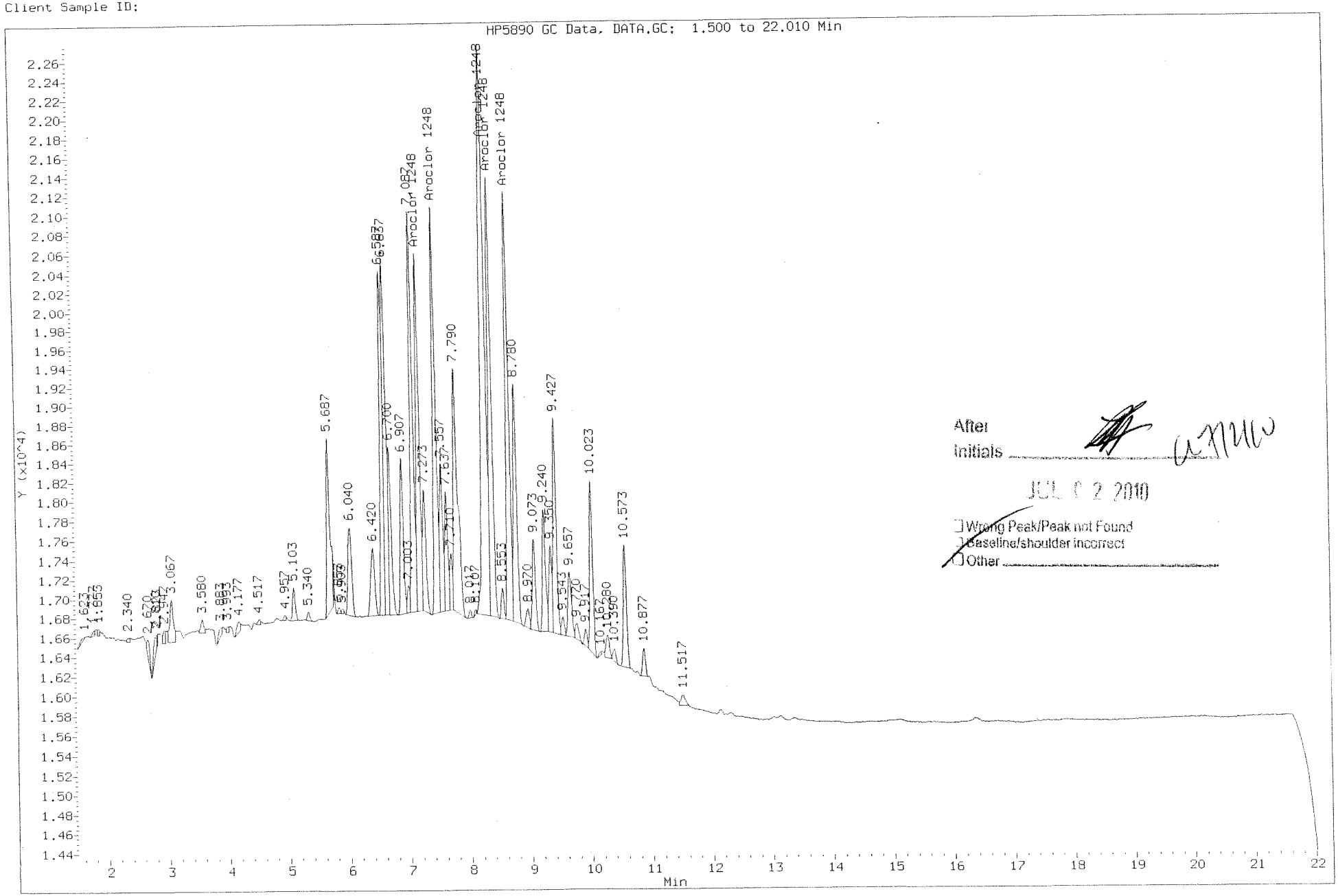
Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R028.D
Injection Date: 02-JUL-2010 02:41
Instrument: GC09.i
Client Sample ID:



Before
JUL 0 2 2010

379

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R028.D
Injection Date: 02-JUL-2010 02:41
Instrument: GC09.i
Client Sample ID:



After
Initials _____ 7/7/10

JUL 12 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other _____

380

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F029.D
Report Date: 02-Jul-2010 10:10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F029.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R029.D
Inj Date : 02-JUL-2010 03:08
Sample Info: 1248 @ 500ppb | PCB5-53D
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.713	7.190	80398	112872	531	534	80.00- 120.00	100.00
	7.350	7.467	99406	124007	535	531	103.33- 155.00	123.64
	7.633	8.290	77229	260040	547	521	78.37- 117.55	96.06
	7.710	8.390	145376	141186	498	529	142.65- 213.98	180.82
	7.807	8.670	161615	135945	501	529	158.37- 237.55	201.02
			Average of Peak Amounts =		522	529		

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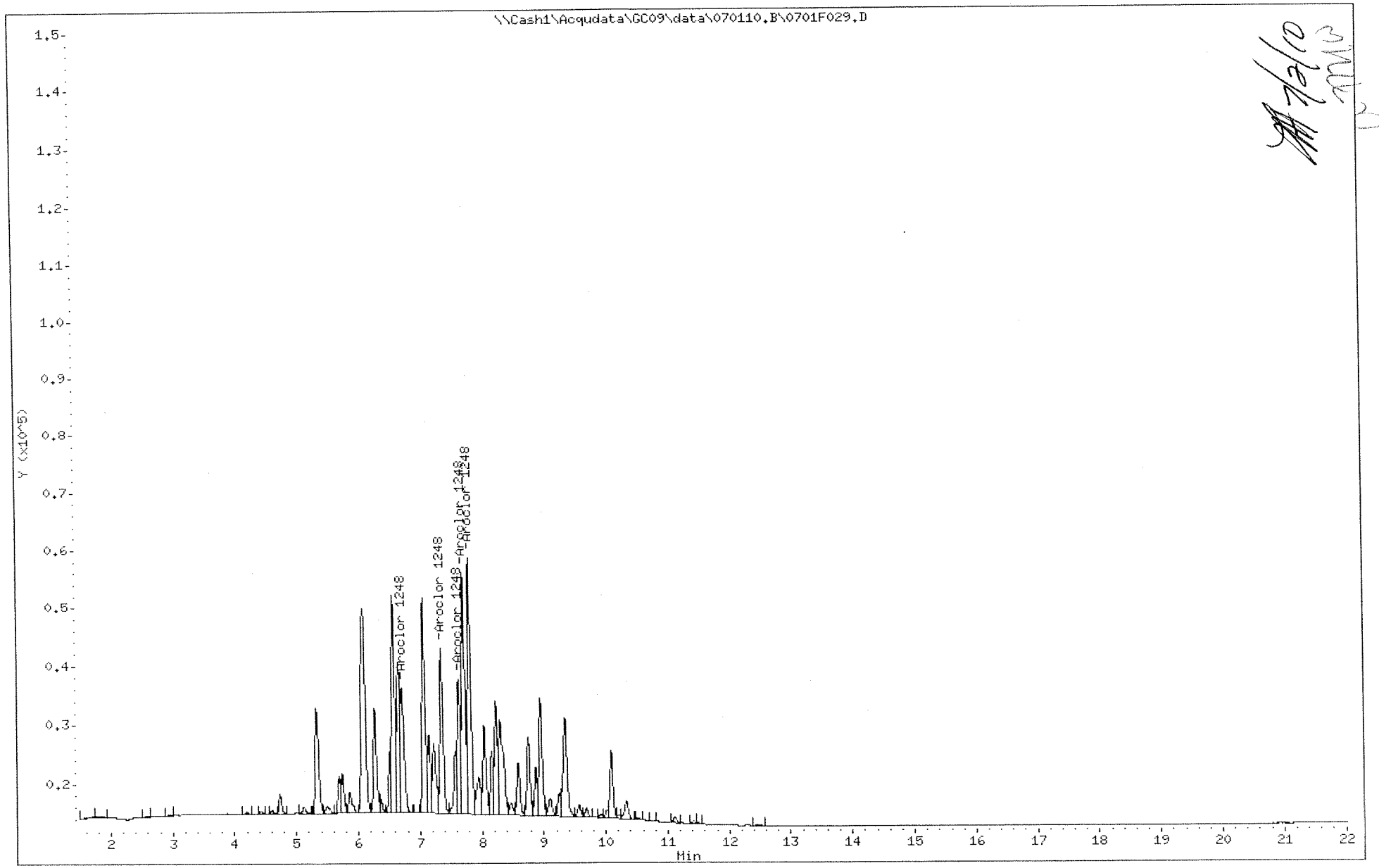
Data File: \\Cash1\Acqudata\GC09\data\070110,B\0701F029.D
Date : 02-JUL-2010 03:08
Client ID:
Sample Info: 1248 @ 500ppb | PCB5-53D

Column phase: DB-35MS

Instrument: GC09,i

Operator: LHarris
Column diameter: 0.53



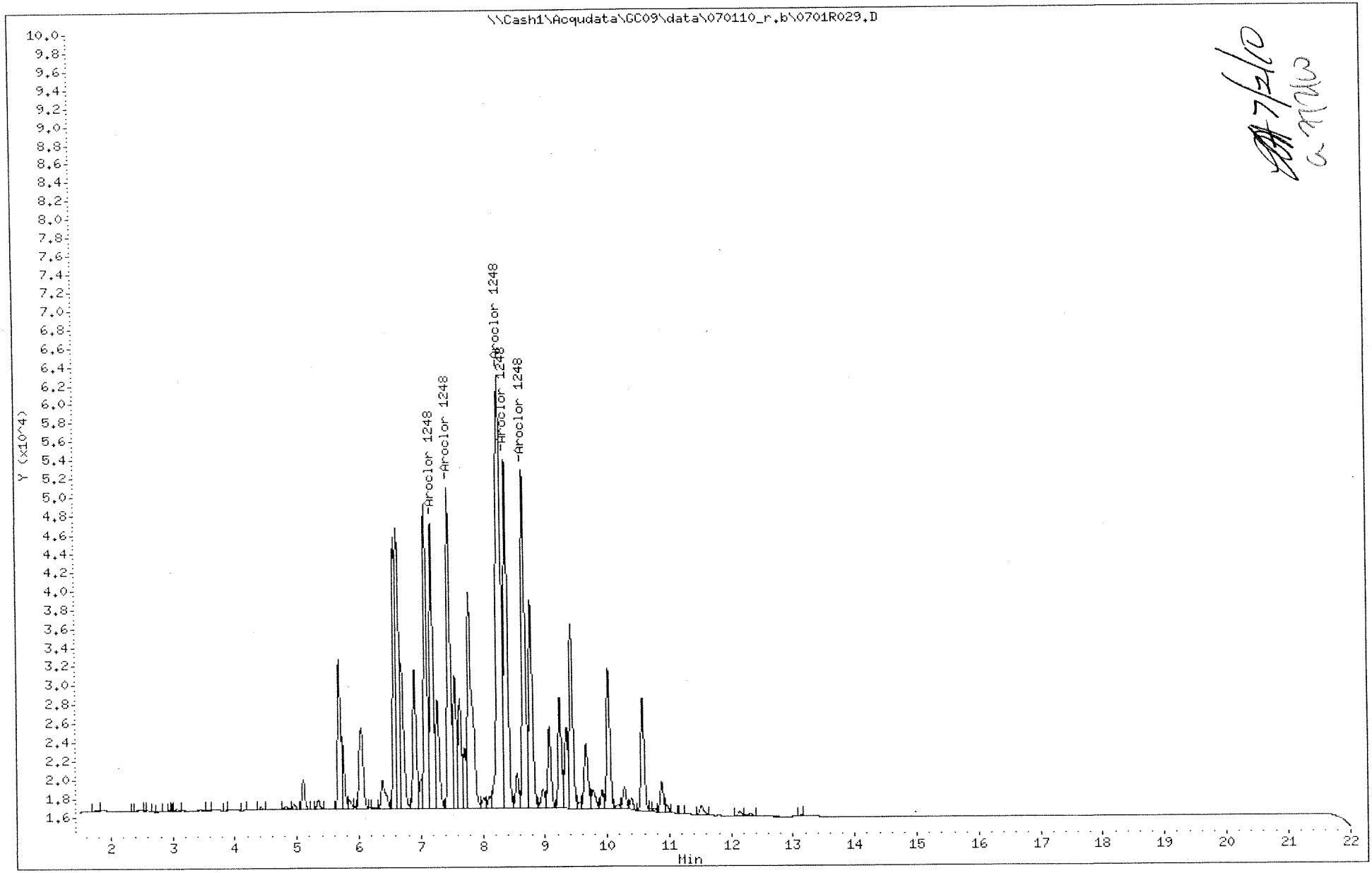
382

Data File: \\Cash1\Acqudata\GC09\data\070110_r,b\0701R029.D
Date : 02-JUL-2010 03:08
Client ID:
Sample Info: 1248 @ 500ppb | PCB5-53D

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F030.D
Report Date: 02-Jul-2010 10:10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F030.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R030.D
Inj Date : 02-JUL-2010 03:34
Sample Info: 1248 @ 1000ppb | PCB5-53E
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.713	7.190	142504	191944	942	851	80.00- 120.00	100.00
	7.350	7.467	174662	213024	940	868	103.33- 155.00	122.57
	7.633	8.290	134638	447474	954	835	78.37- 117.55	94.48
	7.710	8.390	250890	243945	860	863	142.65- 213.98	176.06
	7.807	8.670	281743	235332	873	854	158.37- 237.55	197.71
			Average of Peak Amounts =		914	854		

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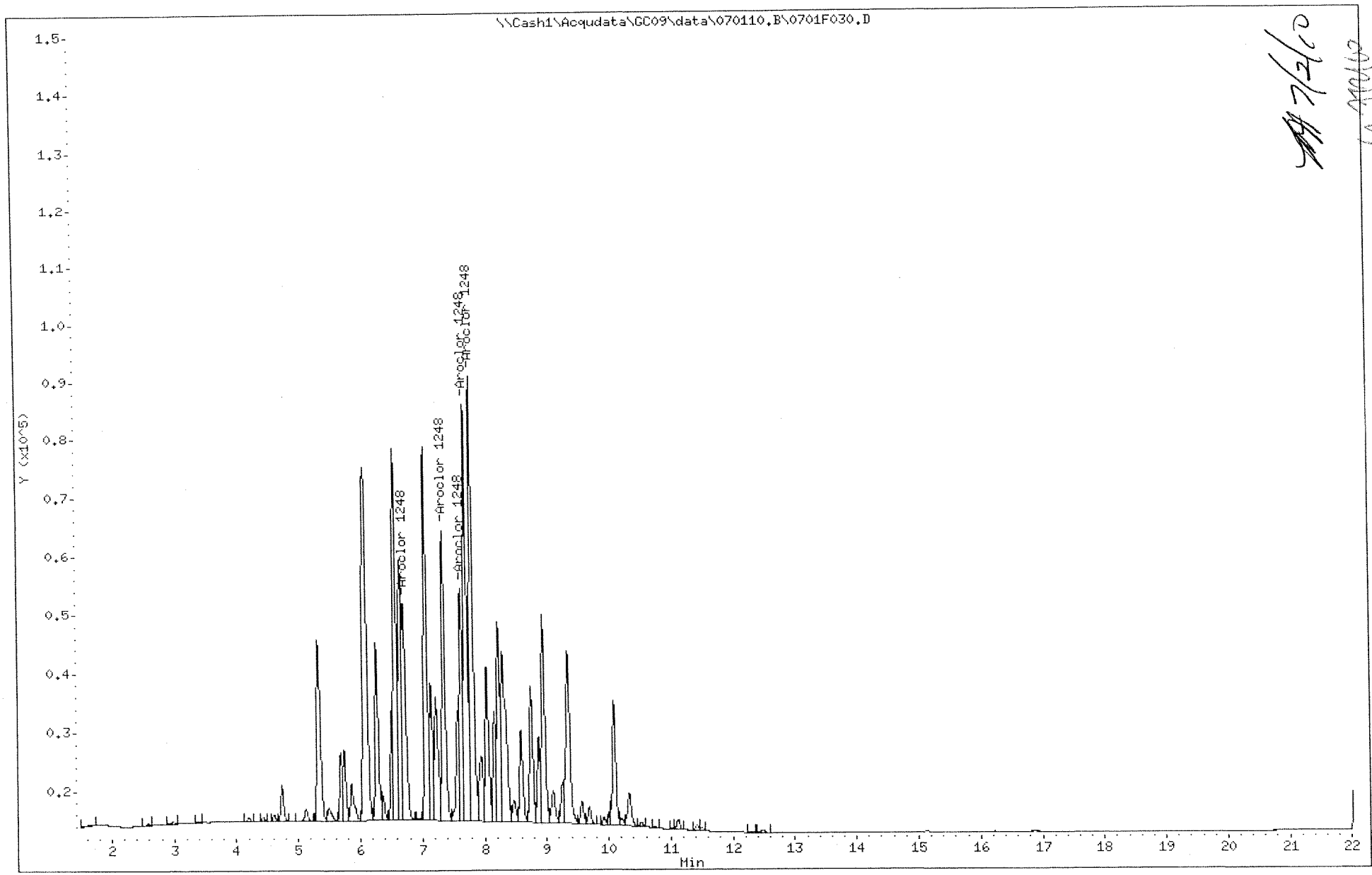
Data File: \\Cash1\Acqudata\GC09\data\070110,B\0701F030.D
Date : 02-JUL-2010 03:34
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-53E

Column phase: DB-35MS

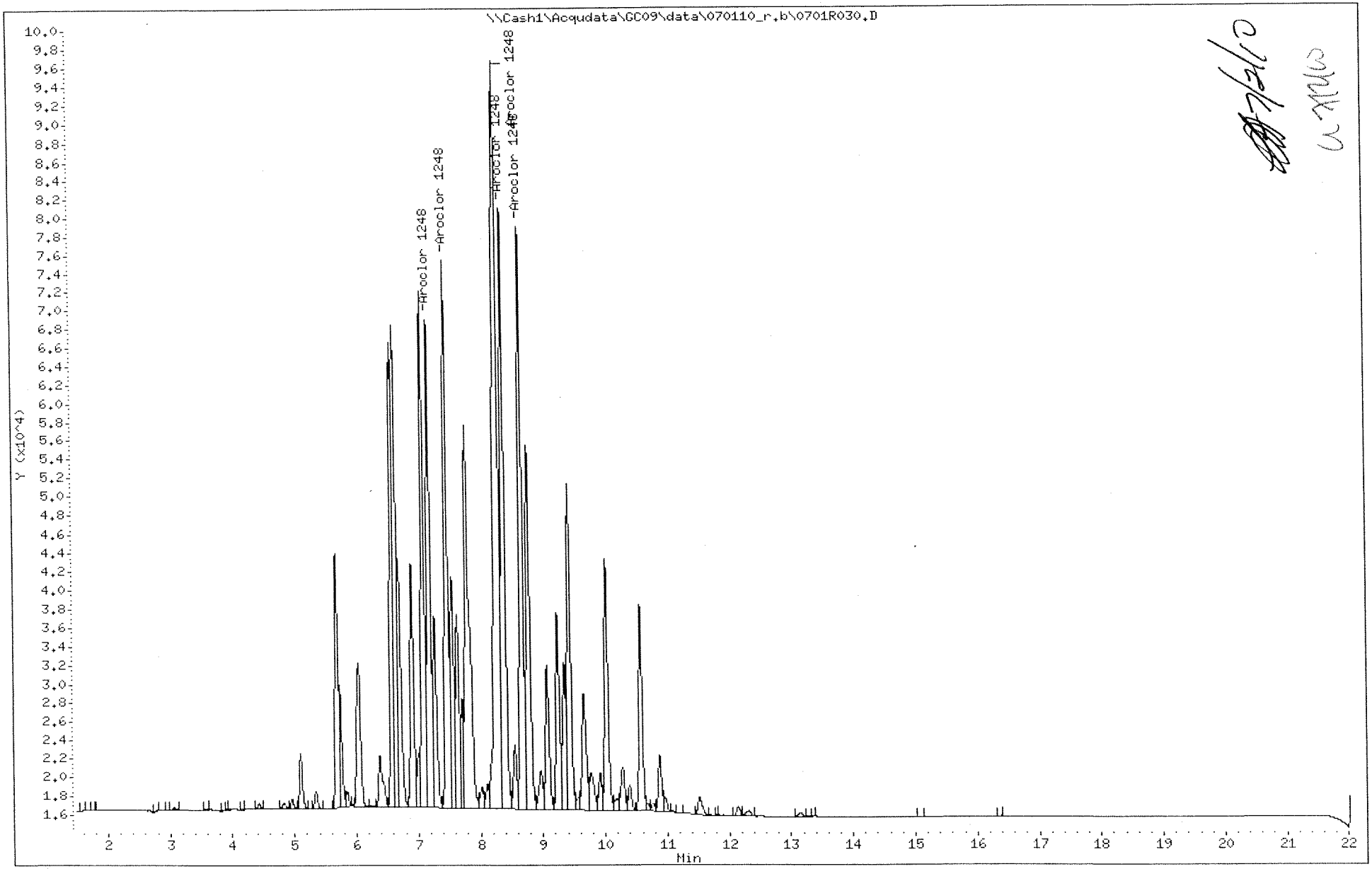
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R030.D
Date : 02-JUL-2010 03:34
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-53E

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F031.D
Report Date: 02-Jul-2010 10:10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F031.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R031.D
Inj Date : 02-JUL-2010 04:01
Sample Info: 1248 @ 2000ppb | PCB5-53F
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.710	7.187	256184	330860	1690	1470	80.00- 120.00	100.00
	7.350	7.467	317904	373859	1710	1520	103.33- 155.00	124.09
	7.633	8.290	241060	776742	1710	1450	78.37- 117.55	94.10
	7.710	8.390	443122	437747	1520	1550	142.65- 213.98	172.97
	7.807	8.670	495816	414443	1540	1500	158.37- 237.55	193.54
			Average of Peak Amounts =		1630	1500		

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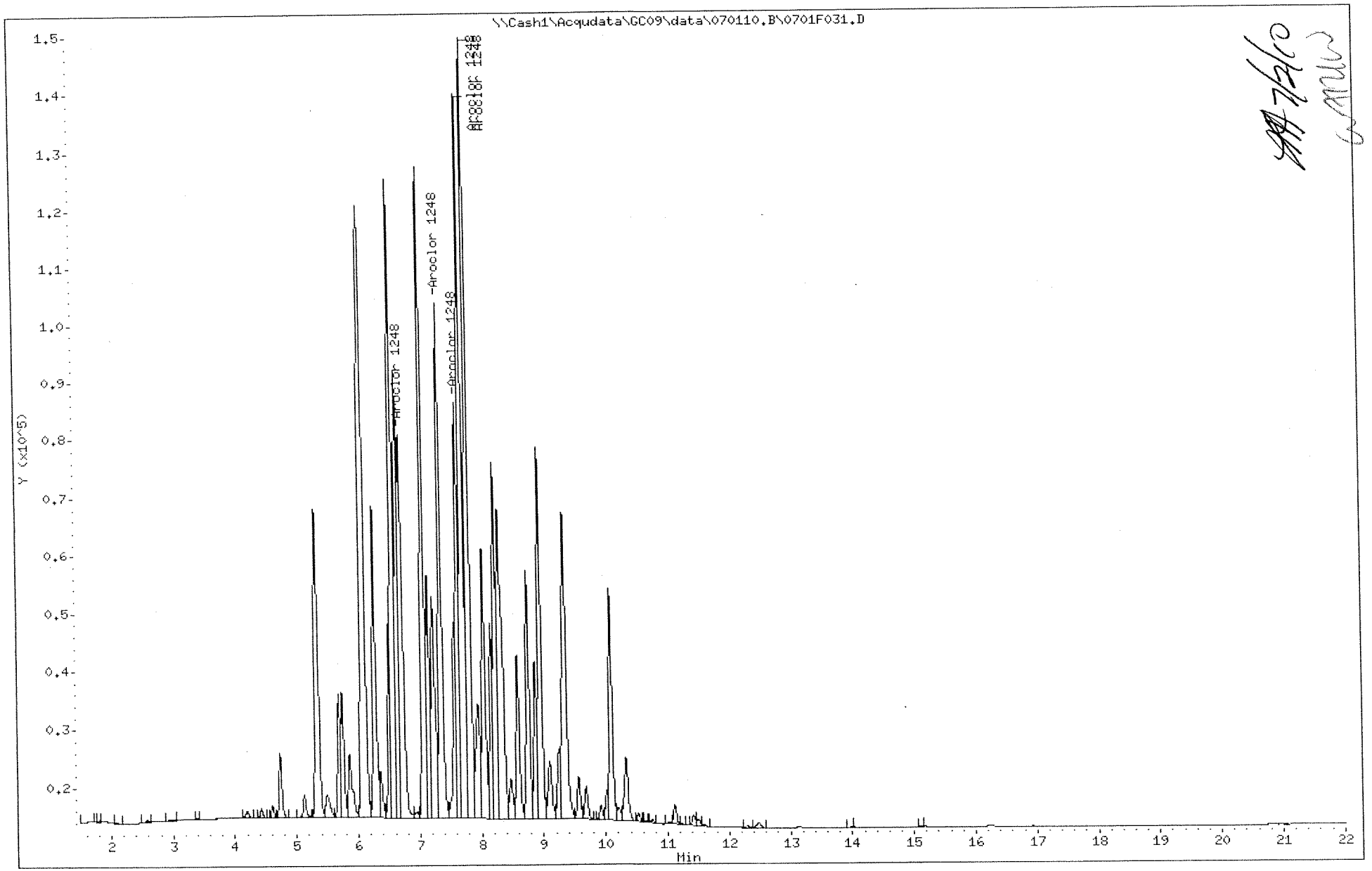
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F031.D
Date : 02-JUL-2010 04:01
Client ID:
Sample Info: 1248 @ 2000ppb | PCB5-53F

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

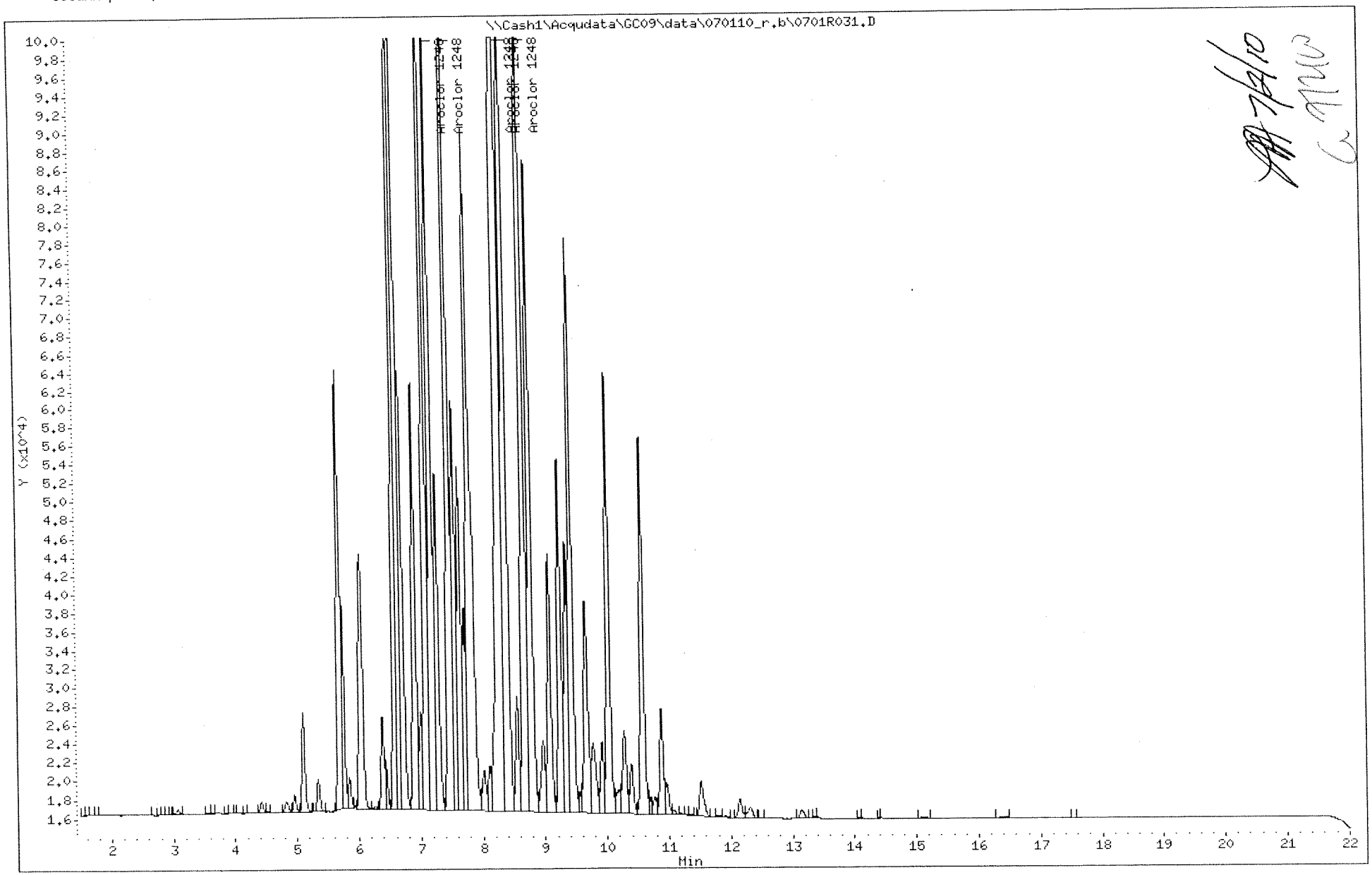


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R031.D
Date : 02-JUL-2010 04:01
Client ID:
Sample Info: 1248 @ 2000ppb | PCB5-53F

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F032.D
Report Date: 02-Jul-2010 10:10

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F032.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R032.D
Inj Date : 02-JUL-2010 04:27
Sample Info: 1248 @ 5000ppb | PCB5-53G
Misc Info :
Cal Date : 02-JUL-2010 08:52
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.710	7.187	546042	727255	3620	3240	80.00- 120.00	100.00
	7.350	7.467	705309	820089	3800	3300	103.33- 155.00	129.17
	7.630	8.290	534906	1709845	3790	3220	78.37- 117.55	97.96
	7.710	8.390	973686	962376	3340	3410	142.65- 213.98	178.32
	7.807	8.670	1080938	913473	3350	3330	158.37- 237.55	197.96
			Average of Peak Amounts =		3580	3300		

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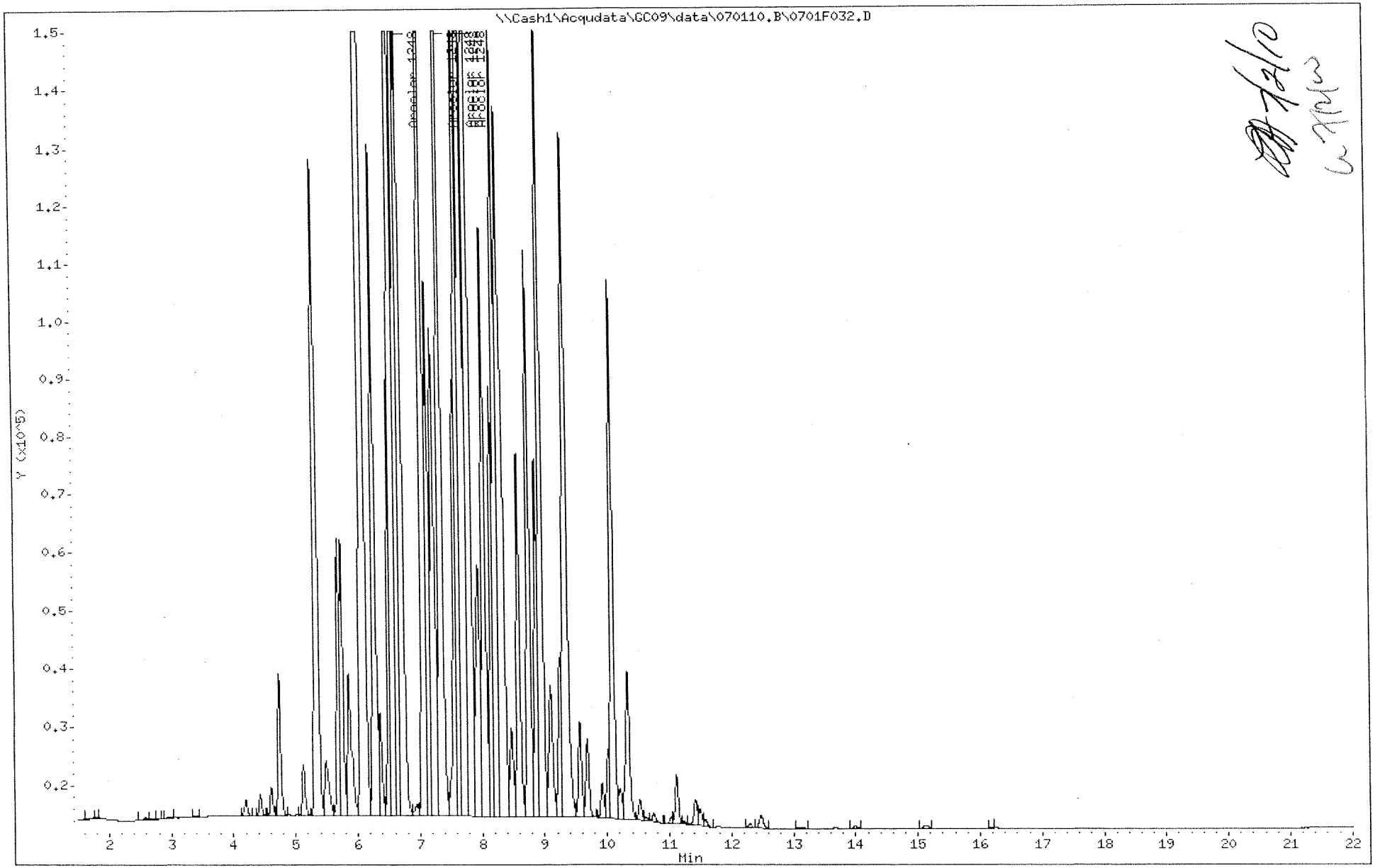
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F032.D
Date : 02-JUL-2010 04:27
Client ID:
Sample Info: 1248 @ 5000ppb | PCB5-53C

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

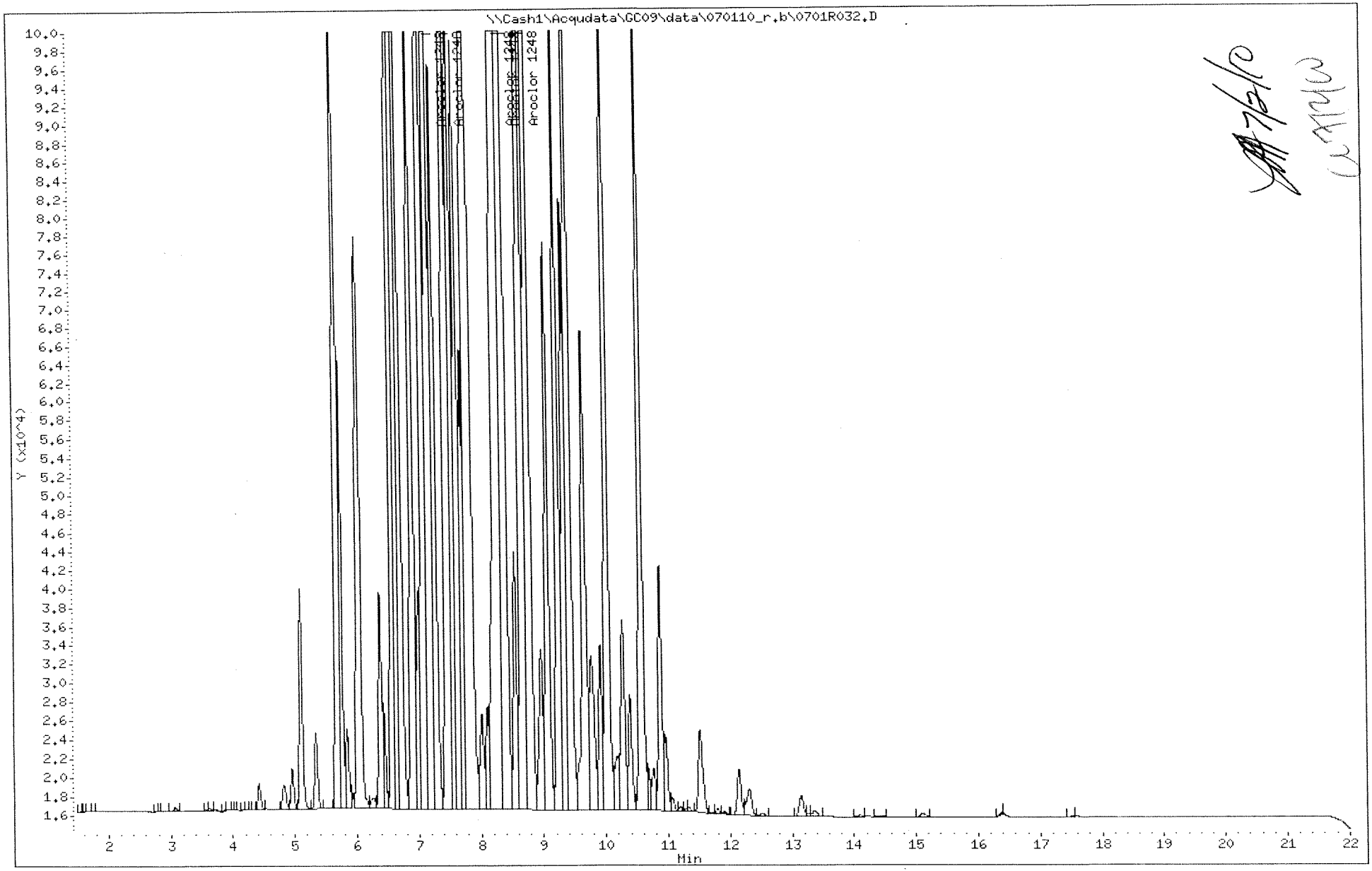


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R032.D
Date : 02-JUL-2010 04:27
Client ID:
Sample Info: 1248 @ 5000ppb | PCB5-53C

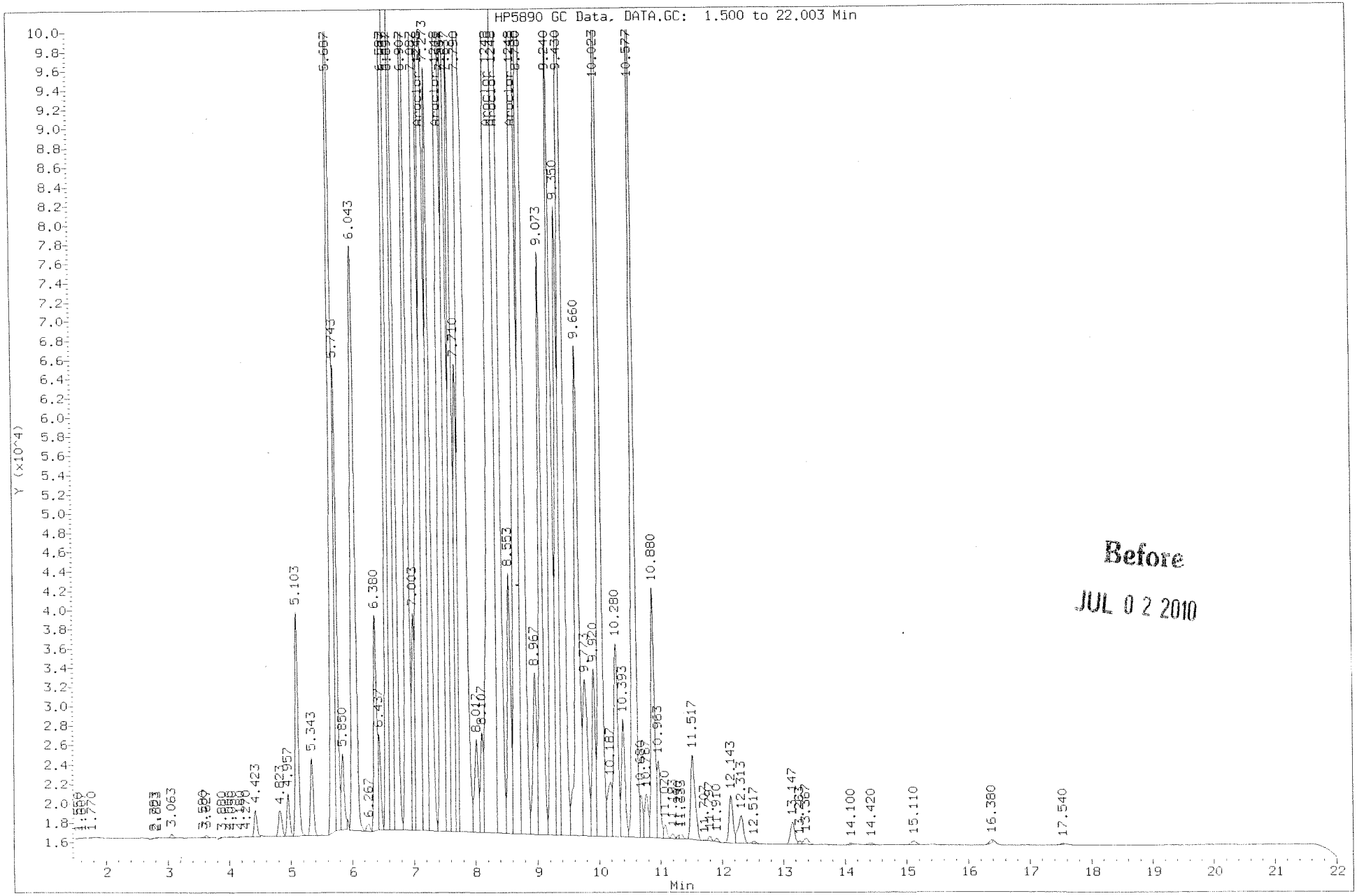
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



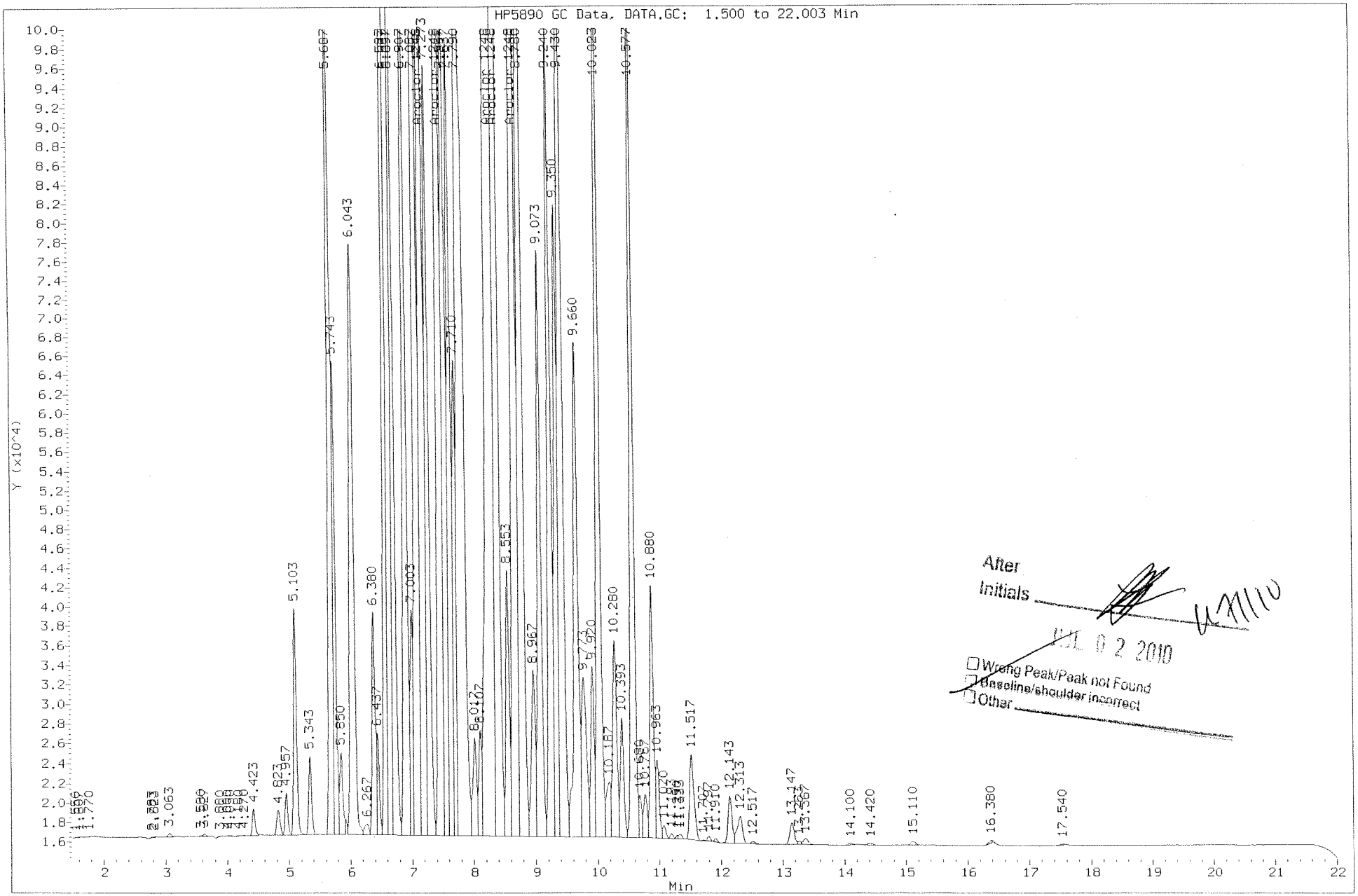
Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R032.D
Injection Date: 02-JUL-2010 04:27
Instrument: GC09.i
Client Sample ID:



Before

JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R032.D
Injection Date: 02-JUL-2010 04:27
Instrument: GC09.i
Client Sample ID:



After
Initials

JUL 0 2 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F033.D
Report Date: 02-Jul-2010 11:01

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F033.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R033.D
Inj Date : 02-JUL-2010 04:54
Sample Info: 1016 @ 1000ppb | PCB5-49E
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1016.sub
Sub List #2 : AR1016.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	5.690	5.743	66501	101288	1010	982	80.00- 120.00	100.00
	5.747	6.910	107043	158403	962	945	138.61- 207.92	160.96
	6.270	7.087	214664	130672	966	892	283.61- 425.41	322.80
	6.510	7.187	106545	147130	987	921	135.31- 202.97	160.22
	7.063	7.467	153031	144164	970	935	202.79- 304.19	230.12
			Average of Peak Amounts =		979	935		

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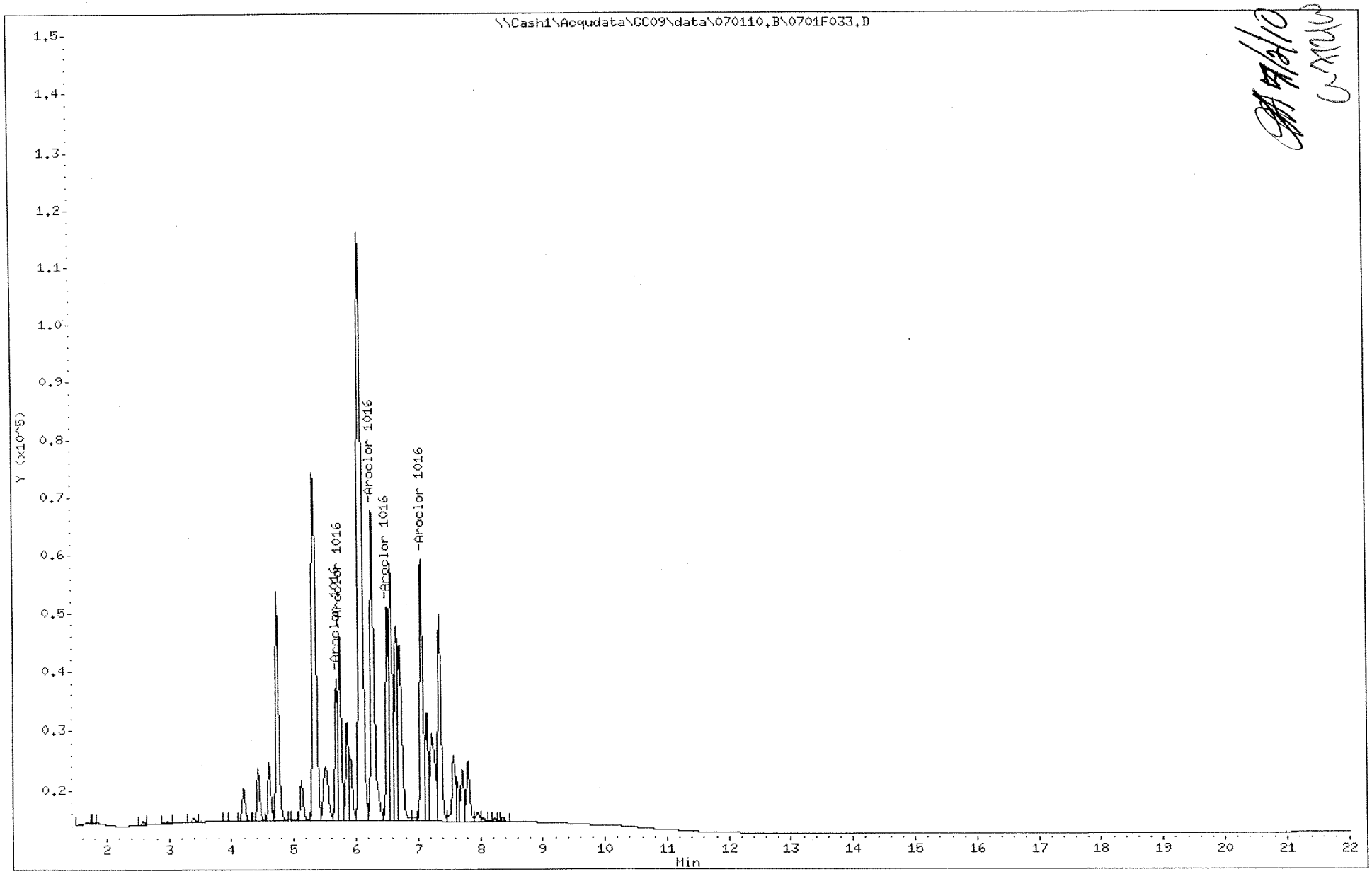
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F033.D
Date : 02-JUL-2010 04:54
Client ID:
Sample Info: 1016 @ 1000ppb | PCB5-49E

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

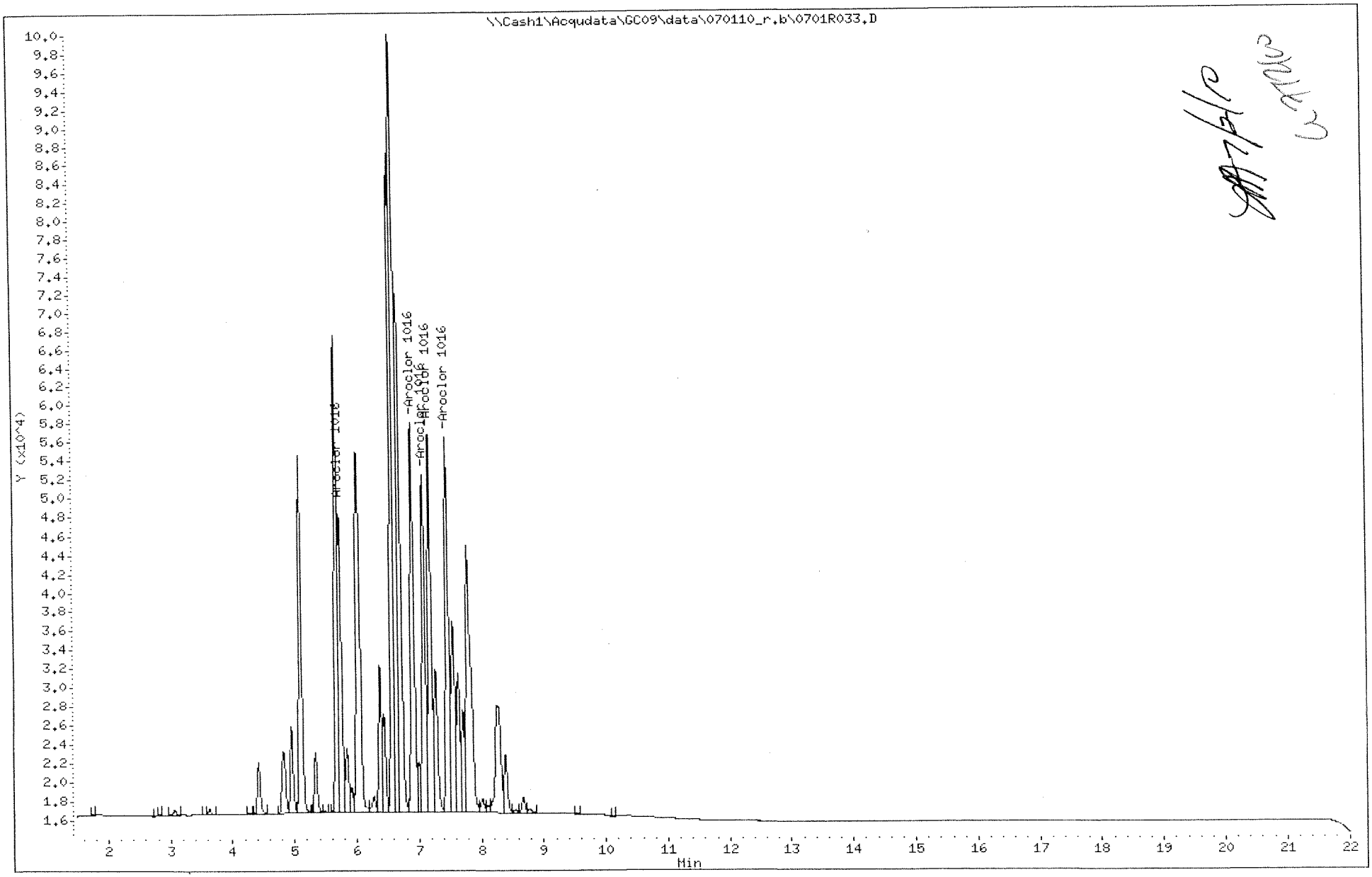


Data File: \\Cash1\Acqudata\GC09\data\070110_r,b\0701R033.D
Date : 02-JUL-2010 04:54
Client ID:
Sample Info: 1016 @ 1000ppb | PCB5-49E

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
Report Date: 02-Jul-2010 11:01

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R034.D
Inj Date : 02-JUL-2010 05:21
Sample Info: 1221 @ 1000ppb | PCB5-53J
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.390	4.270	57899	18824	944	982	80.00- 120.00	100.00(M)
	4.430	4.427	82664	32093	947	963	123.27- 184.91	142.77(M)
	4.607	4.837	55635	83821	951	976	79.54- 119.30	96.09(M)
	4.737	4.957	181578	54794	952	946	253.26- 379.90	313.61(M)
			Average of Peak Amounts =		948	967		

QC Flag Legend

M - Compound response manually integrated.

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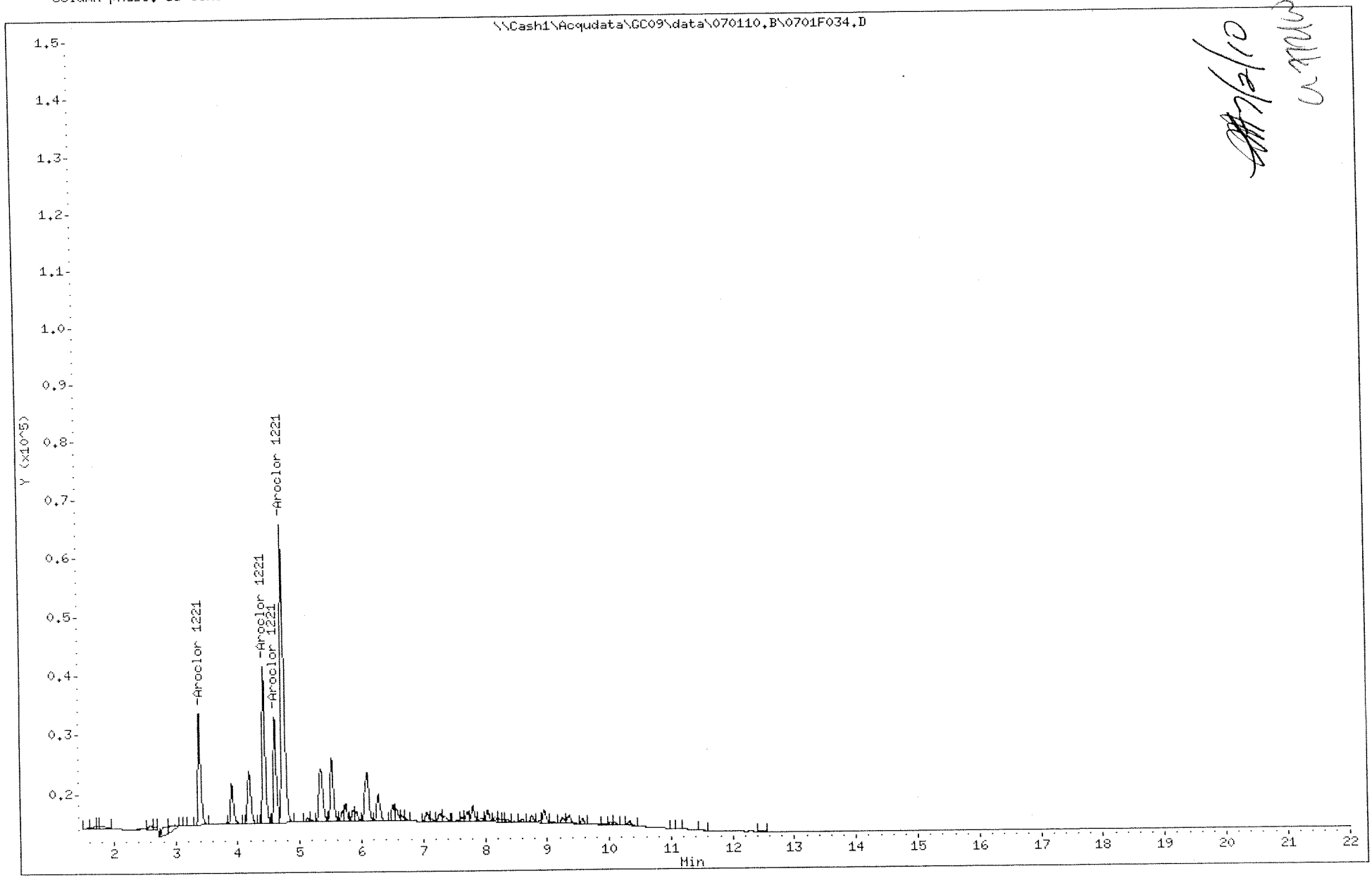
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
Date : 02-JUL-2010 05:21
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-53J

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

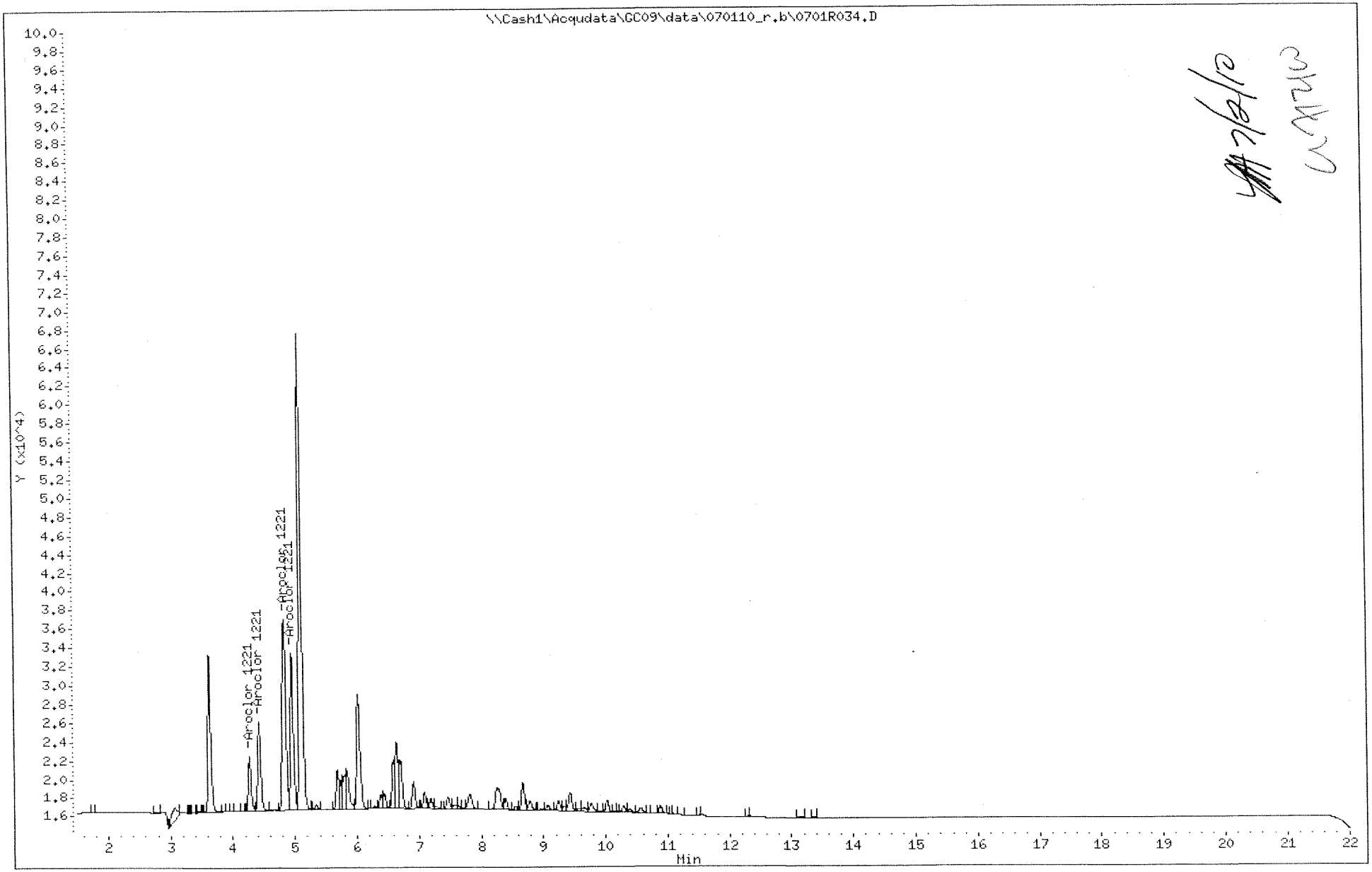


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R034.D
Date : 02-JUL-2010 05:21
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-53J

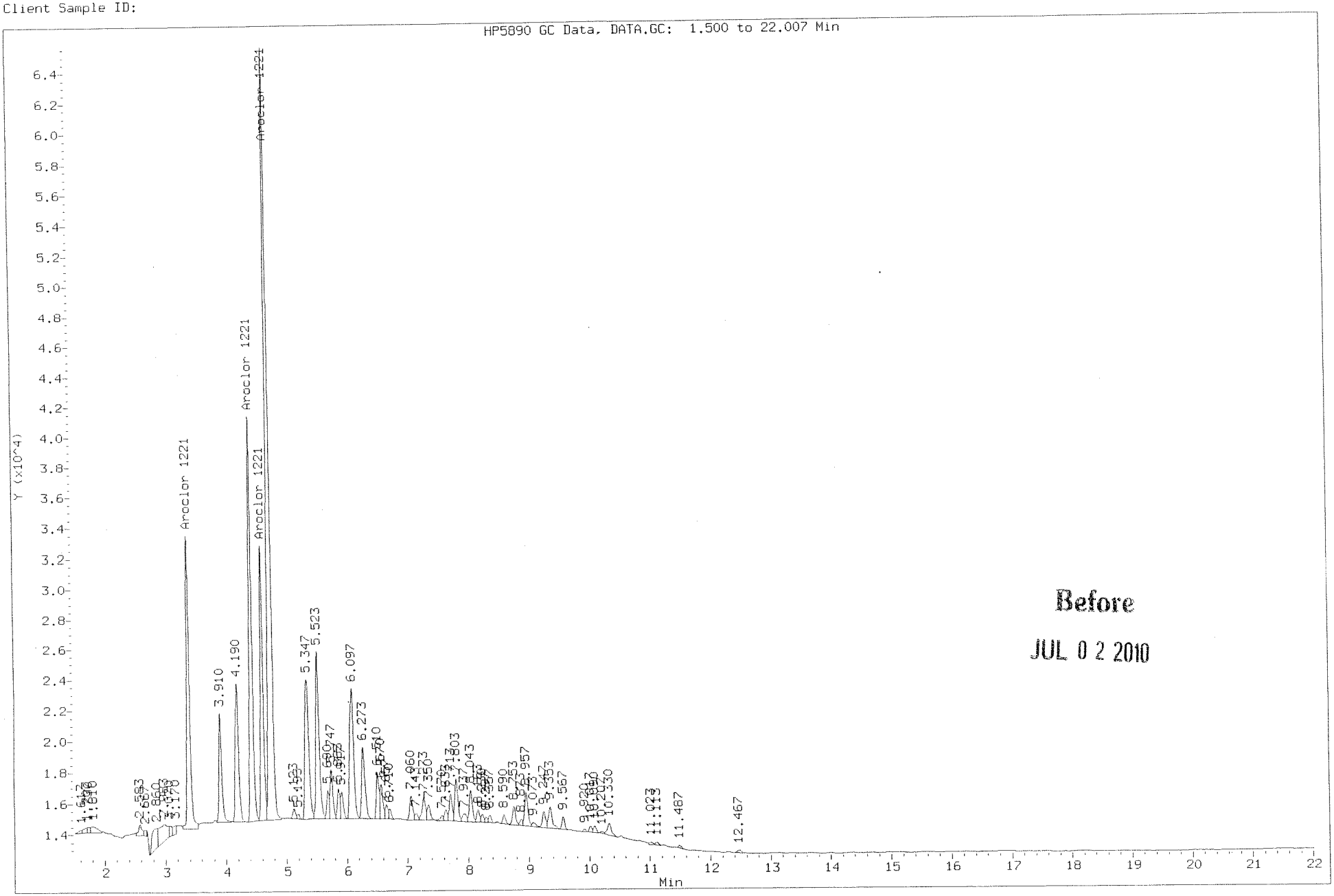
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



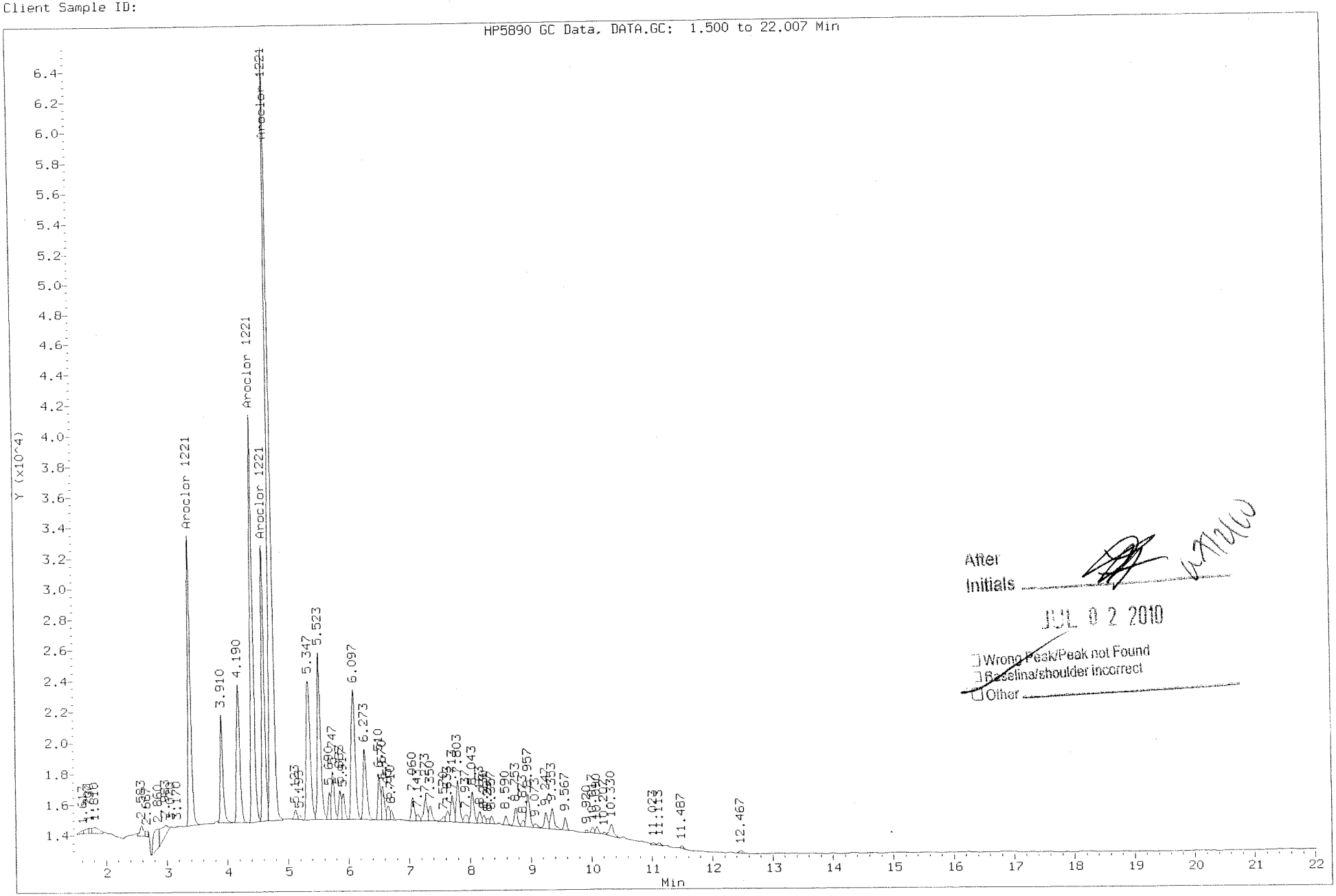
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
Injection Date: 02-JUL-2010 05:21
Instrument: GC09.i
Client Sample ID:



Before

JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F034.D
Injection Date: 02-JUL-2010 05:21
Instrument: GC09.i
Client Sample ID:



After
Initials
JUL 0 2 2010
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F035.D
Report Date: 02-Jul-2010 11:01

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F035.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R035.D
Inj Date : 02-JUL-2010 05:47
Sample Info: 1232 @ 1000ppb | PCB5-49F
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.737	5.103	147282	144732	780	770	80.00- 120.00	100.00
	5.330	5.687	142707	89270	838	913	71.62- 107.42	96.89
	6.093	6.027	249554	105289	829	919	125.66- 188.50	169.44
	6.270	6.587	108204	106850	921	824	48.59- 72.89	73.47
			Average of Peak Amounts =		842	856		

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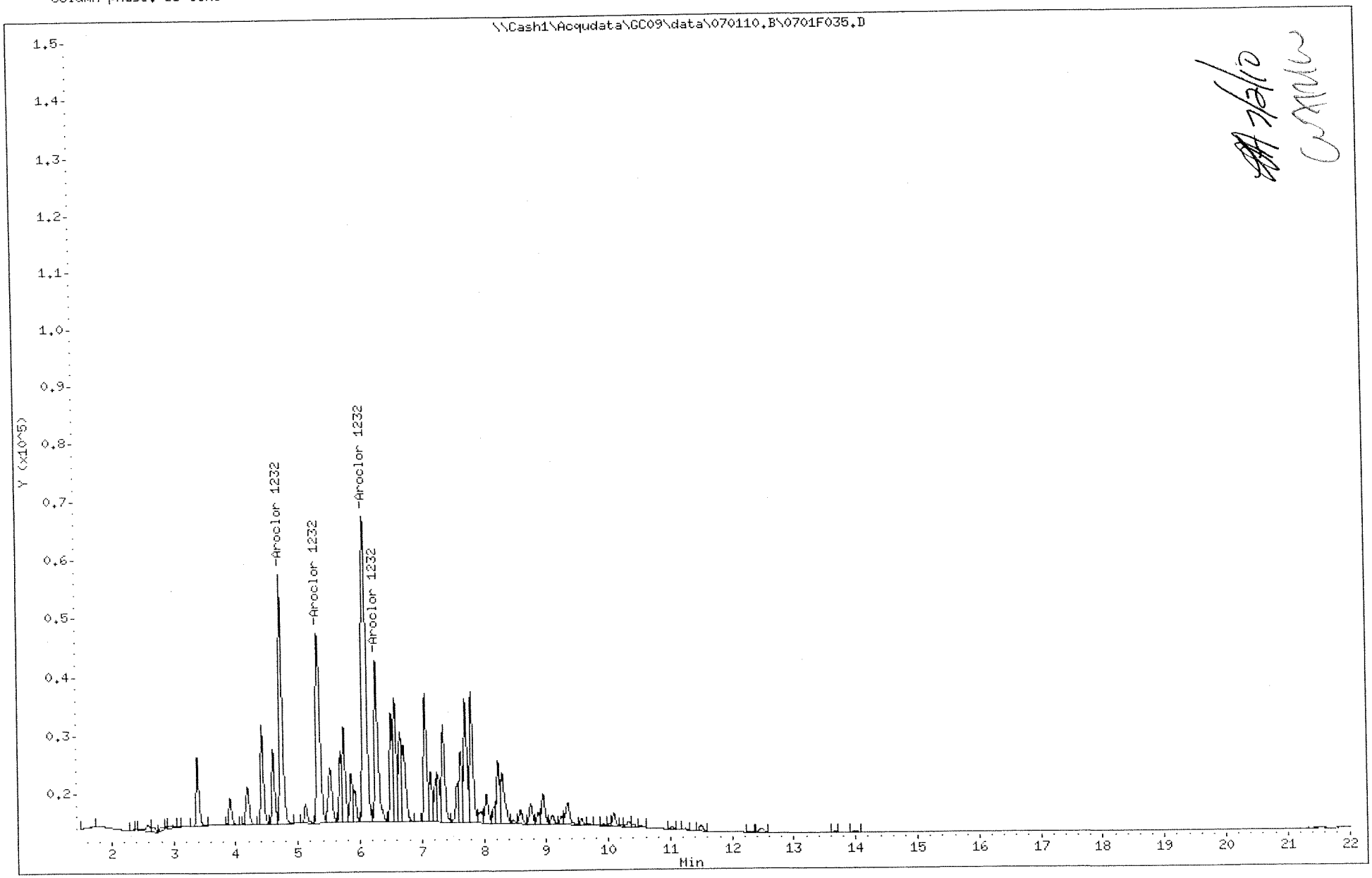
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F035.D
Date : 02-JUL-2010 05:47
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-49F

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

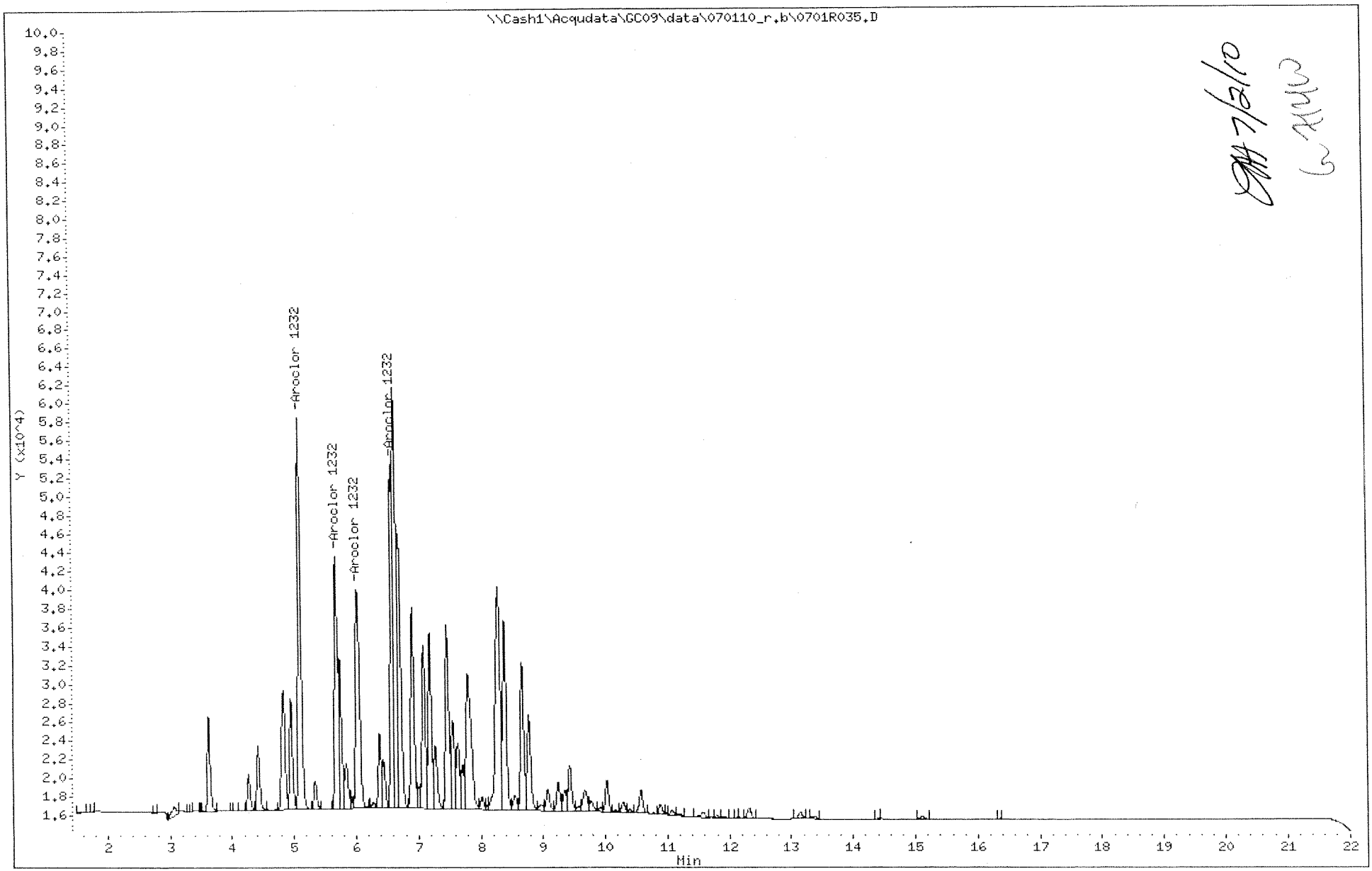


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R035.D
Date : 02-JUL-2010 05:47
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-49F

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F036.D
Report Date: 02-Jul-2010 11:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F036.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R036.D
Inj Date : 02-JUL-2010 06:13
Sample Info: 1242 @ 1000ppb | PCB5-49G
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.747	5.747	93323	84645	926	908	80.00- 120.00	100.00
	6.093	6.700	424345	166132	953	827	354.70- 532.06	454.71
	6.657	7.090	97501	124561	981	977	79.49- 119.23	104.48
	7.063	7.187	139215	134214	975	934	116.46- 174.68	149.18
	7.350	7.467	121632	134060	957	944	108.43- 162.65	130.33
			Average of Peak Amounts =		958	918		

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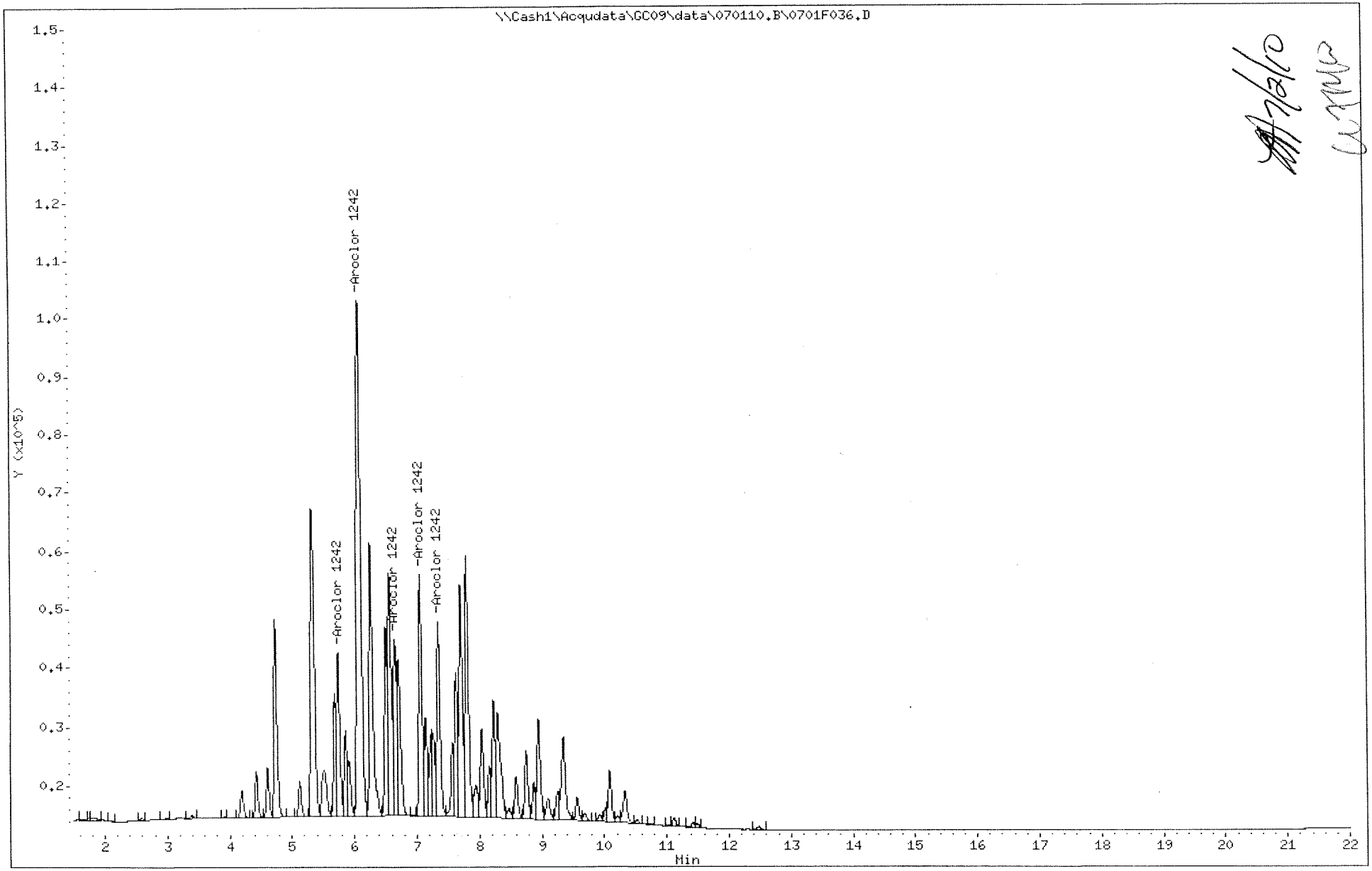
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F036.D
Date : 02-JUL-2010 06:13
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-49C

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

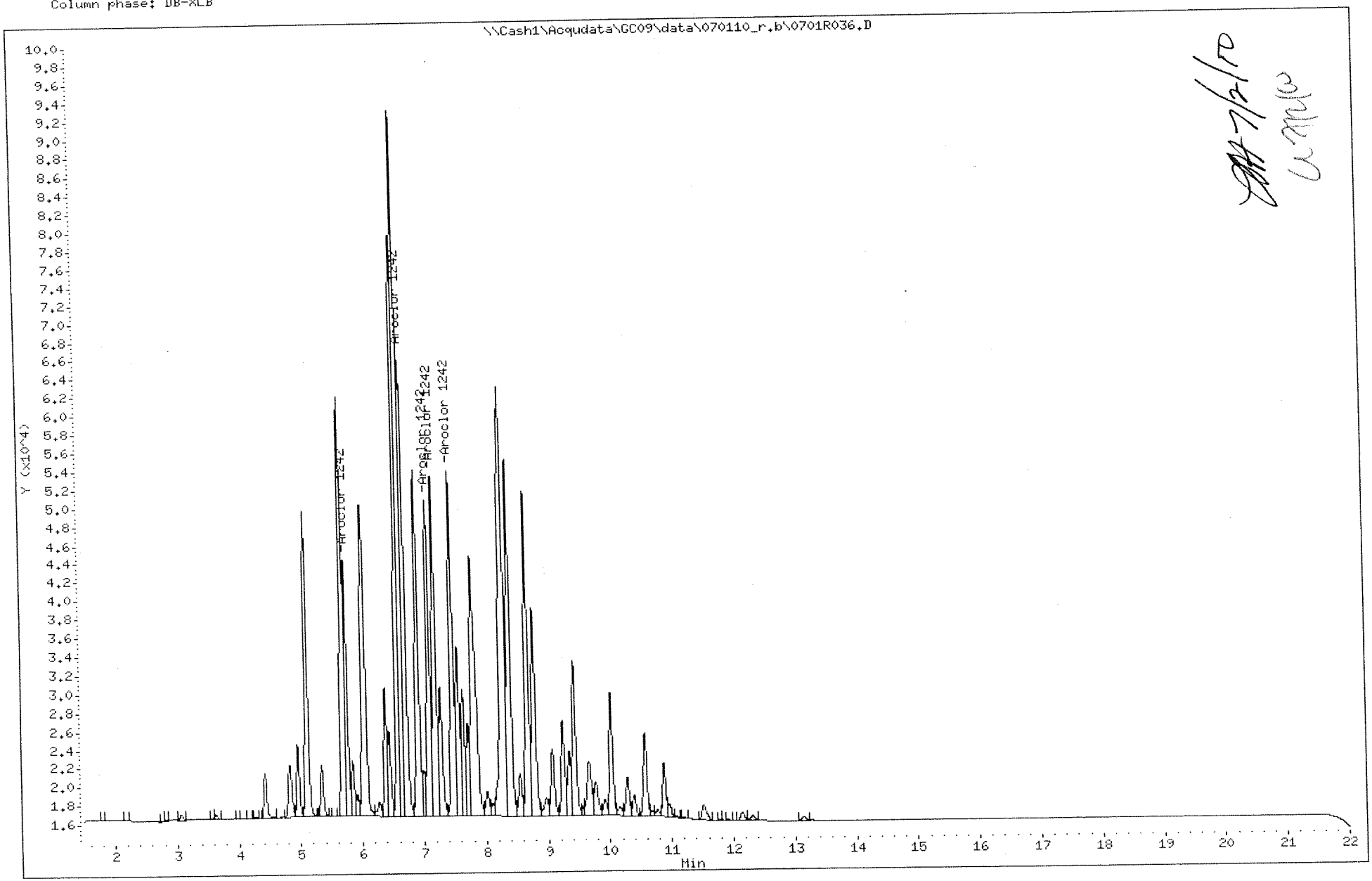


Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R036.D
Date : 02-JUL-2010 06:13
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-49G

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F037.D
Report Date: 02-Jul-2010 11:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F037.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R037.D
Inj Date : 02-JUL-2010 06:40
Sample Info: 1248 @ 1000ppb | PCB5-49H
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.710	7.187	135121	177477	895	925	80.00- 120.00	100.00
	7.350	7.463	166459	203289	896	954	103.33- 155.00	123.19
	7.630	8.290	124488	408023	882	912	78.37- 117.55	92.13
	7.710	8.390	231157	224095	792	919	142.65- 213.98	171.07
	7.803	8.670	258175	217281	800	923	158.37- 237.55	191.07
			Average of Peak Amounts =		853	927		

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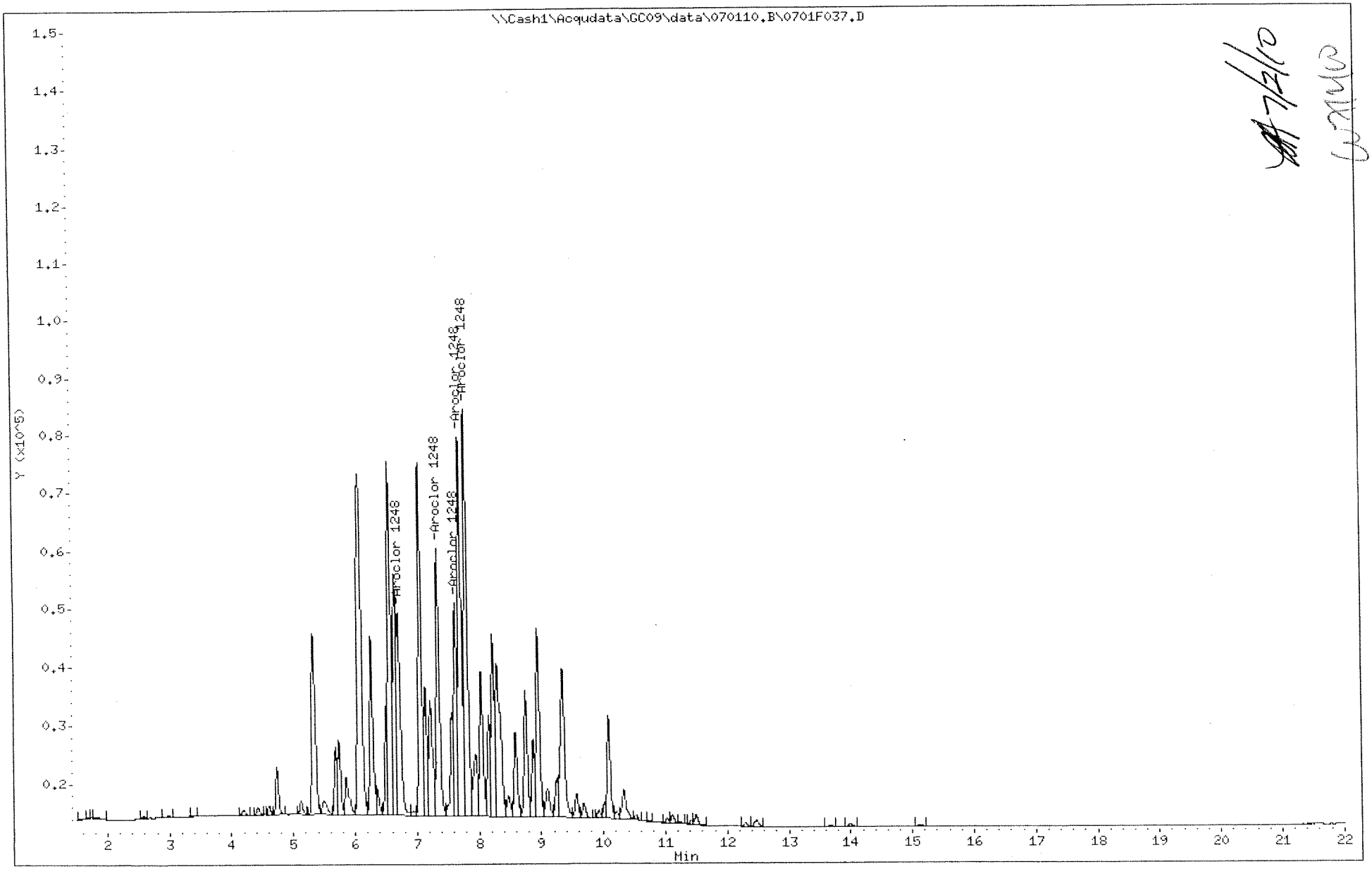
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F037.D
Date : 02-JUL-2010 06:40
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-49H

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

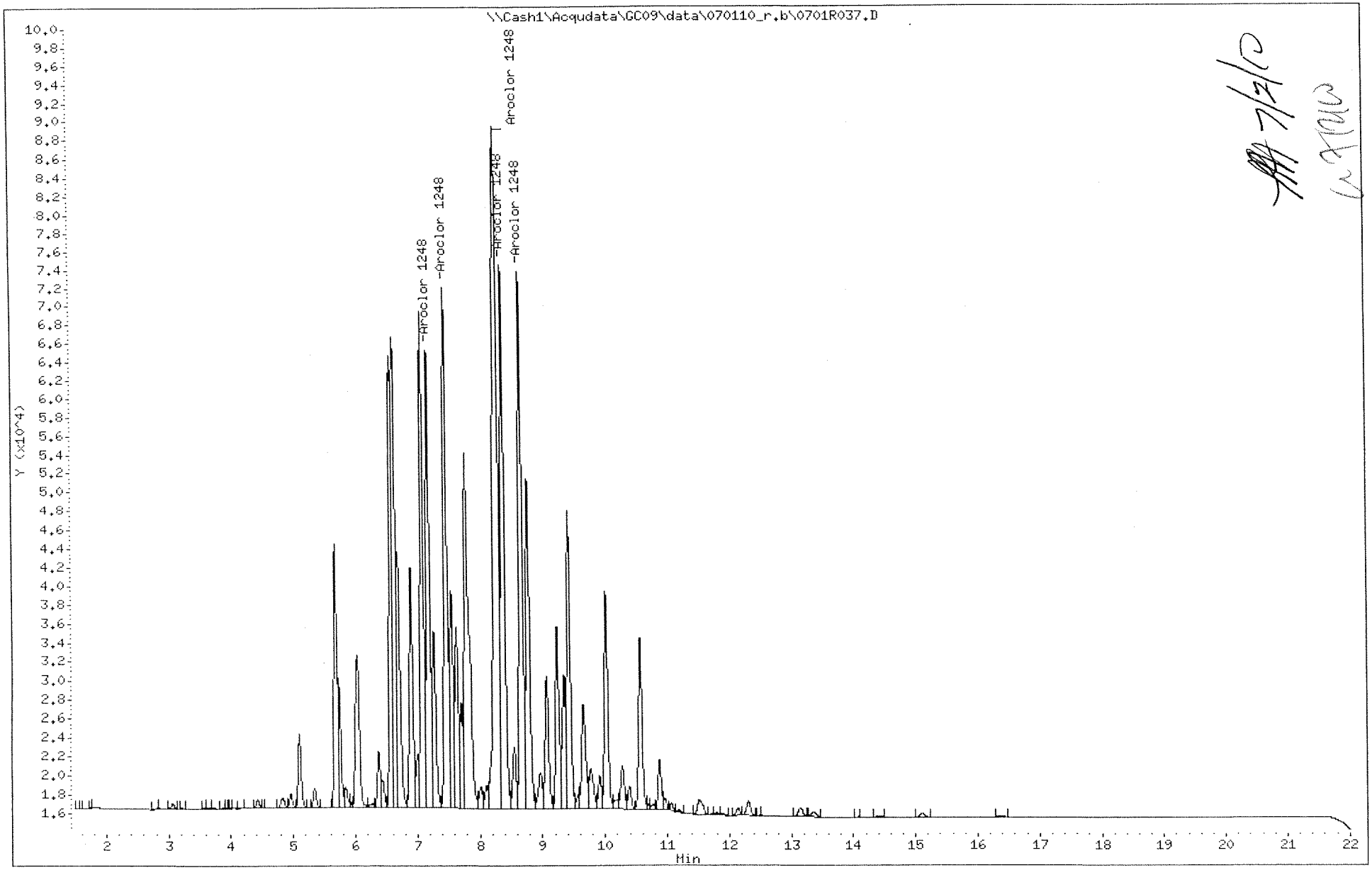
Column phase: DB-35MS



410

Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R037.D
Date : 02-JUL-2010 06:40
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-49H

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
Report Date: 02-Jul-2010 11:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R038.D
Inj Date : 02-JUL-2010 07:07
Sample Info: 1254 @ 1000ppb | PCB5-53K
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	7.800	9.240	228158	168890	755	773	80.00- 120.00	100.00(M)
	8.753	9.427	172742	302595	816	760	65.70- 98.55	75.71(M)
	8.953	9.767	342821	166423	801	899	127.75- 191.62	150.26(M)
	9.350	10.023	292815	243534	815	740	108.11- 162.16	128.34(M)
	9.563	10.287	173573	171775	926	888	56.14- 84.21	76.08(M)
			Average of Peak Amounts =		823	812		

QC Flag Legend

M - Compound response manually integrated.

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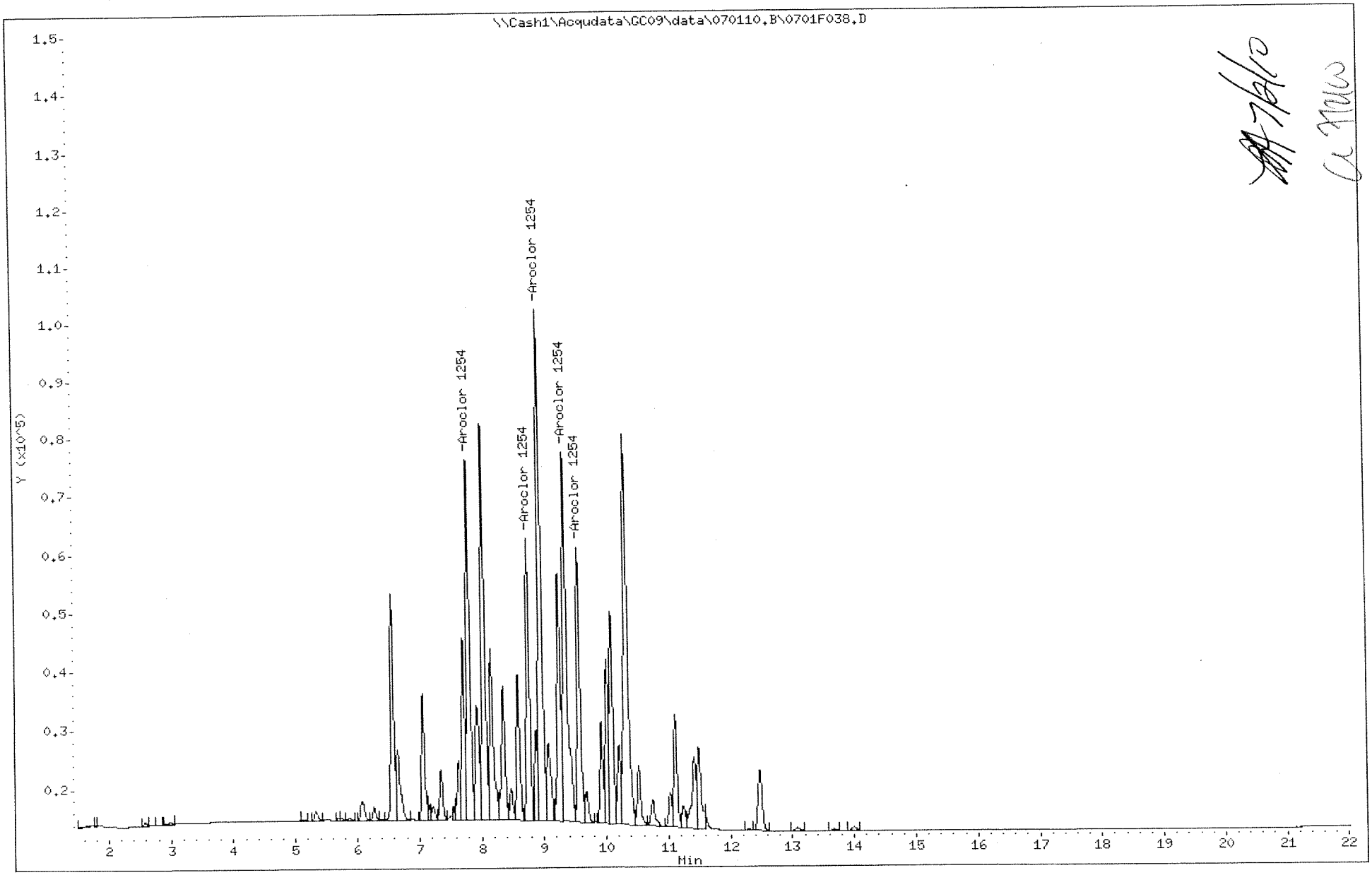
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
Date : 02-JUL-2010 07:07
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-53K

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

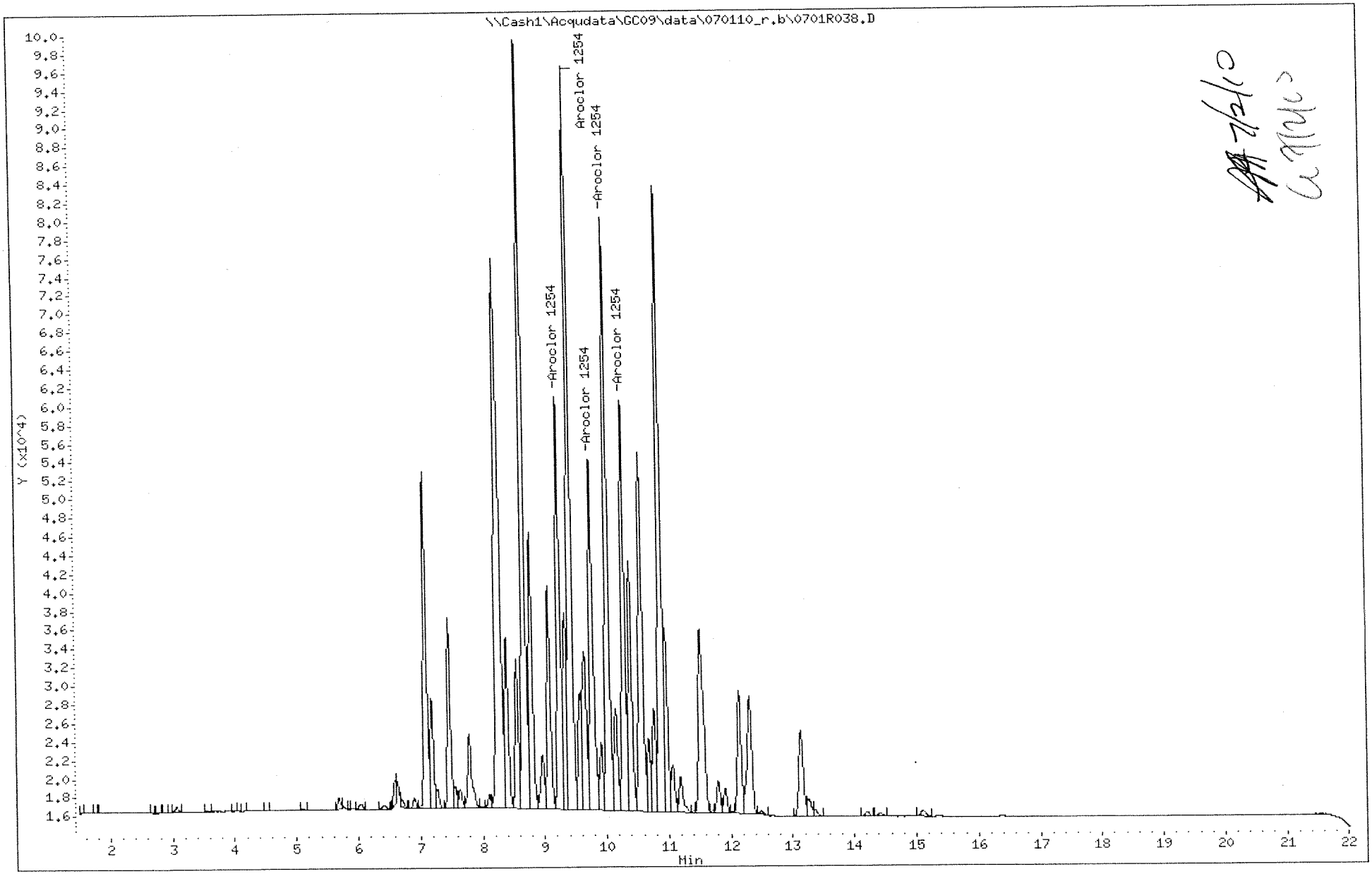
Column phase: DB-35MS



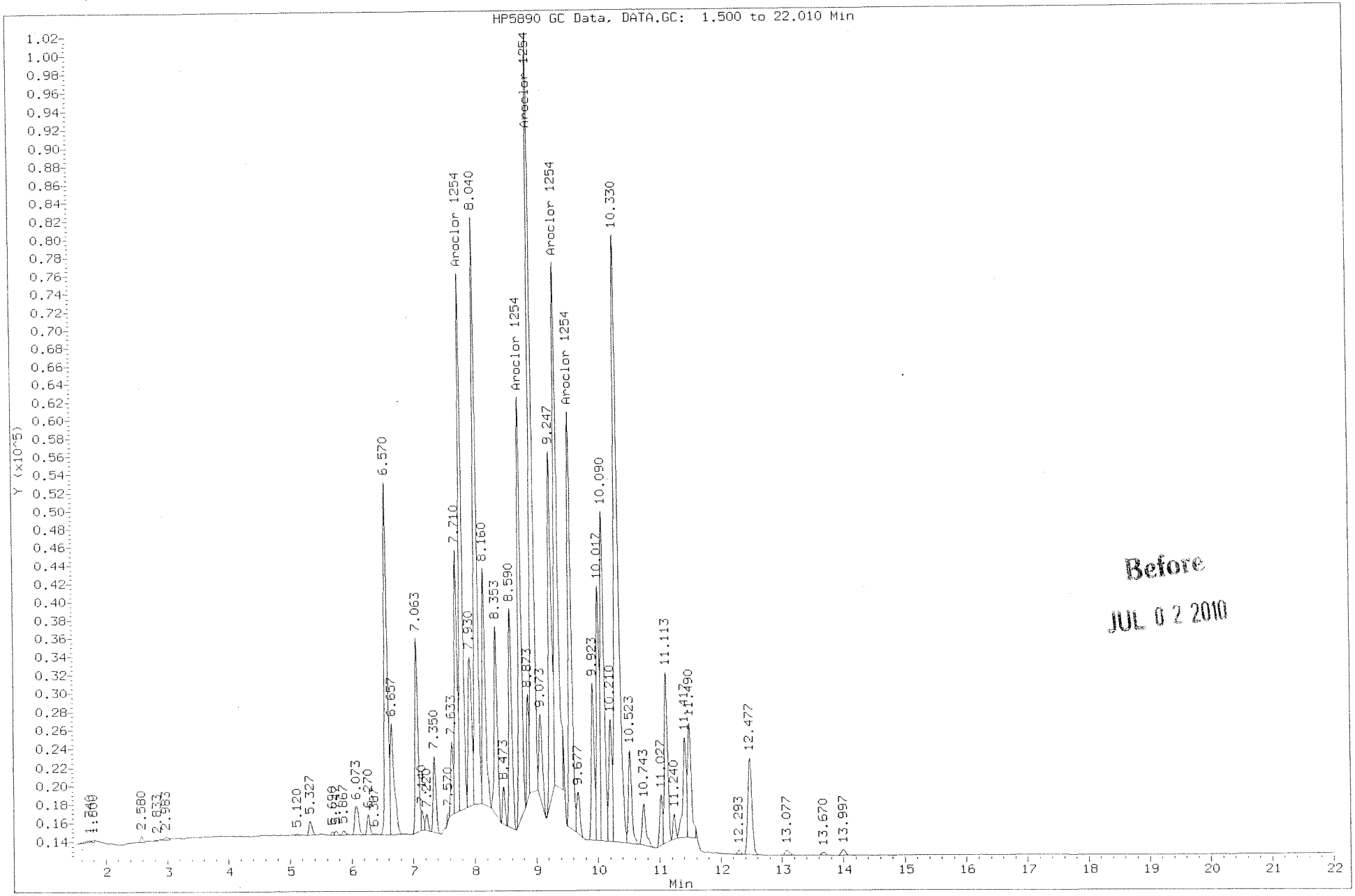
Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R038.D
Date : 02-JUL-2010 07:07
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-53K

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB

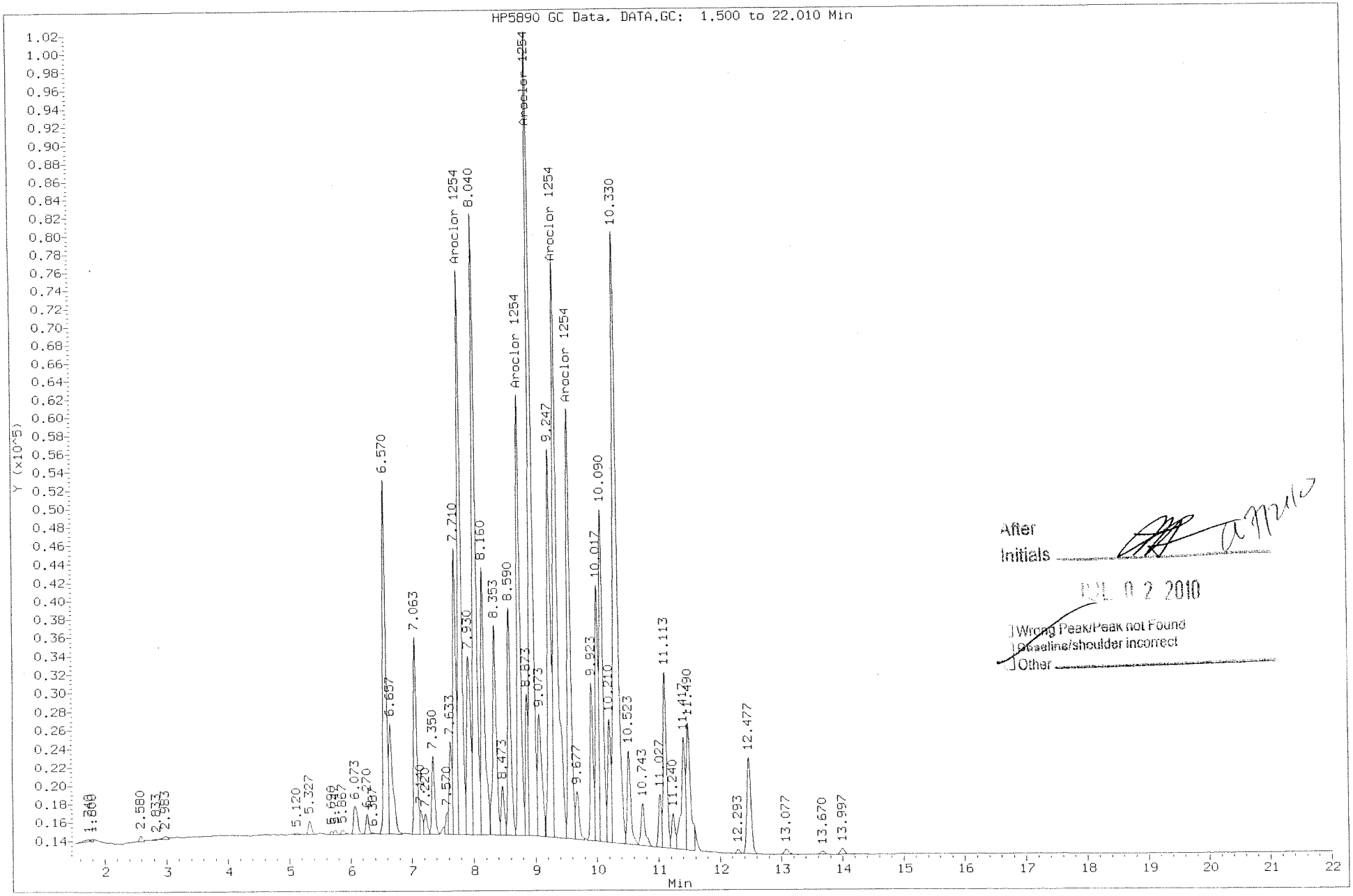


Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
Injection Date: 02-JUL-2010 07:07
Instrument: GC09.i
Client Sample ID:



Before
JUL 0 2 2010

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F038.D
Injection Date: 02-JUL-2010 07:07
Instrument: GC09.i
Client Sample ID:



After Initials

JUL 0 2 2010

Wrong Peak/Peak not Found
Baseline/shoulder incorrect
Other

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F039.D
Report Date: 02-Jul-2010 11:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F039.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R039.D
Inj Date : 02-JUL-2010 07:33
Sample Info: 1260 @ 1000ppb | PCB5-49I
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1260.sub
Sub List #2 : AR1260.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	8.970	10.533	227485	229249	990	1110	80.00- 120.00	100.00
	9.563	10.883	341430	396690	965	945	119.55- 179.33	150.09
	10.330	11.070	334781	274295	952	1230	117.24- 175.86	147.17
	11.023	11.570	256677	272149	1330	1010	62.30- 93.45	112.83
	11.493	12.313	534793	581206	1220	1170	138.87- 208.31	235.09
			Average of Peak Amounts =		1090	1090		

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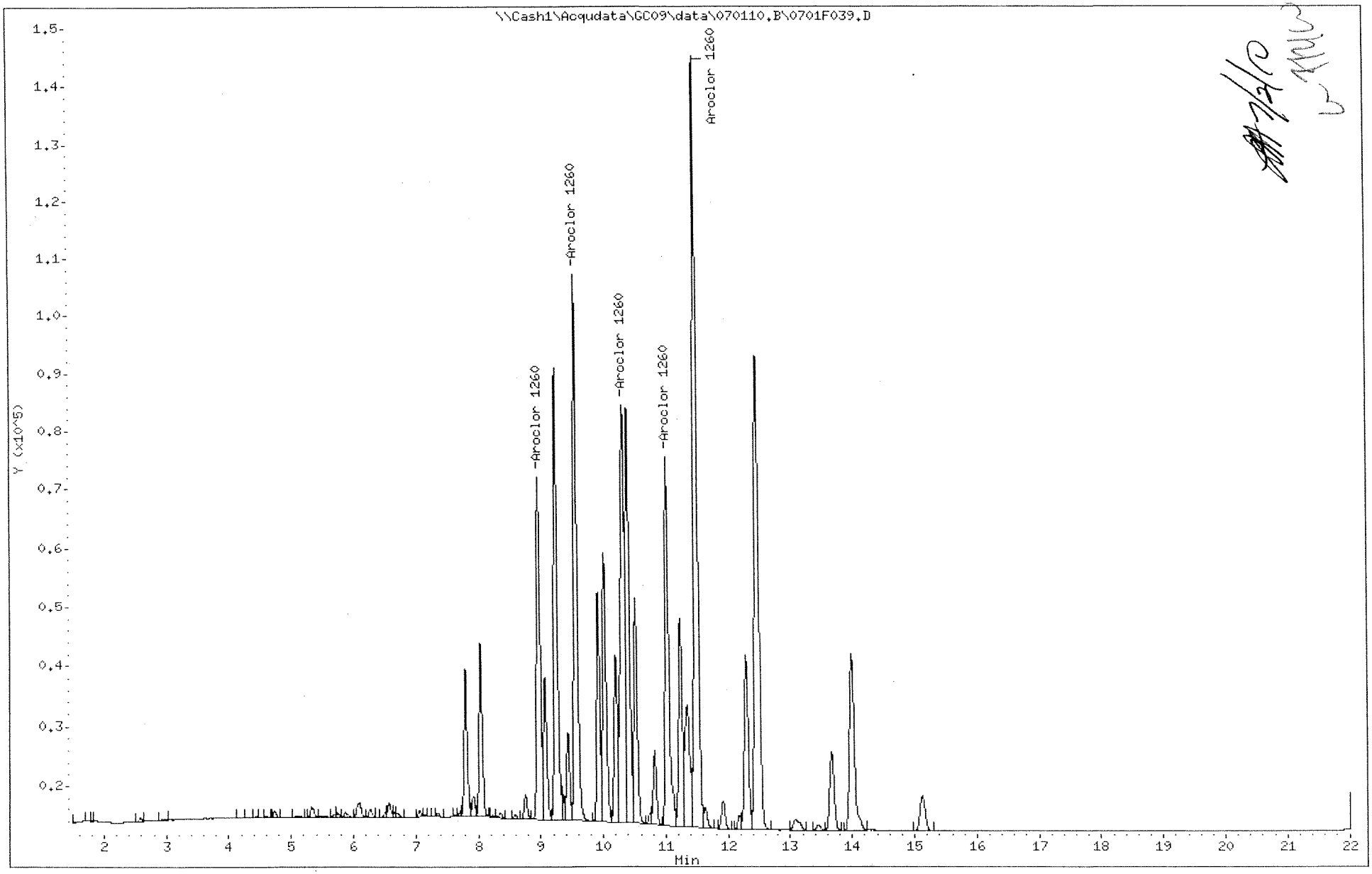
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F039.D
Date : 02-JUL-2010 07:33
Client ID:
Sample Info: 1260 @ 1000ppb | PCB5-49I

Instrument: GC09.i

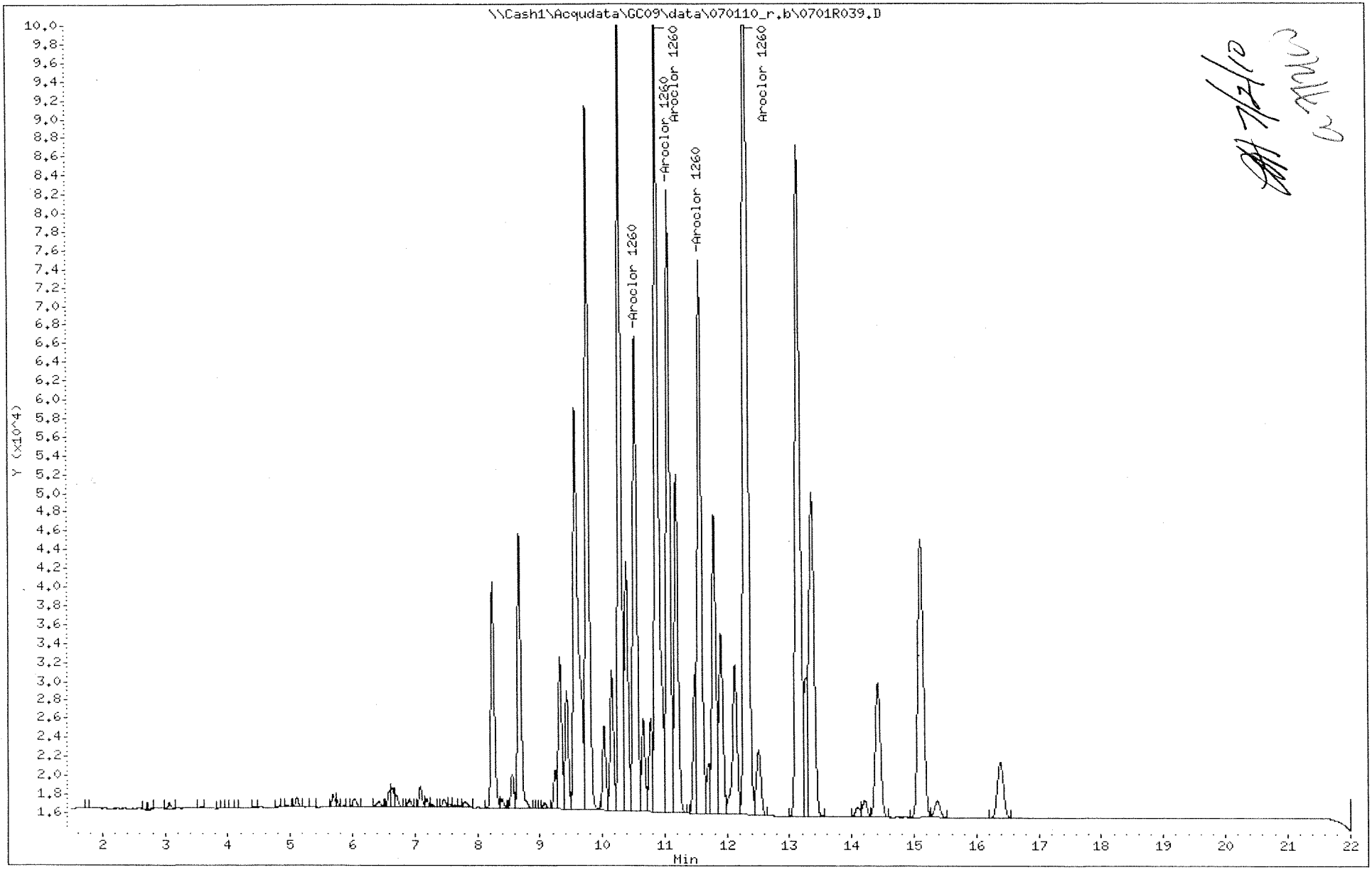
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R039.D
Date : 02-JUL-2010 07:33
Client ID:
Sample Info: 1260 @ 1000ppb | PCB5-49I

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F040.D
Report Date: 02-Jul-2010 11:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F040.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R040.D
Inj Date : 02-JUL-2010 07:59
Sample Info: 1262 @ 1000ppb | PCB5-49J
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	10.403	10.887	352554	240137	986	972	80.00- 120.00	100.00
	11.023	11.070	288879	361960	993	943	62.54- 93.81	81.94
	11.493	11.573	549702	280245	991	982	115.93- 173.89	155.92
	12.293	12.313	248039	604459	1010	954	50.73- 76.10	70.35
	12.470	13.150	437109	454392	994	967	91.68- 137.52	123.98
			Average of Peak Amounts =		995	964		

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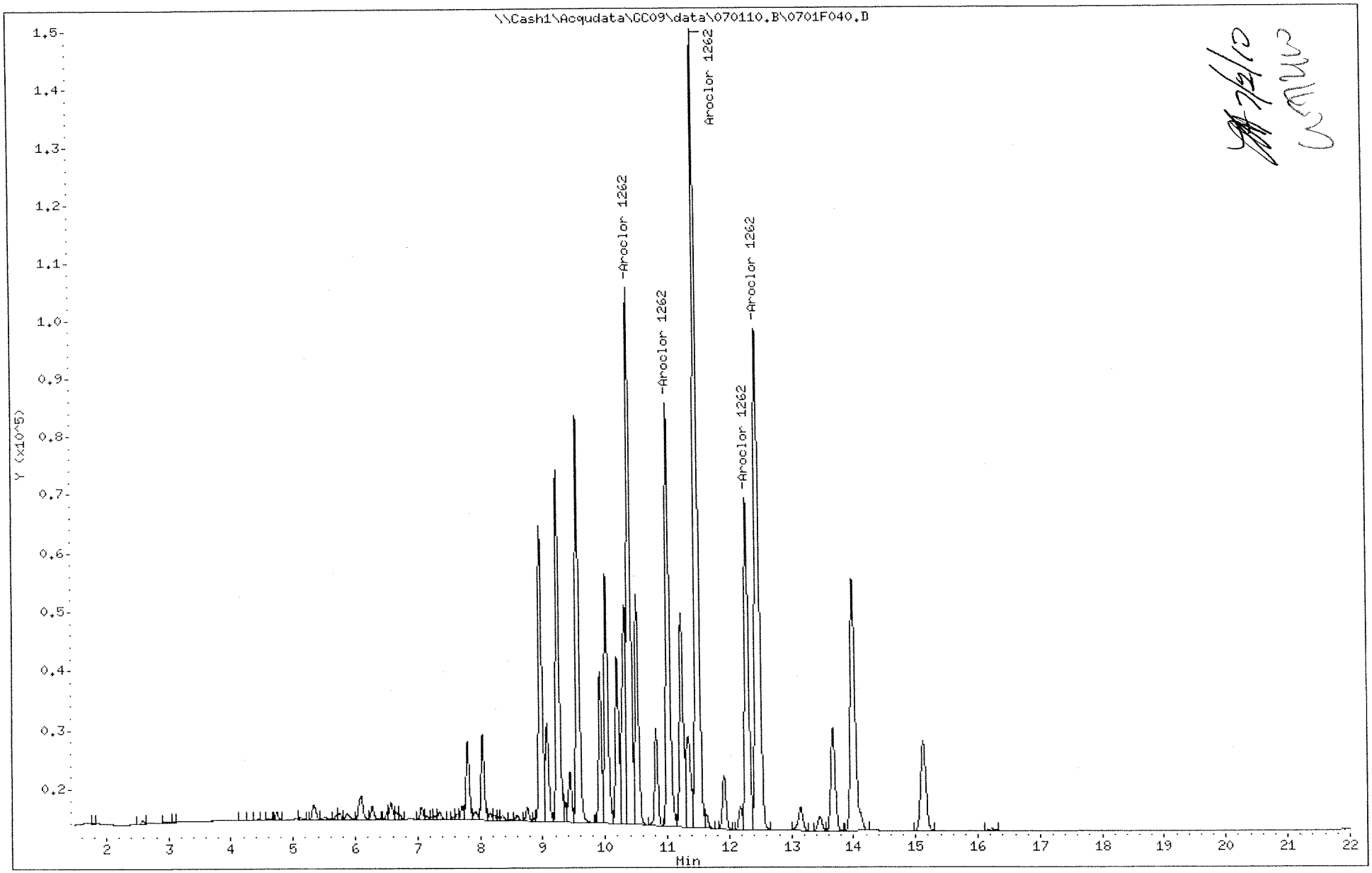
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F040.D
Date : 02-JUL-2010 07:59
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-49J

Column phase: DB-35MS

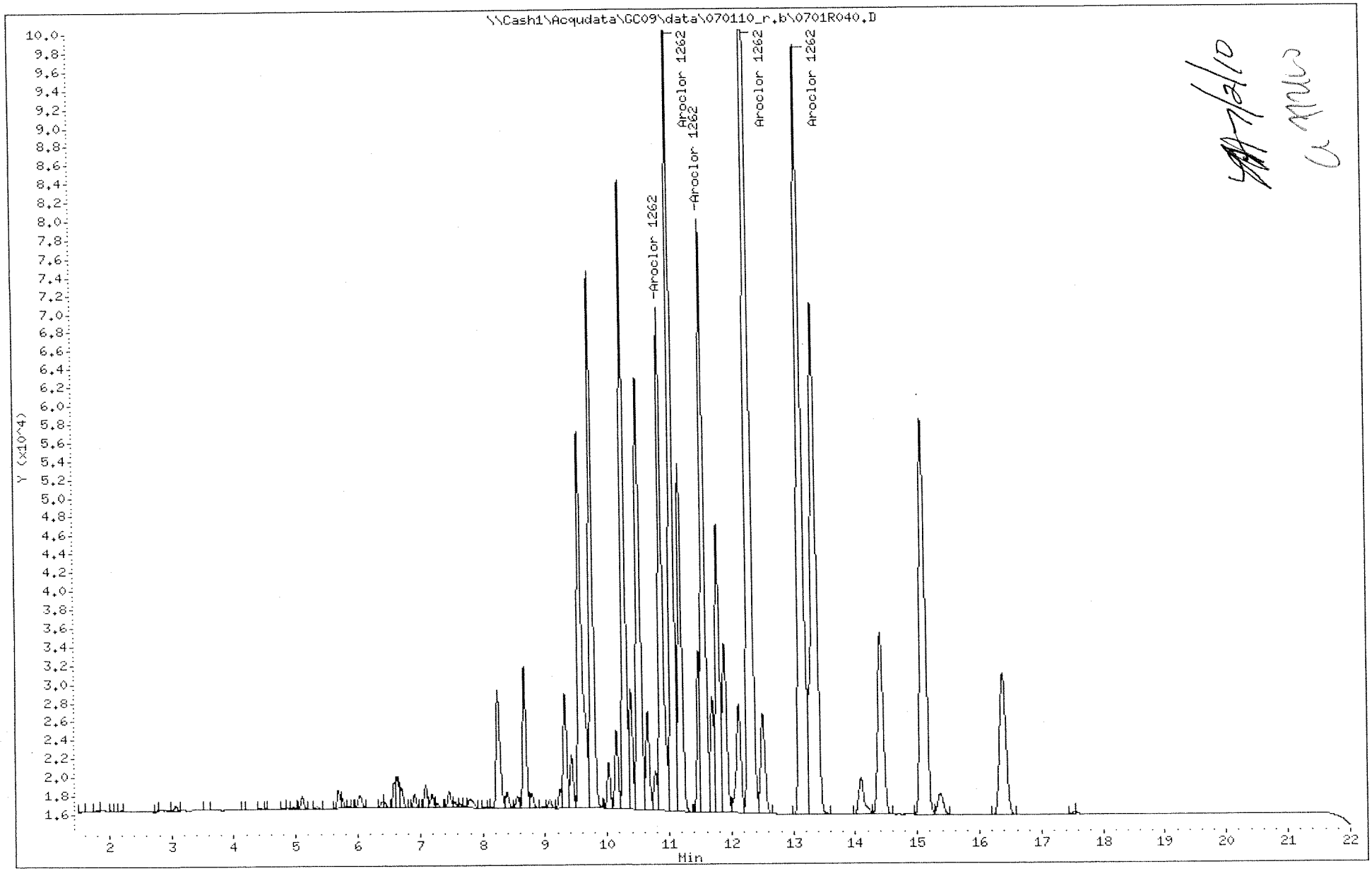
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R040.D
Date : 02-JUL-2010 07:59
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-49J

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



7/2/10

Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F041.D
Report Date: 02-Jul-2010 11:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\070110.B\0701F041.D
Sample #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\0701R041.D
Inj Date : 02-JUL-2010 08:26
Sample Info: 1268 @ 1000ppb | PCB5-49K
Misc Info :
Cal Date : 02-JUL-2010 10:49
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\070110.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\070110_r.b\070110_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	12.457	13.157	593863	723559	807	719	80.00- 120.00	100.00
	13.150	13.373	527298	674342	880	752	65.26- 97.89	88.79
	13.457	14.093	146345	611437	959	869	18.12- 27.17	24.64
	14.000	14.387	234604	185414	917	939	30.22- 45.34	39.50
	15.127	15.110	1562344	276533	858	899	178.84- 268.26	263.08
			Average of Peak Amounts =		884	836		

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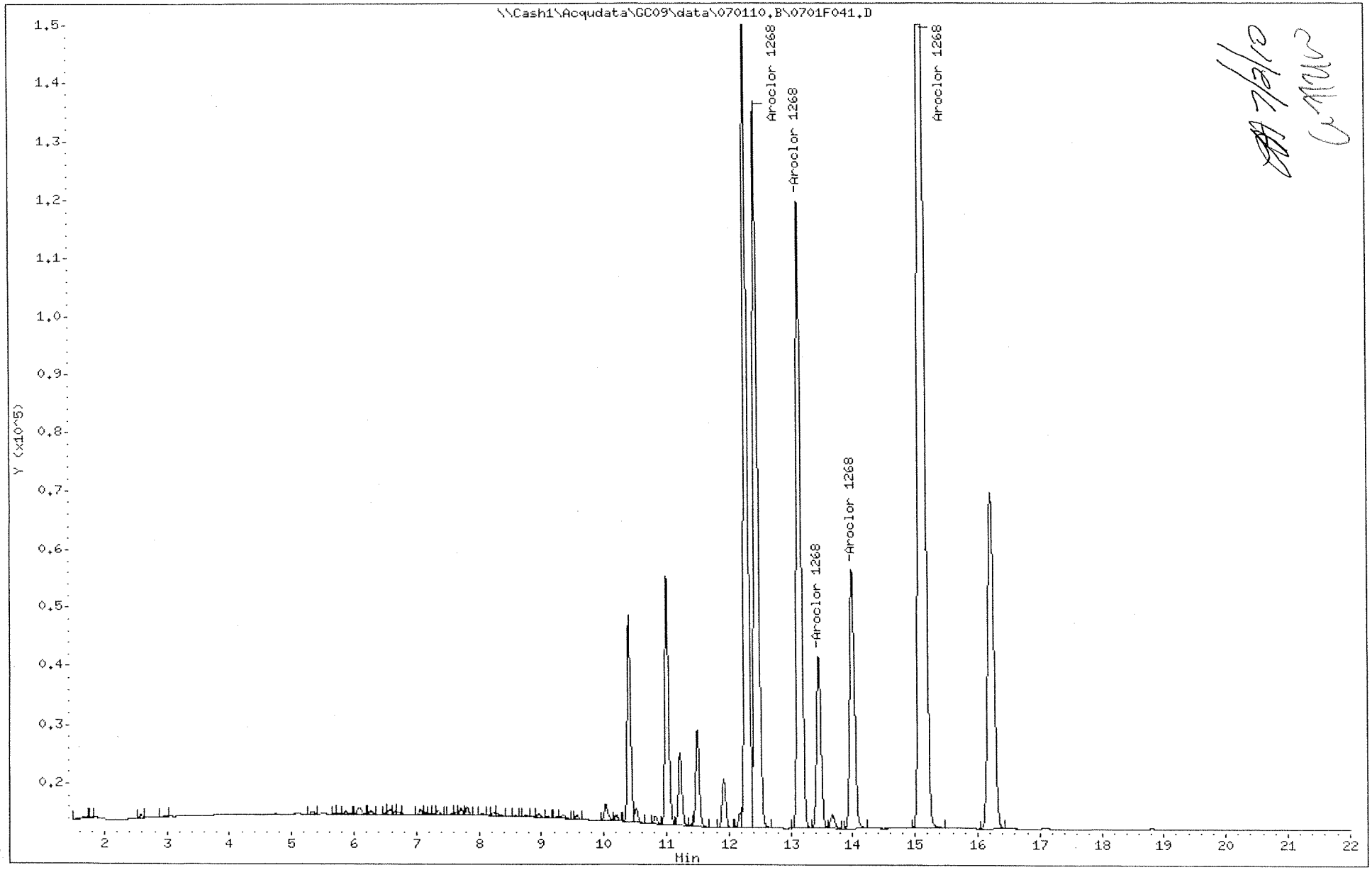
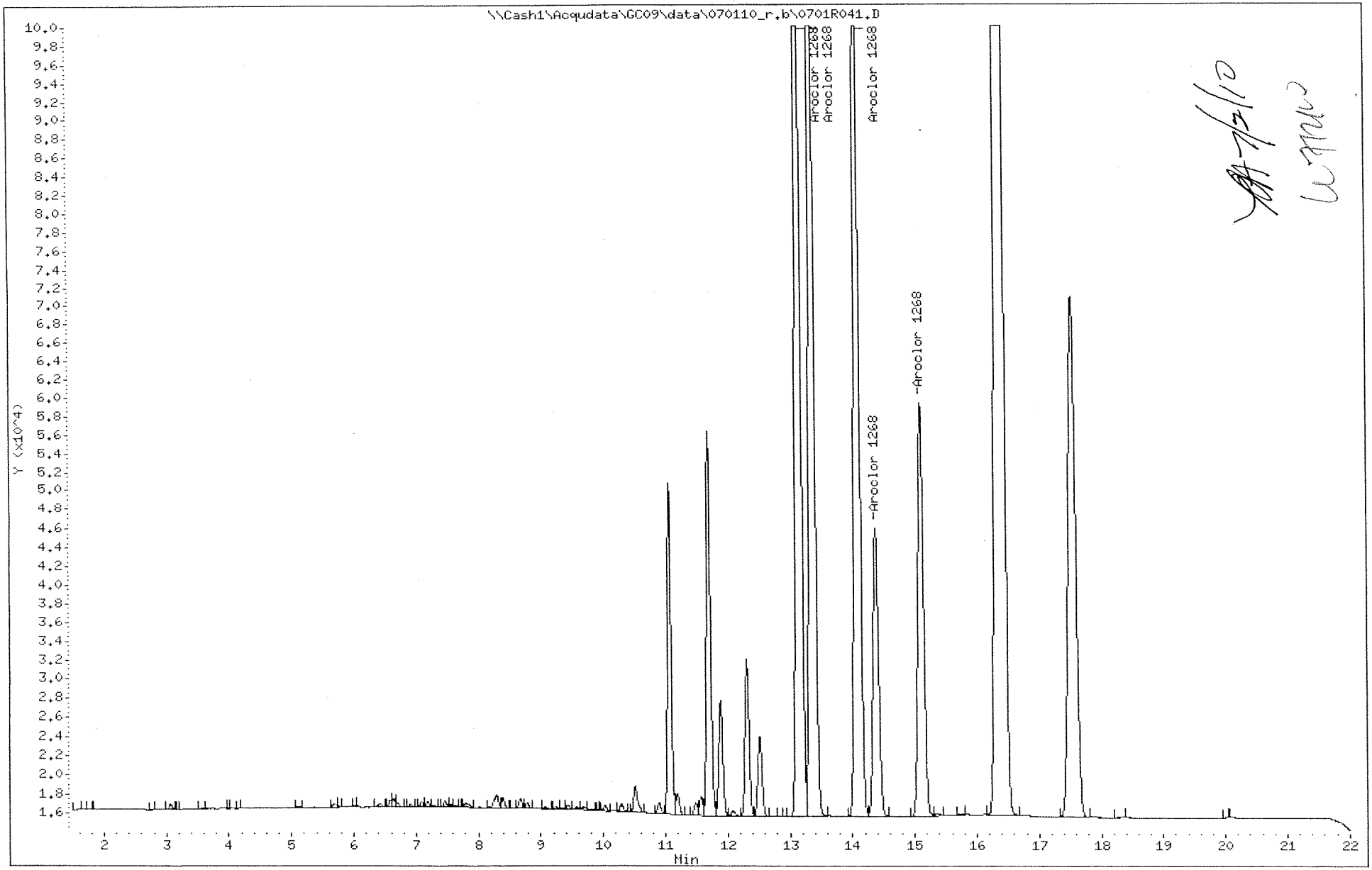
Data File: \\Cash1\Acqudata\GC09\data\070110.B\0701F041.D
Date : 02-JUL-2010 08:26
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-49K

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\070110_r.b\0701R041.D
Date : 02-JUL-2010 08:26
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-49K

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/21/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F017.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	90	4920	4440	-10	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	1100	66.0	74.2	12	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	115	4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	227	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	114	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	161	2	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 20 %	NA
Aroclor 1260 {1}	1000	1000	230	231	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	920	354	326	-8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	353	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	193	188	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	436	420	-4	NA	± 100 %	AverageRF
Aroclor 1260	1000	970	NA	NA	NA	-3	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/21/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R017.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	5830	5590	-4	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	1000	103	105	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	990	168	166	-1	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	970	146	143	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	950	160	152	-5	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	960	154	149	-4	NA	± 100 %	AverageRF
Aroclor 1016	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	990	206	204	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	420	404	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	970	224	218	-3	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	960	269	259	-4	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	930	498	465	-7	NA	± 100 %	AverageRF
Aroclor 1260	1000	960	NA	NA	NA	-4	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F017.D
Lab ID: KWG1007212-2
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/21/2010 19:22
Date Quantitated: 07/22/2010 09:56
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
CAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R017.D	**Date Acquired:**	07/21/2010 19:22
Lab ID:	KWG1007212-2	**Date Quantitated:**	07/22/2010 09:58
RunType:	CCV	**Batch ID:**	KWG1007212
Matrix:	NOT APPLICABLE	**Analysis Method:**	8082
		MethodJoinID:	MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/22/2010

Analysis Lot:	KWG1007212	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ1043
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F017.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R017.D			**Vial:**	96
Acqu Date:	07/21/2010 19:22	**Quant Date:**	07/22/2010 09:56	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007212-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	565666m	568445	99.72	98.24			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.19	17.54	444429	558659	90.33	95.83			NA
				%Recovery =	NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	1,052	980.73			
Aroclor 1016 {1}	5.68	5.75	74170m	105123	1,124	1,019			
Aroclor 1016 {2}	5.74	6.91	115199m	166170	1,035	991.01			
Aroclor 1016 {3}	6.26	7.09	226932m	142662	1,021	974.40			
Aroclor 1016 {4}	6.50	7.19	114418m	152413	1,060	954.32			
Aroclor 1016 {5}	7.05	7.46	161177m	148668	1,021	964.68			
Aroclor 1260			0	0	972.71	964.24			
Aroclor 1260 {1}	8.96	10.53	231121m	203548	1,006	987.59			
Aroclor 1260 {2}	9.55	10.88	325535m	403508	919.89	961.09			
Aroclor 1260 {3}	10.32	11.07	352598m	217846	1,003	973.94			
Aroclor 1260 {4}	11.01	11.57	188246m	259446	972.95	964.82			
Aroclor 1260 {5}	11.48	12.31	419662m	465103	961.85	933.77			

Undetected at or above MDL
\nalyte detected above MDL, but below MRL
Hit above MRL also found in Method Blank
Analyte concentration above high point of ICAL
Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F017.D
Report Date: 22-Jul-2010 09:56

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F017.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R017.D
Inj Date : 21-JUL-2010 19:22
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info : SEMIVOA GC\W1007121\2-CCV.H
Cal Date : 22-JUL-2010 08:50
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.593	565666	568445	99.7	98.2		100.00(M)
Aroclor 1016	5.683	5.747	74170	105123	1120	1020	80.00- 120.00	100.00(M)
	5.740	6.910	115199	166170	1040	991	132.70- 199.06	155.32(M)
	6.260	7.087	226932	142662	1020	974	261.51- 392.27	305.96(M)
	6.503	7.187	114418	152413	1060	954	131.51- 197.26	154.27(M)
	7.053	7.463	161177	148668	1020	965	186.98- 280.47	217.31(M)
			Average of Peak Amounts =		1050	981		
Aroclor 1260	8.957	10.533	231121	203548	1000	988	80.00- 120.00	100.00(M)
	9.553	10.880	325535	403508	920	961	112.79- 169.19	140.85(M)
	10.317	11.067	352598	217846	1000	974	121.76- 182.64	152.56(M)
	11.013	11.570	188246	259446	973	965	65.54- 98.31	81.45(M)
	11.480	12.310	419662	465103	962	934	147.93- 221.89	181.58(M)
			Average of Peak Amounts =		971	964		
Decachlorobiphenyl	16.187	17.537	444429	558659	90.3	95.8		100.00

QC Flag Legend

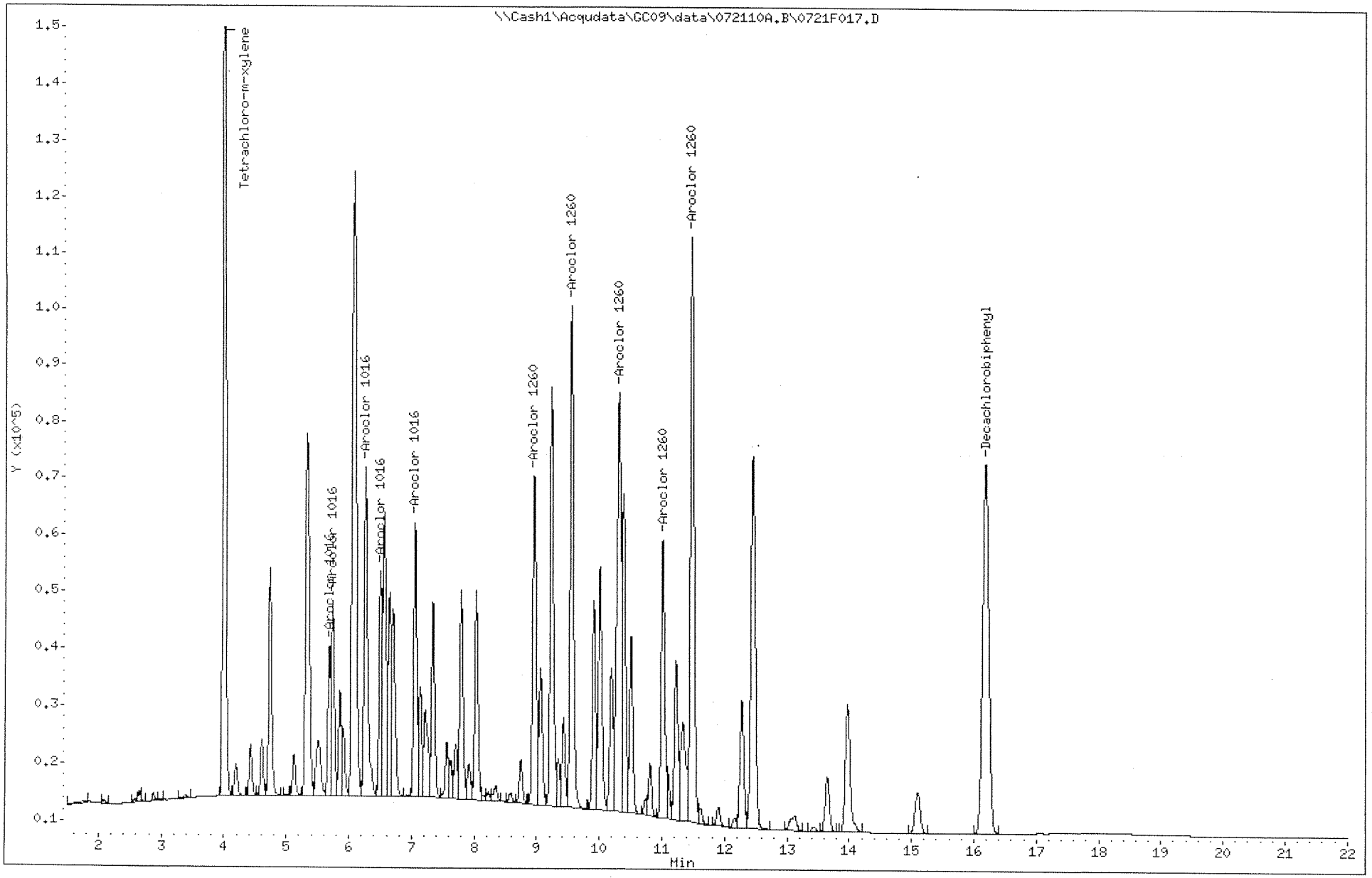
M - Compound response manually integrated.

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F017.D
Date : 21-JUL-2010 19:22
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

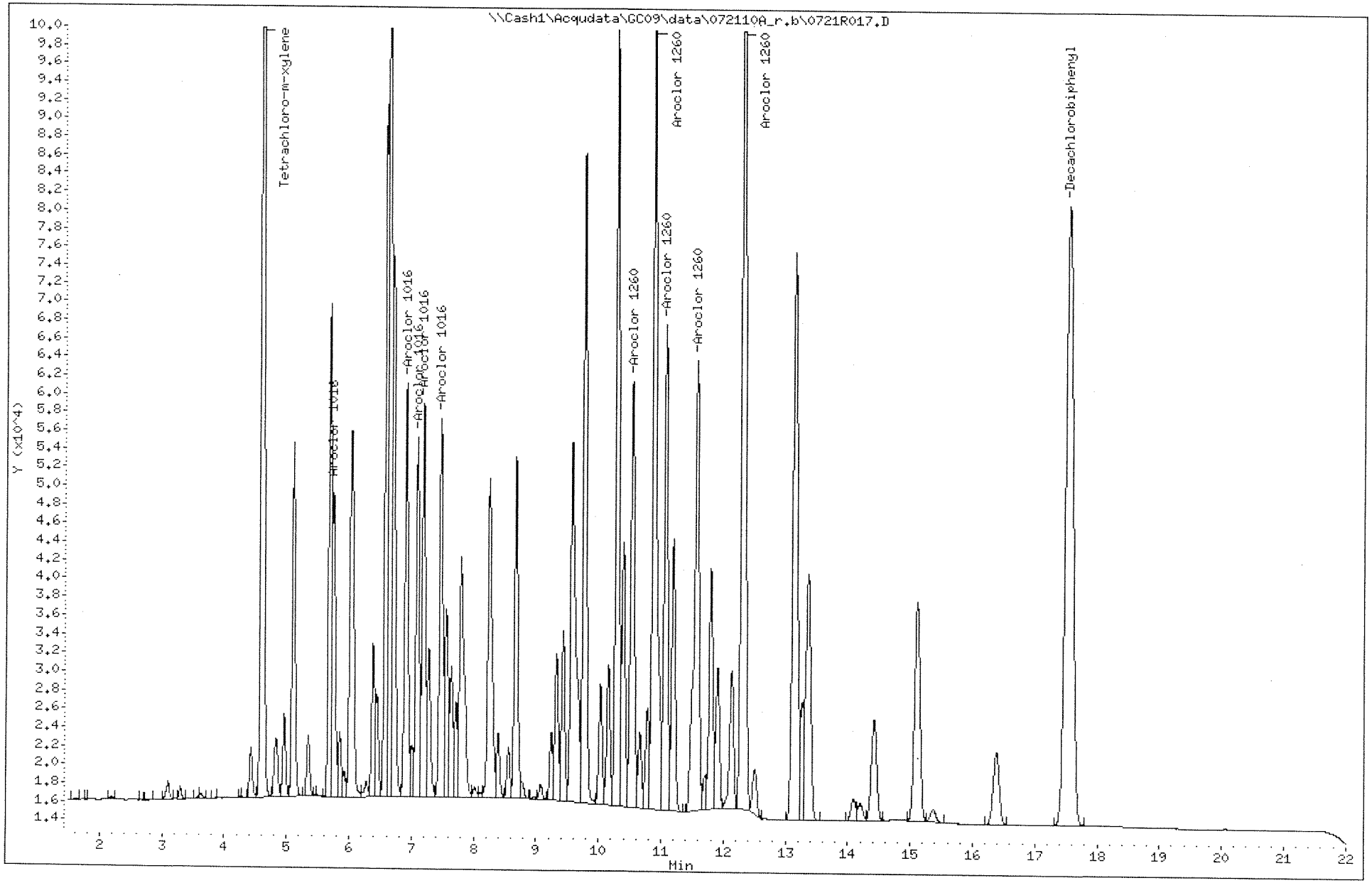
Column phase: DB-35MS



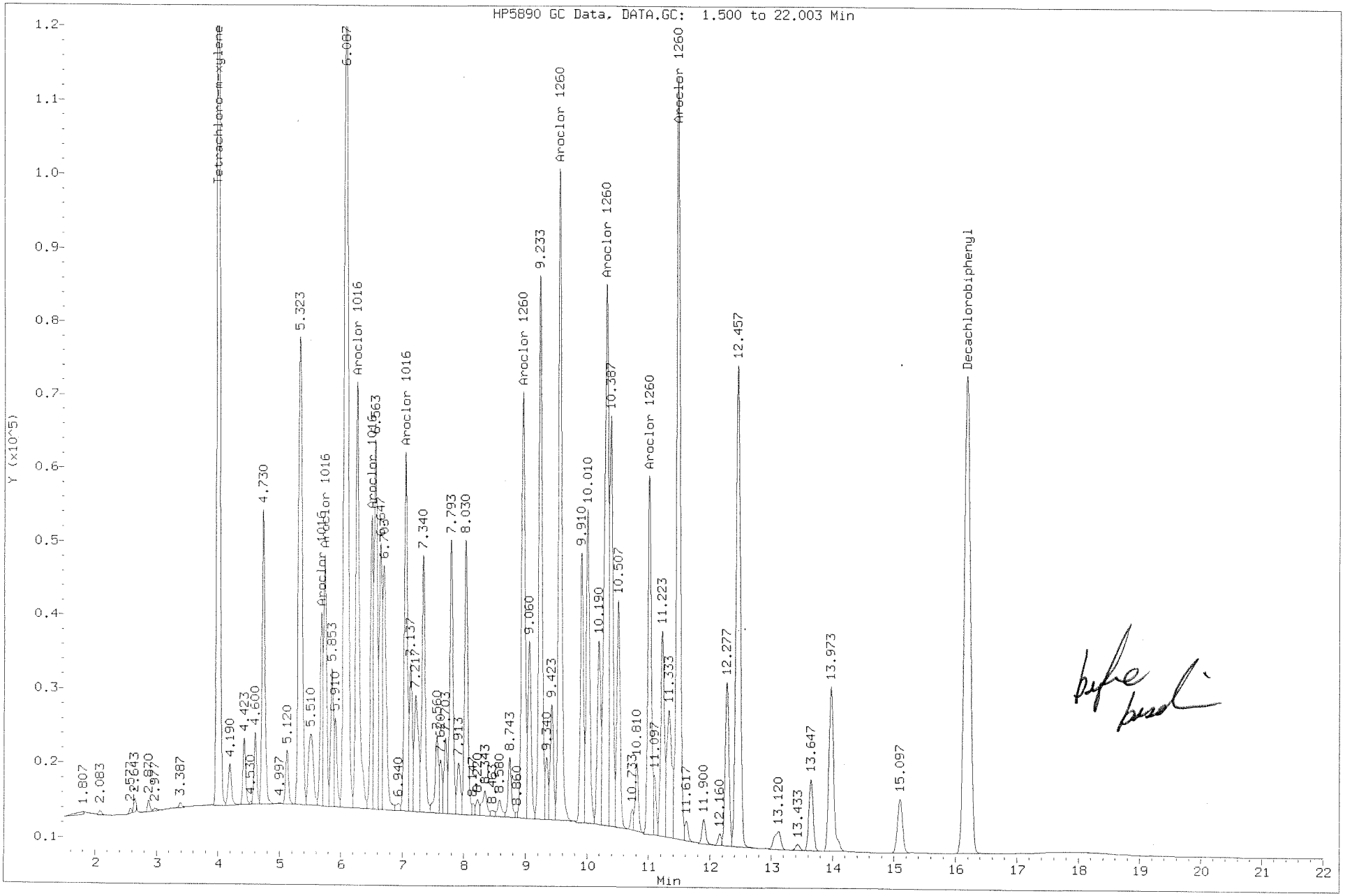
Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R017.D
Date : 21-JUL-2010 19:22
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i

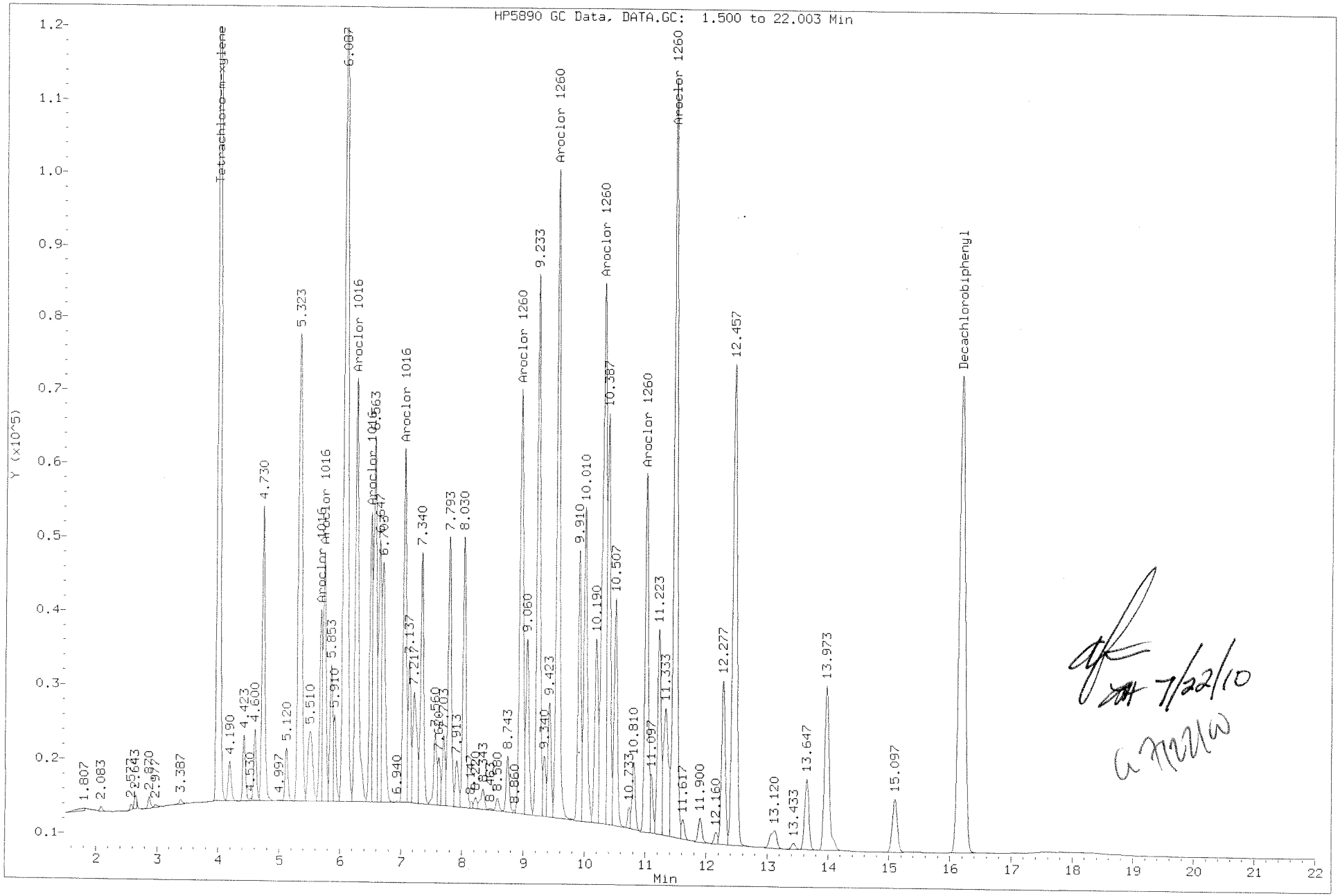
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F017.D
Injection Date: 21-JUL-2010 19:22
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F017.D
Injection Date: 21-JUL-2010 19:22
Instrument: GC09.i
Client Sample ID:



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a 72110

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/22/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F031.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	4920	4550	-8	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	1000	66.0	69.1	5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	115	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	226	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	114	5	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	162	2	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	3	± 20 %	NA
Aroclor 1260 {1}	1000	1000	230	232	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	920	354	327	-8	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	353	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	980	193	190	-2	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	980	436	428	-2	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/22/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007212
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R031.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	98	5830	5690	-2	NA	± 20 %	AverageRF
Aroclor 1016 {1}	1000	990	103	103	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	168	0	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	970	146	142	-3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	970	160	155	-3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	154	151	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	1000	206	206	0	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	980	420	410	-2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	980	224	219	-2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	269	262	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	950	498	472	-5	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F031.D
Lab ID: KWG1007212-4
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/22/2010 01:34
Date Quantitated: 07/22/2010 09:57
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R031.D
Lab ID: KWG1007212-4
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/22/2010 01:34
Date Quantitated: 07/22/2010 09:59
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/22/2010

Analysis Lot:	KWG1007212	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ1043
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F031.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R031.D			**Vial:**	96
Acqu Date:	07/22/2010 01:34	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007212-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	562396	569280	99.14	98.38			NA
				%Recovery =	NA	NA	**Limits =**	10-135	
Decachlorobiphenyl	16.18	17.53	454511	568607	92.38	97.54			NA
				%Recovery =	NA	NA	**Limits =**	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	1,034	982.29			
Aroclor 1016 {1}	5.68	5.74	69126	102536	1,048	994.17			
Aroclor 1016 {2}	5.74	6.91	114667	167655	1,030	999.86			
Aroclor 1016 {3}	6.26	7.09	225967	141832	1,017	968.73			
Aroclor 1016 {4}	6.50	7.19	113633	155094	1,053	971.11			
Aroclor 1016 {5}	7.05	7.46	161563	150657	1,024	977.59			
Aroclor 1260			0	0	979.29	975.73			
Aroclor 1260 {1}	8.96	10.53	231644m	206323	1,008	1,001			
Aroclor 1260 {2}	9.55	10.88	326595m	409762	922.89	975.98			
Aroclor 1260 {3}	10.32	11.07	352556m	219192	1,003	979.96			
Aroclor 1260 {4}	11.01	11.57	189769m	262157	980.83	974.90			
Aroclor 1260 {5}	11.48	12.31	428333m	471580	981.73	946.78			

: Undetected at or above MDL
Analyte detected above MDL, but below MRL
: Hit above MRL also found in Method Blank
: Analyte concentration above high point of ICAL
: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F031.D
Report Date: 22-Jul-2010 09:57

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F031.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R031.D
Inj Date : 22-JUL-2010 01:34
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info : SEMIVOA GC\W1007121\2-CCV.H
Cal Date : 22-JUL-2010 08:51
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.993	4.593	562396	569280	99.1	98.4		100.00
Aroclor 1016	5.680	5.743	69126	102536	1050	994	80.00- 120.00	100.00
	5.737	6.907	114667	167655	1030	1000	132.70- 199.06	165.88
	6.260	7.087	225967	141832	1020	969	261.51- 392.27	326.89
	6.500	7.187	113633	155094	1050	971	131.51- 197.26	164.39
	7.053	7.463	161563	150657	1020	978	186.98- 280.47	233.72
			Average of Peak Amounts =		1030	982		
Aroclor 1260	8.957	10.533	231644	206323	1010	1000	80.00- 120.00	100.00(M)
	9.553	10.880	326595	409762	923	976	112.79- 169.19	140.99(M)
	10.317	11.067	352556	219192	1000	980	121.76- 182.64	152.20(M)
	11.010	11.567	189769	262157	981	975	65.54- 98.31	81.92(M)
	11.480	12.307	428333	471580	982	947	147.93- 221.89	184.91(M)
			Average of Peak Amounts =		979	976		
Decachlorobiphenyl	16.180	17.533	454511	568607	92.4	97.5		100.00

QC Flag Legend

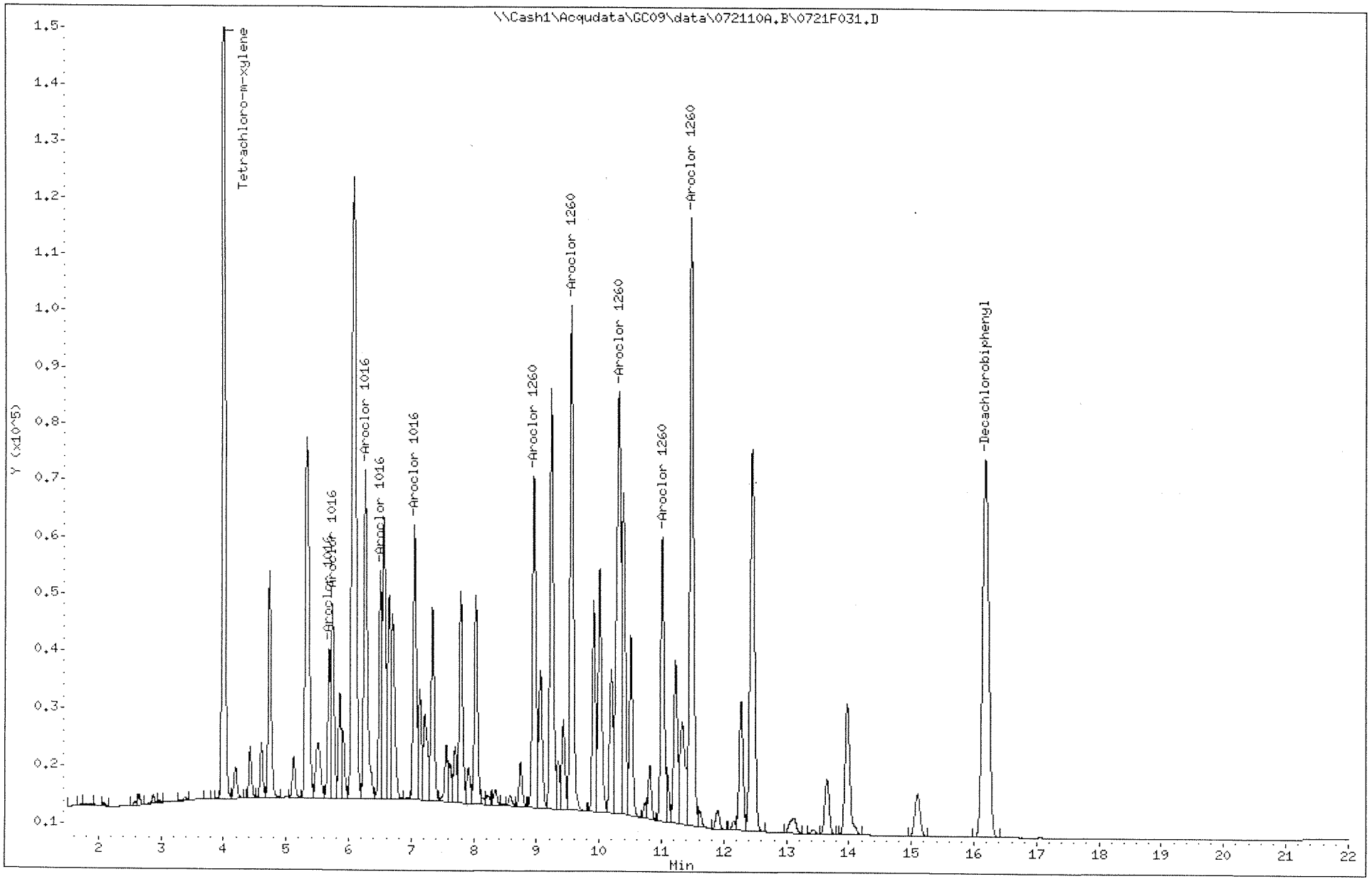
M - Compound response manually integrated.

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F031.D
Date : 22-JUL-2010 01:34
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i

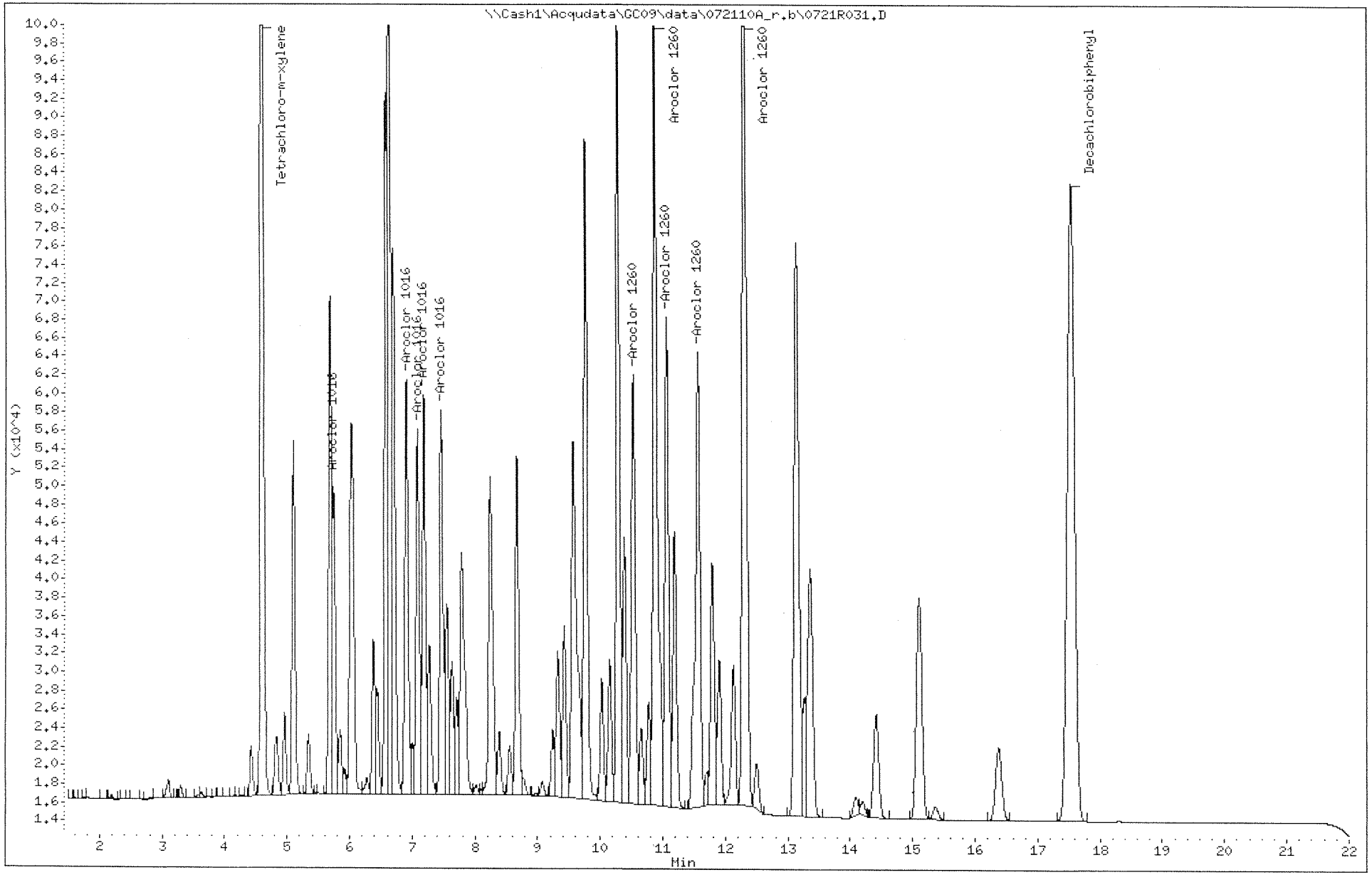
Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS

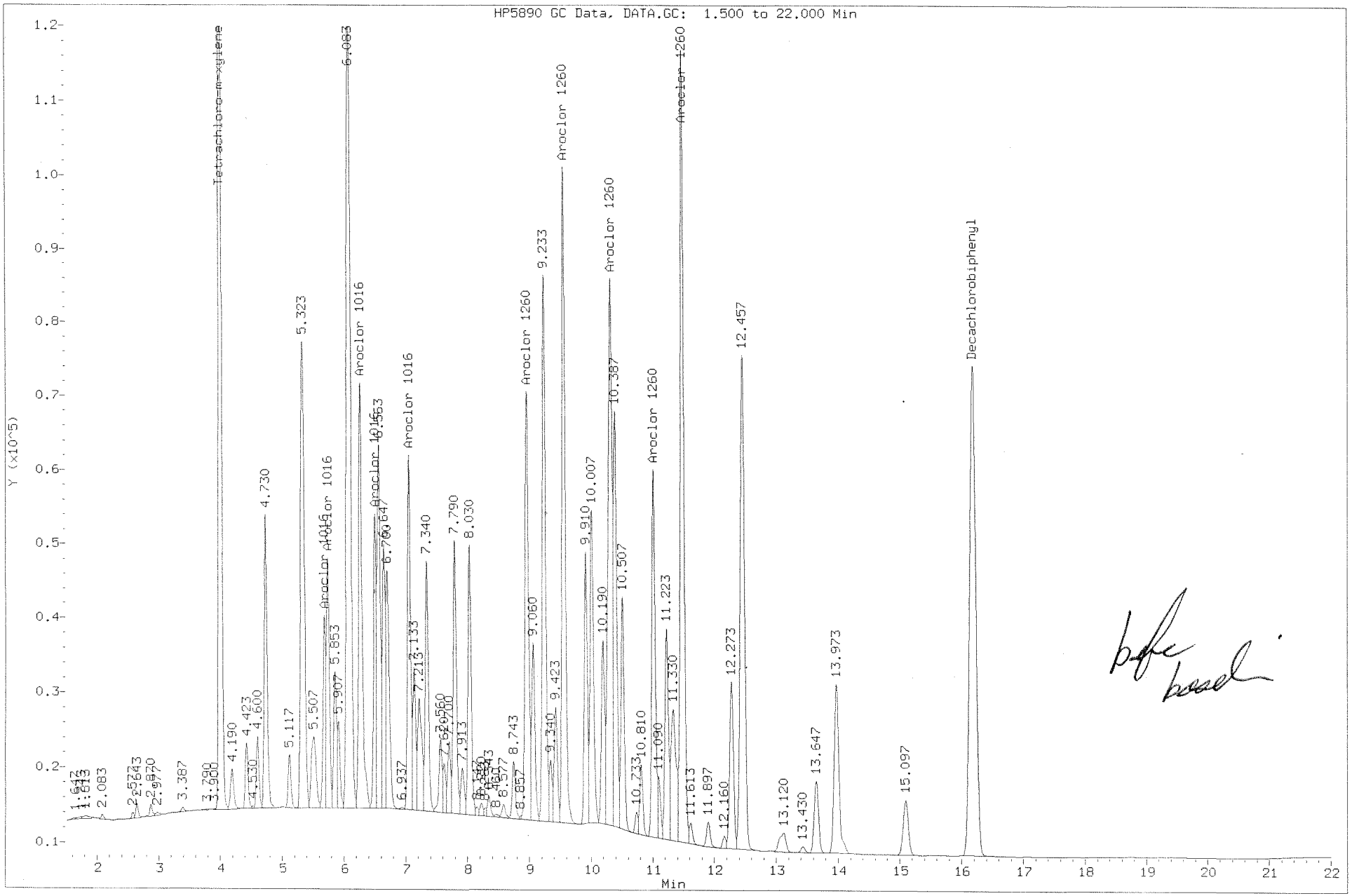


Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R031.D
Date : 22-JUL-2010 01:34
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

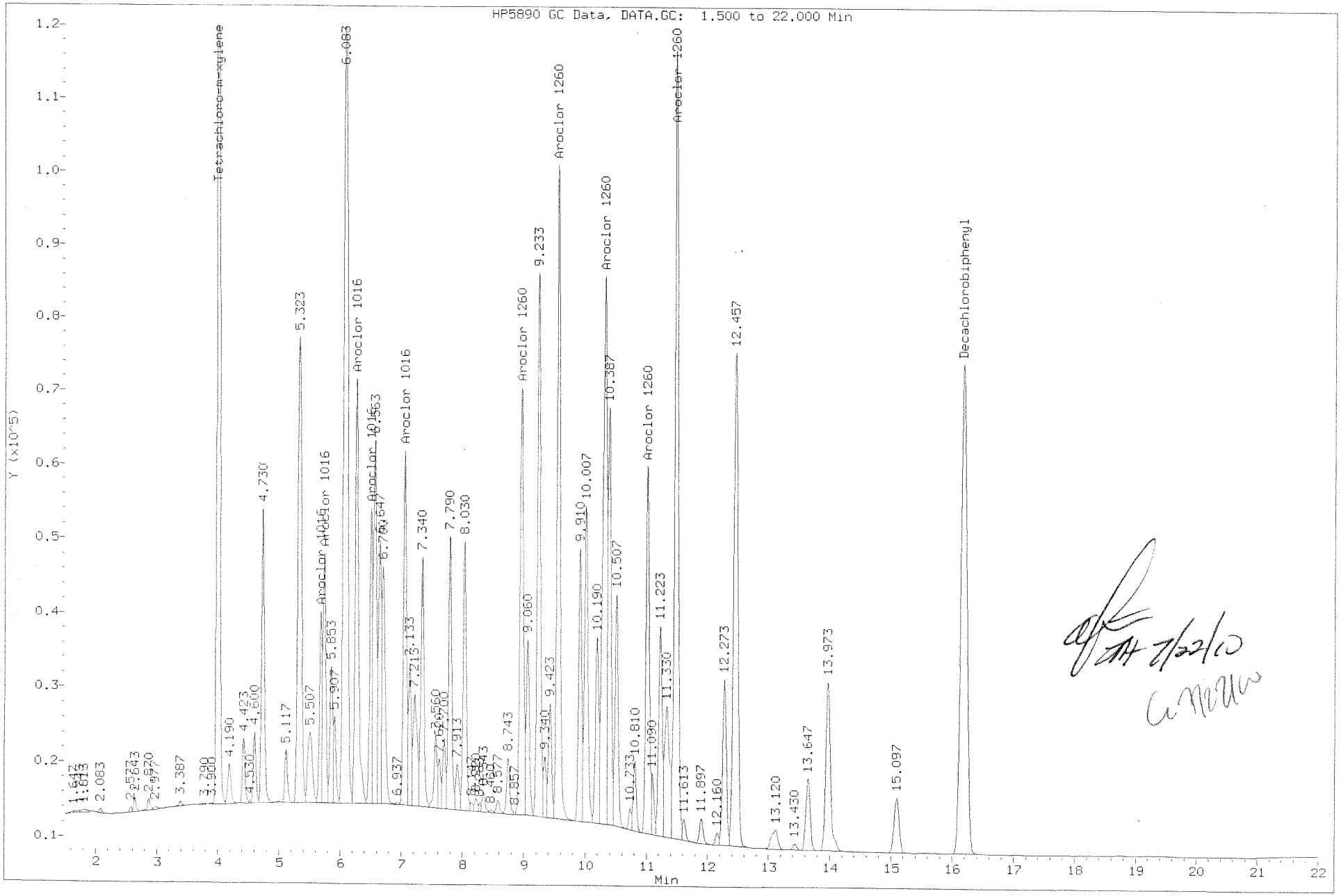
Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F031.D
Injection Date: 22-JUL-2010 01:34
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F031.D
Injection Date: 22-JUL-2010 01:34
Instrument: GC09.i
Client Sample ID:



7/22/10

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F037.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	87	4920	4300	-13	NA	± 20 %	AverageRF
Aroclor 1016	1000	960	NA	NA	NA	-4	± 20 %	NA
Aroclor 1016 {1}	1000	970	66.0	64.0	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	950	111	106	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	900	222	201	-10	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	108	105	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	990	158	155	-1	NA	± 100 %	AverageRF
Aroclor 1260	1000	950	NA	NA	NA	-5	± 20 %	NA
Aroclor 1260 {1}	1000	950	230	219	-5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	910	354	324	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	930	352	328	-7	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	990	193	191	-1	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	436	420	-4	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R037.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	100	5830	5860	0	NA	± 20 %	AverageRF
Aroclor 1016	1000	910	NA	NA	NA	-9	± 20 %	NA
Aroclor 1016 {1}	1000	980	103	101	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	880	168	147	-12	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	830	146	122	-17	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	870	160	139	-13	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	154	156	1	NA	± 100 %	AverageRF
Aroclor 1260	1000	970	NA	NA	NA	-3	± 20 %	NA
Aroclor 1260 {1}	1000	1100	206	234	14	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	420	438	4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	920	224	206	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	820	269	221	-18	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	920	498	458	-8	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F037.D
Lab ID: KWG1007403-7
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 02:39
Date Quantitated: 07/27/2010 11:43
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R037.D
Lab ID: KWG1007403-7
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 02:39
Date Quantitated: 07/27/2010 11:46
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ773
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F037.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R037.D			**Vial:**	97
Acqu Date:	07/27/2010 02:39	**Quant Date:**	07/27/2010 11:43	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-7				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	547020m	553178m	96.43	95.60			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.17	17.53	429543m	585758m	87.31	100.48			NA
			%Recovery =		NA	NA	Limits =	60-125	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	957.79	913.41			
Aroclor 1016 {1}	5.68	5.74	64017m	100689m	970.20	976.27			
Aroclor 1016 {2}	5.73	6.90	106052m	146951m	953.03	876.39			
Aroclor 1016 {3}	6.26	7.08	200714m	121706m	903.16	831.27			
Aroclor 1016 {4}	6.50	7.18	105475m	139257m	977.23	871.95			
Aroclor 1016 {5}	7.05	7.46	155490m	155832m	985.32	1,011			
Aroclor 1260			0	0	950.60	968.43			
Aroclor 1260 {1}	8.95	10.53	219374m	233992m	954.74	1,135			
Aroclor 1260 {2}	9.55	10.87	323633m	437775m	914.52	1,043			
Aroclor 1260 {3}	10.31	11.06	328003m	205922m	933.04	920.63			
Aroclor 1260 {4}	11.01	11.56	190954m	221374m	986.95	823.24			
Aroclor 1260 {5}	11.47	12.30	420479m	458390m	963.73	920.29			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F037.D
Report Date: 27-Jul-2010 11:43

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F037.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R037.D
Inj Date : 27-JUL-2010 02:39
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.590	547020	553178	96.4	95.6		100.00(M)
Aroclor 1016	5.677	5.740	64017	100689	970	976	80.00- 120.00	100.00(M)
	5.733	6.903	106052	146951	953	876	123.67- 185.51	165.66(M)
	6.257	7.083	200714	121706	903	831	241.99- 362.98	313.53(M)
	6.497	7.183	105475	139257	977	872	122.73- 184.09	164.76(M)
	7.047	7.460	155490	155832	985	1010	170.78- 256.17	242.89(M)
			Average of Peak Amounts =		958	913		
Aroclor 1260	8.953	10.530	219374	233992	955	1140	80.00- 120.00	100.00(M)
	9.547	10.873	323633	437775	914	1040	114.95- 172.42	147.53(M)
	10.310	11.063	328003	205922	933	921	126.50- 189.75	149.52(M)
	11.007	11.563	190954	221374	987	823	67.76- 101.64	87.04(M)
	11.473	12.303	420479	458390	964	920	155.49- 233.24	191.67(M)
			Average of Peak Amounts =		951	969		
Decachlorobiphenyl	16.173	17.527	429543	585758	87.3	100		100.00(M)

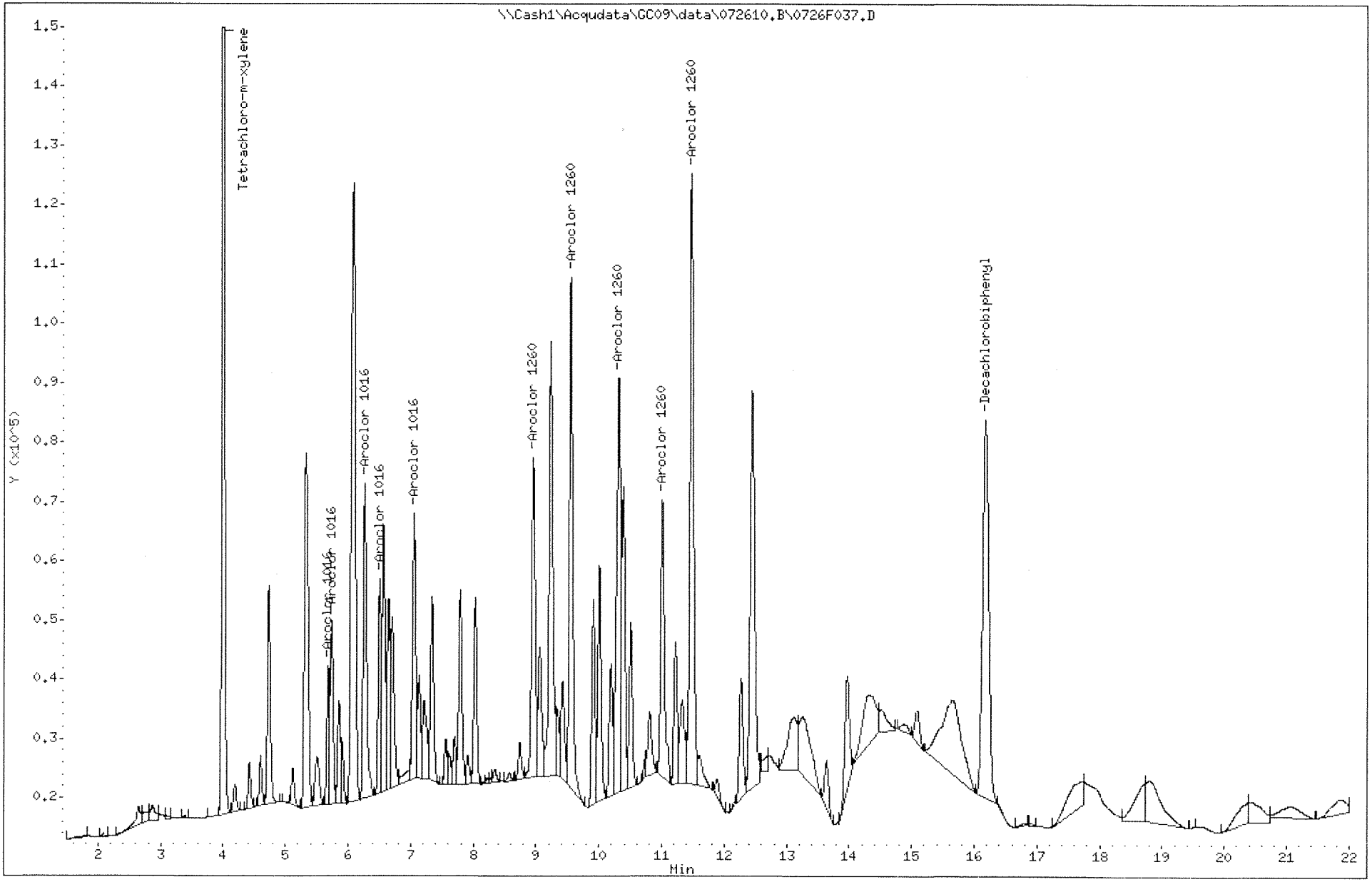
QC Flag Legend

M - Compound response manually integrated.

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F037.D
Date : 27-JUL-2010 02:39
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

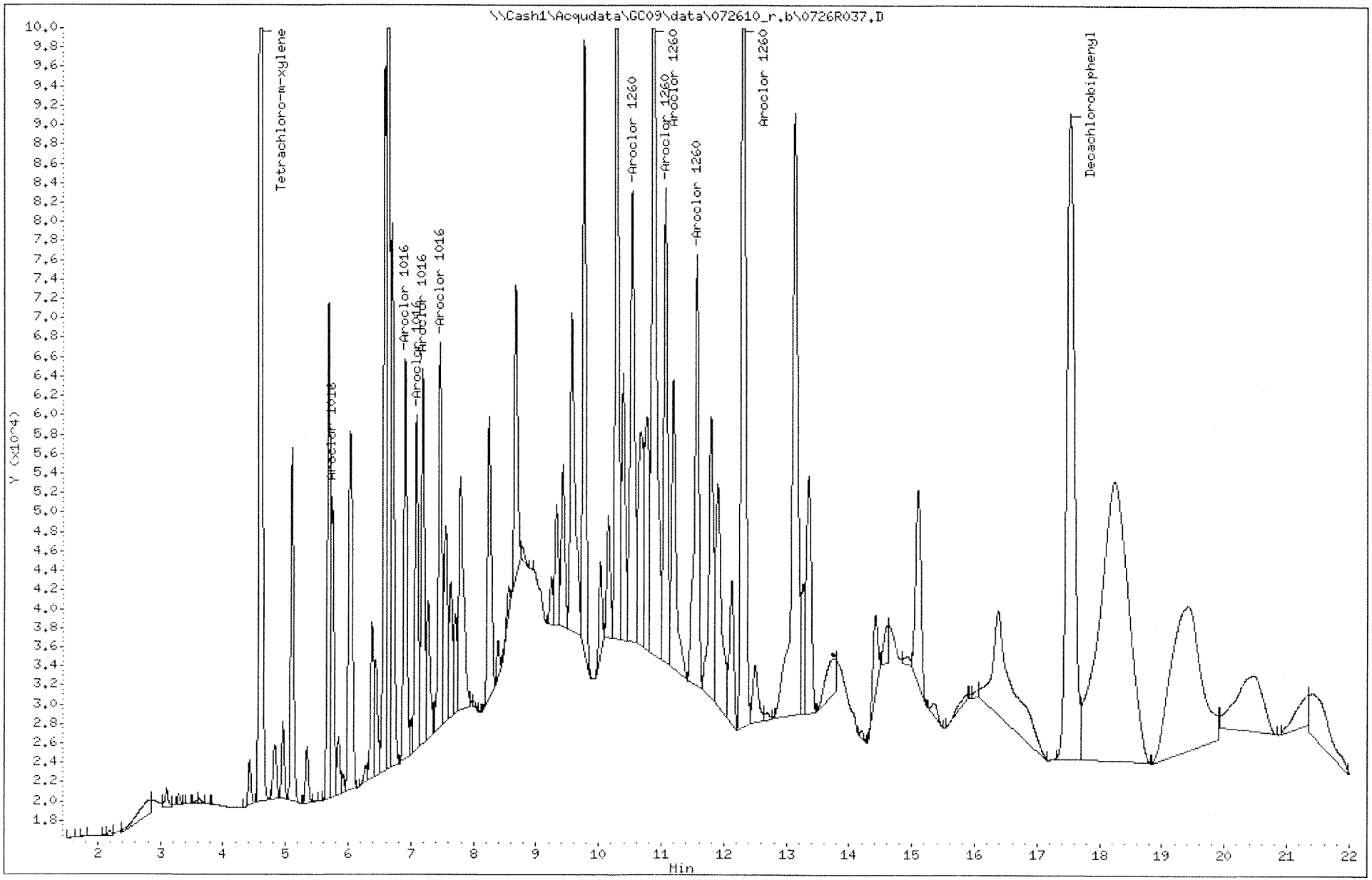
Instrument: GC09.i

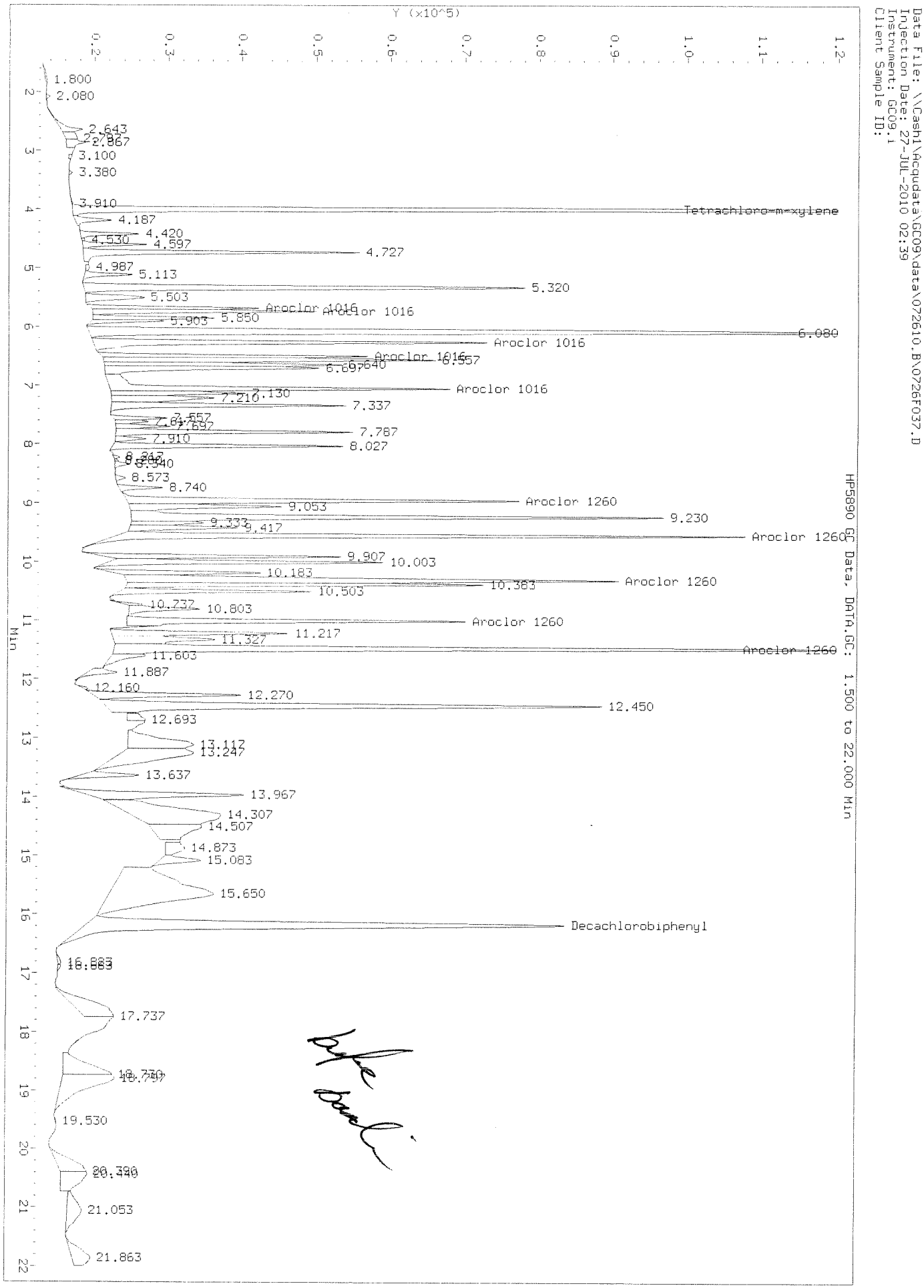
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



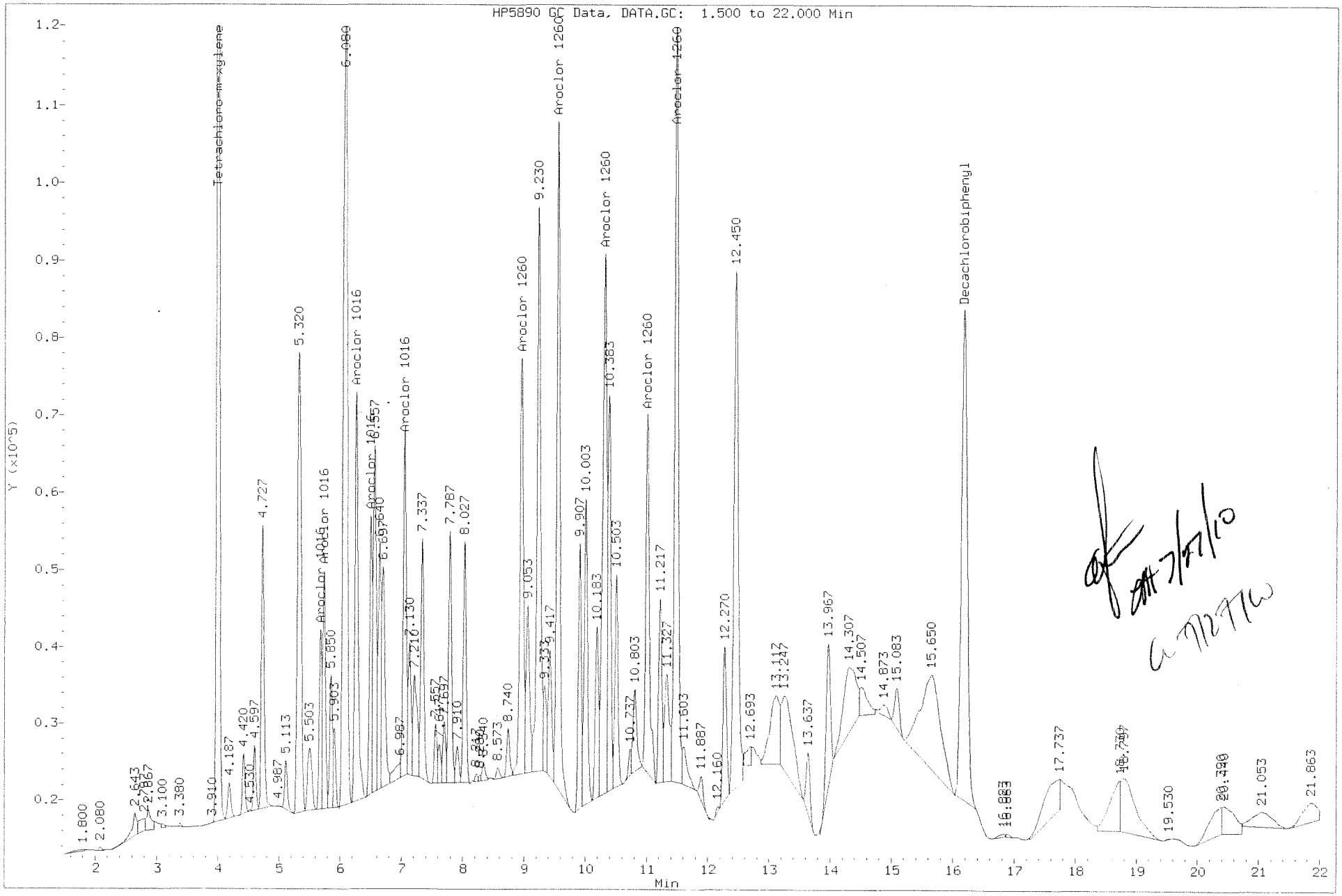
Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R037.D
Date : 27-JUL-2010 02:39
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53




Data File: \\Gash1\Acqudata\GC09\data\072610.B\0726F037.D
Injection Date: 27-JUL-2010 02:39
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
Min
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
1.800
2.080
2.643
2.867
3.100
3.380
3.910
Tetrachloro-m-xylene
4.187
4.420
4.530
4.597
4.727
4.987
5.113
5.320
5.503
Aroclor 1016
Aroclor 1016
5.903
5.850
6.080
Aroclor 1016
Aroclor 1016
6.557
6.640
Aroclor 1016
7.130
7.216
7.337
7.557
7.692
7.787
7.910
8.027
8.340
8.573
8.740
Aroclor 1260
9.053
9.230
9.333
9.417
Aroclor 1260
9.907
10.003
10.183
10.383
Aroclor 1260
10.503
10.737
10.803
Aroclor 1260
11.217
11.327
Aroclor 1260
11.603
11.887
12.160
12.270
12.450
12.693
13.117
13.247
13.637
13.967
14.307
14.507
14.873
15.083
15.650
Decachlorobiphenyl
16.883
17.737
18.730
18.757
19.530
20.390
21.053
21.863
HP5890 GC Data. DATA.GC: 1.500 to 22.000 Min

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F037.D
Injection Date: 27-JUL-2010 02:39
Instrument: GC09.i
Client Sample ID:



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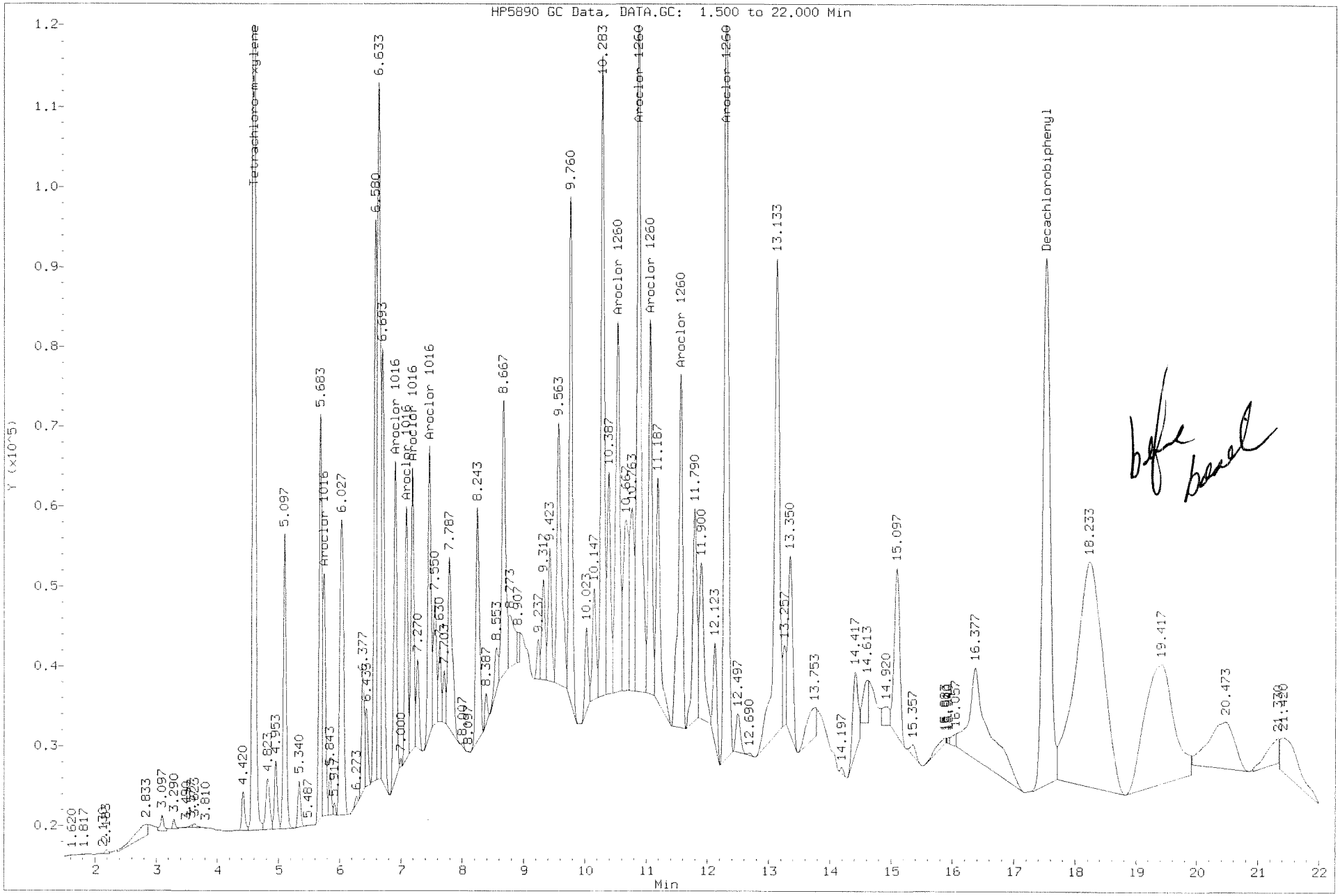
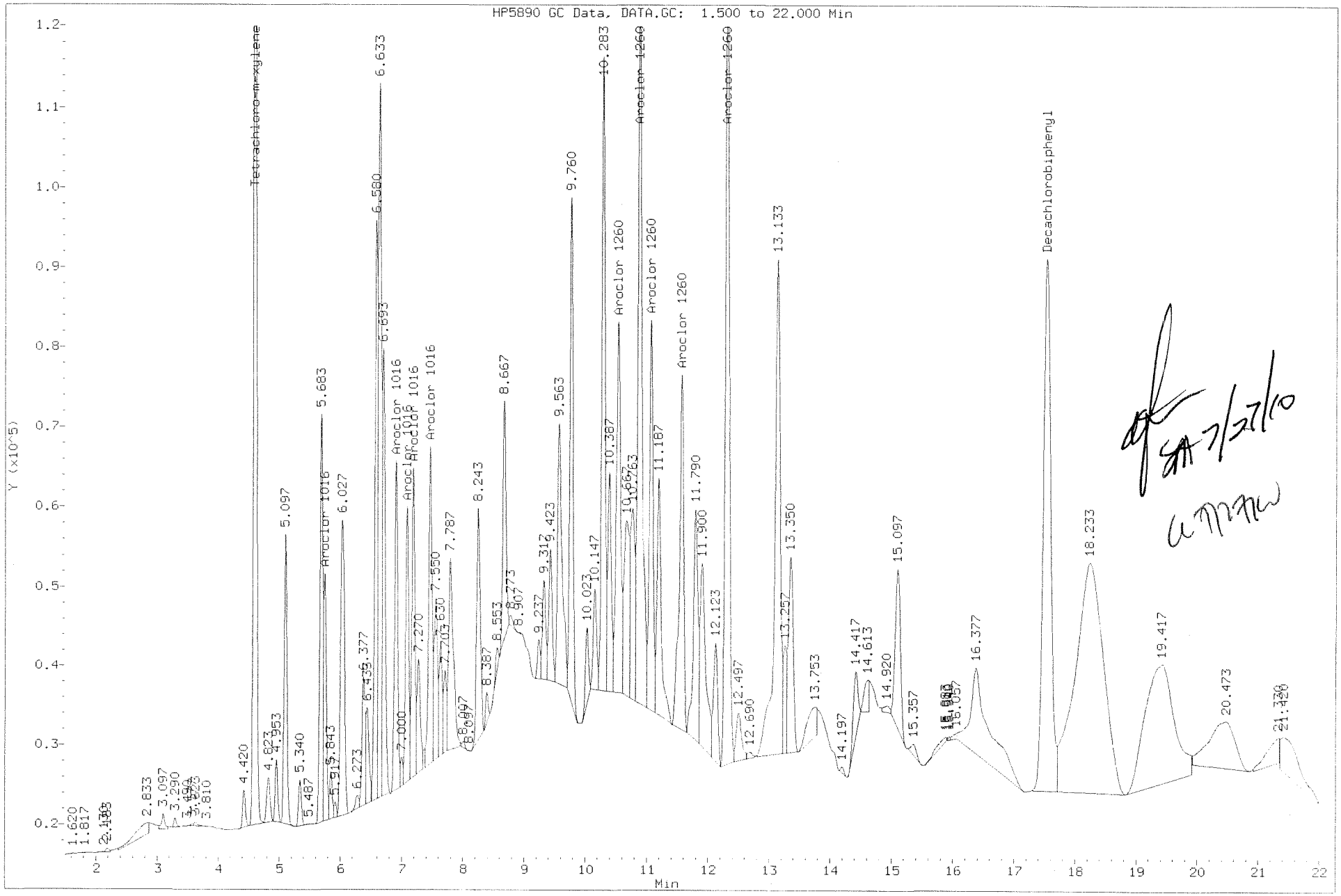
Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R037.D
Injection Date: 27-JUL-2010 02:39
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R037.D
Injection Date: 27-JUL-2010 02:39
Instrument: GC09.i
Client Sample ID:



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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F051.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	82	4920	4010	-18	NA	± 20 %	AverageRF
Aroclor 1016	1000	920	NA	NA	NA	-8	± 20 %	NA
Aroclor 1016 {1}	1000	990	66.0	65.4	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	910	111	101	-9	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	890	222	198	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	930	108	100	-7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	880	158	140	-12	NA	± 100 %	AverageRF
Aroclor 1260	1000	850	NA	NA	NA	-15	± 20 %	NA
Aroclor 1260 {1}	1000	850	230	195	-15	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	790	354	280	-21	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	352	308	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	850	193	165	-15	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	870	436	379	-13	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R051.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	89	5830	5180	-11	NA	± 20 %	AverageRF
Aroclor 1016	1000	870	NA	NA	NA	-13	± 20 %	NA
Aroclor 1016 {1}	1000	950	103	97.8	-5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	870	168	145	-13	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	850	146	125	-15	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	830	160	133	-17	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	840	154	129	-16	NA	± 100 %	AverageRF
Aroclor 1260	1000	870	NA	NA	NA	-13	± 20 %	NA
Aroclor 1260 {1}	1000	880	206	182	-12	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	860	420	361	-14	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	224	193	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	880	269	237	-12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	870	498	432	-13	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F051.D
Lab ID: KWG1007403-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 08:51
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R051.D
Lab ID: KWG1007403-9
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 08:51
Date Quantitated: 07/27/2010 15:54
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F051.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R051.D			**Vial:**	98
Acqu Date:	07/27/2010 08:51	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-9				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	554582	564742	97.77	97.60			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.17	17.53	401494	517680	81.61	88.80			NA
				%Recovery =	NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	921.03	867.55			
Aroclor 1016 {1}	5.68	5.74	65414m	97815	991.39	948.40			
Aroclor 1016 {2}	5.73	6.90	101125m	145089	908.76	865.28			
Aroclor 1016 {3}	6.26	7.08	197867m	124733	890.35	851.94			
Aroclor 1016 {4}	6.50	7.18	100350m	133274	929.75	834.48			
Aroclor 1016 {5}	7.05	7.46	139642m	129094	884.90	837.67			
Aroclor 1260			0	0	847.72	871.54			
Aroclor 1260 {1}	8.95	10.53	194941m	182271	848.41	884.35			
Aroclor 1260 {2}	9.55	10.88	280097m	360745	791.49	859.23			
Aroclor 1260 {3}	10.31	11.06	308258m	193444	876.87	864.84			
Aroclor 1260 {4}	11.01	11.56	165115m	236937	853.40	881.11			
Aroclor 1260 {5}	11.47	12.30	378900m	432412	868.43	868.14			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F051.D
Report Date: 27-Jul-2010 15:52

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F051.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R051.D
Inj Date : 27-JUL-2010 08:51
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 27-JUL-2010 09:25
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	554582	564742	97.8	97.6		100.00
Aroclor 1016	5.680	5.743	65414	97815	991	948	80.00- 120.00	100.00(M)
	5.733	6.903	101125	145089	909	865	132.29- 198.44	154.59(M)
	6.257	7.083	197867	124733	890	852	258.39- 387.58	302.48(M)
	6.497	7.183	100350	133274	930	834	128.59- 192.88	153.41(M)
	7.050	7.460	139642	129094	885	838	176.28- 264.43	213.47(M)
			Average of Peak Amounts =		921	867		
Aroclor 1260	8.953	10.530	194941	182271	848	884	80.00- 120.00	100.00(M)
	9.550	10.877	280097	360745	791	859	115.28- 172.93	143.68(M)
	10.313	11.063	308258	193444	877	865	122.15- 183.23	158.13(M)
	11.007	11.563	165115	236937	853	881	67.81- 101.71	84.70(M)
	11.473	12.303	378900	432412	868	868	154.72- 232.08	194.37(M)
			Average of Peak Amounts =		847	871		
Decachlorobiphenyl	16.173	17.527	401494	517680	81.6	88.8		100.00

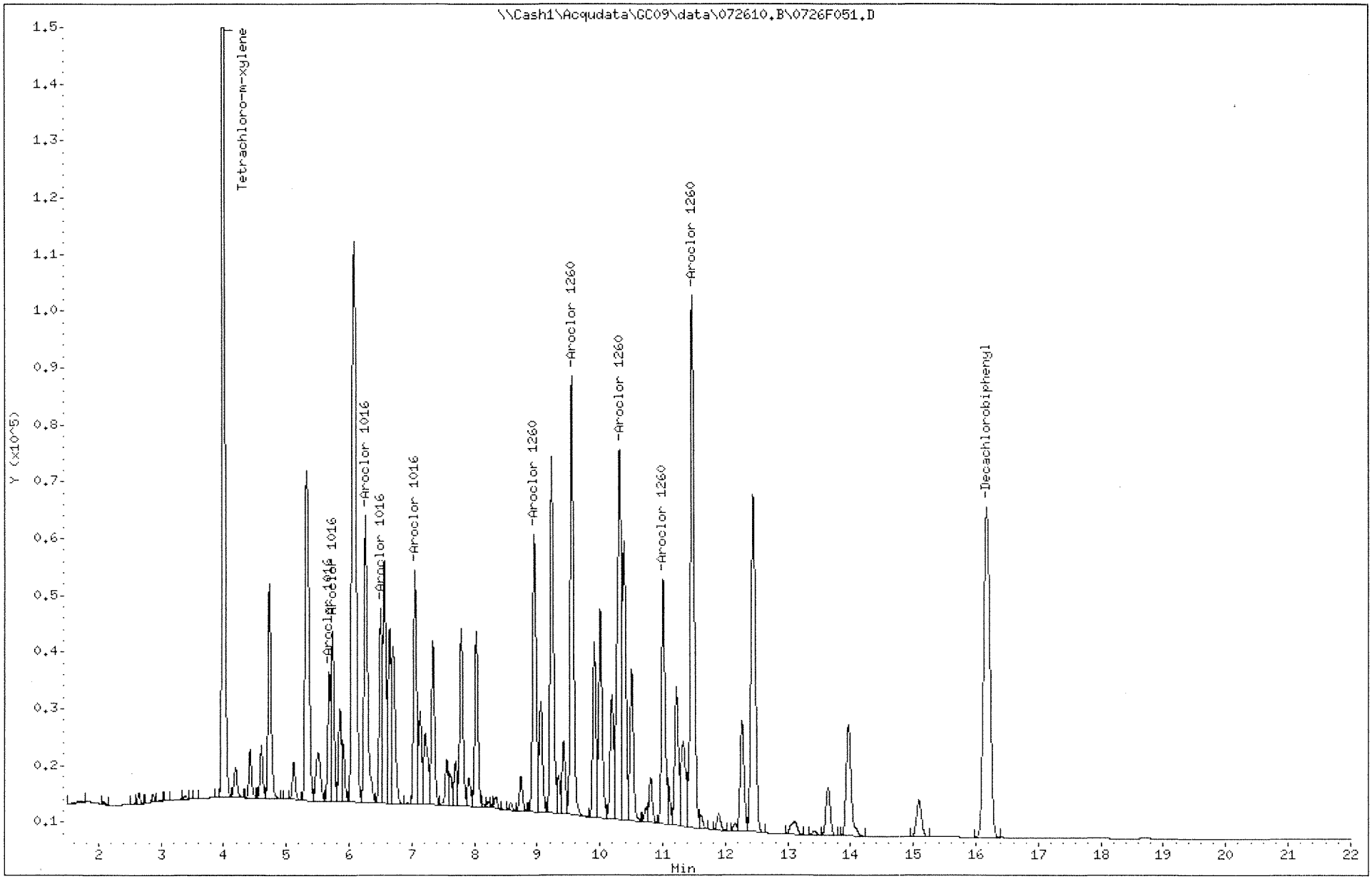
QC Flag Legend

M - Compound response manually integrated.

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F051.D
Date : 27-JUL-2010 08:51
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

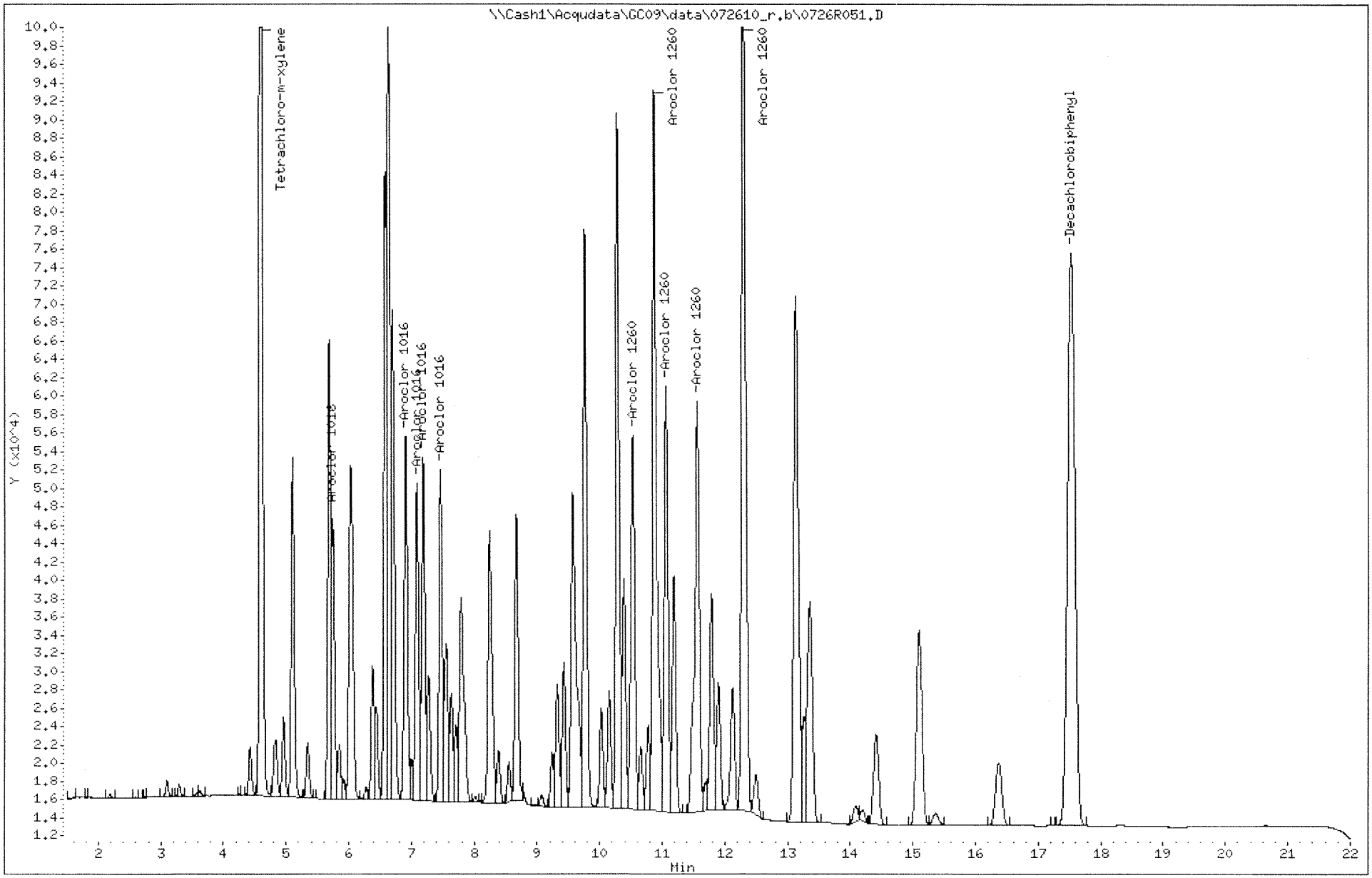
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

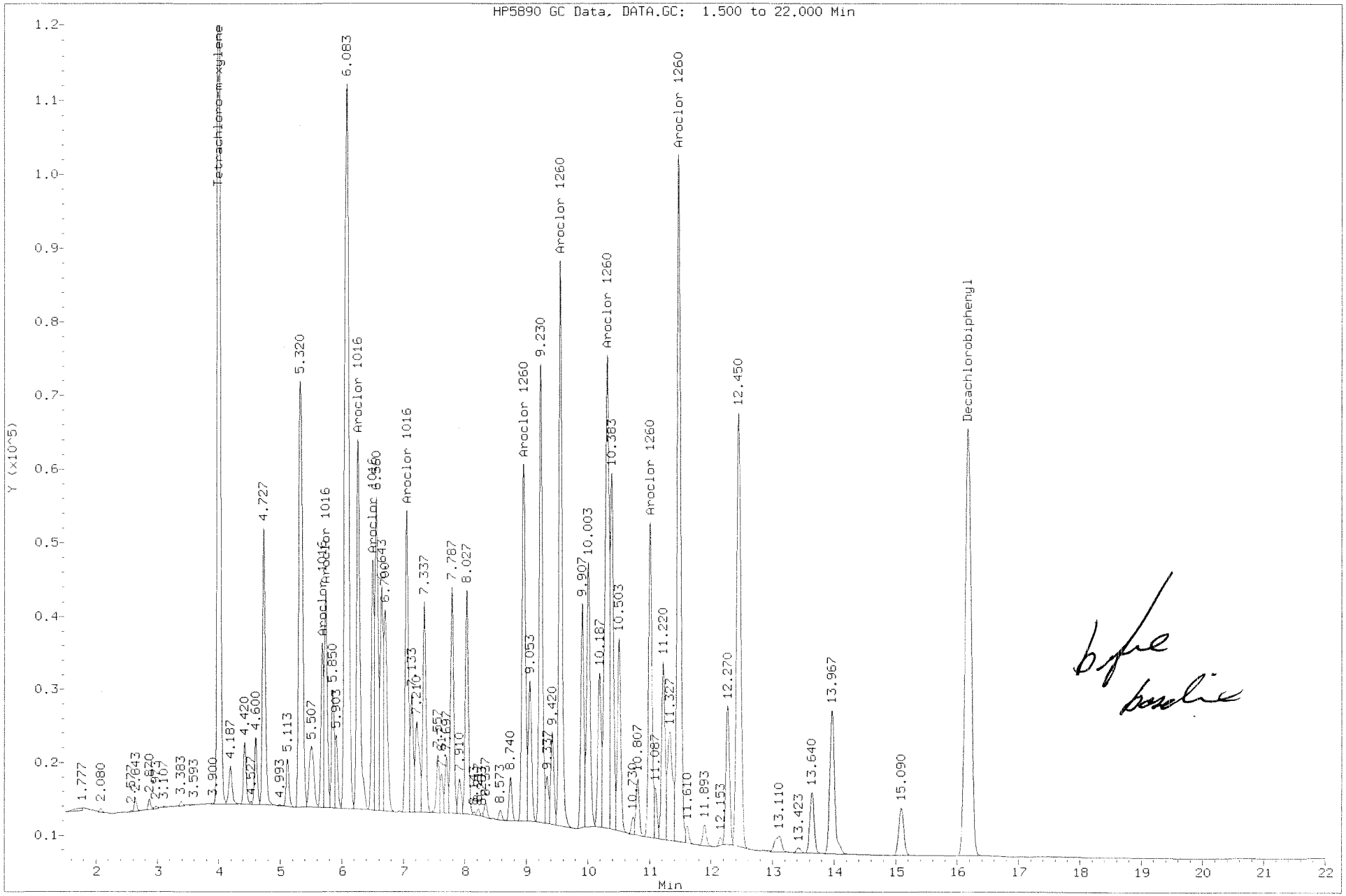


Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R051.D
Date : 27-JUL-2010 08:51
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

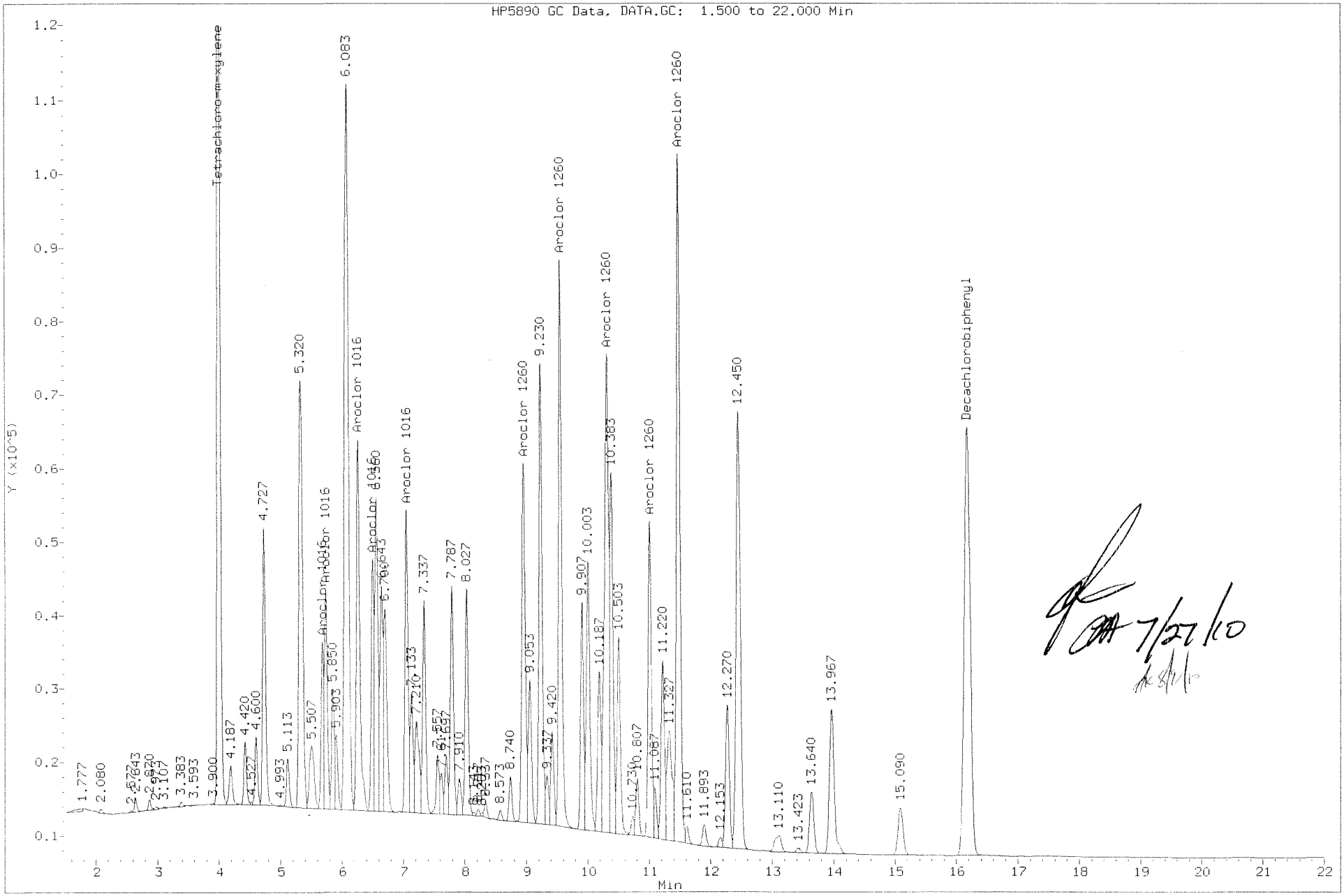
Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F051.D
Injection Date: 27-JUL-2010 08:51
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F051.D
Injection Date: 27-JUL-2010 08:51
Instrument: GC09.i
Client Sample ID:



7/27/10

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F055.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	83	4920	4100	-17	NA	± 20 %	AverageRF
Aroclor 1016	1000	940	NA	NA	NA	-6	± 20 %	NA
Aroclor 1016 {1}	1000	980	66.0	64.7	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	970	111	108	-3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	910	222	203	-9	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	940	108	101	-6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	900	158	143	-10	NA	± 100 %	AverageRF
Aroclor 1260	1000	860	NA	NA	NA	-14	± 20 %	NA
Aroclor 1260 {1}	1000	860	230	199	-14	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	800	354	285	-20	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	352	304	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	870	193	169	-13	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	880	436	386	-12	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R055.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	89	5830	5210	-11	NA	± 20 %	AverageRF
Aroclor 1016	1000	880	NA	NA	NA	-12	± 20 %	NA
Aroclor 1016 {1}	1000	930	103	95.7	-7	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	880	168	148	-12	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	860	146	126	-14	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	870	160	138	-13	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	870	154	133	-13	NA	± 100 %	AverageRF
Aroclor 1260	1000	880	NA	NA	NA	-12	± 20 %	NA
Aroclor 1260 {1}	1000	890	206	184	-11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	880	420	368	-12	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	224	196	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	880	269	236	-12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	880	498	436	-12	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F055.D
Lab ID: KWG1007403-11
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 10:37
Date Quantitated: 07/27/2010 13:01
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R055.D
Lab ID: KWG1007403-11
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 10:37
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ773
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F055.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R055.D			**Vial:**	98
Acqu Date:	07/27/2010 10:37	**Quant Date:**	07/27/2010 13:01	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-11				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	543935	558046	95.89	96.44			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.17	17.52	409638	520602	83.26	89.30			NA
				%Recovery =	NA	NA	Limits =	60-125	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	940.21	880.39			
Aroclor 1016 {1}	5.68	5.74	64699	95696	980.54	927.85			
Aroclor 1016 {2}	5.73	6.90	107837	147925	969.07	882.20			
Aroclor 1016 {3}	6.26	7.08	202870	126091	912.86	861.21			
Aroclor 1016 {4}	6.50	7.18	100923	138256	935.05	865.68			
Aroclor 1016 {5}	7.05	7.46	142580	133309	903.51	865.02			
Aroclor 1260			0	0	858.41	879.93			
Aroclor 1260 {1}	8.95	10.53	198662	184408	864.60	894.72			
Aroclor 1260 {2}	9.55	10.87	284660	367810	804.39	876.06			
Aroclor 1260 {3}	10.31	11.06	304030	196015	864.84	876.34			
Aroclor 1260 {4}	11.01	11.56	169222	235867	874.63	877.14			
Aroclor 1260 {5}	11.47	12.30	385524	436023	883.61	875.39			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F055.D
Report Date: 27-Jul-2010 13:01

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F055.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R055.D
Inj Date : 27-JUL-2010 10:37
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

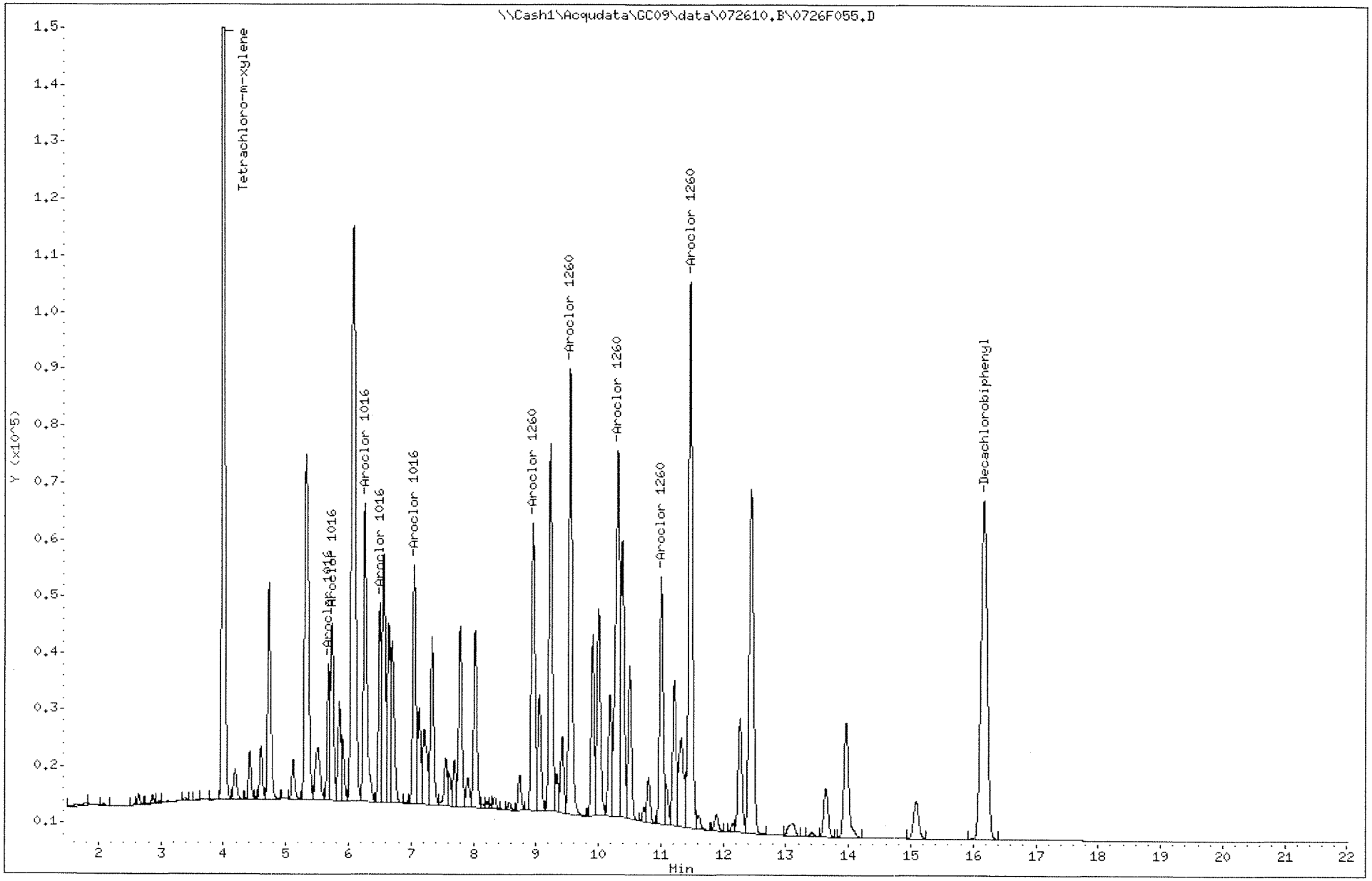
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	543935	558046	95.9	96.4		100.00
Aroclor 1016	5.677	5.743	64699	95696	980	928	80.00- 120.00	100.00
	5.733	6.903	107837	147925	969	882	132.29- 198.44	166.67
	6.257	7.083	202870	126091	913	861	258.39- 387.58	313.56
	6.497	7.183	100923	138256	935	866	128.59- 192.88	155.99
	7.050	7.460	142580	133309	904	865	176.28- 264.43	220.37
			Average of Peak Amounts =		940	880		
Aroclor 1260	8.950	10.530	198662	184408	865	895	80.00- 120.00	100.00
	9.550	10.873	284660	367810	804	876	115.28- 172.93	143.29
	10.313	11.060	304030	196015	865	876	122.15- 183.23	153.04
	11.007	11.563	169222	235867	875	877	67.81- 101.71	85.18
	11.473	12.303	385524	436023	884	875	154.72- 232.08	194.06
			Average of Peak Amounts =		859	880		
Decachlorobiphenyl	16.173	17.523	409638	520602	83.3	89.3		100.00

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F055.D
Date : 27-JUL-2010 10:37
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

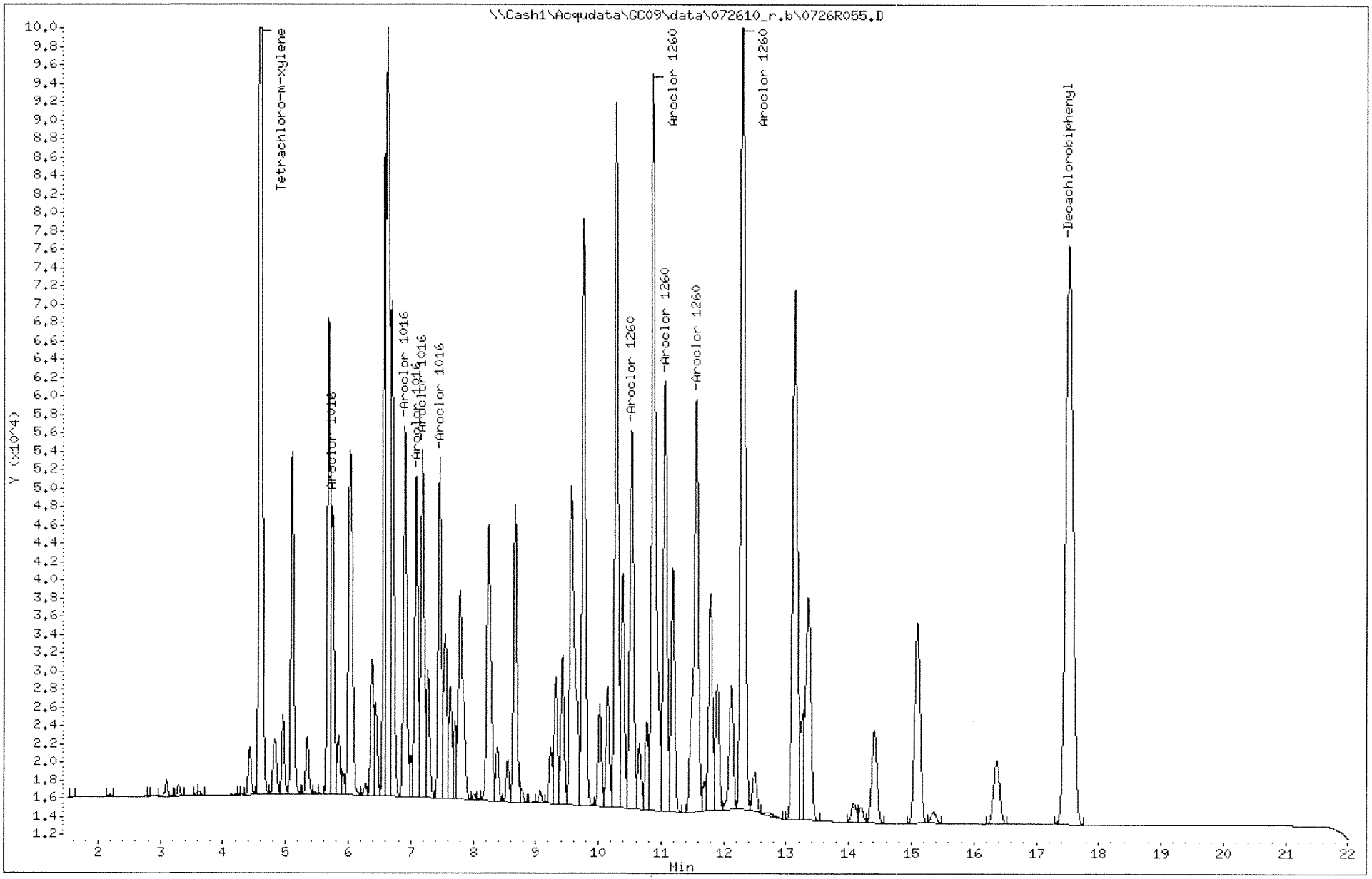
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R055.D
Date : 27-JUL-2010 10:37
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F058.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	86	4920	4230	-14	NA	± 20 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	1	± 20 %	NA
Aroclor 1016 {1}	1000	1000	66.0	69.1	5	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	114	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	223	0	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1000	108	111	3	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	960	158	152	-4	NA	± 100 %	AverageRF
Aroclor 1260	1000	890	NA	NA	NA	-11	± 20 %	NA
Aroclor 1260 {1}	1000	890	230	205	-11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	840	354	296	-16	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	890	352	314	-11	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	900	193	174	-10	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	910	436	397	-9	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R058.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	5830	5380	-8	NA	± 20 %	AverageRF
Aroclor 1016	1000	930	NA	NA	NA	-7	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	105	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	940	168	157	-6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	900	146	132	-10	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	910	160	145	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	900	154	139	-10	NA	± 100 %	AverageRF
Aroclor 1260	1000	910	NA	NA	NA	-9	± 20 %	NA
Aroclor 1260 {1}	1000	920	206	189	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	900	420	378	-10	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	900	224	201	-10	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	920	269	247	-8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	890	498	443	-11	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F058.D
Lab ID: KWG1007403-13
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 11:58
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/28/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R058.D
Lab ID: KWG1007403-13
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 11:58
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/28/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ773
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F058.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R058.D			**Vial:**	98
Acqu Date:	07/27/2010 11:58	**Quant Date:**	07/27/2010 13:02	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-13				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	557189	566393	98.23	97.88			NA
			%Recovery =		NA	NA	**Limits =**	10-135	
Decachlorobiphenyl	16.17	17.53	422527	537817	85.88	92.25			NA
			%Recovery =		NA	NA	**Limits =**	60-125	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	1,015	934.21			
Aroclor 1016 {1}	5.68	5.74	69104	105305	1,047	1,021			
Aroclor 1016 {2}	5.73	6.90	114273	157304	1,027	938.13			
Aroclor 1016 {3}	6.26	7.08	223193	132257	1,004	903.33			
Aroclor 1016 {4}	6.50	7.18	111073	144705	1,029	906.06			
Aroclor 1016 {5}	7.05	7.46	152274	139090	964.94	902.53			
Aroclor 1260			0	0	886.29	905.04			
Aroclor 1260 {1}	8.95	10.53	205338	189365	893.66	918.77			
Aroclor 1260 {2}	9.55	10.87	295902	377860	836.15	900.00			
Aroclor 1260 {3}	10.31	11.06	313526	200837	891.85	897.90			
Aroclor 1260 {4}	11.01	11.56	174049	247105	899.58	918.93			
Aroclor 1260 {5}	11.47	12.30	397123	443109	910.19	889.62			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F058.D
Report Date: 27-Jul-2010 13:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F058.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R058.D
Inj Date : 27-JUL-2010 11:58
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

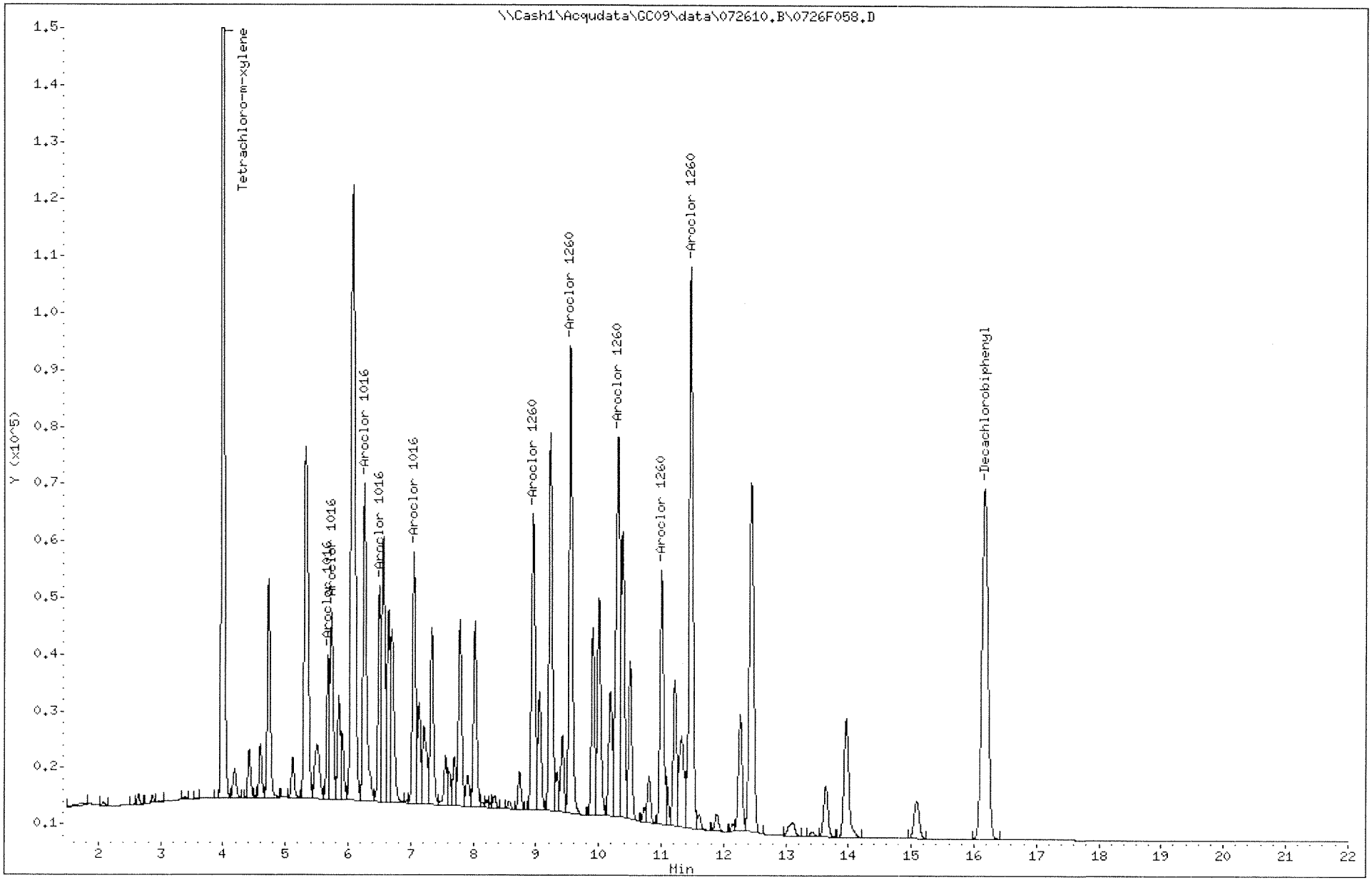
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.990	4.593	557189	566393	98.2	97.9		100.00
Aroclor 1016	5.677	5.740	69104	105305	1050	1020	80.00- 120.00	100.00
	5.733	6.903	114273	157304	1030	938	132.29- 198.44	165.36
	6.257	7.083	223193	132257	1000	903	258.39- 387.58	322.98
	6.497	7.183	111073	144705	1030	906	128.59- 192.88	160.73
	7.047	7.460	152274	139090	965	902	176.28- 264.43	220.35
			Average of Peak Amounts =		1020	934		
Aroclor 1260	8.953	10.530	205338	189365	894	919	80.00- 120.00	100.00
	9.547	10.873	295902	377860	836	900	115.28- 172.93	144.10
	10.310	11.060	313526	200837	892	898	122.15- 183.23	152.69
	11.007	11.563	174049	247105	900	919	67.81- 101.71	84.76
	11.473	12.303	397123	443109	910	890	154.72- 232.08	193.40
			Average of Peak Amounts =		886	905		
Decachlorobiphenyl	16.170	17.527	422527	537817	85.9	92.2		100.00

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F058.D
Date : 27-JUL-2010 11:58
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

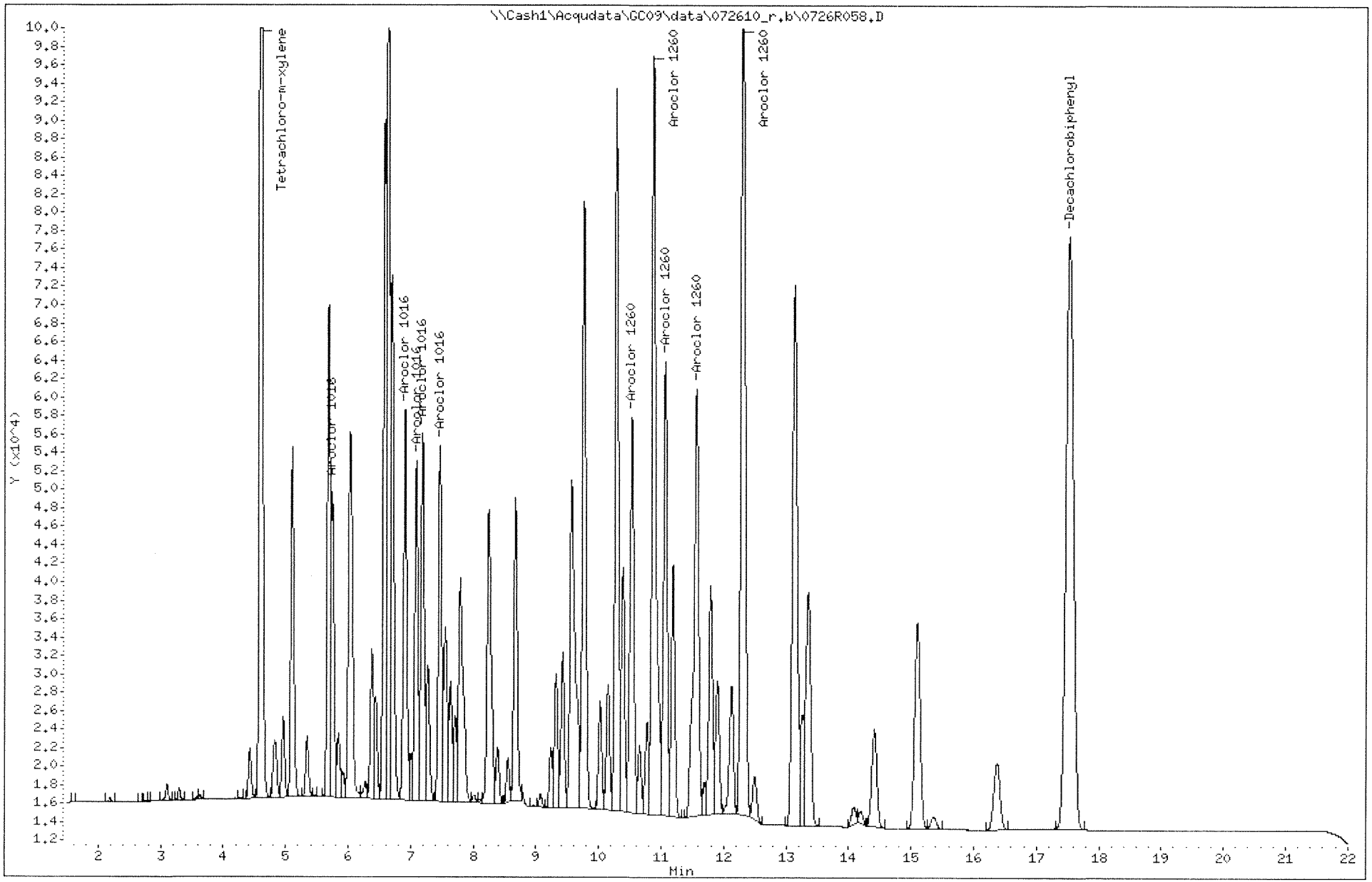


Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R058.D
Date : 27-JUL-2010 11:58
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB



Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F066.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	91	4920	4460	-9	NA	± 20 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	6	± 20 %	NA
Aroclor 1016 {1}	1000	1100	66.0	73.8	12	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	116	5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	228	3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	116	7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	161	2	NA	± 100 %	AverageRF
Aroclor 1260	1000	950	NA	NA	NA	-5	± 20 %	NA
Aroclor 1260 {1}	1000	960	230	222	-4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	870	354	306	-13	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	980	352	344	-2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	193	187	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	436	420	-4	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007403
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R066.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	5830	5580	-4	NA	± 20 %	AverageRF
Aroclor 1016	1000	990	NA	NA	NA	-1	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	106	3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	168	0	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	980	146	143	-2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	160	156	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	950	154	147	-5	NA	± 100 %	AverageRF
Aroclor 1260	1000	960	NA	NA	NA	-4	± 20 %	NA
Aroclor 1260 {1}	1000	970	206	201	-3	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	950	420	400	-5	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	960	224	214	-4	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	970	269	261	-3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	960	498	478	-4	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F066.D
Lab ID: KWG1007403-15
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 15:31
Date Quantitated: 07/27/2010 16:01
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/27/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R066.D
Lab ID: KWG1007403-15
RunType: CCV
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 15:31
Date Quantitated: 07/27/2010 16:01
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 8/2/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F066.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R066.D			**Vial:**	98
Acqu Date:	07/27/2010 15:31	**Quant Date:**	07/27/2010 16:01	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-15				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	568734m	574445m	100.26	99.27			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.17	17.52	446126	558410	90.68	95.79			NA
				%Recovery =	NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	1,058	987.44			
Aroclor 1016 {1}	5.68	5.74	73801m	106007m	1,118	1,028			
Aroclor 1016 {2}	5.73	6.90	116465m	167919m	1,047	1,001			
Aroclor 1016 {3}	6.25	7.08	228494m	142900m	1,028	976.03			
Aroclor 1016 {4}	6.50	7.18	115766m	156144m	1,073	977.68			
Aroclor 1016 {5}	7.05	7.46	161420m	147054m	1,023	954.21			
Aroclor 1260			0	0	947.35	963.56			
Aroclor 1260 {1}	8.95	10.53	221536m	200867m	964.15	974.58			
Aroclor 1260 {2}	9.55	10.87	306370m	399892m	865.74	952.47			
Aroclor 1260 {3}	10.31	11.06	343858m	214361m	978.14	958.36			
Aroclor 1260 {4}	11.00	11.56	186975m	261396m	966.39	972.07			
Aroclor 1260 {5}	11.47	12.30	419868m	478335m	962.33	960.34			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F066.D
Report Date: 27-Jul-2010 16:01

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F066.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R066.D
Inj Date : 27-JUL-2010 15:31
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 27-JUL-2010 15:58
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	568734	574445	100	99.3		100.00(M)
Aroclor 1016	5.677	5.740	73801	106007	1120	1030	80.00- 120.00	100.00(M)
	5.733	6.903	116465	167919	1050	1000	126.25- 189.37	157.81(M)
	6.253	7.080	228494	142900	1030	976	247.69- 371.53	309.61(M)
	6.497	7.180	115766	156144	1070	978	125.49- 188.24	156.86(M)
	7.047	7.460	161420	147054	1020	954	174.98- 262.47	218.72(M)
			Average of Peak Amounts =		1060	988		
Aroclor 1260	8.950	10.527	221536	200867	964	974	80.00- 120.00	100.00(M)
	9.547	10.873	306370	399892	866	952	110.63- 165.95	138.29(M)
	10.310	11.060	343858	214361	978	958	124.17- 186.26	155.22(M)
	11.003	11.560	186975	261396	966	972	67.52- 101.28	84.40(M)
	11.470	12.303	419868	478335	962	960	151.62- 227.43	189.53(M)
			Average of Peak Amounts =		947	963		
Decachlorobiphenyl	16.170	17.520	446126	558410	90.7	95.8		100.00

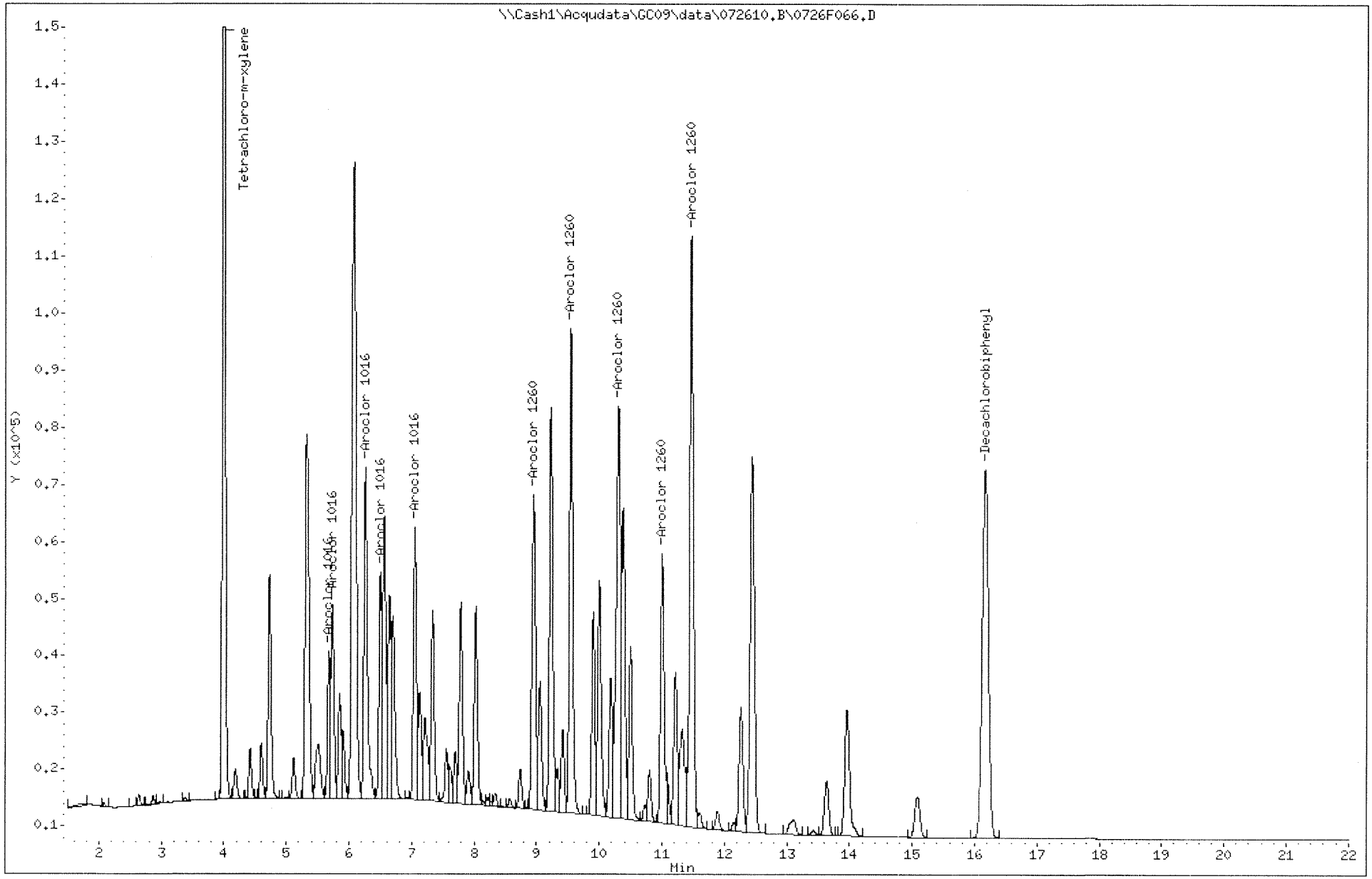
QC Flag Legend

M - Compound response manually integrated.

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F066.D
Date : 27-JUL-2010 15:31
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

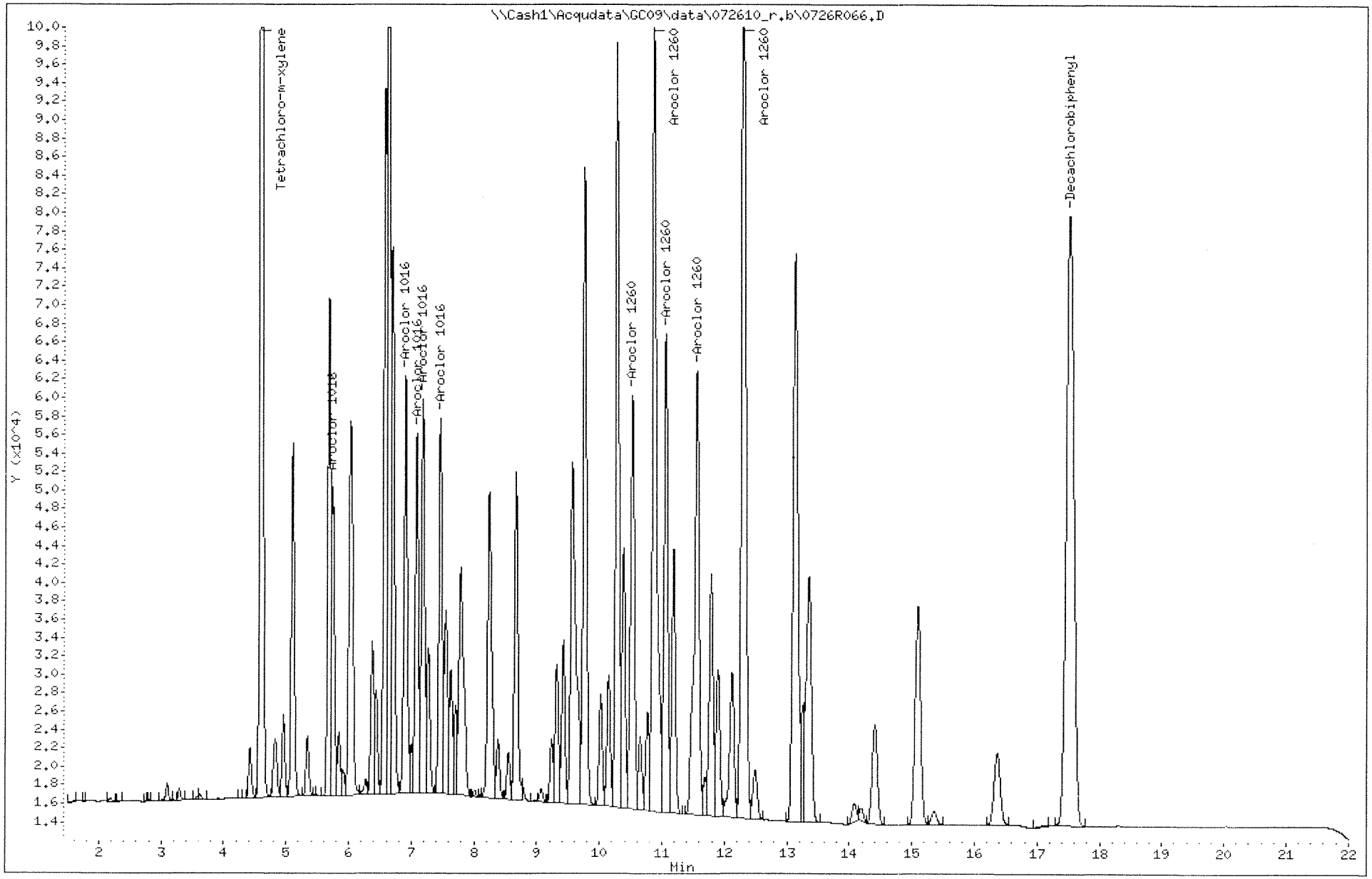
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

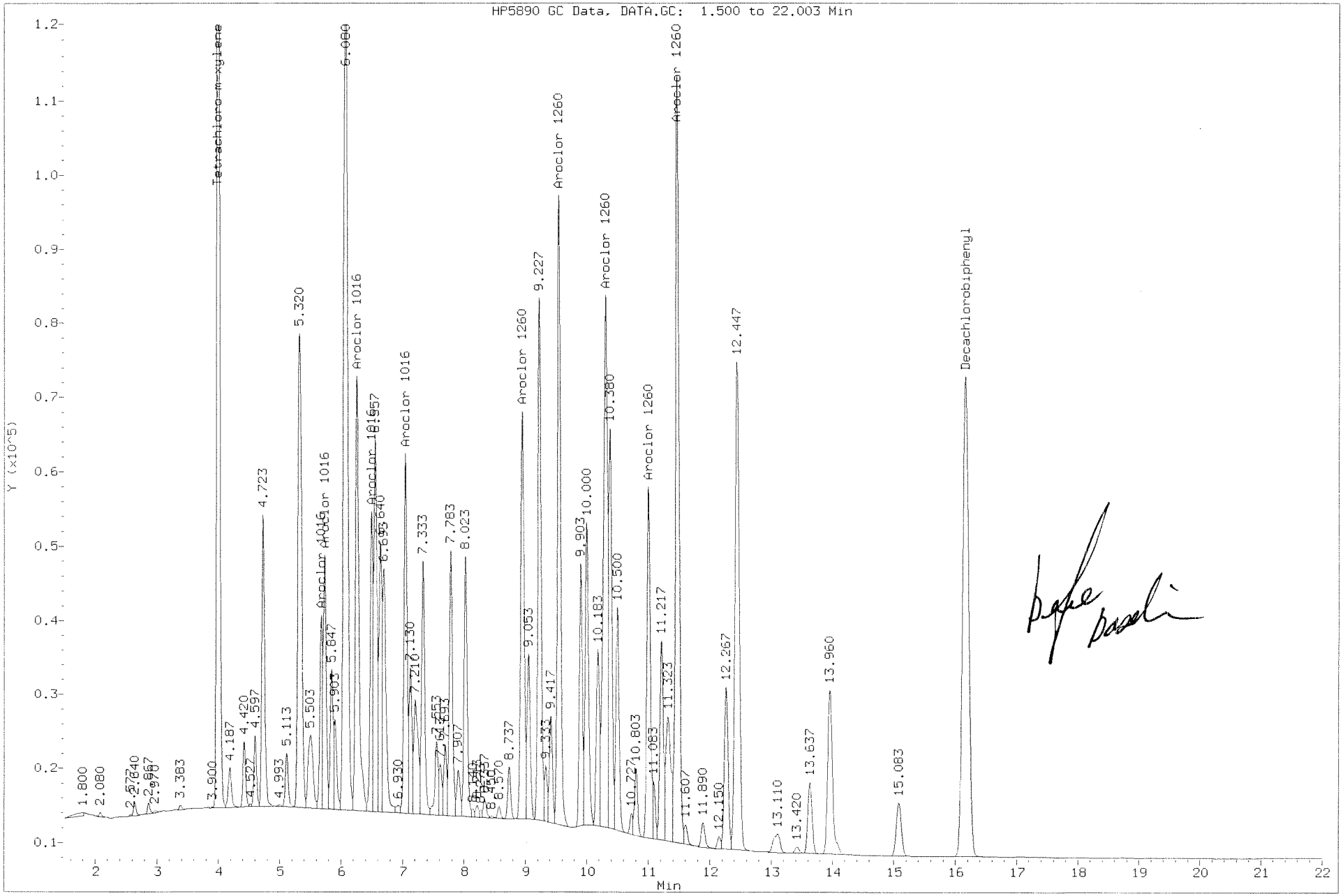


Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R066.D
Date : 27-JUL-2010 15:31
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

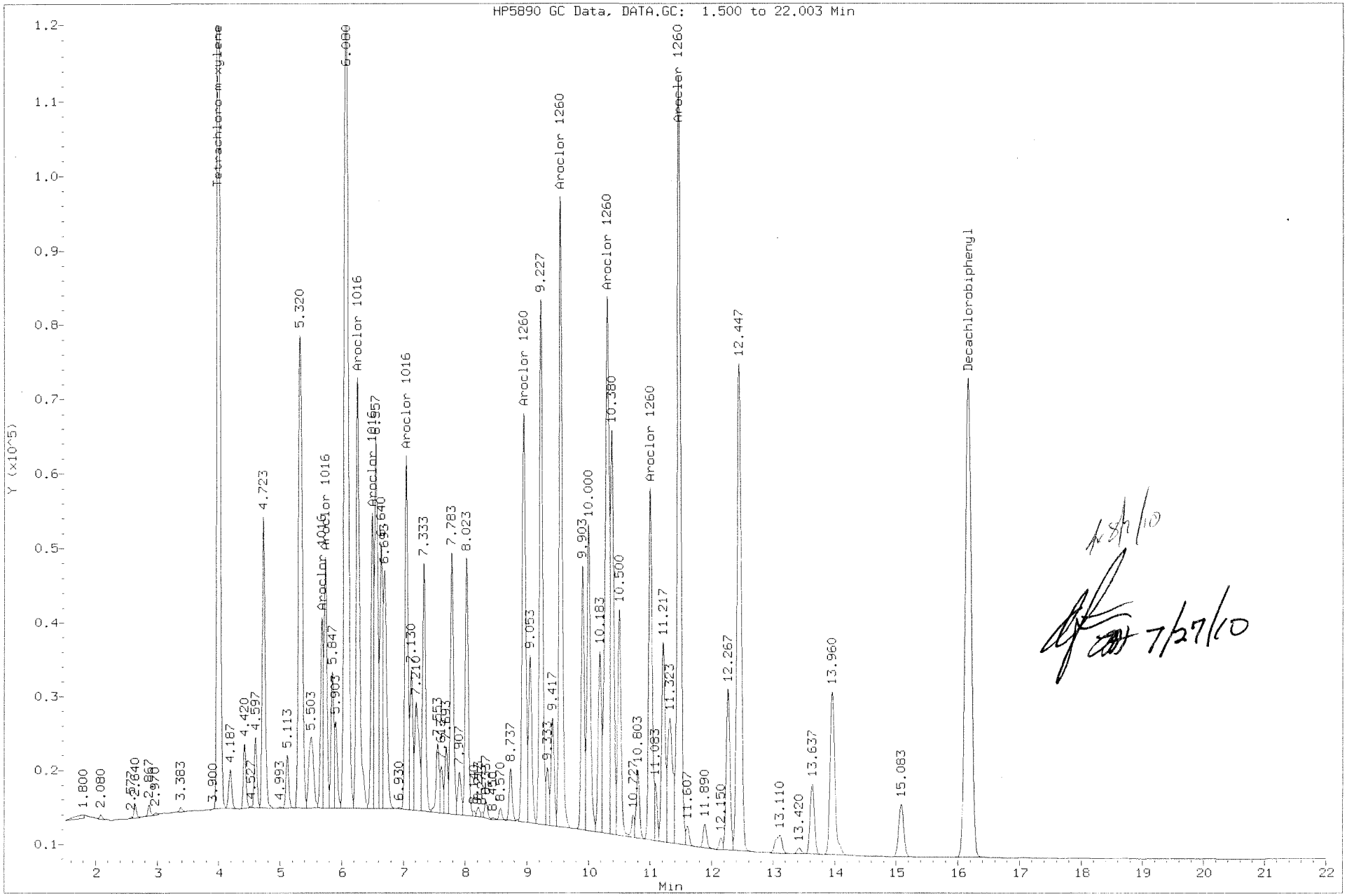
Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F066.D
Injection Date: 27-JUL-2010 15:31
Instrument: GC09.i
Client Sample ID:



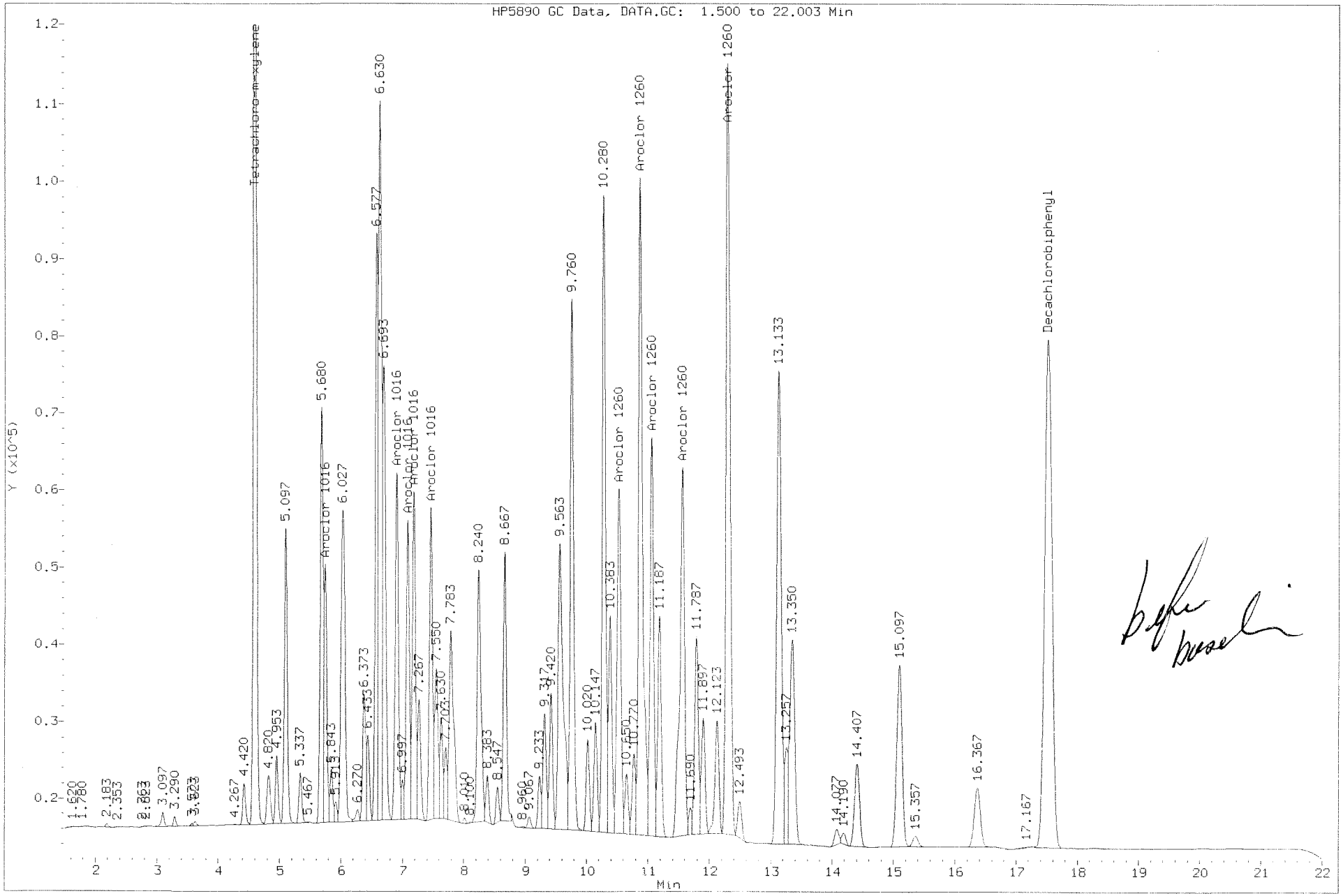
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F066.D
Injection Date: 27-JUL-2010 15:31
Instrument: GC09.i
Client Sample ID:



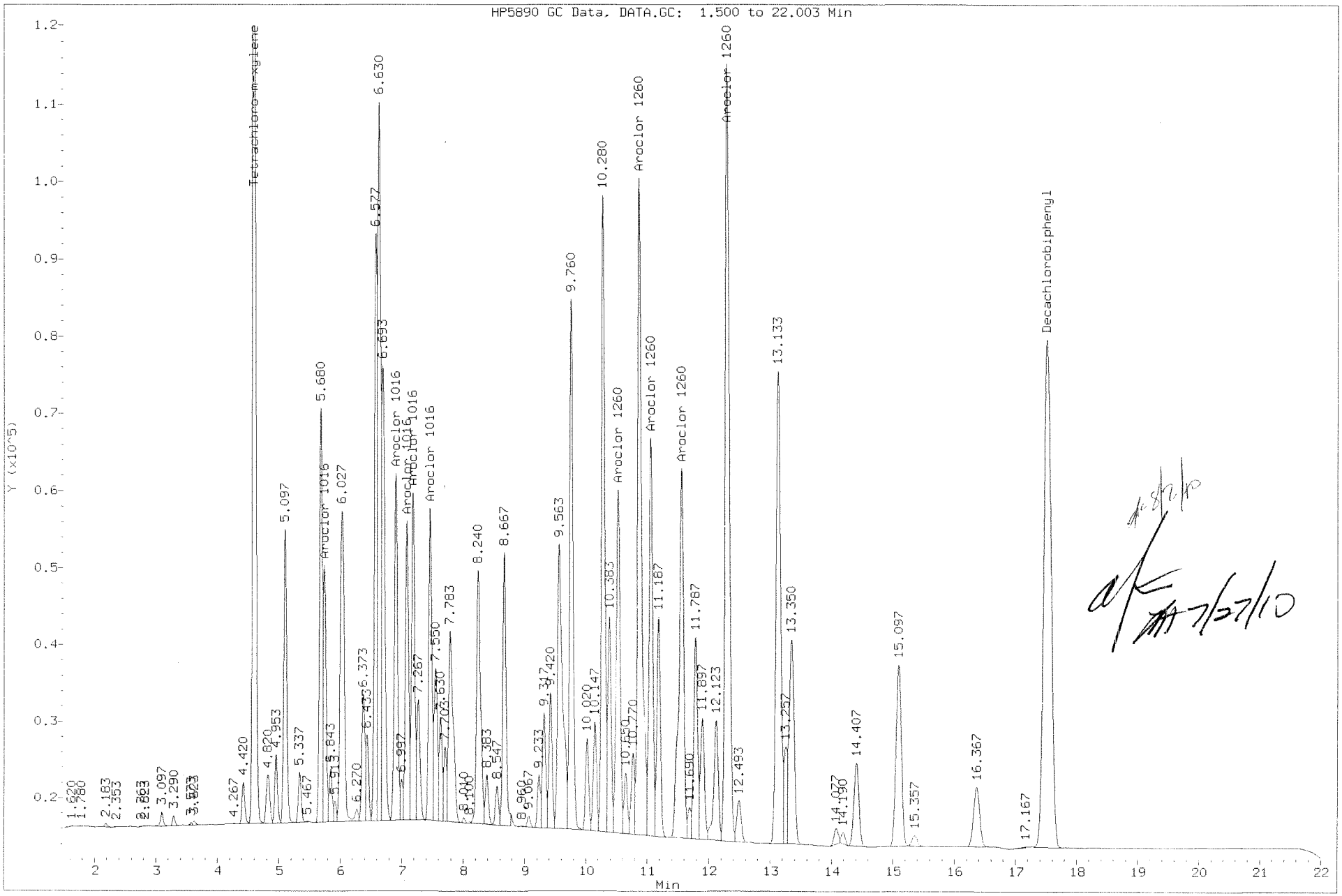
7/27/10

7/27/10

Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R066.D
Injection Date: 27-JUL-2010 15:31
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R066.D
Injection Date: 27-JUL-2010 15:31
Instrument: GC09.i
Client Sample ID:



7/27/10

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F003.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	4920	4530	-8	NA	± 20 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 20 %	NA
Aroclor 1016 {1}	1000	1100	66.0	72.7	10	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	115	3	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	231	4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1000	108	113	5	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	163	3	NA	± 100 %	AverageRF
Aroclor 1260	1000	990	NA	NA	NA	-1	± 20 %	NA
Aroclor 1260 {1}	1000	990	230	227	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	910	354	322	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	350	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	193	210	8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	980	436	427	-2	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R003.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	99	5830	5750	-1	NA	± 20 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	0	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	106	3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	169	1	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	980	146	144	-2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	990	160	158	-1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	154	151	-2	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	990	206	204	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	960	420	404	-4	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	970	224	217	-3	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	980	269	265	-2	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	970	498	484	-3	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F003.D
Lab ID: KWG1007595-2
RunType: CCV
Matrix: SOIL

Date Acquired: 07/27/2010 18:22
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 8/6/10

Secondary Review: [signature] 8/6/10

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R003.D	**Date Acquired:**	07/27/2010 18:22
Lab ID:	KWG1007595-2	**Date Quantitated:**	07/30/2010 15:39
RunType:	CCV	**Batch ID:**	KWG1007595
Matrix:	SOIL	**Analysis Method:**	8082
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: 8/4/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/30/2010

Analysis Lot:	KWG1007595	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072710.B\0727F003.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R003.D			**Vial:**	96
Acqu Date:	07/27/2010 18:22	**Quant Date:**	07/30/2010 15:39	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007595-2				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	571082	575752m	100.68	99.50			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.17	17.52	453424	574944	92.16	98.62			NA
				%Recovery =	NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	1,051	998.74			
Aroclor 1016 {1}	5.68	5.74	72666	106467m	1,101	1,032			
Aroclor 1016 {2}	5.73	6.90	115132	168912m	1,035	1,007			
Aroclor 1016 {3}	6.25	7.08	230680	144176m	1,038	984.74			
Aroclor 1016 {4}	6.50	7.18	113232	158271m	1,049	991.00			
Aroclor 1016 {5}	7.05	7.46	163229	150768m	1,034	978.31			
Aroclor 1260			0	0	991.32	975.22			
Aroclor 1260 {1}	8.95	10.53	227140m	203683m	988.54	988.24			
Aroclor 1260 {2}	9.55	10.87	321695m	404308m	909.04	962.99			
Aroclor 1260 {3}	10.31	11.06	350211m	216664m	996.21	968.65			
Aroclor 1260 {4}	11.00	11.56	209777m	264751m	1,084	984.55			
Aroclor 1260 {5}	11.47	12.30	426961m	483988m	978.58	971.69			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F003.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F003.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R003.D
Inj Date : 27-JUL-2010 18:22
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	571082	575752	101	99.5		100.00
Aroclor 1016	5.677	5.740	72666	106467	1100	1030	80.00- 120.00	100.00
	5.733	6.903	115132	168912	1030	1010	126.75- 190.13	158.44
	6.253	7.080	230680	144176	1040	985	253.96- 380.94	317.45
	6.497	7.180	113232	158271	1050	991	124.66- 186.99	155.83
	7.047	7.460	163229	150768	1030	978	179.70- 269.55	224.63
			Average of Peak Amounts =		1050	999		
Aroclor 1260	8.950	10.527	227140	203683	988	988	80.00- 120.00	100.00(M)
	9.547	10.873	321695	404308	909	963	113.30- 169.95	141.63(M)
	10.310	11.060	350211	216664	996	969	123.35- 185.02	154.18(M)
	11.003	11.560	209777	264751	1080	984	73.88- 110.83	87.88(M)
	11.470	12.300	426961	483988	978	972	150.38- 225.57	187.97(M)
			Average of Peak Amounts =		990	975		
Decachlorobiphenyl	16.170	17.520	453424	574944	92.2	98.6		100.00

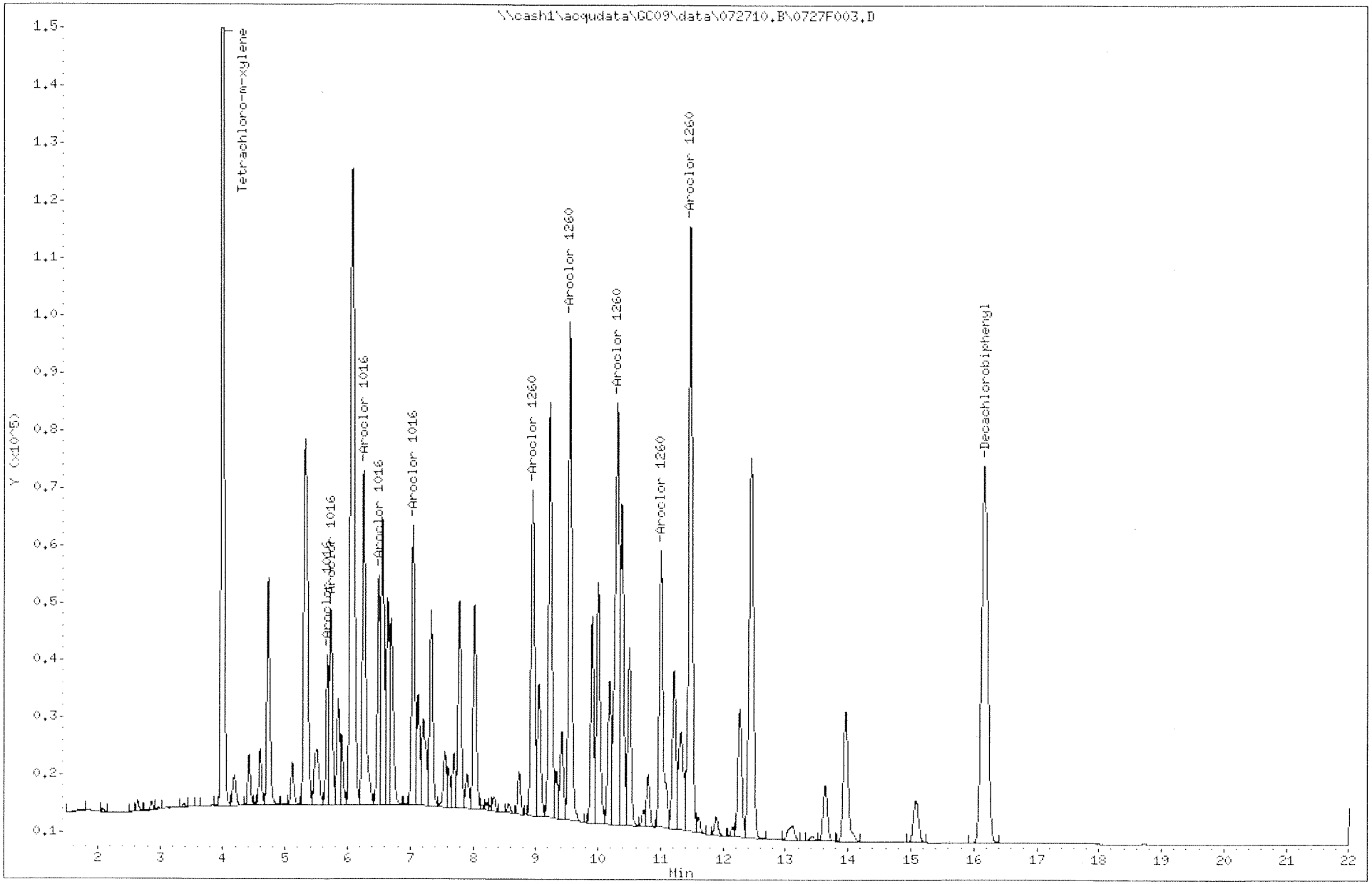
QC Flag Legend

M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F003.D
Date : 27-JUL-2010 18:22
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09.i

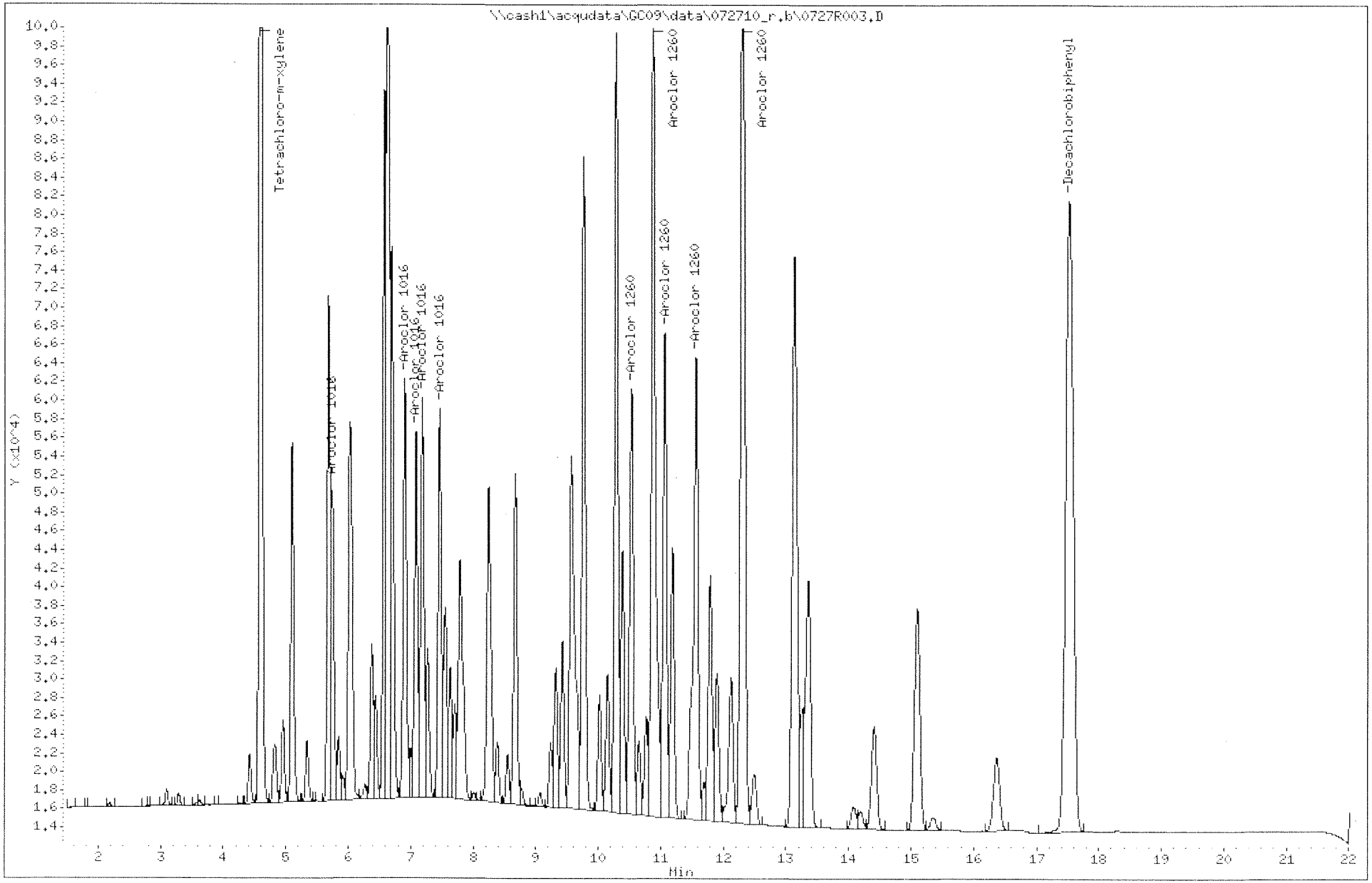
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



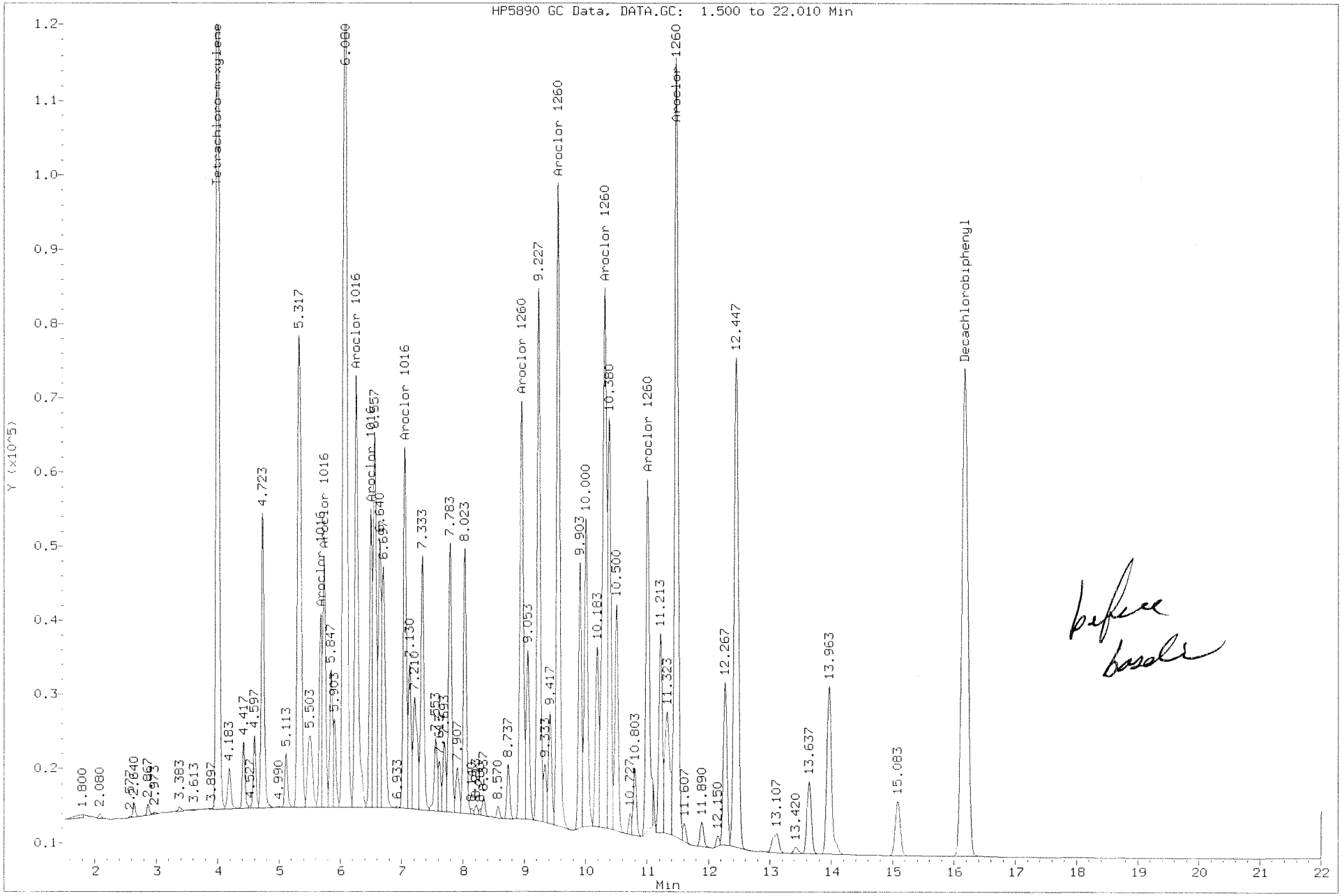
Data File: \\cash1\acqudata\GC09\data\072710_r,b\0727R003.D
Date : 27-JUL-2010 18:22
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

Instrument: GC09,i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53

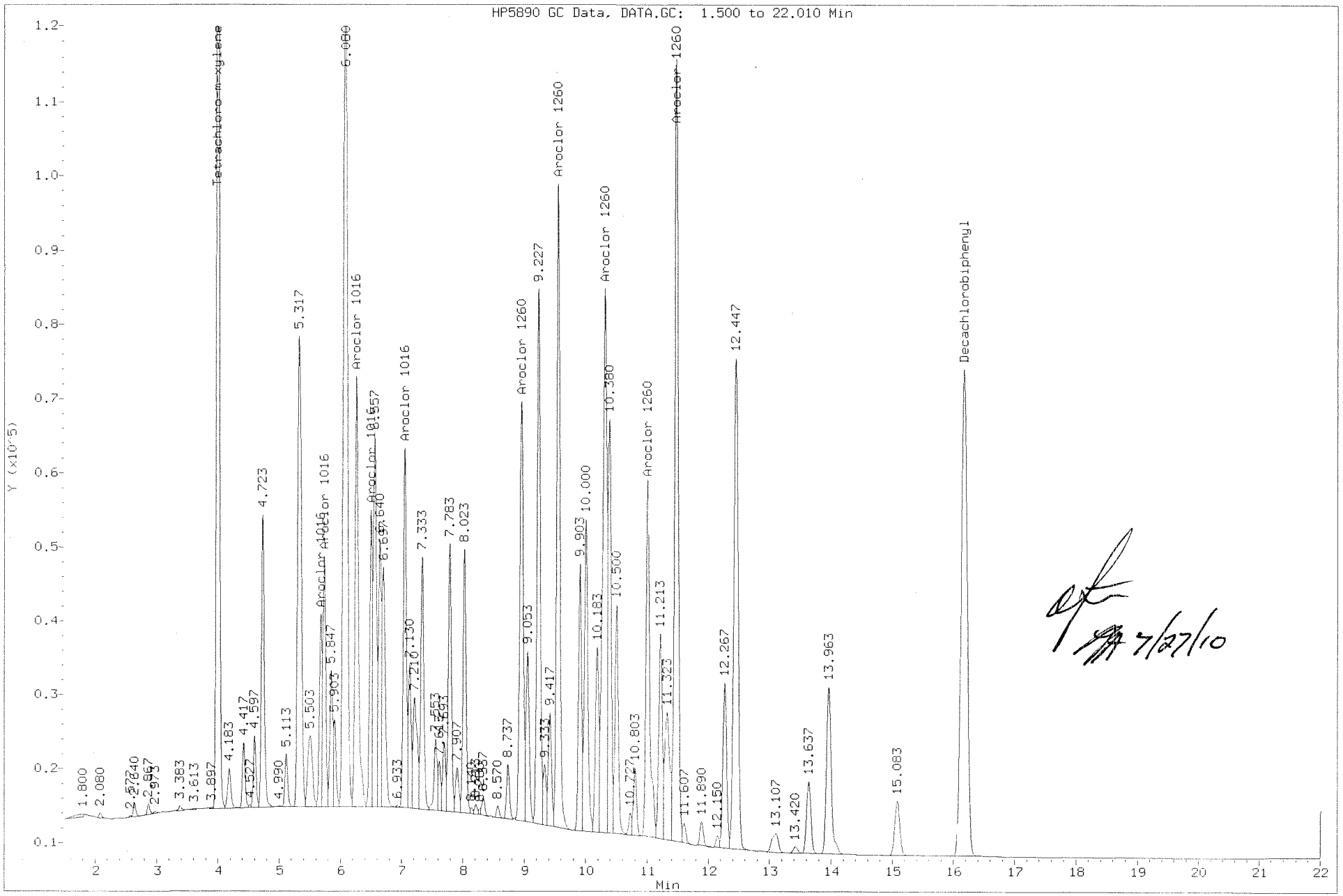


Data File: \\Cash1\Acqudata\GC09\data\072710.B\0727F003.D
Injection Date: 27-JUL-2010 18:22
Instrument: GC09.i
Client Sample ID:



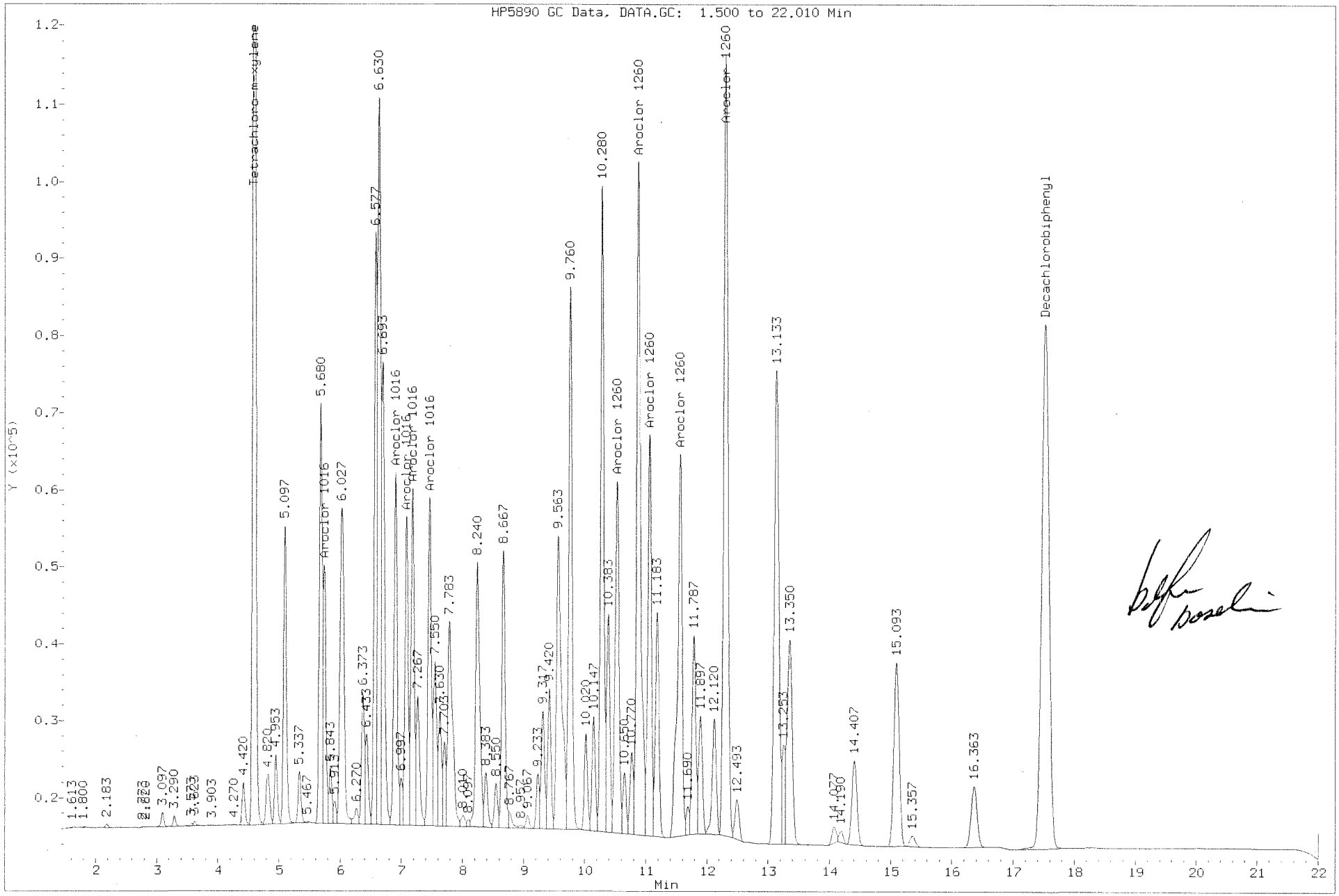
before
basal

Data File: \\Cash1\Acqudata\GC09\data\072710.B\0727F003.D
Injection Date: 27-JUL-2010 18:22
Instrument: GC09.i
Client Sample ID:

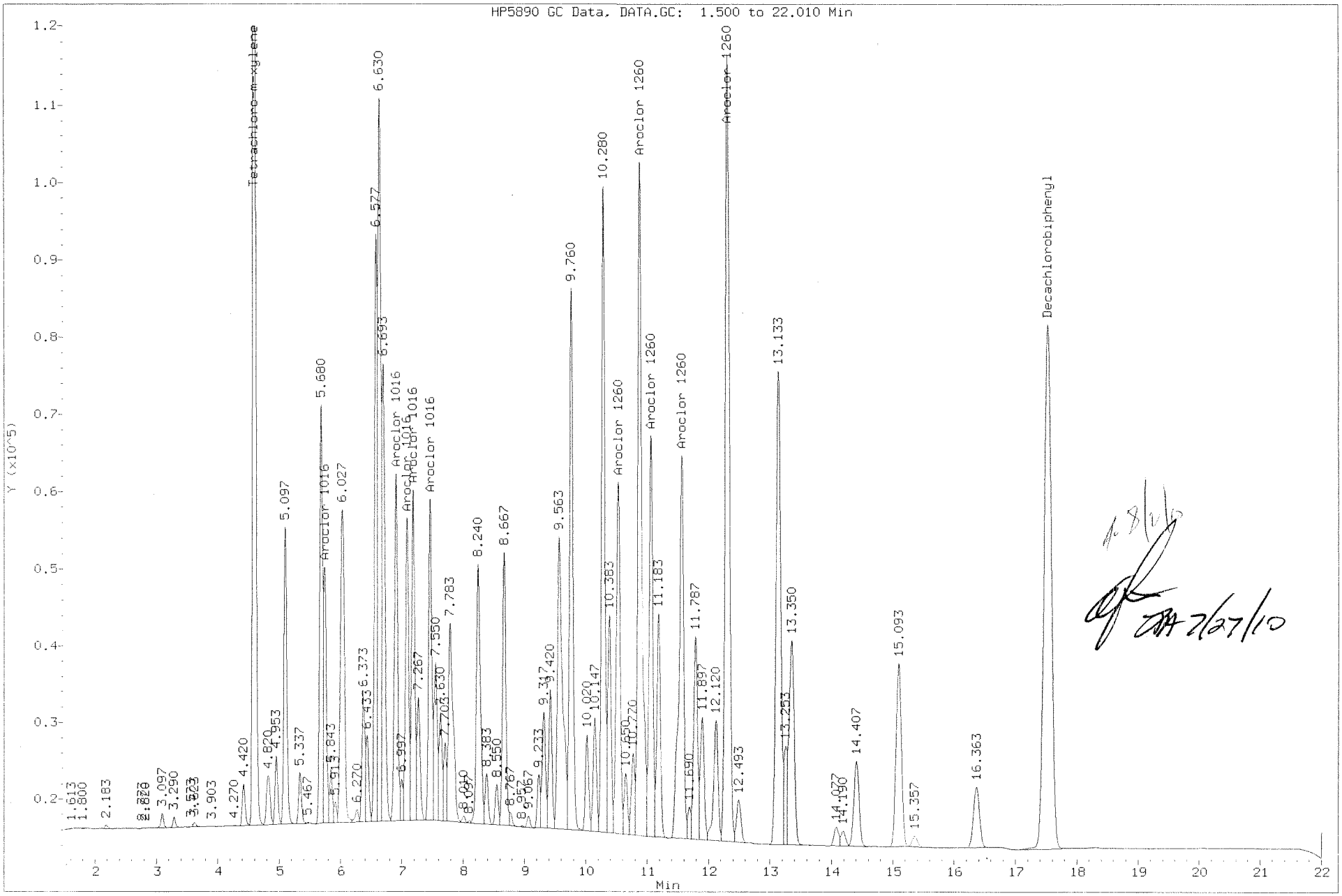


7/27/10

Data File: \\Cash1\Acqudata\GC09\data\072710_r.b\0727R003.D
Injection Date: 27-JUL-2010 18:22
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072710_r.b\0727R003.D
Injection Date: 27-JUL-2010 18:22
Instrument: GC09.i
Client Sample ID:



1.8 1/5

2/27/10

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F012.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	94	4920	4620	-6	NA	± 20 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 20 %	NA
Aroclor 1016 {1}	1000	1100	66.0	72.9	10	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	111	114	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	222	229	3	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	108	114	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	158	163	4	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	-2	± 20 %	NA
Aroclor 1260 {1}	1000	990	230	228	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	900	354	320	-10	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	352	352	0	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	990	193	192	-1	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	990	436	434	-1	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Barr Engineering Company
Project: Rhodia Silver Bow/26460006.15-SOIL-200

Service Request: K1006867
Date Analyzed: 07/27/2010

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 07/01/2010
Calibration ID: CAL9609
Analysis Lot: KWG1007595
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R012.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	98	5830	5740	-2	NA	± 20 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	0	± 20 %	NA
Aroclor 1016 {1}	1000	1000	103	106	2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	168	169	1	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	990	146	145	-1	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	160	157	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	990	154	152	-1	NA	± 100 %	AverageRF
Aroclor 1260	1000	990	NA	NA	NA	-1	± 20 %	NA
Aroclor 1260 {1}	1000	1000	206	207	1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	980	420	410	-2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	990	224	221	-1	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	269	269	0	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	980	498	489	-2	NA	± 100 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F012.D
Lab ID: KWG1007595-4
RunType: CCV
Matrix: SOIL

Date Acquired: 07/27/2010 22:22
Date Quantitated: 07/30/2010 15:39
Batch ID: KWG1007595
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 08/01/10

Secondary Review: 8/4/10

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R012.D	**Date Acquired:**	07/27/2010 22:22
Lab ID:	KWG1007595-4	**Date Quantitated:**	07/30/2010 15:40
RunType:	CCV	**Batch ID:**	KWG1007595
Matrix:	SOIL	**Analysis Method:**	8082
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] 8/2/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/30/2010

Analysis Lot:	KWG1007595	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072710.B\0727F012.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R012.D			**Vial:**	96
Acqu Date:	07/27/2010 22:22	**Quant Date:**	07/30/2010 15:39	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007595-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.99	4.59	571294	574382m	100.71	99.26			NA
				%Recovery =	NA	NA	Limits =	10-135	
Decachlorobiphenyl	16.16	17.52	461713	573629	93.85	98.40			NA
				%Recovery =	NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	1,051	998.07			
Aroclor 1016 {1}	5.68	5.74	72861	105580m	1,104	1,024			
Aroclor 1016 {2}	5.73	6.90	113994	169221m	1,024	1,009			
Aroclor 1016 {3}	6.25	7.08	229385	144912m	1,032	989.76			
Aroclor 1016 {4}	6.49	7.18	114366	156837m	1,060	982.03			
Aroclor 1016 {5}	7.05	7.46	163441	151899m	1,036	985.65			
Aroclor 1260			0	0	976.35	990.26			
Aroclor 1260 {1}	8.95	10.53	227896	207336m	991.83	1,006			
Aroclor 1260 {2}	9.54	10.87	319789	410138m	903.65	976.88			
Aroclor 1260 {3}	10.31	11.06	351794	220705m	1,001	986.72			
Aroclor 1260 {4}	11.00	11.56	191718	268849m	990.90	999.79			
Aroclor 1260 {5}	11.47	12.30	433984	489088m	994.68	981.93			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F012.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F012.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R012.D
Inj Date : 27-JUL-2010 22:22
Sample Info: 1660 @ 1000ppb | PCB5-620
Misc Info :
Cal Date : 28-JUL-2010 10:23
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

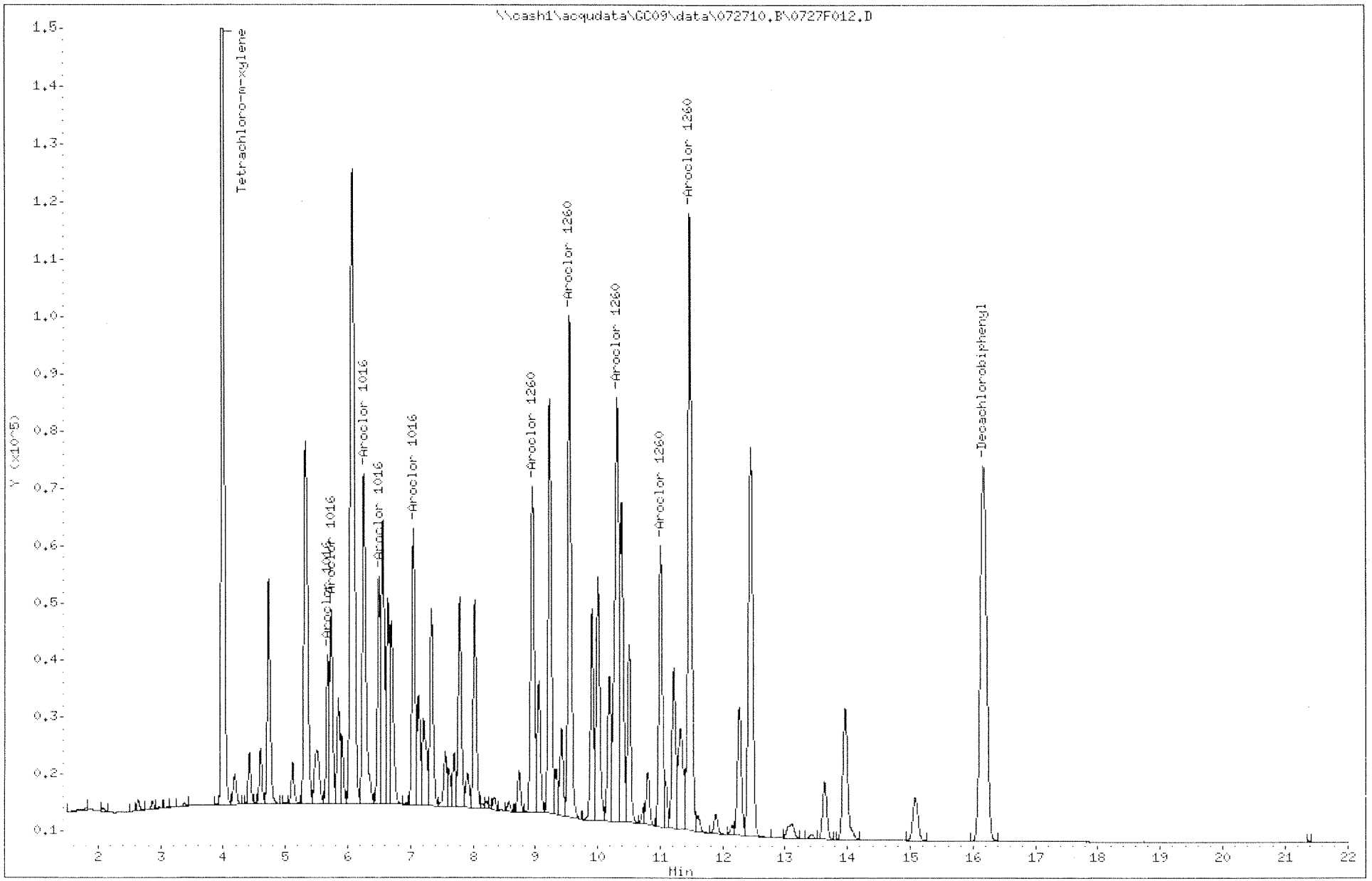
Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.987	4.590	571294	574382	101	99.3		100.00
Aroclor 1016	5.677	5.740	72861	105580	1100	1020	80.00- 120.00	100.00
	5.730	6.903	113994	169221	1020	1010	126.75- 190.13	156.45
	6.253	7.080	229385	144912	1030	990	253.96- 380.94	314.83
	6.493	7.180	114366	156837	1060	982	124.66- 186.99	156.96
	7.047	7.457	163441	151899	1040	986	179.70- 269.55	224.32
			Average of Peak Amounts =		1050	998		
Aroclor 1260	8.950	10.527	227896	207336	992	1000	80.00- 120.00	100.00
	9.543	10.873	319789	410138	904	977	113.30- 169.95	140.32
	10.310	11.060	351794	220705	1000	987	123.35- 185.02	154.37
	11.003	11.560	191718	268849	991	1000	73.88- 110.83	84.13
	11.470	12.300	433984	489088	995	982	150.38- 225.57	190.43
			Average of Peak Amounts =		976	989		
Decachlorobiphenyl	16.163	17.517	461713	573629	93.8	98.4		100.00

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F012.D
Date : 27-JUL-2010 22:22
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

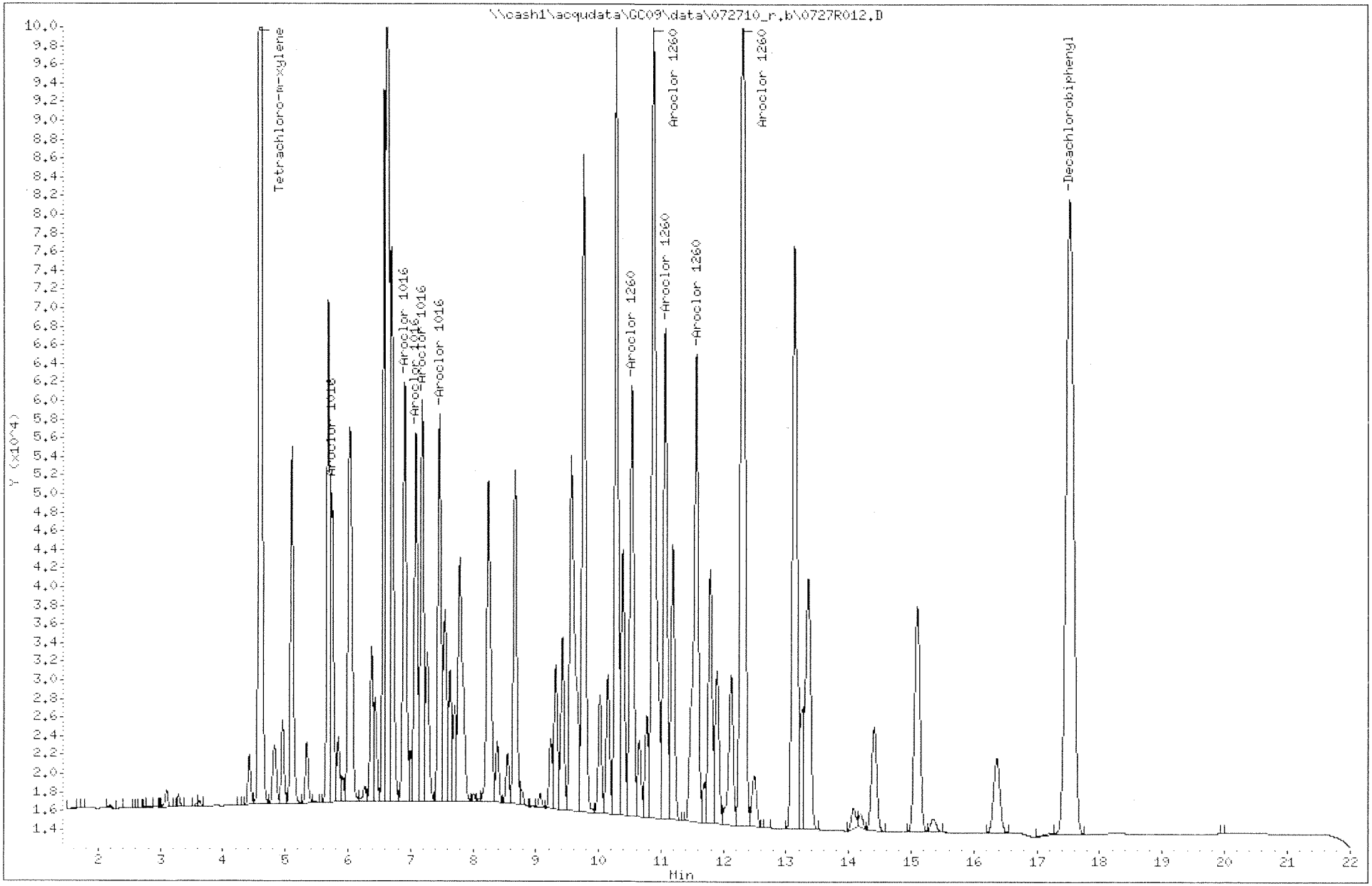
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

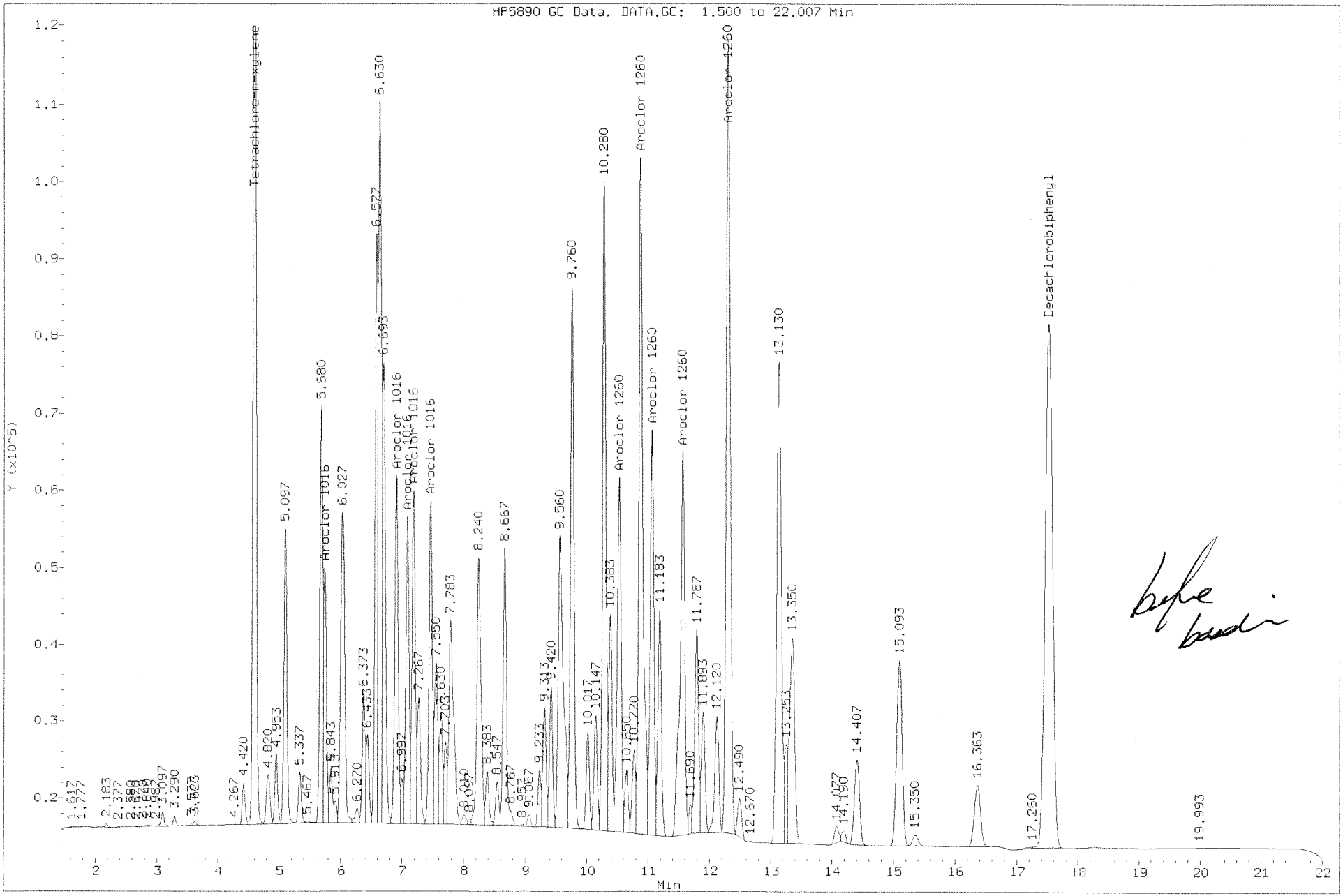


Data File: \\cash1\acqudata\GC09\data\072710_r.b\0727R012.D
Date : 27-JUL-2010 22:22
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-620

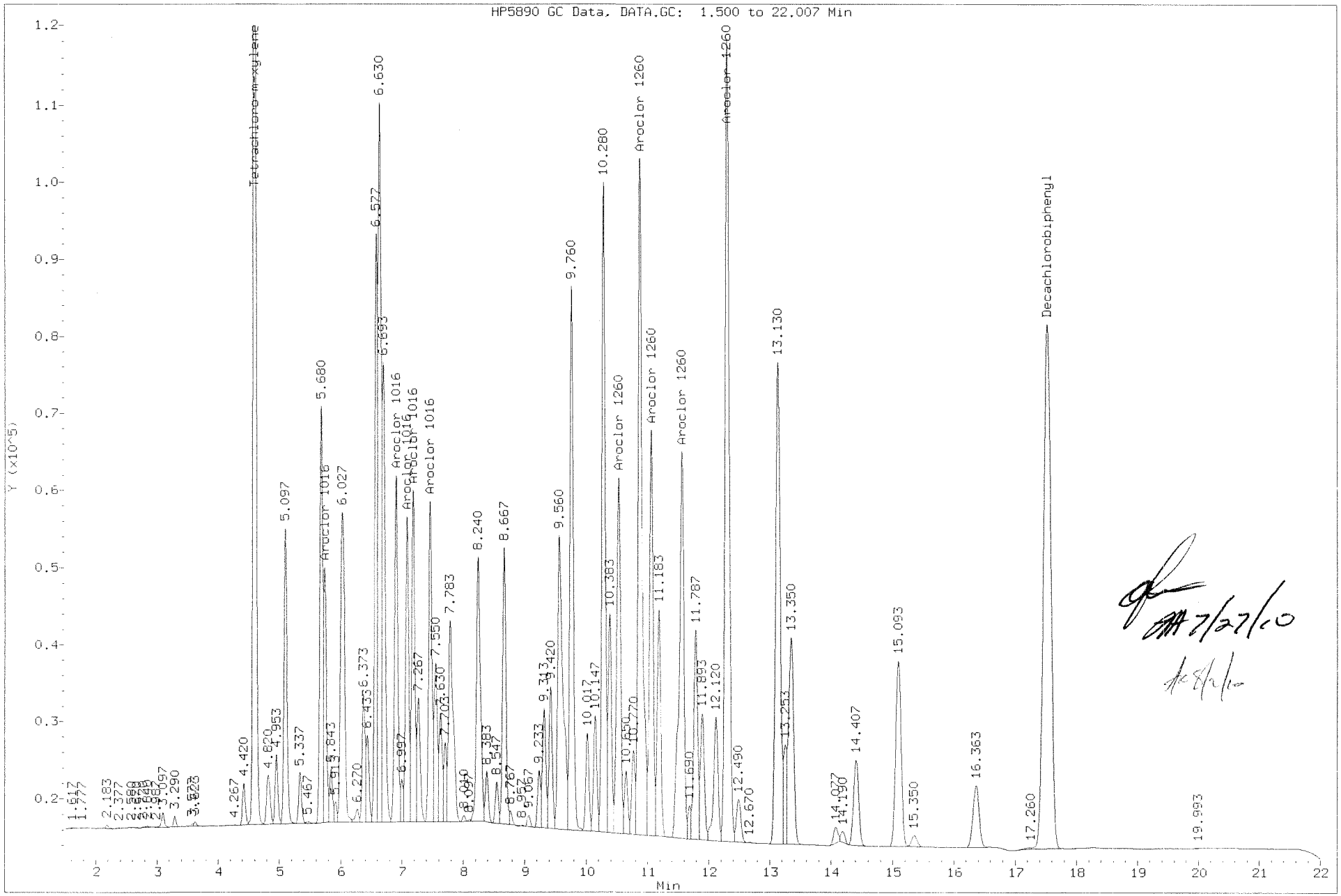
Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072710_r.b\0727R012.D
Injection Date: 27-JUL-2010 22:22
Instrument: GC09.i
Client Sample ID:



Data File: \\Cash1\Acqudata\GC09\data\072710_r.b\0727R012.D
Injection Date: 27-JUL-2010 22:22
Instrument: GC09.i
Client Sample ID:



7/27/10

7/27/10

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG1007137	**Prep Method:**	EPA 3535A	**Prep Date:**	07/07/10 00:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1006867-010	FTS-121 0-2	8082 PCB	WATER	1030mL	2mL	
KWG1007137-1	Lab Control Sample	8082 PCB	WATER	1000mL	2mL	
KWG1007137-2	Duplicate Lab Control Sampl	8082 PCB	WATER	1000mL	2mL	
KWG1007137-3	Method Blank	8082 PCB	WATER	1030mL	2mL	

Lab Code	Parent Lab Code	Comments
KWG1007137-1		KQ1006700-01
KWG1007137-2		KQ1006700-02
KWG1007137-3		KQ1006700-03

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1006867-010	931189					RHolden
KWG1007137-1	931190					RHolden
KWG1007137-2	931191					RHolden
KWG1007137-3	931192					RHolden

Comments:

Started By: SSulliva Assisted By:

Completed By: SSulliva Assisted By:

Training: Yes / No

Yes / No

Reviewed By: Date: 7/22/10 Storage:

Chain of Custody

Relinquished By: Date: 7/20/10

Received By: Date: 7/22/10

Extracts Examined: Yes / No

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114948
Team: Semivoa GC
Analyst: SSullivan
Prep Workflow: OrgExtSPEaq (7)
Prep Method: EPA 3535A
Rush/NPDES: N/A
Status: Prepped
Current Step: Final Volume
Prep Date: 07/07/2010 00:00
Due Date: 07/26/2010

Lab Code	Client ID	Bottle #	Initial Amt	pH Initial	pH Adj 1	Final Volume	TestNo List	Comments
K1006867-010	FTS-121 0-2	.02	1030 mL	N/A	2.5	2 mL	PCB	
KQ1006700-01	Lab Control Sample		1000 mL	N/A	2.5	2 mL	PCB	
KQ1006700-02	Duplicate Lab Control Sample		1000 mL	N/A	2.5	2 mL	PCB	
KQ1006700-03	Method Blank		1030 mL	N/A	2.5	2 mL	PCB	

4 Total Samples consisting of 1 Client Sample, 0 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Witness: RHolden

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	07-JUL-10 00:00	07-JUL-10 00:00	SSullivan		N	
Final Volume	20-JUL-10 00:00	20-JUL-10 00:00	SSullivan		N	

Comments

Review

Reviewed by: _____ Date: 7/20/10

Chain of Custody

Relinquished By: _____ Date: 7/20/10

Received By: _____ Date: 7/22/10

Extracts/Digestions Examined: Yes / No

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114948 **Prep Workflow**: OrgExtSPEaq (7) **Status**: Draft **Prep Date**: 07/07/2010 11:06
Team: Semivoa GC **Prep Method**: EPA 3535A **Current Step**: Extraction **Due Date**: 07/14/2010
Analyst: SJONES **Rush/NPDES**: N/A

Lab Code	Client ID	Bottle #	✓	Initial Amount	pH Initial	pH Adj 1	Inter. Volume	Final Volume	Surr Amt	Spike Amt	TestNo List
K1006867-010	FTS-121 0-2	.02		1030	N/A	2.5	N/A	2mL	100µL	—	PCB
KQ1006700-01	Lab Control Sample			1000	↓	↓	↓	↓	↓	50µL	PCB
KQ1006700-02	Duplicate Lab Control Sample			1000	↓	↓	↓	↓	↓	50µL	PCB
KQ1006700-03	Method Blank			1030	↓	↓	↓	↓	↓	—	PCB

4 Total Samples consisting of 1 Client Sample, 0 Client QC Samples, 3 Batch QC Samples associated with the current Prep Run.

Spiking Solutions **Witness**: 7-7-10

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction	7-7-10	SSullivan		—	NO	
Final Volume		7/20/10	SSullivan	—	NO	

SURR PCB5-60H 2.0ppm XP: 12-28-10 100µL
SPIKE PCB5-57C 40ppm XP: 9-30-10 50µL

Comments

No sample for MS/DMS. LCS/DLCS used.

Additional Prep Information For Pest/PCB Water by 3535

Service Request # K1006867 Work Group # Pest: —

PCB: K1006700

Solvents/Reagents used:

Methanol Lot#: JO8E47 Sulfuric Acid Lot#: 49253

Acetone Lot #: 49281 Hexane Lot #: 50062

C18 extraction cartridge Lot #: JO3N25

Extraction Program # 8081.6 Initial Purge Prog # 8081.4
Between Sample Purge Program# 8081.8

Start (Time/Date/Initial): 12:45 7.7.10 SS

Stop (Time/Date/Initial): 13:30 7.7.10 SS

Dry Disk Lot #: 4810033161

Cleanups:

Sulfuric Acid Clean-up (3665): 7/20/10 SS. (PCB aliquots only) Lot #: 49253

Carbon Clean-up : — ☐ all samples ☐ some samples: — Lot #: —

Florisil Clean-up : — ☐ all samples ☐ some samples: — Lot#: —

Pest Vial: — Vial Storage: —

PCB Vial: GREEN Vial Storage: Mel G7-G10

Comments/Observations:

Bench Sheet Review Check List
☐ Hold Times Met (if no, Reason:)
☐ Prep date, dept, method, product code correct in stealth
☐ Spike Information correct
☐ Weights/Volumes and units correct on raw and final bench sheets
☐ Sample IDs have been checked—Bottle numbers appended if required
☐ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☐ Training has been circled
☐ Extract Storage recorded
☐ Additional Prep Sheet completely filled out (NA or line out Blanks)
☐ All clean-ups have been noted on additional prep sheet
☐ Signed service request with Form V, if applicable, has been attached

Preparation Information

Group ID:	KWG1007334	**Prep Method:**	EPA 3541	**Prep Date:**	07/13/10 00:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1006816-001	OUTSIDE-CB2-062910	8082 PCB	SOIL	10.21g	10mL	
K1006816-002	OUTSIDE-CB3-062910	8082 PCB	SOIL	10.11g	10mL	
K1006816-003	OUTSIDE-CB5-062910	8082 PCB	SOIL	10.51g	10mL	
K1006816-004	DALLAS AVE-062910	8082 PCB	SOIL	10.86g	10mL	
K1006867-001	FTS-21 2-12	8082 PCB	SOIL	13.26g	10mL	
K1006867-002	FTS-22 0-2	8082 PCB	SOIL	11.97g	10mL	
K1006867-003	FTS-23 0-2	8082 PCB	SOIL	12.65g	10mL	
K1006867-004	FTS-24 0-2	8082 PCB	SOIL	13.39g	10mL	
K1006867-005	FTS-25 0-2	8082 PCB	SOIL	11.94g	10mL	
K1006867-006	FTS-26 0-2	8082 PCB	SOIL	12.03g	10mL	
K1006867-007	FTS-27 0-2	8082 PCB	SOIL	10.81g	10mL	
K1006867-008	FTS-28 0-2	8082 PCB	SOIL	11.03g	10mL	
K1006867-009	FTS-101 0-2	8082 PCB	SOIL	12.10g	10mL	
KWG1007334-1	Matrix Spike	8082 PCB	SOIL	13.56g	10mL	
KWG1007334-2	Duplicate Matrix Spike	8082 PCB	SOIL	13.32g	10mL	
KWG1007334-3	Lab Control Sample	8082 PCB	SOIL	10.00g	10mL	
KWG1007334-4	Method Blank	8082 PCB	SOIL	13.56g	10mL	

Lab Code	Parent Lab Code	Comments
KWG1007334-1	K1006867-001	KQ1006734-01
KWG1007334-2	K1006867-001	KQ1006734-02
KWG1007334-3		KQ1006734-03
KWG1007334-4		KQ1006734-04

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1006816-001	933053					SHeflin
K1006816-002	933054					SHeflin
K1006816-003	933055					SHeflin
K1006816-004	933056					SHeflin
K1006867-001	933057					SHeflin
K1006867-002	933058					SHeflin
K1006867-003	933059					SHeflin
K1006867-004	933060					SHeflin
K1006867-005	933061					SHeflin
K1006867-006	933062					SHeflin

Comments:

Started By: DWood Assisted By: Training: Yes / No

Completed By: DWood Assisted By: Yes / No

Reviewed By: [signature] Date: 7/26/10 Storage: Calvin D1-E7

Chain of Custody

Relinquished By: [signature] Date: 7-26-10

Received By: [signature] Date: 7/26/10 Extracts Examined: Yes / No

Group ID:	KWG1007334	**Prep Method:**	EPA 3541	**Prep Date:**	07/13/10 00:00
Department:	Semivoa GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1006867-007	933063					SHeflin
K1006867-008	933064					SHeflin
K1006867-009	933065					SHeflin
KWG1007334-1	933066					SHeflin
KWG1007334-2	933067					SHeflin
KWG1007334-3	933068					SHeflin
KWG1007334-4	933069					SHeflin

Comments:

Started By: DWood Assisted By: Training

Completed By: DWood Assisted By: Yes No

Reviewed By: Date: 7/26/10 Storage: Yes No

Chain of Custody

Relinquished By: Date: 7-26-10

Received By: Date: 7/26/10 Extracts Examined: Yes No

Columbia Analytical Services

Preparation Information Benchsheet

Prep Run: 114990 **Prep Workflow:** OrgExtS (14) **Status:** Prepped **Prep Date:** 07/13/2010 00:00
Team: Semivoa GC **Prep Method:** EPA 3541 **Current Step:** Final Volume **Due Date:** 07/12/2010
Analyst: DWood **Rush/NPDES:** NPDES

Lab Code	Client ID	Bottle #	Target Amt	Initial Amt	Final Volume	TestNo List	Comments
K1006816-001	OUTSIDE-CB2-062910	.01	10.06 g	10.21 g	10 mL	PCB	
K1006816-002	OUTSIDE-CB3-062910	.01	10.09 g	10.11 g	10 mL	PCB	
K1006816-003	OUTSIDE-CB5-062910	.01	10.07 g	10.51 g	10 mL	PCB	
K1006816-004	DALLAS AVE-062910	.01	10.19 g	10.86 g	10 mL	PCB	
K1006867-001	FTS-21 2-12	.01	12.92 g	13.26 g	10 mL	PCB	
K1006867-002	FTS-22 0-2	.01	11.90 g	11.97 g	10 mL	PCB	
K1006867-003	FTS-23 0-2	.01	12.20 g	12.65 g	10 mL	PCB	
K1006867-004	FTS-24 0-2	.01	13.00 g	13.39 g	10 mL	PCB	
K1006867-005	FTS-25 0-2	.01	11.90 g	11.94 g	10 mL	PCB	
K1006867-006	FTS-26 0-2	.01	11.27 g	12.03 g	10 mL	PCB	
K1006867-007	FTS-27 0-2	.01	10.46 g	10.81 g	10 mL	PCB	
K1006867-008	FTS-28 0-2	.01	10.98 g	11.03 g	10 mL	PCB	
K1006867-009	FTS-101 0-2	.01	11.35 g	12.10 g	10 mL	PCB	
K1006867-001: KQ1006734-01	Matrix Spike	.01	10.00 g	13.56 g	10 mL	PCB	
K1006867-001: KQ1006734-02	Duplicate Matrix Spike	.01	10.00 g	13.32 g	10 mL	PCB	
KQ1006734-03	Lab Control Sample		10.00 g	10.00 g	10 mL	PCB	
KQ1006734-04	Method Blank		10.00 g	13.56 g	10 mL	PCB	

17 Total Samples consisting of 13 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions **Witness:** SHeflin

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments

Extraction	00:00	00:00	DWood	N
Final Volume	26-JUL-10 00:00	26-JUL-10 00:00	DWood	N

Comments

Review

Reviewed by: _____ Date: 7/26/10

Chain of Custody

Relinquished By: Debra Wood Date: 7.26.10

Received By: _____ Date: 7/26/10

~~Extracts~~/Digestions Examined

Yes No

Columbia Analytical Services

Preparation Information Benchsheet

7-13-10

Prep Run: 114990 **Prep Workflow:** OrgExtS (14) **Status:** Draft **Prep Date:** 07/08/2010 03:46

Team: Semivoa GC **Prep Method:** EPA 3541 **Current Step:** Extraction **Due Date:** 07/07/2010

Analyst: DWOOD **Rush/NPDES:** NPDES

Lab Code	Client ID	Bottle #	✓	Target Amt	Initial Amount	Inter. Volume	Final Volume	Surr Amt	Spike Amt	TestNo List
K1006816-001	OUTSIDE-CB2-062910	.01	✓	10.06 g	10.21	NA	10mL	500ul	NA	PCB
K1006816-002	OUTSIDE-CB3-062910	.01	✓	10.09 g	10.11					PCB
K1006816-003	OUTSIDE-CB5-062910	.01	✓	10.07 g	10.51					PCB
K1006816-004	DALLAS AVE-062910	.01	✓	10.19 g	10.86					PCB
K1006867-001	FTS-21 2-12	.01	✓	10.00 g	13.26					PCB
K1006867-002	FTS-22 0-2	.01	✓	10.00 g	11.97					PCB
K1006867-003	FTS-23 0-2	.01	✓	10.00 g	12.65					PCB
K1006867-004	FTS-24 0-2	.01	✓	10.00 g	13.39					PCB
K1006867-005	FTS-25 0-2	.01	✓	10.00 g	11.94					PCB
K1006867-006	FTS-26 0-2	.01	✓	10.00 g	12.03					PCB
K1006867-007	FTS-27 0-2	.01	✓	10.00 g	10.81					PCB
K1006867-008	FTS-28 0-2	.01	✓	10.00 g	11.03					PCB
K1006867-009	FTS-101 0-2	.01	✓	10.00 g	12.10					PCB
K1006867-001: KQ1006734-01	Matrix Spike	.01	✓	10.00 g	13.56				250ul	PCB
K1006867-001: KQ1006734-02	Duplicate Matrix Spike	.01	✓	10.00 g	13.32					PCB
KQ1006734-03	Lab Control Sample			10.00 g	10.00					PCB
KQ1006734-04	Method Blank			10.00 g	13.56				NA	PCB

17 Total Samples consisting of 13 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions **Witness:** SH

PCB5-60H 2.0ppm 500ul exp 12.28.10

PCB5-57C 40ug/mL 250ul exp 9.30.10

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Extraction						
Final Volume						

Comments

Additional Prep Information for Pest/PCB in Soil by EPA 3541

Service Request # K1006816|68867 **Work Group # Pest:** _____

PCB: KQ1006734

Extraction (3541):

Sulfate Lot # A0099137-006 Matrix Sand Lot # 6-4-10

DCM Lot # DB747

Soxtherm Start (Time/Date/Initial): 0315|7-13-10|DW

Soxtherm Stop (Time/Date/Initial): 0700|7-13-10|DW

Clean-ups:

GPC Clean-up (3640): _____ (Initial/Date)

Solvent Exchanged To Hexane (Initial/Date): 7-19-10 DW S-Evap Temp: NA

Hexane Lot # 49243 N-Evap Temp: 30° DW

Carbon Clean-up: NA 4:1 Hexane/DCM Lot # _____

Florisil Clean-up (3620): NA Florisil Lot # _____

1:1 Hexane/Acetone Lot # _____ 9:1 Hexane/Acetone Lot # _____

Sulfuric Acid Clean-up (3665): 7-26-10 DW Sulfuric Acid Lot # 49253

Sulfur Clean-up (3660M): NA Mercury Lot # _____

Pesticide Vials: NA Vial Storage: _____

PCB Vials: Green Vial Storage: _____

Archived Extract Storage: _____

Comments/Observations: _____

Bench Sheet Review Check List
☐ Hold Times Met (if no, Reason: _____)
☐ Prep date, dept, method, product code correct in stealth
☐ Spike Information correct
☐ Weights/Volumes and units correct on raw and final bench sheets
☐ Sample IDs have been checked—Bottle numbers appended if required
☐ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☐ Training has been circled
☐ Extract Storage recorded
☐ Additional Prep Sheet completely filled out (NA or line out Blanks)
☐ All clean-ups have been noted on additional prep sheet
☐ Signed service request with Form V, if applicable, has been attached

SVG Dilution Log

LAB ID	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	EXTRACTION DATE	COMMENTS
K6816-1	100ml	1000ml	10X	7/27/10	[illegible]		Target
K6867-2	100ml		10X				
-4	200ml		5X				
-6	100ml		10X				
-8	100ml		10X				
-9	100ml		10X				

Sequence Name: D:\GC09\SEQUENCE\072110A.S
Comment: PCB Aroclors by EPA 8082
Operator: LHarris
Data Path: D:\GC09\DATA\072110A.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

ICAL 9609

Analysis lot KWG1007212

Run # 209444

Line	Type	Vial	DataFile	Method	Sample Name
1	DeleteGC				
2	MaskName	-	----r---		
3	IB	1	0721F015	PCB_REG	IB
4	IB	2	0721F016	PCB_REG	IB
5	CCV	96	0721F017	PCB_REG	1660 @ 1000ppb | PCB5-620
6	SMPL	3	0721F018	PCB_REG	K1007526-001
7	SMPL	4	0721F019	PCB_REG	K1007526-002
8	SMPL	5	0721F020	PCB_REG	K1007526-003
9	SMPL	6	0721F021	PCB_REG	K1007526-004
10	SMPL	7	0721F022	PCB_REG	K1007526-005
11	SMPL	8	0721F023	PCB_REG	K1007526-006
12	SMPL	9	0721F024	PCB_REG	K1006601-010 @10X
13	MB	10	0721F025	PCB_REG	KWG1007137-3 | MB | 8082 PCB | WATER
14	LCS	11	0721F026	PCB_REG	KWG1007137-1 | LCS | 8082 PCB | WATER
15	DLCS	12	0721F027	PCB_REG	KWG1007137-2 | DLCS | 8082 PCB | WATE
16	SMPL	13	0721F028	PCB_REG	K1006867-010
17	IB	1	0721F029	PCB_REG	IB
18	IB	2	0721F030	PCB_REG	IB
19	CCV	96	0721F031	PCB_REG	1660 @ 1000ppb | PCB5-620

K, OK

5 SMPL 3 0721F018 PCB_REG K1007526-001 need 10X

6 SMPL 4 0721F019 PCB_REG K1007526-002

7 SMPL 5 0721F020 PCB_REG K1007526-003

8 SMPL 6 0721F021 PCB_REG K1007526-004 need 10X

9 SMPL 7 0721F022 PCB_REG K1007526-005 carryover, need RR

10 SMPL 8 0721F023 PCB_REG K1007526-006 carryover, need RR

11 SMPL 9 0721F024 PCB_REG K1006601-010 @10X

12 MB 10 0721F025 PCB_REG KWG1007137-3 | MB | 8082 PCB | WATER

13 LCS 11 0721F026 PCB_REG KWG1007137-1 | LCS | 8082 PCB | WATER

14 DLCS 12 0721F027 PCB_REG KWG1007137-2 | DLCS | 8082 PCB | WATE

15 SMPL 13 0721F028 PCB_REG K1006867-010

16 IB 1 0721F029 PCB_REG IB

17 IB 2 0721F030 PCB_REG IB

18 CCV 96 0721F031 PCB_REG 1660 @ 1000ppb | PCB5-620

, OK

Last Modified: Wed Jul 21 18:35:08 2010 Page: 1

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F016.D
Lab ID: KWG1007212-1
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/21/2010 18:56
Date Quantitated: 07/22/2010 09:56
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
CAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R016.D
Lab ID: KWG1007212-1
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/21/2010 18:56
Date Quantitated: 07/22/2010 09:58
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

nted: 07/22/2010 10:19:29
tealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/22/2010

Analysis Lot:	KWG1007212	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ1043
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F016.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R016.D			**Vial:**	2
Acqu Date:	07/21/2010 18:56	**Quant Date:**	07/22/2010 09:56	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007212-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	10-135	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1221 {4}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0	0	0.0000	0.0000			

: Undetected at or above MDL
Analyte detected above MDL, but below MRL
: Hit above MRL also found in Method Blank
: Analyte concentration above high point of ICAL
: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072110A.B\0721F016.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R016.D			**Vial:**	2
Acqu Date:	07/21/2010 18:56	**Quant Date:**	07/22/2010 09:56	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007212-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

Undetected at or above MDL
Analyte detected above MDL, but below MRL
Hit above MRL also found in Method Blank
Analyte concentration above high point of ICAL
Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F016.D
Report Date: 22-Jul-2010 09:56

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F016.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R016.D
Inj Date : 21-JUL-2010 18:56
Sample Info: IB
Misc Info : SEMIVOA GC\W1007121\1-IB.H
Cal Date : 21-JUL-2010 13:13
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

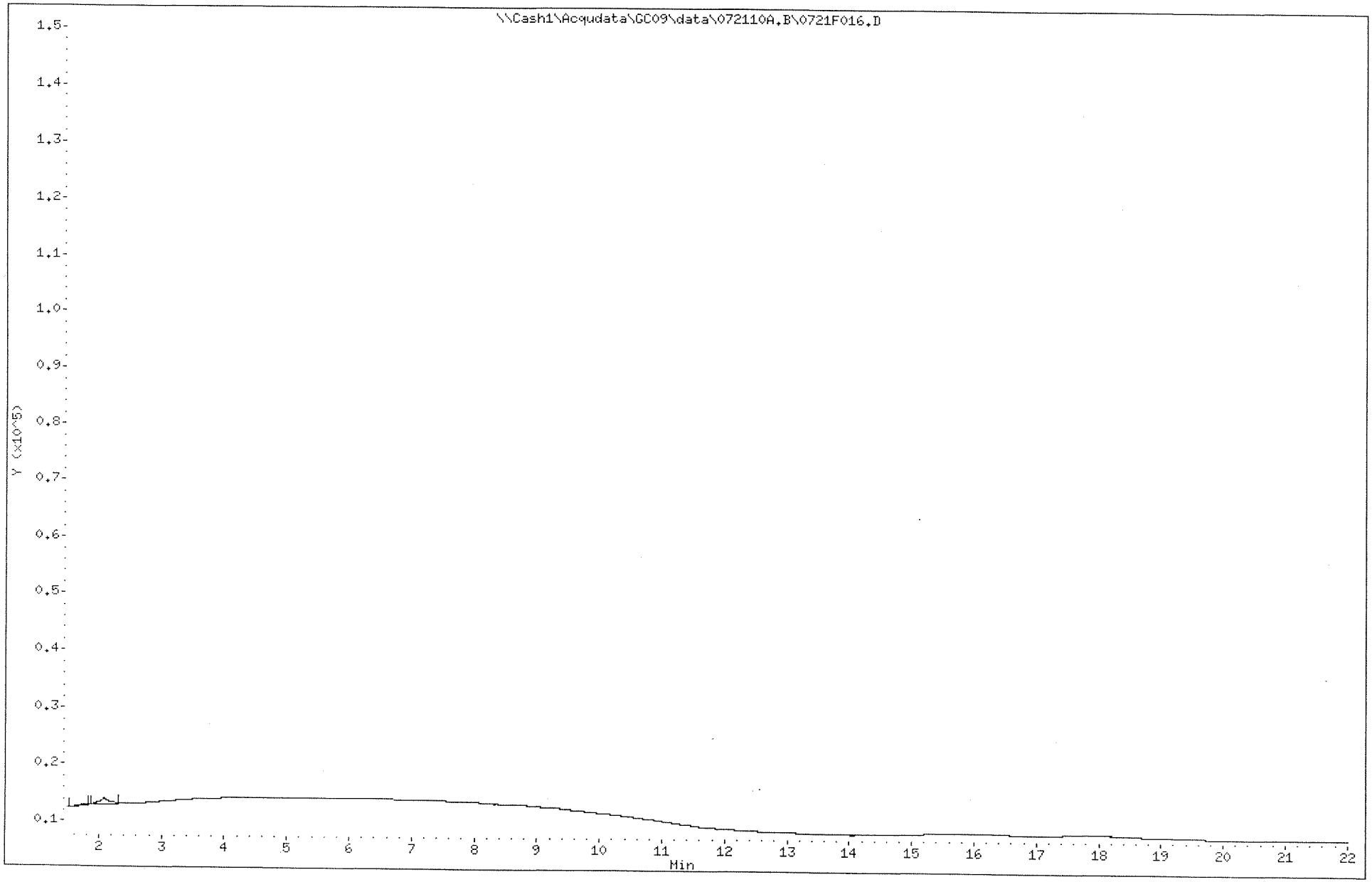
Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F016.D
Date : 21-JUL-2010 18:56
Client ID:
Sample Info: IB

Instrument: GC09.i

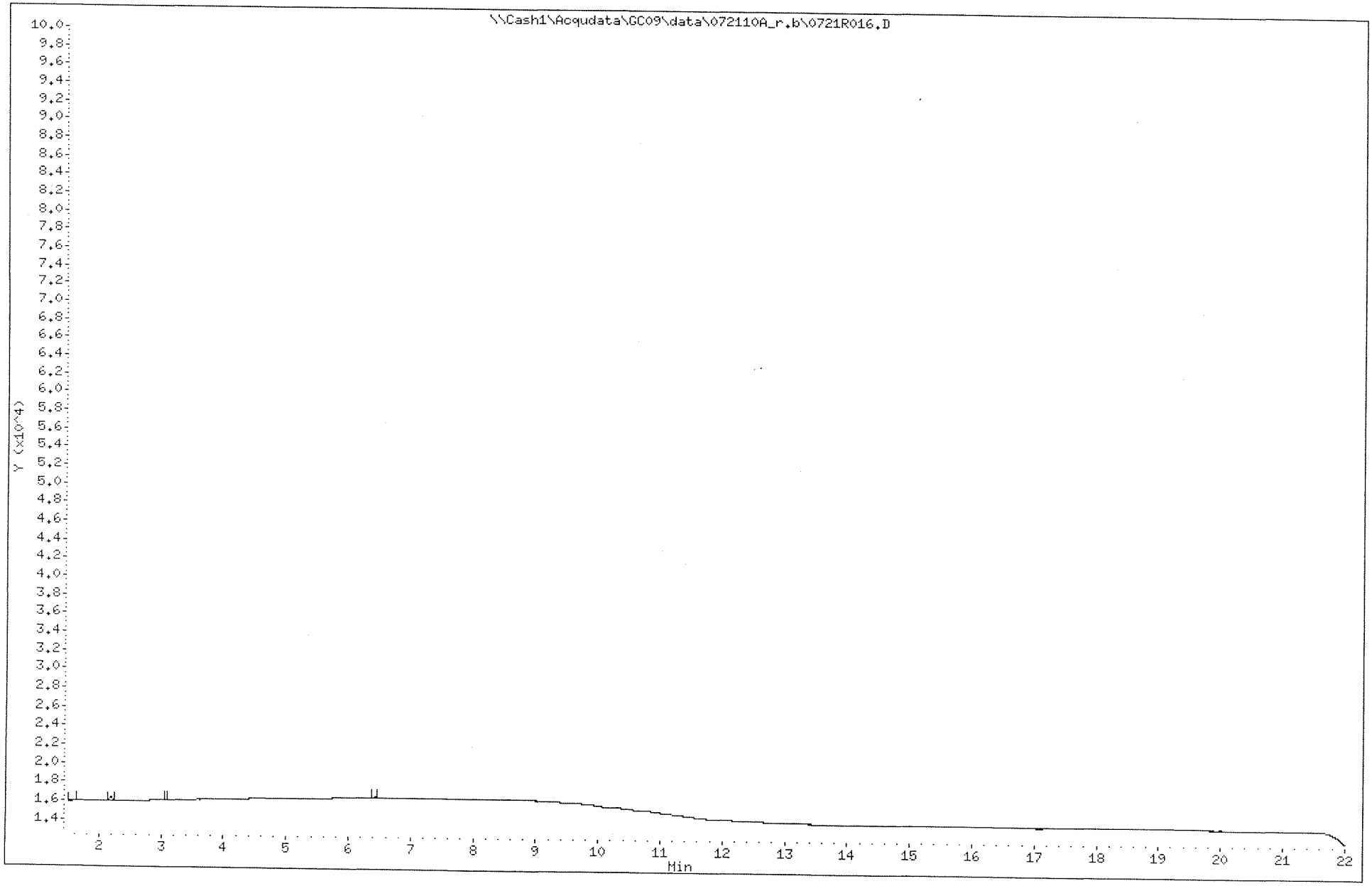
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R016.D
Date : 21-JUL-2010 18:56
Client ID:
Sample Info: IB

Instrument: GC09.i

Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A.B\0721F030.D
Lab ID: KWG1007212-3
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/22/2010 01:08
Date Quantitated: 07/22/2010 09:57
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072110A_R.B\0721R030.D
Lab ID: KWG1007212-3
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/22/2010 01:08
Date Quantitated: 07/22/2010 09:59
Batch ID: KWG1007212
Analysis Method: 8082
MethodJoinID: MJ1043

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
CAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/22/2010

Analysis Lot:	KWG1007212	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072110A.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ1043
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072110A.B\0721F030.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R030.D			**Vial:**	2
Acqu Date:	07/22/2010 01:08	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007212-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00	4.51	0	1269		0.2190			NA
			%Recovery =		NA	NA	**Limits =**	10-135	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	**Limits =**	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1221 {4}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
P: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072110A.B\0721F030.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072110A_r.b\0721R030.D			**Vial:**	2
Acqu Date:	07/22/2010 01:08	**Quant Date:**	07/22/2010 09:57	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007212-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0d	0.0000	0.0000			
Aroclor 1254 {2}			0	0d	0.0000	0.0000			
Aroclor 1254 {3}			0	0d	0.0000	0.0000			
Aroclor 1254 {4}			0	0d	0.0000	0.0000			
Aroclor 1254 {5}			0	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

J: Undetected at or above MDL
I: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F030.D
Report Date: 22-Jul-2010 09:57

Columbia Analytical Services

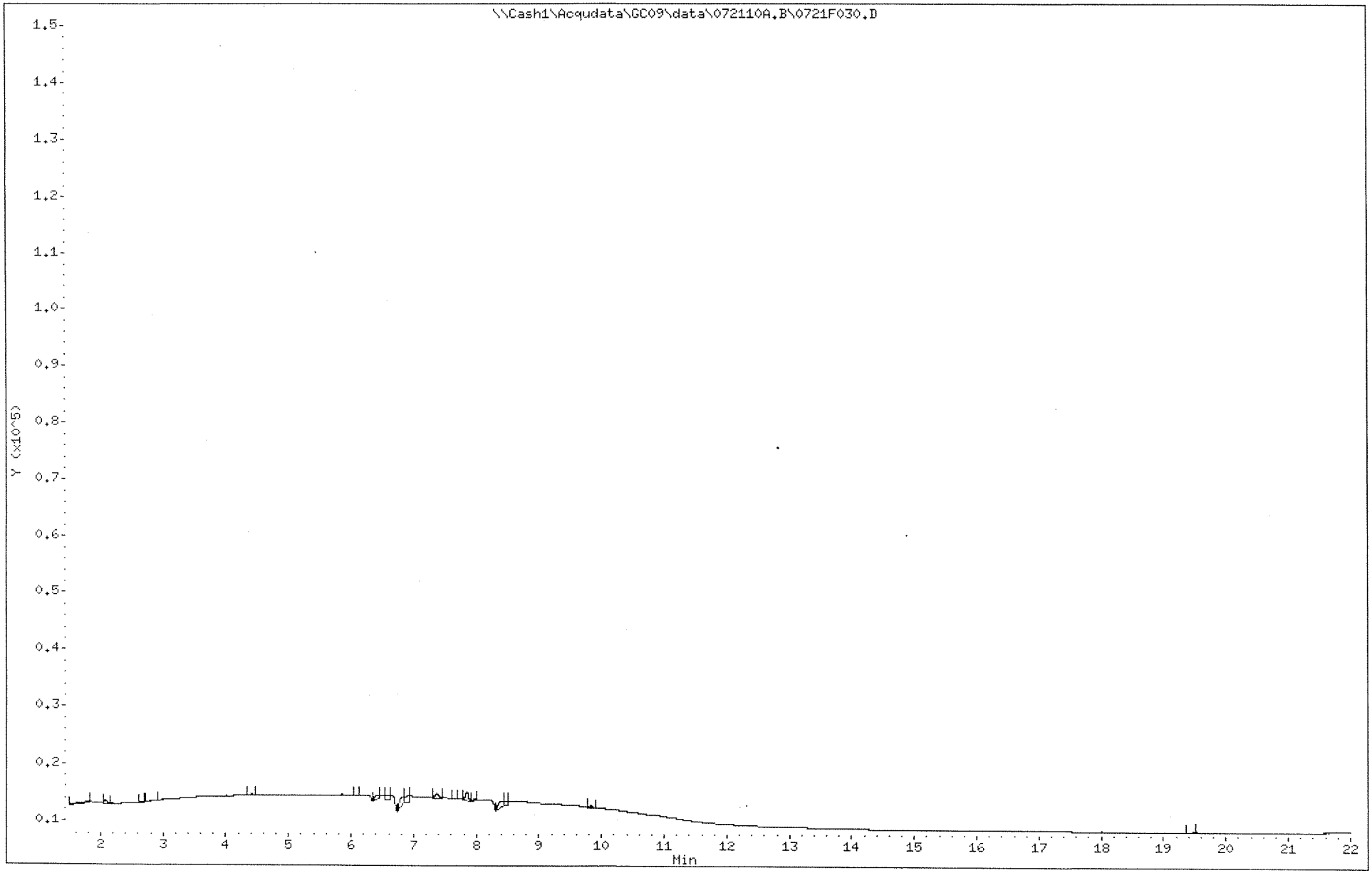
Sample #1 : \\Cash1\Acqudata\GC09\data\072110A.B\0721F030.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R030.D
Inj Date : 22-JUL-2010 01:08
Sample Info: IB
Misc Info : SEMIVOA GC\W1007121\1-IB.H
Cal Date : 22-JUL-2010 08:50
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072110A.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072110A_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	0.000	4.513	0	1269	0.000	0.219		

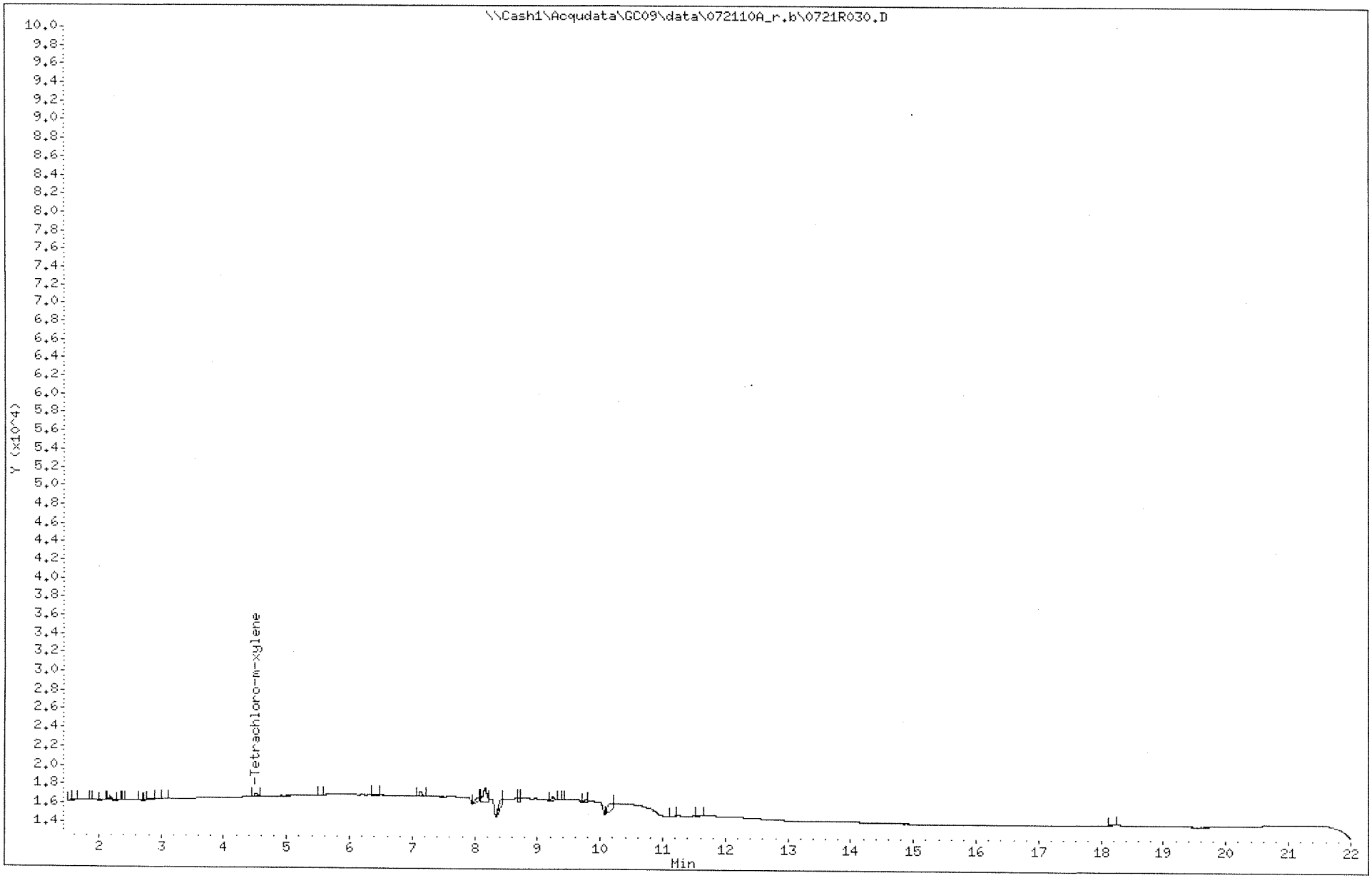
Data File: \\Cash1\Acqudata\GC09\data\072110A.B\0721F030.D
Date : 22-JUL-2010 01:08
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072110A_r.b\0721R030.D
Date : 22-JUL-2010 01:08
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Sequence Name: D:\GC09\SEQUENCE\072610.S
Comment: PCB Aroclors by EPA 8082
Operator: LHarris
Data Path: D:\GC09\DATA\072610.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

ICAL 9609

Run # 210045
Analytic lot KWG1007403

Line	Type	Vial	DataFile	Method	Sample Name
1	DeleteGC				
2	MaskName - ----r---				
3	IB	2	0726F001	PCB_REG	IB
4	CCV	96	0726F002	PCB_REG	1660 @ 1000ppb | PCB5-620
5	IB	2	0726F003	PCB_REG	IB
6	SMPL	3	0726F004	PCB_REG	K1007543-001
7	MS	4	0726F005	PCB_REG	K1007543-001 MS
8	DMS	5	0726F006	PCB_REG	K1007543-001 DMS
9	SMPL	6	0726F007	PCB_REG	K1007543-002 @10X
10	SMPL	7	0726F008	PCB_REG	K1007543-003 @10X-NR
11	SMPL	8	0726F009	PCB_REG	K1007543-004
12	SMPL	9	0726F010	PCB_REG	K1007543-005 @10X-NR
13	SMPL	10	0726F011	PCB_REG	K1007543-006 @10X-NR
14	SMPL	11	0726F012	PCB_REG	K1007543-007 @10X
15	SMPL	12	0726F013	PCB_REG	K1007543-008
16	SMPL	13	0726F014	PCB_REG	K1007543-009 @10X-
17	SMPL	14	0726F015	PCB_REG	K1007543-010 @10X
18	CCV	96	0726F016	PCB_REG	1660 @ 1000ppb | PCB5-620
19	IB	2	0726F017	PCB_REG	IB
20	SMPL	15	0726F018	PCB_REG	K1007543-011 @10X
21	SMPL	16	0726F019	PCB_REG	K1007543-012 @10X-NR, need 100X
22	SMPL	17	0726F020	PCB_REG	K1007543-013 @10X-NR
23	SMPL	18	0726F021	PCB_REG	K1007543-014 @10X-
24	SMPL	21	0726F022	PCB_REG	K1007543-002-NR
25	SMPL	22	0726F023	PCB_REG	K1007543-003
26	SMPL	23	0726F024	PCB_REG	K1007543-005
27	SMPL	24	0726F025	PCB_REG	K1007543-006-
28	SMPL	25	0726F026	PCB_REG	K1007543-007-NR
29	LCS	19	0726F027	PCB_REG	KWG1007238-3 | LCS | 8082 PCB | SOIL
30	MB	20	0726F028	PCB_REG	KWG1007238-4 | MB | 8082 PCB | SOIL
31	CCV	97	0726F029	PCB_REG	1660 @ 1000ppb | PCB5-620
32	IB	2	0726F030	PCB_REG	IB
33	SMPL	26	0726F031	PCB_REG	K1007543-009
34	SMPL	27	0726F032	PCB_REG	K1007543-010-NR
35	SMPL	28	0726F033	PCB_REG	K1007543-011-NR
36	SMPL	29	0726F034	PCB_REG	K1007543-012-NR, need 100 K
37	SMPL	30	0726F035	PCB_REG	K1007543-013
38	SMPL	31	0726F036	PCB_REG	K1007543-014
39	CCV	97	0726F037	PCB_REG	1660 @ 1000ppb | PCB5-620
40	IB	2	0726F038	PCB_REG	IB
41	MB	32	0726F039	PCB_REG	KWG1007334-4 | MB | 8082 PCB | SOIL
42	LCS	33	0726F040	PCB_REG	KWG1007334-3 | LCS | 8082 PCB | SOIL
43	SMPL	34	0726F041	PCB_REG	K1006816-001-NR, need 10X

OK, OK
OK, OK
K, OK
K, OK

Last Modified: Tue Jul 27 10:33:22 2010 Page: 1

Sequence Name: D:\GC09\SEQUENCE\072610.S

Line	Type	Vial	DataFile	Method	Sample Name
44	SMPL	35	0726F042	PCB_REG	K1006816-002
45	SMPL	36	0726F043	PCB_REG	K1006816-003
46	SMPL	37	0726F044	PCB_REG	K1006816-004
47	SMPL	38	0726F045	PCB_REG	K1006867-001
48	MS	39	0726F046	PCB_REG	K1006867-001 MS
49	DMS	40	0726F047	PCB_REG	K1006867-001 DMS
50	SMPL	41	0726F048	PCB_REG	K1006867-002 - NR, need 10X
51	IB	1	0726F049	PCB_REG	IB
52	IB	2	0726F050	PCB_REG	IB
53	CCV	98	0726F051	PCB_REG	1660 @ 1000ppb | PCB5-620
54	SMPL	42	0726F052	PCB_REG	K1006867-003
55	SMPL	43	0726F053	PCB_REG	K1006867-004 - NR, need 5X
56	SMPL	44	0726F054	PCB_REG	K1006867-005
57	CCV	98	0726F055	PCB_REG	1660 @ 1000ppb | PCB5-620
58	IB	2	0726F056	PCB_REG	IB
59	SMPL	100	0726F057	PCB_REG	K1007543-012 @100X
60	CCV	98	0726F058	PCB_REG	1660 @ 1000ppb | PCB5-620
61	IB	2	0726F059	PCB_REG	IB
62	SMPL	45	0726F060	PCB_REG	K1006867-006 - NR, need 10X
63	SMPL	46	0726F061	PCB_REG	K1006867-007
64	SMPL	47	0726F062	PCB_REG	K1006867-008 - NR, need 10X
65	SMPL	48	0726F063	PCB_REG	K1006867-009 - NR, need 10X
66	IB	1	0726F064	PCB_REG	IB
67	IB	2	0726F065	PCB_REG	IB
68	CCV	98	0726F066	PCB_REG	1660 @ 1000ppb | PCB5-620

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F038.D
Lab ID: KWG1007403-8
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 03:06
Date Quantitated: 07/27/2010 11:43
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R038.D
Lab ID: KWG1007403-8
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 03:06
Date Quantitated: 07/27/2010 11:46
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ773
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F038.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R038.D			**Vial:**	2
Acqu Date:	07/27/2010 03:06	**Quant Date:**	07/27/2010 11:43	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-8				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	60-125	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0d	0.0000	0.0000			
Aroclor 1016 {2}			0	0d	0.0000	0.0000			
Aroclor 1016 {3}			0	0d	0.0000	0.0000			
Aroclor 1016 {4}			0	0d	0.0000	0.0000			
Aroclor 1016 {5}			0	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0d	0.0000	0.0000			
Aroclor 1221 {2}			0	0d	0.0000	0.0000			
Aroclor 1221 {3}			0	0d	0.0000	0.0000			
Aroclor 1221 {4}			0	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0	0.0000	0.0000			
Aroclor 1232 {2}			0d	0	0.0000	0.0000			
Aroclor 1232 {3}			0d	0	0.0000	0.0000			
Aroclor 1232 {4}			0d	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F038.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R038.D			**Vial:**	2
Acqu Date:	07/27/2010 03:06	**Quant Date:**	07/27/2010 11:43	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-8				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0d	0.0000	0.0000			
Aroclor 1254 {2}			0d	0d	0.0000	0.0000			
Aroclor 1254 {3}			0d	0d	0.0000	0.0000			
Aroclor 1254 {4}			0d	0d	0.0000	0.0000			
Aroclor 1254 {5}			0d	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0d	0	0.0000	0.0000			
Aroclor 1260 {2}			0d	0	0.0000	0.0000			
Aroclor 1260 {3}			0d	0	0.0000	0.0000			
Aroclor 1260 {4}			0d	0	0.0000	0.0000			
Aroclor 1260 {5}			0d	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0	0.0000	0.0000			
Aroclor 1262 {2}			0d	0	0.0000	0.0000			
Aroclor 1262 {3}			0d	0	0.0000	0.0000			
Aroclor 1262 {4}			0d	0	0.0000	0.0000			
Aroclor 1262 {5}			0d	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F038.D
Report Date: 27-Jul-2010 11:43

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F038.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R038.D
Inj Date : 27-JUL-2010 03:06
Sample Info: IB
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

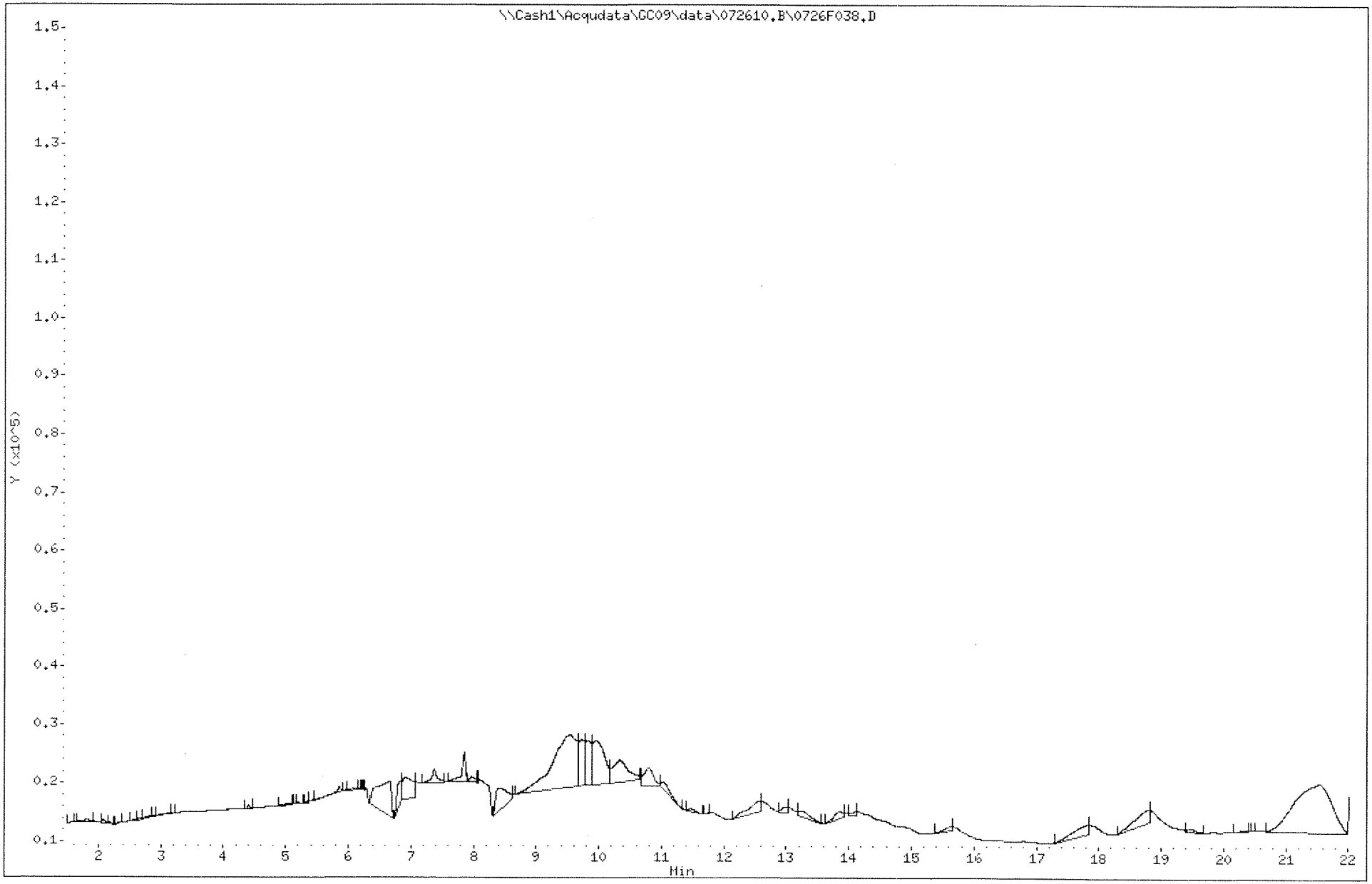
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\Cash1\Acqudata\GC09\data\072610,B\0726F038.D
Date : 27-JUL-2010 03:06
Client ID:
Sample Info: IB

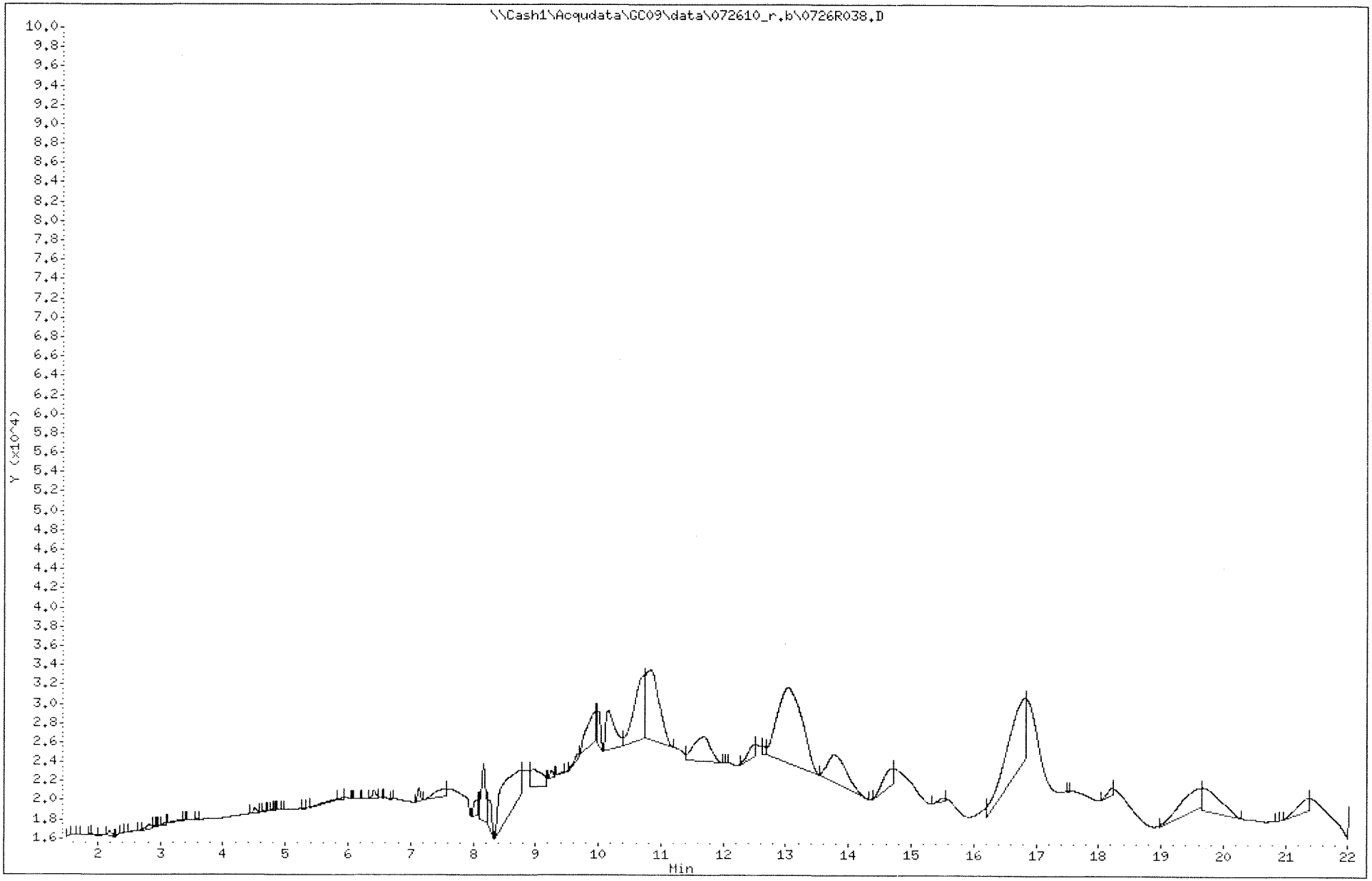
Instrument: GC09,i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R038.D
Date : 27-JUL-2010 03:06
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F050.D
Lab ID: KWG1007403-10
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 08:25
Date Quantitated: 07/27/2010 15:52
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R050.D
Lab ID: KWG1007403-10
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 08:25
Date Quantitated: 07/27/2010 15:54
Batch ID: KWG1007403
Analysis Method: 8082
ListJoinID: LJ9899

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 7/28/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F050.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R050.D			**Vial:**	2
Acqu Date:	07/27/2010 08:25	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-10				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0	0.0000	0.0000			
Aroclor 1221 {2}			0	0	0.0000	0.0000			
Aroclor 1221 {3}			0	0	0.0000	0.0000			
Aroclor 1221 {4}			0	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F050.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R050.D			**Vial:**	2
Acqu Date:	07/27/2010 08:25	**Quant Date:**	07/27/2010 15:52	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-10				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0	0	0.0000	0.0000			
Aroclor 1242 {3}			0	0	0.0000	0.0000			
Aroclor 1242 {4}			0	0	0.0000	0.0000			
Aroclor 1242 {5}			0	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F050.D
Report Date: 27-Jul-2010 15:52

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F050.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R050.D
Inj Date : 27-JUL-2010 08:25
Sample Info: IB
Misc Info :
Cal Date : 27-JUL-2010 09:01
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

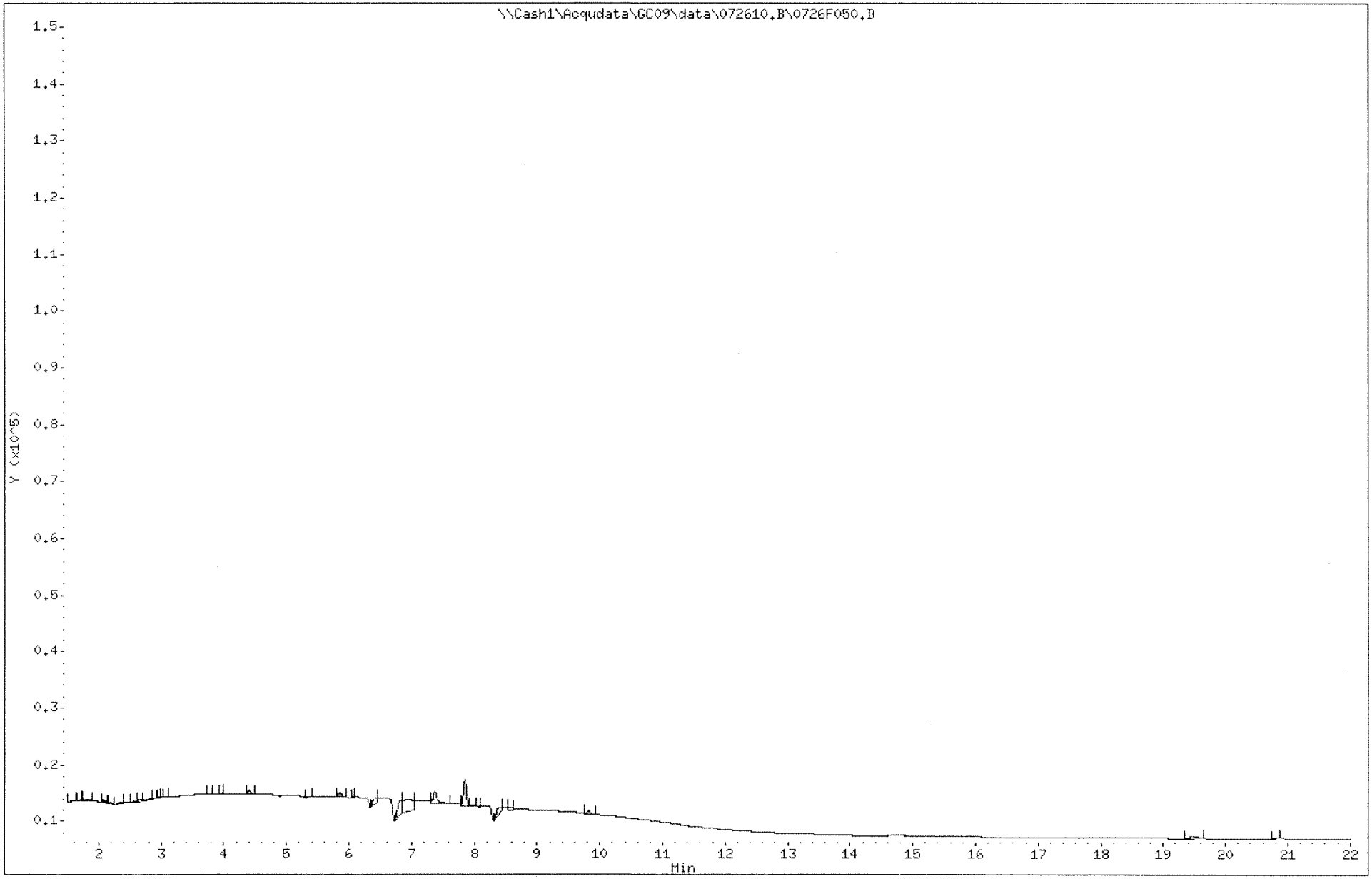
Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F050.D
Date : 27-JUL-2010 08:25
Client ID:
Sample Info: IB

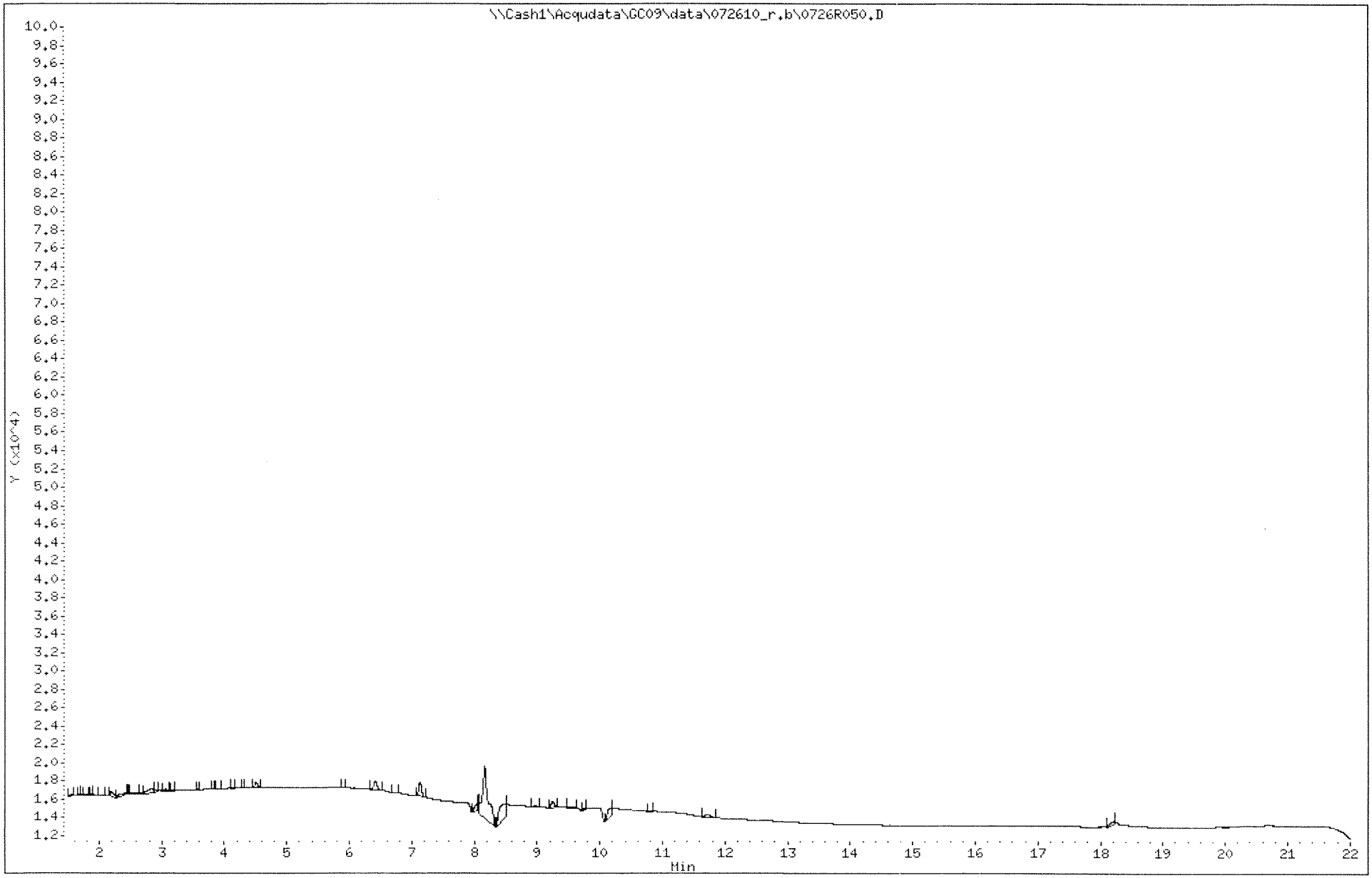
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R050.D
Date : 27-JUL-2010 08:25
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F056.D
Lab ID: KWG1007403-12
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 11:04
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R056.D
Lab ID: KWG1007403-12
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 11:04
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ773
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F056.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R056.D			**Vial:**	2
Acqu Date:	07/27/2010 11:04	**Quant Date:**	07/27/2010 13:02	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-12				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	60-125	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0d	0.0000	0.0000			
Aroclor 1221 {2}			0	0d	0.0000	0.0000			
Aroclor 1221 {3}			0	0d	0.0000	0.0000			
Aroclor 1221 {4}			0	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0	0.0000	0.0000			
Aroclor 1232 {2}			0	0	0.0000	0.0000			
Aroclor 1232 {3}			0	0	0.0000	0.0000			
Aroclor 1232 {4}			0	0	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F056.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R056.D			**Vial:**	2
Acqu Date:	07/27/2010 11:04	**Quant Date:**	07/27/2010 13:02	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-12				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0	0.0000	0.0000			
Aroclor 1242 {3}			0d	0	0.0000	0.0000			
Aroclor 1242 {4}			0d	0	0.0000	0.0000			
Aroclor 1242 {5}			0d	0	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N. Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F056.D
Report Date: 27-Jul-2010 13:02

Columbia Analytical Services

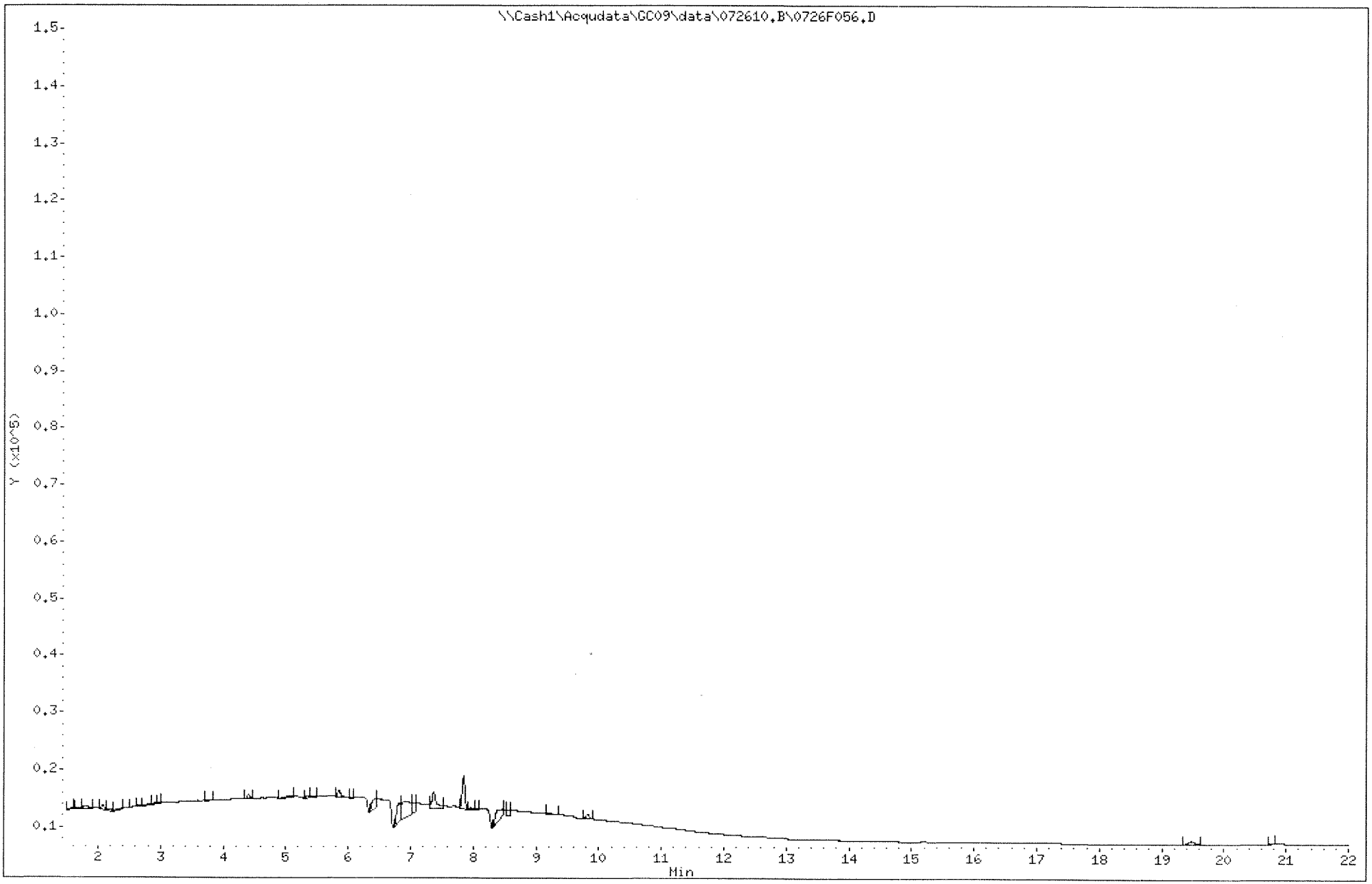
Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F056.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R056.D
Inj Date : 27-JUL-2010 11:04
Sample Info: IB
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\cash1\acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F056.D
Date : 27-JUL-2010 11:04
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53

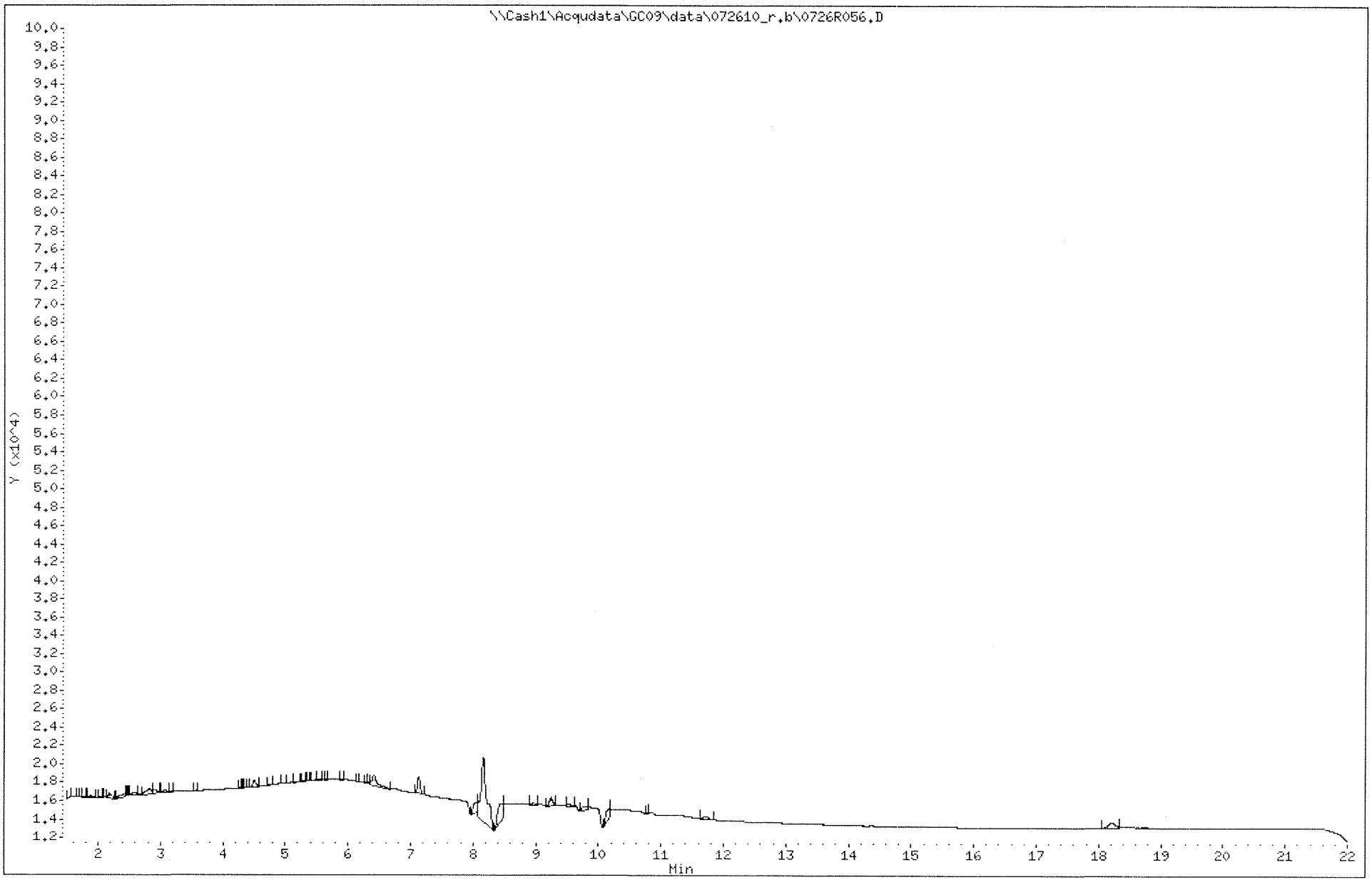


Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R056.D
Date : 27-JUL-2010 11:04
Client ID:
Sample Info: IB

Instrument: GC09.i

Operator: LHarris

Column phase: DB-XLB
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F059.D
Lab ID: KWG1007403-14
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 12:24
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R059.D
Lab ID: KWG1007403-14
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 12:24
Date Quantitated: 07/27/2010 13:02
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ773

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/22/10

Secondary Review:

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ773
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F059.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R059.D			**Vial:**	2
Acqu Date:	07/27/2010 12:24	**Quant Date:**	07/27/2010 13:02	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-14				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	60-125	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0	0.0000	0.0000			
Aroclor 1016 {2}			0	0	0.0000	0.0000			
Aroclor 1016 {3}			0	0	0.0000	0.0000			
Aroclor 1016 {4}			0	0	0.0000	0.0000			
Aroclor 1016 {5}			0	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0	0d	0.0000	0.0000			
Aroclor 1221 {2}			0	0d	0.0000	0.0000			
Aroclor 1221 {3}			0	0d	0.0000	0.0000			
Aroclor 1221 {4}			0	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0	0d	0.0000	0.0000			
Aroclor 1232 {2}			0	0d	0.0000	0.0000			
Aroclor 1232 {3}			0	0d	0.0000	0.0000			
Aroclor 1232 {4}			0	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F059.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R059.D			**Vial:**	2
Acqu Date:	07/27/2010 12:24	**Quant Date:**	07/27/2010 13:02	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-14				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0	0.0000	0.0000			
Aroclor 1248 {2}			0	0	0.0000	0.0000			
Aroclor 1248 {3}			0	0	0.0000	0.0000			
Aroclor 1248 {4}			0	0	0.0000	0.0000			
Aroclor 1248 {5}			0	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F059.D
Report Date: 27-Jul-2010 13:02

Columbia Analytical Services

Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F059.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R059.D
Inj Date : 27-JUL-2010 12:24
Sample Info: IB
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

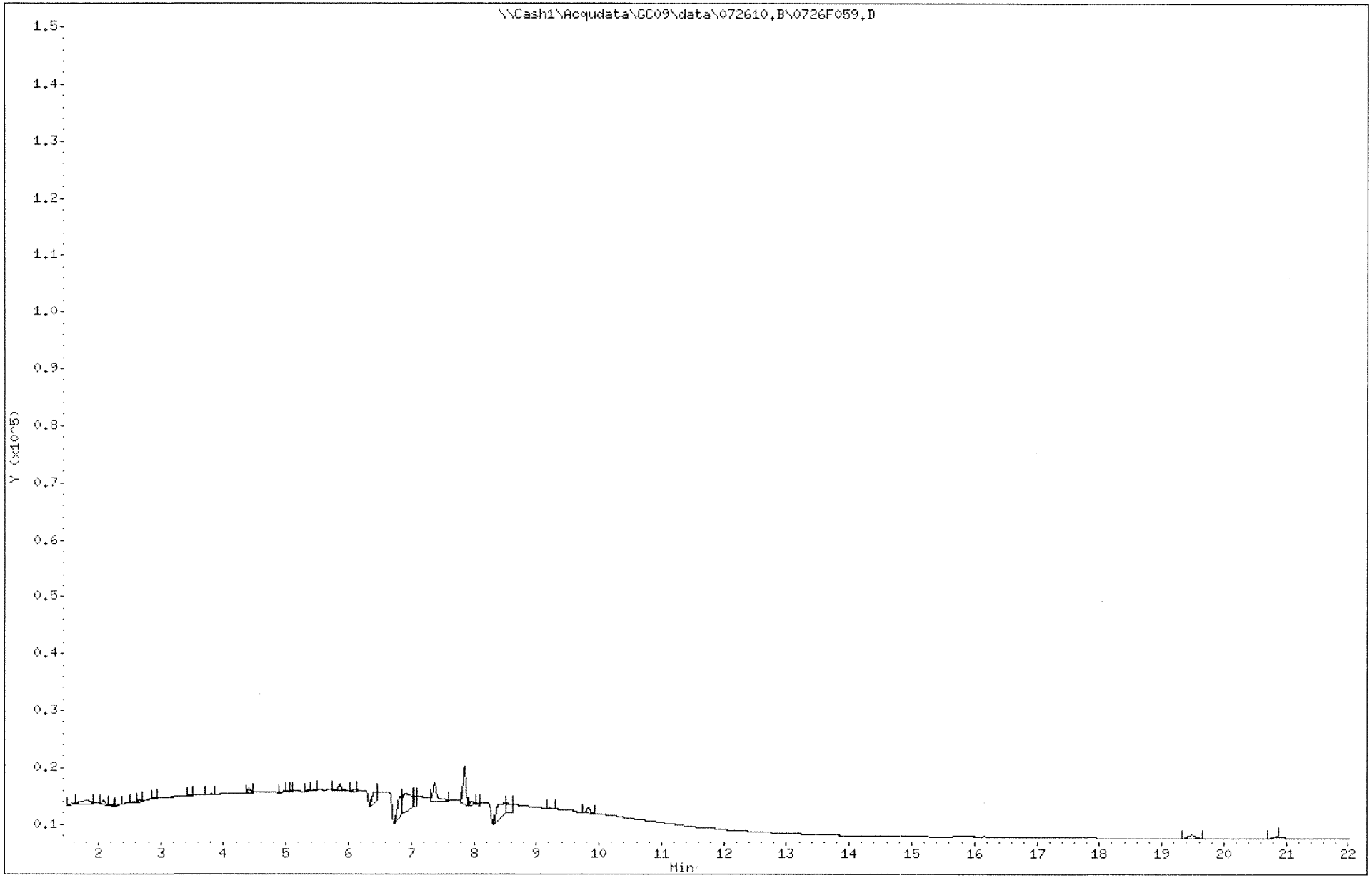
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F059.D
Date : 27-JUL-2010 12:24
Client ID:
Sample Info: IB

Instrument: GC09.i

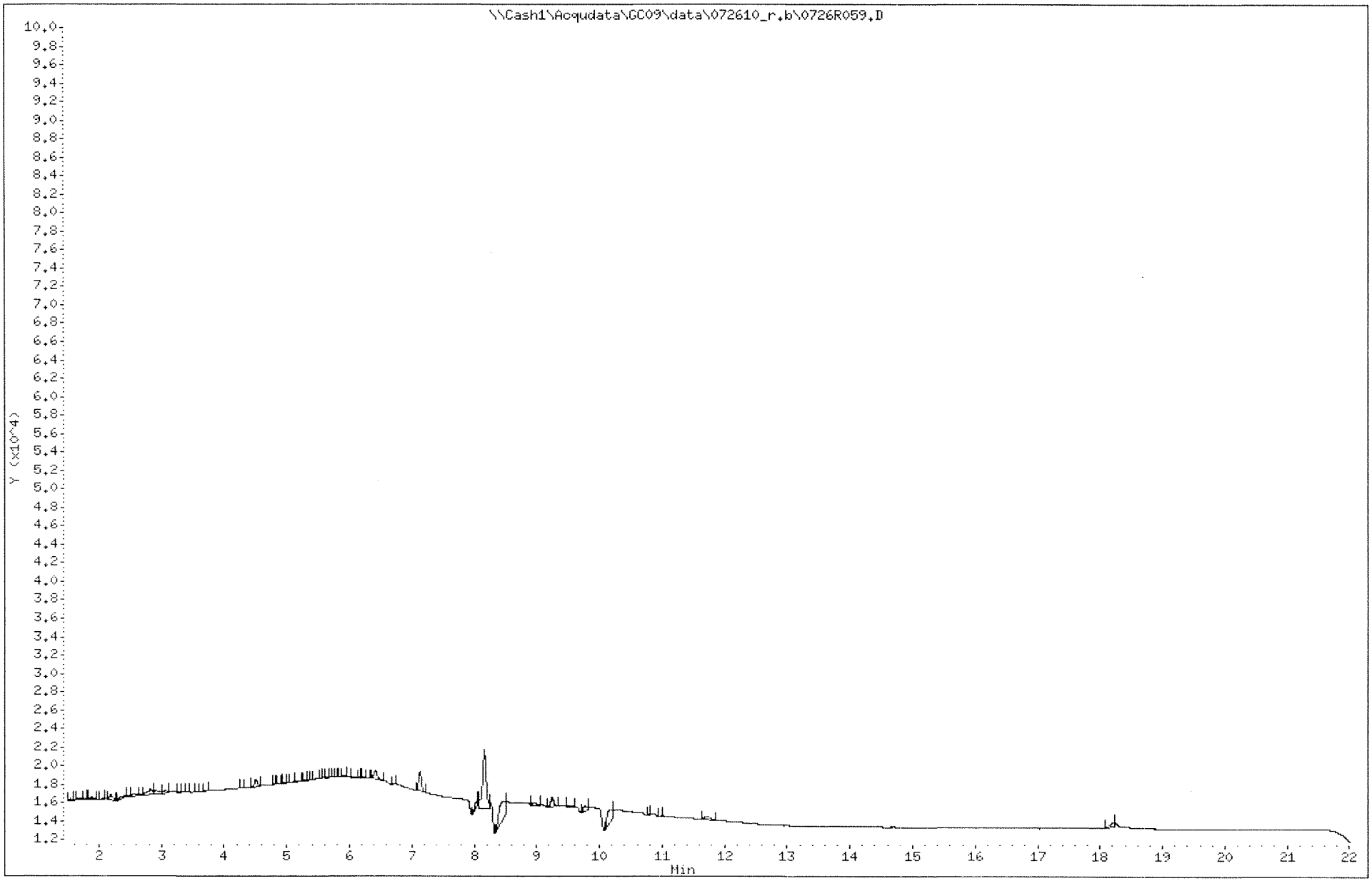
Operator: LHarris

Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r,b\0726R059,D
Date : 27-JUL-2010 12:24
Client ID:
Sample Info: IB

Instrument: GC09,i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0,53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610.B\0726F065.D
Lab ID: KWG1007403-16
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 15:04
Date Quantitated: 07/27/2010 15:53
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 8/2/10

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\072610_R.B\0726R065.D
Lab ID: KWG1007403-16
RunType: IB
Matrix: NOT APPLICABLE

Date Acquired: 07/27/2010 15:04
Date Quantitated: 07/27/2010 15:55
Batch ID: KWG1007403
Analysis Method: 8082
MethodJoinID: MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 7/27/10

Secondary Review: 8/1/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	NOT APPLICABL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/27/2010

Analysis Lot:	KWG1007403	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072610.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072610.B\0726F065.D			**Instrument:**	GC09.i
Data File #2:	\\Cash1\Acqudata\GC09\data\072610_r.b\0726R065.D			**Vial:**	2
Acqu Date:	07/27/2010 15:04	**Quant Date:**	07/27/2010 15:53	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-16				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	0.00		0	0		0.0000			NA
			%Recovery =		NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0	0.0000	0.0000			
Aroclor 1016 {2}			0d	0	0.0000	0.0000			
Aroclor 1016 {3}			0d	0	0.0000	0.0000			
Aroclor 1016 {4}			0d	0	0.0000	0.0000			
Aroclor 1016 {5}			0d	0	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072610.B\0726F065.D			**Instrument:**	GC09.i
Data File #2:	\\Cashfile\acqudata\GC09\data\072610_r.b\0726R065.D			**Vial:**	2
Acqu Date:	07/27/2010 15:04	**Quant Date:**	07/27/2010 15:53	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007403-16				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0	0.0000	0.0000			
Aroclor 1248 {2}			0d	0	0.0000	0.0000			
Aroclor 1248 {3}			0d	0	0.0000	0.0000			
Aroclor 1248 {4}			0d	0	0.0000	0.0000			
Aroclor 1248 {5}			0d	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0	0.0000	0.0000			
Aroclor 1254 {2}			0	0	0.0000	0.0000			
Aroclor 1254 {3}			0	0	0.0000	0.0000			
Aroclor 1254 {4}			0	0	0.0000	0.0000			
Aroclor 1254 {5}			0	0	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0	0.0000	0.0000			
Aroclor 1260 {2}			0	0	0.0000	0.0000			
Aroclor 1260 {3}			0	0	0.0000	0.0000			
Aroclor 1260 {4}			0	0	0.0000	0.0000			
Aroclor 1260 {5}			0	0	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0	0.0000	0.0000			
Aroclor 1262 {2}			0	0	0.0000	0.0000			
Aroclor 1262 {3}			0	0	0.0000	0.0000			
Aroclor 1262 {4}			0	0	0.0000	0.0000			
Aroclor 1262 {5}			0	0	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0	0.0000	0.0000			
Aroclor 1268 {2}			0	0	0.0000	0.0000			
Aroclor 1268 {3}			0	0	0.0000	0.0000			
Aroclor 1268 {4}			0	0	0.0000	0.0000			
Aroclor 1268 {5}			0	0	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F065.D
Report Date: 27-Jul-2010 15:53

Columbia Analytical Services

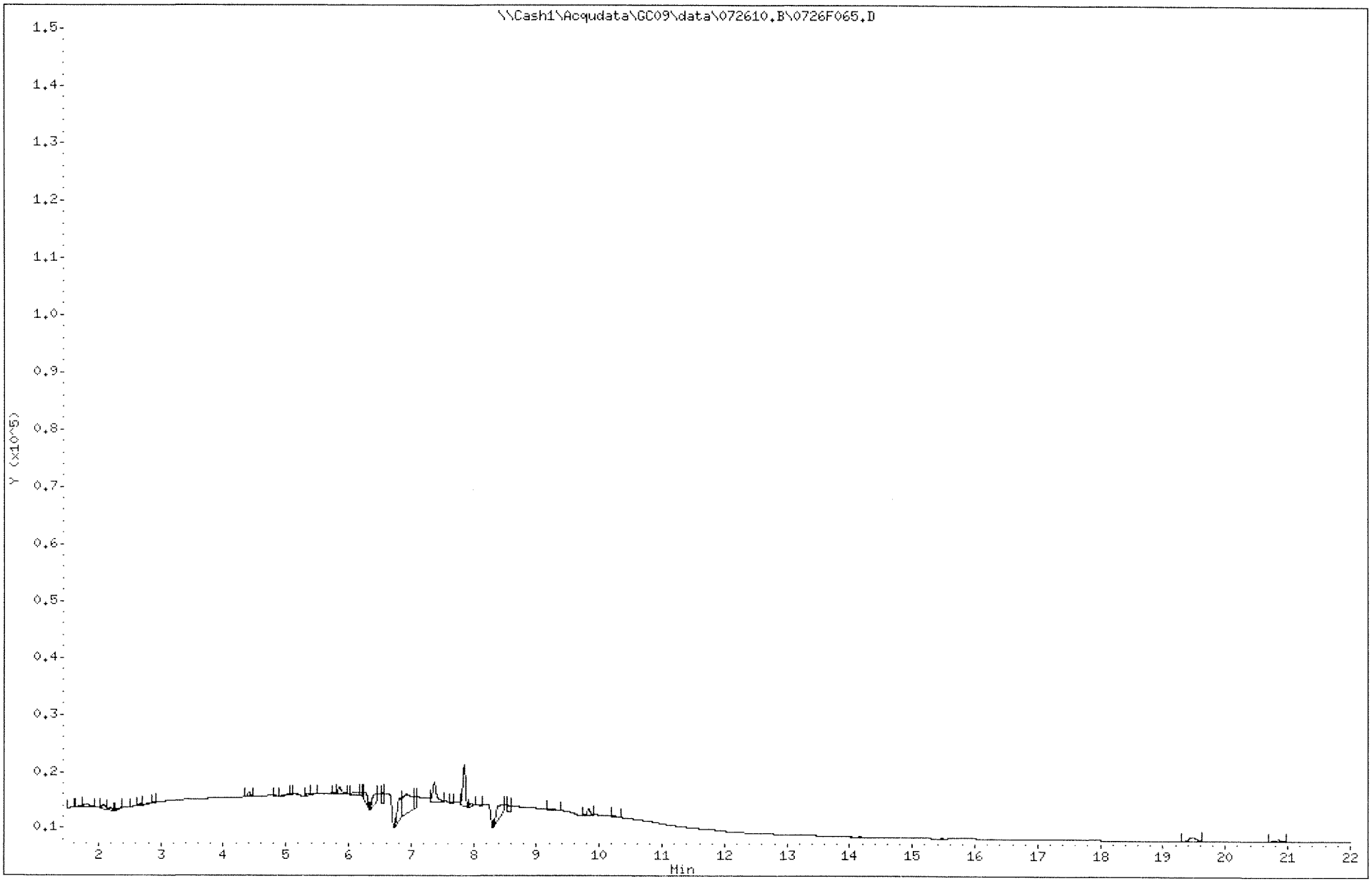
Sample #1 : \\Cash1\Acqudata\GC09\data\072610.B\0726F065.D
Sample #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\0726R065.D
Inj Date : 27-JUL-2010 15:04
Sample Info: IB
Misc Info :
Cal Date : 27-JUL-2010 12:34
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\Cash1\Acqudata\GC09\data\072610.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072610_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

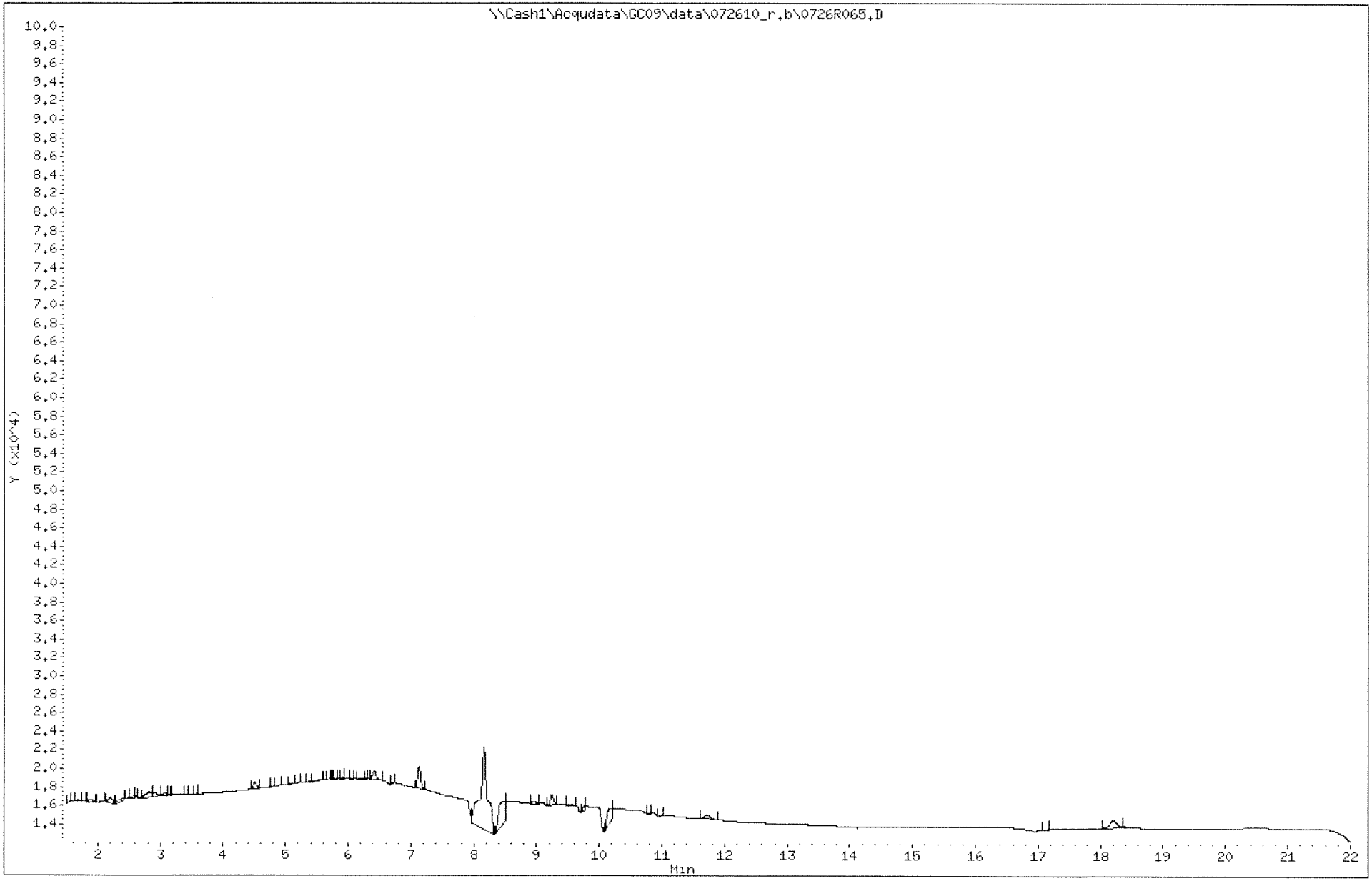
Data File: \\Cash1\Acqudata\GC09\data\072610.B\0726F065.D
Date : 27-JUL-2010 15:04
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\Cash1\Acqudata\GC09\data\072610_r.b\0726R065.D
Date : 27-JUL-2010 15:04
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Sequence Name: D:\GC09\SEQUENCE\072710.S
Comment: PCB Aroclors by EPA 8082
Operator: LHarris
Data Path: D:\GC09\DATA\072710.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

ICAL 9609

	Line	Type	Vial	DataFile	Method	Sample Name
	1	DeleteGC				
	2	MaskName -	----r---			
	3	IB	1	0727F001	PCB_REG	IB
	4	IB	2	0727F002	PCB_REG	IB
OK, OK	5	CCV	96	0727F003	PCB_REG	1660 @ 1000ppb | PCB5-620
	6	SMPL	3	0727F004	PCB_REG	K1006816-001 @10X
	7	SMPL	4	0727F005	PCB_REG	K1006867-002 @10X
	8	SMPL	5	0727F006	PCB_REG	K1006867-004 @5X
	9	SMPL	6	0727F007	PCB_REG	K1006867-006 @10X
	10	SMPL	7	0727F008	PCB_REG	K1006867-008 @10X
	11	SMPL	8	0727F009	PCB_REG	K1006867-009 @10X
	12	IB	1	0727F010	PCB_REG	IB
	13	IB	2	0727F011	PCB_REG	IB
OK, OK	14	CCV	96	0727F012	PCB_REG	1660 @ 1000ppb | PCB5-620

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F002.D	**Date Acquired:**	07/27/2010 17:56
Lab ID:	KWG1007595-1	**Date Quantitated:**	07/30/2010 15:39
RunType:	IB	**Batch ID:**	KWG1007595
Matrix:	SOIL	**Analysis Method:**	8082
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 8/6/10

Secondary Review: [signature] 8/6/10

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R002.D	**Date Acquired:**	07/27/2010 17:56
Lab ID:	KWG1007595-1	**Date Quantitated:**	07/30/2010 15:39
RunType:	IB	**Batch ID:**	KWG1007595
Matrix:	SOIL	**Analysis Method:**	8082
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: 8/1/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/30/2010

Analysis Lot:	KWG1007595	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ731
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072710.B\0727F002.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R002.D			**Vial:**	2
Acqu Date:	07/27/2010 17:56	**Quant Date:**	07/30/2010 15:39	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007595-1				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	10-135	
Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	35-133	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F002.D			Instrument:	GC09.1
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R002.D			Vial:	2
Acqu Date:	07/27/2010 17:56	Quant Date:	07/30/2010 15:39	Dilution:	1.0
Run Type:	IB			Soln Conc. Units:	ng/mL
Lab ID:	KWG1007595-1				
Signal #1:	DB-35MS	Signal #2:	DB-XLB		

Target Compounds — Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	mg/Kg #1	mg/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0d	0.0000	0.0000			
Aroclor 1254 {2}			0d	0d	0.0000	0.0000			
Aroclor 1254 {3}			0d	0d	0.0000	0.0000			
Aroclor 1254 {4}			0d	0d	0.0000	0.0000			
Aroclor 1254 {5}			0d	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0d	0d	0.0000	0.0000			
Aroclor 1260 {2}			0d	0d	0.0000	0.0000			
Aroclor 1260 {3}			0d	0d	0.0000	0.0000			
Aroclor 1260 {4}			0d	0d	0.0000	0.0000			
Aroclor 1260 {5}			0d	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0d	0.0000	0.0000			
Aroclor 1262 {2}			0d	0d	0.0000	0.0000			
Aroclor 1262 {3}			0d	0d	0.0000	0.0000			
Aroclor 1262 {4}			0d	0d	0.0000	0.0000			
Aroclor 1262 {5}			0d	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0d	0d	0.0000	0.0000			
Aroclor 1268 {2}			0d	0d	0.0000	0.0000			
Aroclor 1268 {3}			0d	0d	0.0000	0.0000			
Aroclor 1268 {4}			0d	0d	0.0000	0.0000			
Aroclor 1268 {5}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F002.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F002.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R002.D
Inj Date : 27-JUL-2010 17:56
Sample Info: IB
Misc Info :
Cal Date : 27-JUL-2010 15:58
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

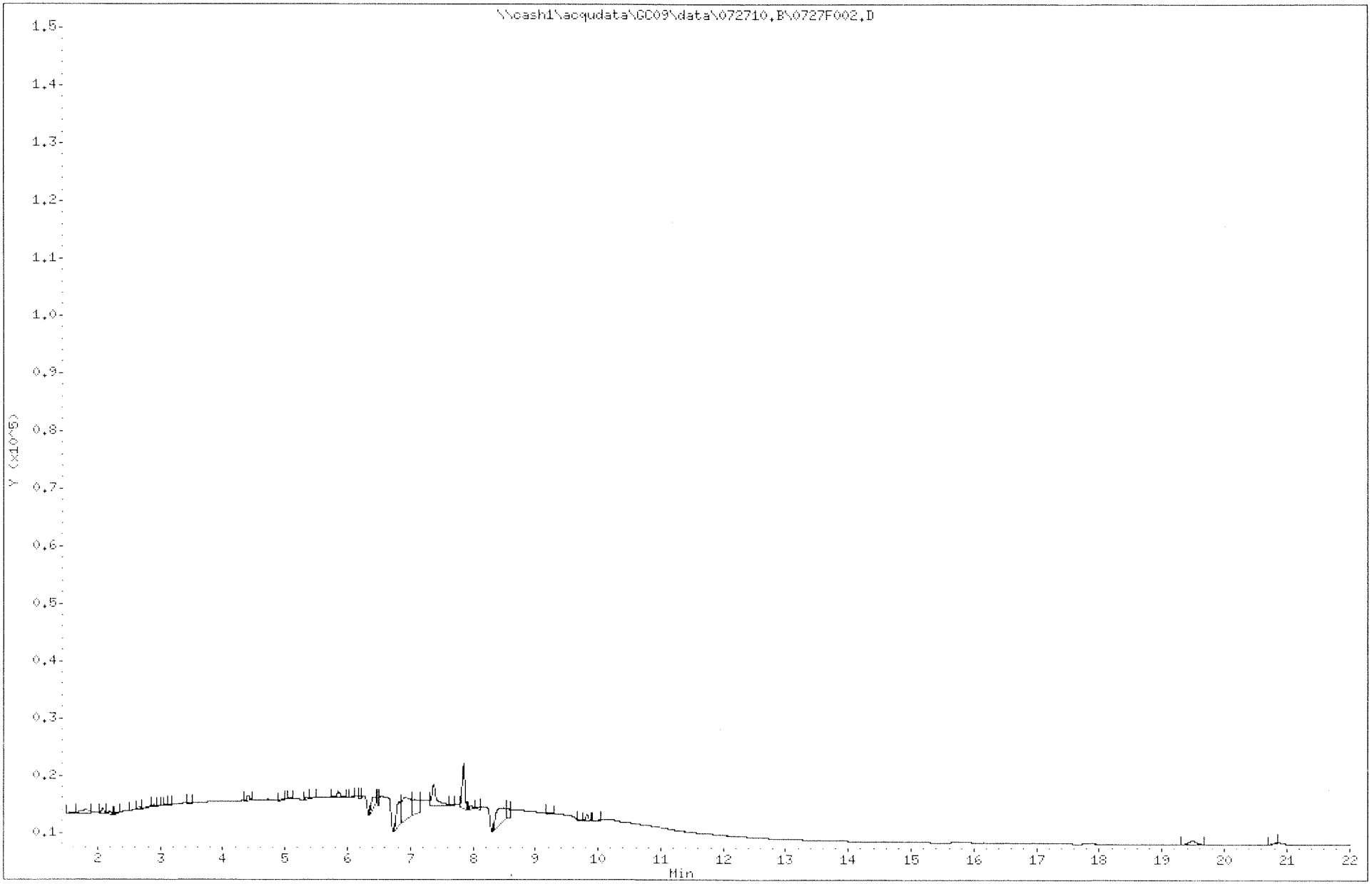
Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\072710,B\0727F002.D
Date : 27-JUL-2010 17:56
Client ID:
Sample Info: IB

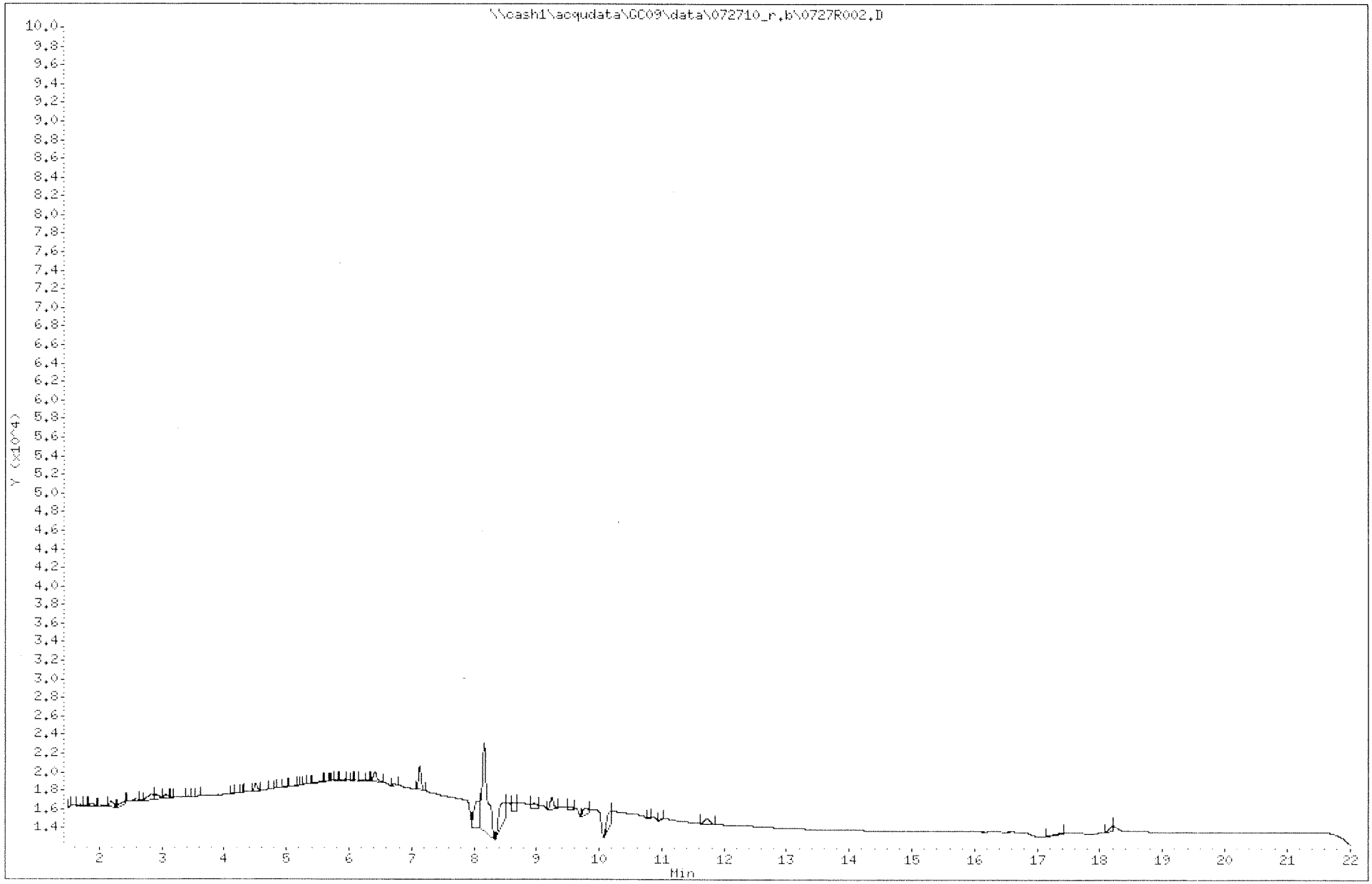
Instrument: GC09.1

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\072710_r.b\0727R002.D
Date : 27-JUL-2010 17:56
Client ID:
Sample Info: IB

Instrument: GC09.i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\0727F011.D	**Date Acquired:**	07/27/2010 21:56
Lab ID:	KWG1007595-3	**Date Quantitated:**	07/30/2010 15:39
RunType:	IB	**Batch ID:**	KWG1007595
Matrix:	SOIL	**Analysis Method:**	8082
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 8/1/10

Secondary Review: 8/2/10

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\072710_R.B\0727R011.D	**Date Acquired:**	07/27/2010 21:56
Lab ID:	KWG1007595-3	**Date Quantitated:**	07/30/2010 15:40
RunType:	IB	**Batch ID:**	KWG1007595
Matrix:	SOIL	**Analysis Method:**	8082
		MethodJoinID:	MJ731

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 8/2/10

Secondary Review: [signature] 8/2/10

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	07/30/2010

Analysis Lot:	KWG1007595	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\072710.B\070110_F.M	**Calibration ID:**	CAL9609
Title:			
MB Ref:		**Method ID:**	MJ579
		Quant based on Method	

Data File #1:	J:\GC09\DATA\072710.B\0727F011.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R011.D			**Vial:**	2
Acqu Date:	07/27/2010 21:56	**Quant Date:**	07/30/2010 15:39	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007595-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	21-114	
Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	36-113	

Target Compounds

Final Conc. Units: ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\072710.B\0727F011.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\072710_r.b\0727R011.D			**Vial:**	2
Acqu Date:	07/27/2010 21:56	**Quant Date:**	07/30/2010 15:39	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG1007595-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/L

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/L #1	ug/L #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0d	0.0000	0.0000			
Aroclor 1254 {2}			0d	0d	0.0000	0.0000			
Aroclor 1254 {3}			0d	0d	0.0000	0.0000			
Aroclor 1254 {4}			0d	0d	0.0000	0.0000			
Aroclor 1254 {5}			0d	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0d	0.0000	0.0000			
Aroclor 1260 {2}			0	0d	0.0000	0.0000			
Aroclor 1260 {3}			0	0d	0.0000	0.0000			
Aroclor 1260 {4}			0	0d	0.0000	0.0000			
Aroclor 1260 {5}			0	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0d	0.0000	0.0000			
Aroclor 1262 {2}			0d	0d	0.0000	0.0000			
Aroclor 1262 {3}			0d	0d	0.0000	0.0000			
Aroclor 1262 {4}			0d	0d	0.0000	0.0000			
Aroclor 1262 {5}			0d	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0d	0d	0.0000	0.0000			
Aroclor 1268 {2}			0d	0d	0.0000	0.0000			
Aroclor 1268 {3}			0d	0d	0.0000	0.0000			
Aroclor 1268 {4}			0d	0d	0.0000	0.0000			
Aroclor 1268 {5}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F011.D
Report Date: 30-Jul-2010 15:39

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\072710.B\0727F011.D
Sample #2 : \\cash1\acqudata\GC09\data\072710_r.b\0727R011.D
Inj Date : 27-JUL-2010 21:56
Sample Info: IB
Misc Info :
Cal Date : 28-JUL-2010 10:22
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

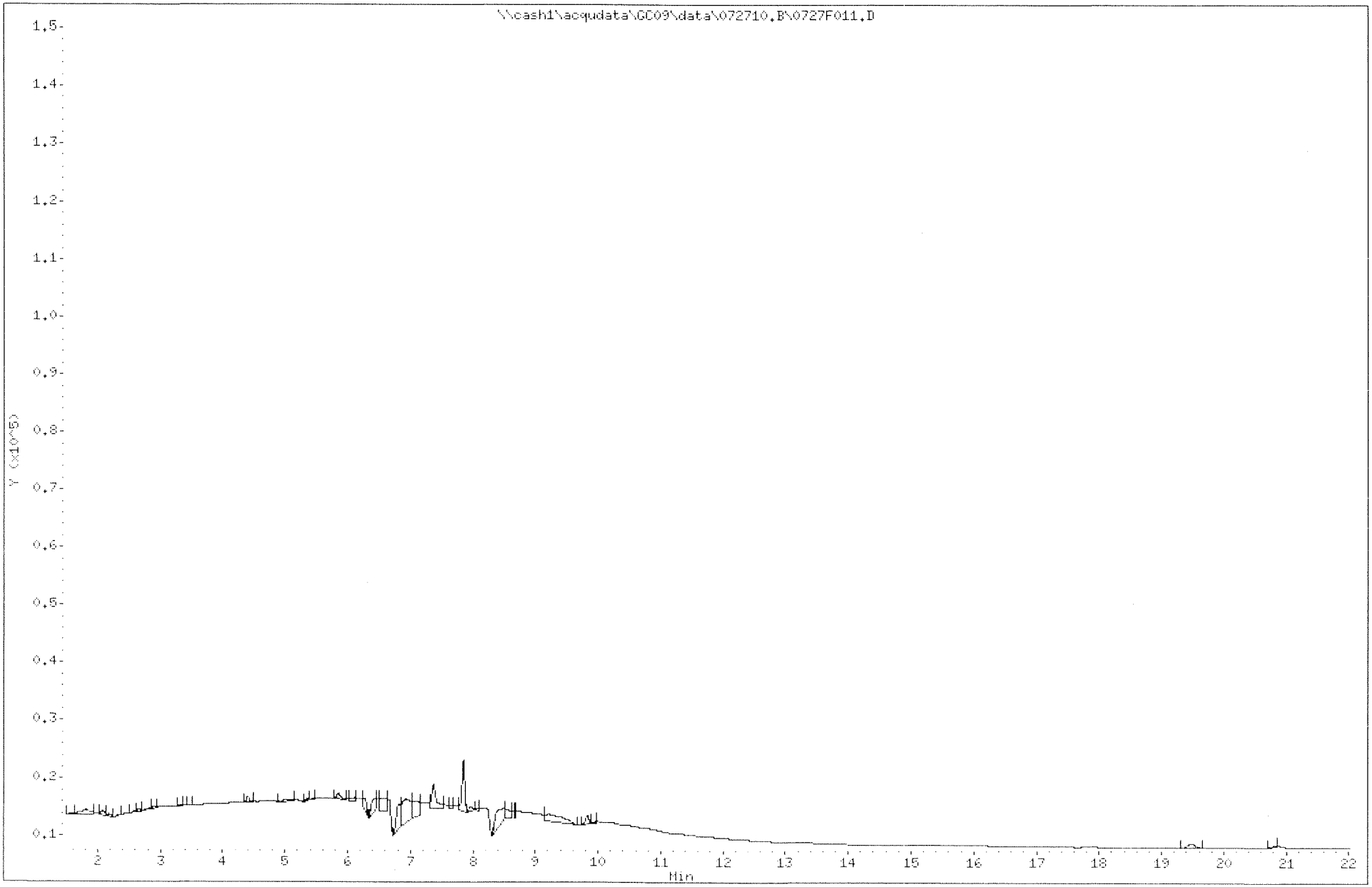
Method #1 : \\Cash1\Acqudata\GC09\data\072710.B\070110_f.m
Method #2 : \\Cash1\Acqudata\GC09\data\072710_r.b\070110_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\072710.B\0727F011.D
Date : 27-JUL-2010 21:56
Client ID:
Sample Info: IB

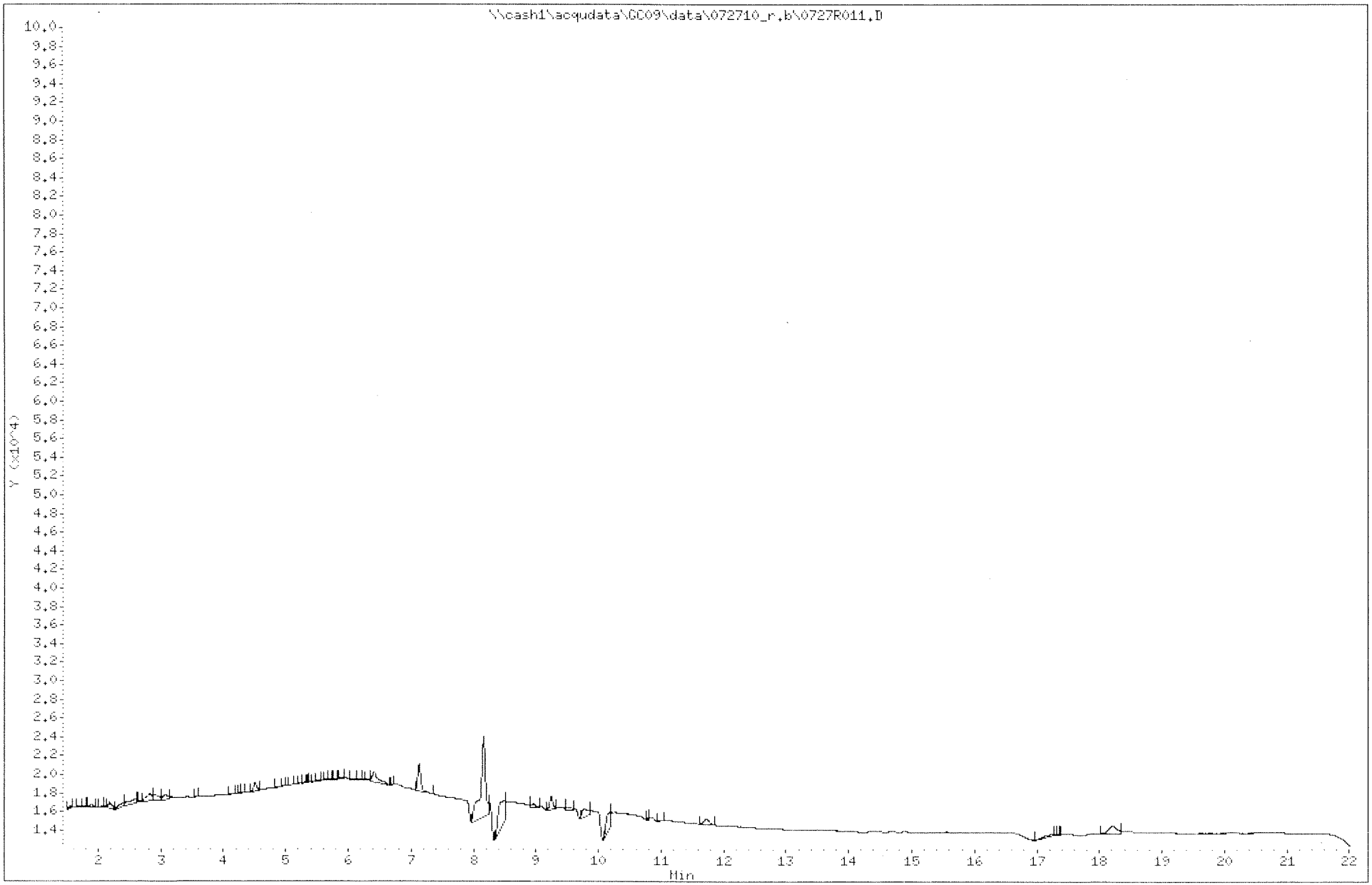
Instrument: GC09.i

Operator: LHarris
Column phase: DB-35MS
Column diameter: 0.53



Data File: \\oash1\acqudata\GC09\data\072710_r,b\0727R011.D
Date : 27-JUL-2010 21:56
Client ID:
Sample Info: IB

Instrument: GC09,i
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Columbia Analytical Services™ 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

August 13, 2010 Analytical Report for Service Request No: K1007395

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow/2646006.17-GW10-100

Dear Andrea:

Enclosed are the results of the samples submitted to our laboratory on July 17, 2010. For your reference, these analyses have been assigned our service request number K1007395.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/ln

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Barr Engineering Company	**Service Request No.:**	K1007395
Project:	Rhodia Silver Bow	**Date Received:**	7/17-20/2010
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seven water samples were received for analysis at Columbia Analytical Services on 7/17-20/2010. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Calcium, Magnesium and Sodium for sample MW-06-2 were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Radiochemistry

Radiochemistry analysis was performed at ACZ Laboratory in Steamboat Springs, CO. The narrative for this analysis can be found in the corresponding section of this data package.

Approved by _____ **Date** 8/13/10

Chain of Custody

K1007345

Chain of Custody

BARR
4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

COC 1 of 1

Project Number: 26460006.17 - GW10-1100

Project Name: Rhodia Silver Bow

Sample Origination State: MT (use two letter postal state abbreviation)

COC Number: № 29307

Project Manager: TDM/KLG

Project QC Contact: AAN

Sampled by: KAM/AMC2

Laboratory: C.A.S.

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix: Water	Matrix: Soil	Type: Grab	Type: Comp.	Type: QC	Number of Containers/Preservative: Water: VOCs (HCl) #1	SVOCs (unpreserved) #2	Dissolved Metals (HNO_3)	Total Metals (HNO_3)	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H_2SO_4) #4	4L Container (HNO_3)	Soil: VOCs (tared MeOH) #1	GRO, BTEX (tared MeOH) #1	DRO (tared unpreserved)	Metals (unpreserved)	SVOCs (unpreserved) #2	% Solids (plastic vial, unpres.)	Total Number Of Containers
1. MW-06-1				07/17/2010	12:30	X		X						3	2		1	2							8
2. MW-02-3				07/17/2010	16:00	X		X						3	2		1	2							8
3. MW-82-3				07/17/2010	16:40	X		X						3	2		1	2							8
4. MW-06-2				07/18/2010	10:50	X		X						9	6		3	6	MS/MSD						24
5. MW-60-12				07/18/2010	13:45	X		X						3	2		1	2							8
6. MW-02-4				07/18/2010	16:35	X		X						3	2		1	2							8
7.																									
8.																									
9.																									
10.																									

SEE TABLES: 1-2, 1-3 & 5-5 (included) for parameters and Methods

* Report all data to the lab Reporting Limit (Not the MDL)

Call Andrea Nord w/ Questions

Common Parameter/Container - Preservation Key

#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
#2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
#3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
#4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	On Ice?	Date	Time	Received by:	Date	Time
[signature]	(Y) N	7/19/10	15:00	S. Stopkins	7/20/10	0930
Relinquished By:	On Ice? Y N	Date	Time	Received by:	Date	Time

Samples Shipped VIA: ☐ Air Freight ☒ Federal Express ☐ Sampler ☐ Other: _____

Air Bill Number: 8670 9279 9898

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

H:\RLG\STDFORMS\Chain Of Custody Form 2009 RLG Rev. 09\01\09

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC hh

Client / Project: Barr Service Request K10 07395

Received: 7/20/10 Opened: 7/20/10 By: SDK

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? One, front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
1.8	1.9	261	2078		
0.2	1.2	263	4078		
-0.3	0.8	387	6078		
1.6	3.0	257	8078	7997 5034 7656	
3.0	4.0	259	7078	7997 5034 7678	

7. Packing material used. *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) (N)
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:
MW-06-2	MW-06-1	time sampled

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: See next page for more coolers

11. Sample MW-06-2, recd one extra HNO3 pres. Found that it was the missing bottle for MW-06-1 based on time sampled.

Page 1 of _____

1007395

Chain of Custody

BARR
4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

Project Number: 26460006.17 - GW10 - 100

Project Name: Rhodia Silver Bow

Sample Origination State MT (use two letter postal state abbreviation)

COC Number: № 29303

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix: Water	Matrix: Soil	Type: Grab	Type: Comp.	Type: QC	Number of Containers/Preservative: Water: VOCs (HCl) #1	SVOCs (unpreserved) #2	Dissolved Metals (HNO_3)	Total Metals (HNO_3)	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H_2SO_4) #4	Cubetainer (HNO_3)	Soil: VOCs (tared MeOH) #1	GRO, BTEX (tared MeOH) #1	DRO (tared unpreserved)	Metals (unpreserved)	SVOCs (unpreserved) #2	% Solids (plastic vial, unpres.)	Total Number Of Containers
1. MW-06-3				07/16/2010	12:05	X		X						3	2		1	2							8
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
9.																									
10.																									

COC 1 of 1

Project Manager: TDM/KLG

Project QC Contact: AAN

Sampled by: KAM/LML2

Laboratory: CAS

SEE TABLES; 1-2, 1-3, 5-5 for parameters and methods, (Included)

* Report all Data to the Lab Reporting Limit (Not the MDL)

Call Andrea Nord W/ Questions

Common Parameter/Container - Preservation Key

#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
#2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
#3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
#4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	On Ice? (Y / N)	Date	Time	Received by:	Date	Time
	Y	7/16/10	15:30	CAS	7-17-10	840
Relinquished By:	On Ice? Y N	Date	Time	Received by:	Date	Time

Samples Shipped VIA: ☐ Air Freight ☒ Federal Express ☐ Sampler ☐ Other: _____

Air Bill Number: 8670 9279 9876

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

H:RLG\STDFORMS\Chain Of Custody Form 2009 RLG Rev. 09\01\09

PC 1 of 1

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client / Project: BARR Service Request K10 07395

Received: 7-17-10 Opened: 7-17-10 By: JF

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
0.5	0.7	268			Y

7. Packing material used. *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA (Y) N
14. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
15. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC LL

Client / Project: Barr Service Request *K10* 07395

Received: _____ Opened: _____ By: _____

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID	NA	Tracking Number	NA	Filed
-0.5	1.7	273	3078		7997 5034 7645		
-0.5	1.9	281	5038		7689		
0.4	0.4	291	1098		8670 9979 9898		

7. Packing material used. *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Sleeves* *Other* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
15. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page 1 of _____

General Chemistry Parameters

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Chloride

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.20	20	07/19/10	108	
MW-06-1	K1007395-002	10	50	07/23/10	234	
MW-02-3	K1007395-003	0.20	1	07/23/10	0.67	
MW-82-3	K1007395-004	10	50	07/23/10	167	
MW-06-2	K1007395-005	20	100	07/23/10	178	
MW-60-12	K1007395-006	0.40	2	07/23/10	ND	
MW-02-4	K1007395-007	10	50	07/26/10	231	
Method Blank	K1007395-MB	0.20	1	07/26/10	ND	
Method Blank	K1007395-MB	0.20	1	07/23/10	ND	
Method Blank	K1007395-MB	0.20	1	07/19/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/18/2010
Date Received : 7/20/2010
Date Prepared : NA
Date Analyzed : 07/23/10

Duplicate Summary
Inorganic Parameters

Sample Name : MW-06-2
Lab Code : K1007395-005DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Chloride	300.0	20	178	178	178	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	MW-06-2		Units :	mg/L
Lab Code :	K1007395-005MS	K1007395-005DMS	Basis :	NA
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Spike Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Chloride	NONE	300.0	40	400	400	178	561	554	96	94	80-120	1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/19/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.00	4.62	92	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.00	5.09	102	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Chloride	NONE	300.0	5.00	4.92	98	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Chloride
300.0
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/19/2010	5.00	4.60	92
CCV2 Result	7/19/2010	5.00	4.76	95
CCV3 Result	7/19/2010	5.00	4.75	95
CCV4 Result	7/19/2010	5.00	4.68	94
CCV5 Result	7/19/2010	5.00	4.77	95
CCV6 Result	7/19/2010	5.00	4.66	93
CCV1 Result	7/23/2010	5.00	4.93	99
CCV2 Result	7/23/2010	5.00	4.97	99
CCV3 Result	7/23/2010	5.00	4.91	98
CCV4 Result	7/23/2010	5.00	4.87	97
CCV5 Result	7/23/2010	5.00	4.98	100
CCV6 Result	7/23/2010	5.00	4.90	98
CCV1 Result	7/26/2010	5.00	4.98	100
CCV2 Result	7/26/2010	5.00	4.95	99
CCV3 Result	7/26/2010	5.00	4.88	98
CCV4 Result	7/26/2010	5.00	4.90	98

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Chloride
300.0
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/19/2010	0.20	ND
CCB2 Result	7/19/2010	0.20	ND
CCB3 Result	7/19/2010	0.20	ND
CCB4 Result	7/19/2010	0.20	ND
CCB5 Result	7/19/2010	0.20	5.06
CCB6 Result	7/19/2010	0.20	ND
CCB1 Result	7/23/2010	0.20	ND
CCB2 Result	7/23/2010	0.20	ND
CCB3 Result	7/23/2010	0.20	ND
CCB4 Result	7/23/2010	0.20	ND
CCB5 Result	7/23/2010	0.20	ND
CCB6 Result	7/23/2010	0.20	ND
CCB1 Result	7/26/2010	0.20	ND
CCB2 Result	7/26/2010	0.20	ND
CCB3 Result	7/26/2010	0.20	ND
CCB4 Result	7/26/2010	0.20	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Fluoride

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.40	2	07/20/10	ND	
MW-06-1	K1007395-002	0.40	2	07/23/10	0.43	
MW-02-3	K1007395-003	0.40	2	07/26/10	0.49	
MW-82-3	K1007395-004	0.40	2	07/23/10	0.49	
MW-06-2	K1007395-005	0.40	2	07/23/10	ND	
MW-60-12	K1007395-006	0.40	2	07/23/10	ND	
MW-02-4	K1007395-007	1.0	5	07/26/10	ND	
Method Blank	K1007395-MB	0.20	1	07/26/10	ND	
Method Blank	K1007395-MB	0.20	1	07/20/10	ND	
Method Blank	K1007395-MB	0.20	1	07/23/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/18/2010
Date Received : 7/20/2010
Date Prepared : NA
Date Analyzed : 07/23/10

Duplicate Summary
Inorganic Parameters

Sample Name : MW-06-2
Lab Code : K1007395-005DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Fluoride	300.0	0.40	ND	ND	ND	-	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	MW-06-2		Units :	mg/L
Lab Code :	K1007395-005MS	K1007395-005DMS	Basis :	NA
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Fluoride	NONE	300.0	0.40	4.00	4.00	ND	4.77	4.68	109	107	80-120	2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/20/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	NONE	300.0	13.5	14.3	106	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	NONE	300.0	13.5	14.4	107	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Fluoride	NONE	300.0	13.5	14.7	109	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Fluoride
300.0
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/20/2010	5.00	4.99	100
CCV2 Result	7/20/2010	5.00	4.99	100
CCV3 Result	7/20/2010	5.00	5.00	100
CCV4 Result	7/20/2010	5.00	4.99	100
CCV5 Result	7/20/2010	5.00	4.99	100
CCV6 Result	7/20/2010	5.00	4.99	100
CCV1 Result	7/23/2010	5.00	5.27	105
CCV2 Result	7/23/2010	5.00	5.32	106
CCV3 Result	7/23/2010	5.00	5.18	104
CCV4 Result	7/23/2010	5.00	5.24	105
CCV5 Result	7/23/2010	5.00	5.30	106
CCV6 Result	7/23/2010	5.00	5.29	106
CCV1 Result	7/26/2010	5.00	5.35	107
CCV2 Result	7/26/2010	5.00	5.33	107
CCV3 Result	7/26/2010	5.00	5.22	104
CCV4 Result	7/26/2010	5.00	5.23	105

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Fluoride
300.0
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/20/2010	0.20	ND
CCB2 Result	7/20/2010	0.20	ND
CCB3 Result	7/20/2010	0.20	ND
CCB4 Result	7/20/2010	0.20	ND
CCB5 Result	7/20/2010	0.20	ND
CCB6 Result	7/20/2010		ND
CCB1 Result	7/23/2010	0.20	ND
CCB2 Result	7/23/2010	0.20	ND
CCB3 Result	7/23/2010	0.20	ND
CCB4 Result	7/23/2010	0.20	ND
CCB5 Result	7/23/2010	0.20	ND
CCB6 Result	7/23/2010	0.20	ND
CCB1 Result	7/26/2010	0.20	ND
CCB2 Result	7/26/2010	0.20	ND
CCB3 Result	7/26/2010	0.20	ND
CCB4 Result	7/26/2010	0.20	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Sulfate

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	20	100	07/20/10	468	
MW-06-1	K1007395-002	10	50	07/23/10	401	
MW-02-3	K1007395-003	0.20	1	07/23/10	47.3	
MW-82-3	K1007395-004	20	100	07/23/10	627	
MW-06-2	K1007395-005	20	100	07/23/10	796	
MW-60-12	K1007395-006	0.40	2	07/23/10	ND	
MW-02-4	K1007395-007	20	100	07/26/10	537	
Method Blank	K1007395-MB	0.20	1	07/20/10	ND	
Method Blank	K1007395-MB	0.20	1	07/26/10	ND	
Method Blank	K1007395-MB	0.20	1	07/23/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/18/2010
Date Received : 7/20/2010
Date Prepared : NA
Date Analyzed : 07/23/10

Duplicate Summary
Inorganic Parameters

Sample Name : MW-06-2
Lab Code : K1007395-005DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Sulfate	300.0	20	796	794	795	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	MW-06-2		Units :	mg/L
Lab Code :	K1007395-005MS	K1007395-005DMS	Basis :	NA
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Sulfate	NONE	300.0	40	400	400	796	1170	1180	94	97	80-120	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/20/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	NONE	300.0	5.00	4.80	96	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	NONE	300.0	5.00	4.96	99	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Sulfate	NONE	300.0	5.00	4.87	97	90-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Sulfate
300.0
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/20/2010	5.00	4.96	99
CCV2 Result	7/20/2010	5.00	4.96	99
CCV3 Result	7/20/2010	5.00	4.94	99
CCV4 Result	7/20/2010	5.00	4.96	99
CCV5 Result	7/20/2010	5.00	4.97	99
CCV6 Result	7/20/2010	5.00	4.99	100
CCV1 Result	7/23/2010	5.00	4.91	98
CCV2 Result	7/23/2010	5.00	4.95	99
CCV3 Result	7/23/2010	5.00	4.81	96
CCV4 Result	7/23/2010	5.00	4.81	96
CCV5 Result	7/23/2010	5.00	4.84	97
CCV6 Result	7/23/2010	5.00	4.83	97
CCV1 Result	7/26/2010	5.00	4.93	99
CCV2 Result	7/26/2010	5.00	4.85	97
CCV3 Result	7/26/2010	5.00	4.77	95
CCV4 Result	7/26/2010	5.00	4.75	95

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Sulfate
300.0
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/20/2010	0.20	ND
CCB2 Result	7/20/2010	0.20	ND
CCB3 Result	7/20/2010	0.20	ND
CCB4 Result	7/20/2010	0.20	ND
CCB5 Result	7/20/2010	0.20	1.64
CCB6 Result	7/20/2010	0.20	ND
CCB1 Result	7/23/2010	0.20	ND
CCB2 Result	7/23/2010	0.20	ND
CCB3 Result	7/23/2010	0.20	ND
CCB4 Result	7/23/2010	0.20	ND
CCB5 Result	7/23/2010	0.20	ND
CCB6 Result	7/23/2010	0.20	ND
CCB1 Result	7/26/2010	0.20	ND
CCB2 Result	7/26/2010	0.20	ND
CCB3 Result	7/26/2010	0.20	ND
CCB4 Result	7/26/2010	0.20	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Ammonia as Nitrogen

Analysis Method : 350.1
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.050	1	07/19/10	ND	
MW-06-1	K1007395-002	0.050	1	07/27/10	ND	
MW-02-3	K1007395-003	0.050	1	07/27/10	ND	
MW-82-3	K1007395-004	0.050	1	07/27/10	ND	
MW-06-2	K1007395-005	0.050	1	07/27/10	ND	
MW-60-12	K1007395-006	0.050	1	07/27/10	ND	
MW-02-4	K1007395-007	0.050	1	07/27/10	ND	
Method Blank	K1007395-MB	0.050	1	07/19/10	ND	
Method Blank	K1007395-MB	0.050	1	07/27/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/27/10

Duplicate Summary
Inorganic Parameters

Sample Name :	MW-06-2	Units :	mg/L
Lab Code :	K1007395-005DUP	Basis :	NA
Test Notes :			

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Ammonia as Nitrogen	350.1	0.050	ND	ND	ND	-	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/27/10

Matrix Spike Summary
Inorganic Parameters

Sample Name :	MW-06-2	Units :	mg/L
Lab Code :	K1007395-005MS	Basis :	NA
Test Notes :			

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	350.1	0.050	2.00	ND	2.02	100	90-112	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/19/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	NONE	350.1	14.3	13.6	95	90-112	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/27/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Ammonia as Nitrogen	NONE	350.1	14.3	13.9	97	90-112	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Ammonia as Nitrogen
350.1
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/19/2010	2.00	1.93	97
CCV2 Result	7/19/2010	2.00	1.94	97
CCV3 Result	7/19/2010	2.00	1.93	97
CCV4 Result	7/19/2010	2.00	1.93	97
CCV5 Result	7/19/2010	2.00	1.91	96
CCV6 Result	7/19/2010	2.00	1.93	97
CCV1 Result	7/27/2010	2.00	1.94	97
CCV2 Result	7/27/2010	2.00	1.94	97
CCV3 Result	7/27/2010	2.00	1.95	98
CCV4 Result	7/27/2010	2.00	1.94	97

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Ammonia as Nitrogen
350.1
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/19/2010	0.050	ND
CCB2 Result	7/19/2010	0.050	ND
CCB3 Result	7/19/2010	0.050	ND
CCB4 Result	7/19/2010	0.050	ND
CCB5 Result	7/19/2010	0.050	ND
CCB6 Result	7/19/2010	0.050	ND
CCB1 Result	7/27/2010	0.050	ND
CCB2 Result	7/27/2010	0.050	ND
CCB3 Result	7/27/2010	0.050	ND
CCB4 Result	7/27/2010	0.050	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Nitrate+Nitrite as Nitrogen

Analysis Method : 353.2
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.050	1	07/23/10	0.348	
MW-06-1	K1007395-002	0.050	1	07/23/10	1.05	
MW-02-3	K1007395-003	0.050	1	07/23/10	0.240	
MW-82-3	K1007395-004	0.050	1	07/23/10	0.234	
MW-06-2	K1007395-005	0.050	1	07/23/10	0.423	
MW-60-12	K1007395-006	0.050	1	07/23/10	ND	
MW-02-4	K1007395-007	0.050	1	07/23/10	0.265	
Method Blank	K1007395-MB	0.050	1	07/23/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/18/2010
Date Received : 7/20/2010
Date Prepared : NA
Date Analyzed : 07/23/10

Duplicate Summary
Inorganic Parameters

Sample Name : MW-06-2
Lab Code : K1007395-005DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.050	0.423	0.424	0.424	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Matrix Spike Summary
Inorganic Parameters

Sample Name :	MW-06-2	Units :	mg/L
Lab Code :	K1007395-005MS	Basis :	NA
Test Notes :			

Analyte	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	353.2	0.050	2.00	0.423	2.39	99	86-117	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/23/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Laboratory Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Nitrate+Nitrite as Nitrogen	NONE	353.2	14.8	13.7	93	88-110	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Nitrate+Nitrite as Nitrogen
353.2
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/23/2010	2.00	1.92	96
CCV2 Result	7/23/2010	2.00	1.91	96
CCV3 Result	7/23/2010	2.00	1.92	96
CCV4 Result	7/23/2010	2.00	1.90	95
CCV5 Result	7/23/2010	2.00	1.89	95
CCV6 Result	7/23/2010	2.00	1.88	94
CCV7 Result	7/23/2010	2.00	1.86	93
CCV8 Result	7/23/2010	2.00	1.87	94
CCV9 Result	7/23/2010	2.00	1.86	93

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Nitrate+Nitrite as Nitrogen
353.2
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/23/2010	0.050	ND
CCB2 Result	7/23/2010	0.050	ND
CCB3 Result	7/23/2010	0.050	ND
CCB4 Result	7/23/2010	0.050	ND
CCB5 Result	7/23/2010	0.050	ND
CCB6 Result	7/23/2010	0.050	ND
CCB7 Result	7/23/2010	0.050	ND
CCB8 Result	7/23/2010	0.050	ND
CCB9 Result	7/23/2010	0.050	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	07/16-18/10
Project Number :	2646006.17-GW10-100	**Date Received :**	07/17-20/10
Sample Matrix :	WATER		

Phosphorus, Total

Prep Method :	Method	Units :	mg/L
Analysis Method :	365.3	Basis :	NA
Test Notes :			

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.010	1	7/26/2010	07/26/10	0.021	
MW-06-1	K1007395-002	0.010	1	7/26/2010	07/26/10	0.084	
MW-02-3	K1007395-003	0.010	1	7/26/2010	07/26/10	0.200	
MW-82-3	K1007395-004	0.010	1	7/26/2010	07/26/10	0.187	
MW-06-2	K1007395-005	0.010	1	7/26/2010	07/26/10	0.187	
MW-60-12	K1007395-006	0.010	1	7/26/2010	07/26/10	ND	
MW-02-4	K1007395-007	0.010	1	7/26/2010	07/26/10	0.520	
Method Blank	K1007395-MB	0.010	1	7/26/2010	07/26/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/18/2010
Date Received : 7/20/2010
Date Prepared : 07/26/10
Date Analyzed : 07/26/10

Duplicate Summary
Inorganic Parameters

Sample Name : MW-06-2
Lab Code : K1007395-005DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Phosphorus, Total	Method	365.3	0.010	0.187	0.224	0.206	18	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	MW-06-2		Units :	mg/L
Lab Code :	K1007395-005MS	K1007395-005DMS	Basis :	NA
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Phosphorus, Total	Method	365.3	0.020	0.500	1.00	0.187	0.680	1.21	99	102	50-144	3	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	NA
Project Number :	2646006.17-GW10-100	**Date Received :**	NA
Sample Matrix :	WATER	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Laboratory Control Sample Summary
Inorganic Parameters

Sample Name :	Lab Control Sample	Units :	mg/L
Lab Code :	K1007395-LCS	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Phosphorus, Total	Method	365.3	3.23	3.24	100	88-113	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Phosphorus, Total
365.3
Units: mg/L

CONTINUING CALIBRATION VERIFICATION (CCV)

	Date Analyzed	True Value	Measured Value	Percent Recovery
CCV1 Result	7/26/2010	0.500	0.489	98
CCV2 Result	7/26/2010	0.500	0.488	98
CCV3 Result	7/26/2010	0.500	0.488	98
CCV4 Result	7/26/2010	0.500	0.486	97
CCV5 Result	7/26/2010	0.500	0.482	96

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project : Rhodia Silver Bow

Service Request : K1007395
Date Collected : NA
Date Received : NA

Phosphorus, Total
365.3
Units: mg/L

CONTINUING CALIBRATION BLANK (CCB)

	Date Analyzed	MRL	Blank Value
CCB1 Result	7/26/2010	0.010	ND
CCB2 Result	7/26/2010	0.010	ND
CCB3 Result	7/26/2010	0.010	ND
CCB4 Result	7/26/2010	0.010	ND
CCB5 Result	7/26/2010	0.010	ND

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	07/16-18/10
Project Number :	2646006.17-GW10-100	**Date Received :**	07/17-20/10
Sample Matrix :	WATER		

Bicarbonate Alkalinity as CaCO3

Analysis Method : SM 2320 B
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	9.0	1	07/20/10	86.1	
MW-06-1	K1007395-002	9.0	1	07/22/10	137	
MW-02-3	K1007395-003	2.0	1	07/28/10	134	
MW-82-3	K1007395-004	9.0	1	07/22/10	137	
MW-06-2	K1007395-005	9.0	1	07/22/10	102	
MW-60-12	K1007395-006	9.0	1	07/22/10	224	
MW-02-4	K1007395-007	9.0	1	07/22/10	499	
Method Blank	K1007395-MB	2.0	1	07/28/10	ND	
Method Blank	K1007395-MB	9.0	1	07/20/10	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/17/2010
Date Received : 7/20/2010
Date Prepared : NA
Date Analyzed : 07/22/10

Duplicate Summary
Inorganic Parameters

Sample Name : MW-82-3
Lab Code : K1007395-004DUP
Test Notes :

Units : mg/L
Basis : NA

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Bicarbonate Alkalinity as CaCO3	SM 2320 B	9.0	137	135	136	1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/22/10

Duplicate Summary
Inorganic Parameters

Sample Name :	MW-06-2	Units :	mg/L
Lab Code :	K1007395-005DUP	Basis :	NA

Test Notes :

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Bicarbonate Alkalinity as CaCO3	SM 2320 B	9.0	102	102	102	<1	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Carbonate Alkalinity as CaCO3

Analysis Method : SM 2320 B
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	9.0	1	07/20/10	ND	
MW-06-1	K1007395-002	9.0	1	07/22/10	ND	
MW-02-3	K1007395-003	2.0	1	07/28/10	ND	
MW-82-3	K1007395-004	9.0	1	07/22/10	ND	
MW-06-2	K1007395-005	9.0	1	07/22/10	ND	
MW-60-12	K1007395-006	9.0	1	07/22/10	ND	
MW-02-4	K1007395-007	9.0	1	07/22/10	ND	
Method Blank	K1007395-MB	2.0	1	07/28/10	ND	
Method Blank	K1007395-MB	9.0	1	07/22/10	ND	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/17/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/22/10

Duplicate Summary
Inorganic Parameters

Sample Name :	MW-82-3	Units :	mg/L
Lab Code :	K1007395-004DUP	Basis :	NA

Test Notes :

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbonate Alkalinity as CaCO3	SM 2320 B	9.0	ND	ND	ND	-	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	NA
		Date Analyzed :	07/22/10

Duplicate Summary
Inorganic Parameters

Sample Name :	MW-06-2	Units :	mg/L
Lab Code :	K1007395-005DUP	Basis :	NA

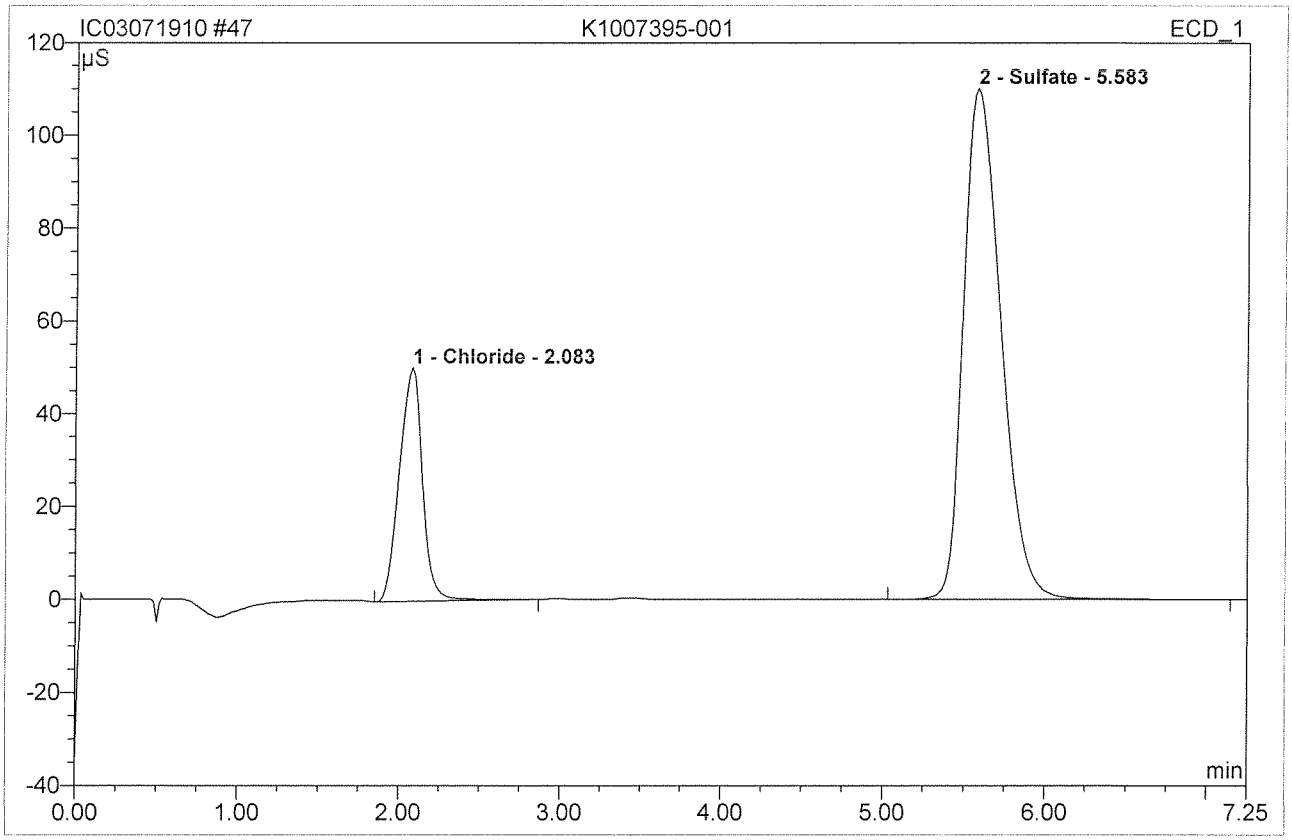
Test Notes :

Analyte	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Carbonate Alkalinity as CaCO3	SM 2320 B	9.0	ND	ND	ND	-	

SM Standard Methods for the Examination of Water and Wastewater, 20th Ed., 1998.

47 K1007395-001

Sample Name:	**K1007395-001**	*Injection Volume:*	**200.0**
Vial Number:	**45**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/19/2010 17:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**

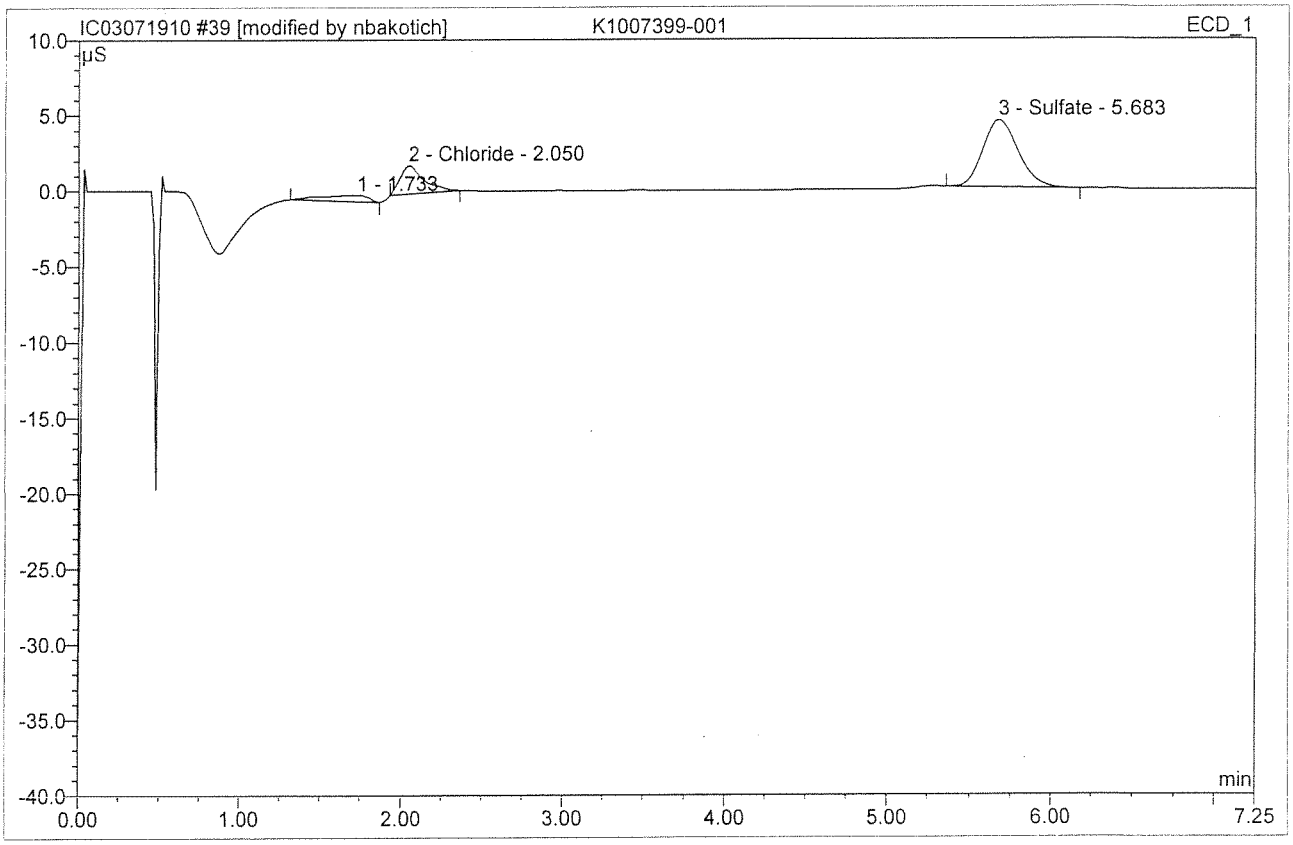


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.08	Chloride	50.403	8.413	22.26	107.892	BMB
2	5.58	Sulfate	110.188	29.387	77.74	597.247	BMB
Total:			160.591	37.800	100.00	705.139	

G.K to report Cl conc. > 20 times of that in cass

39 K1007399-001

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 15:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	n.a.	0.429	0.142	9.04	n.a.	BMB*
2	2.05	Chloride $\bar{x}$ = 104 RPD = 2	1.886	0.321	20.36	102.876	BMB*
3	5.68	Sulfate $\bar{x}$ = 566 RPD = 0.1	4.447	1.113	70.60	565.308	BMB
Total:			6.763	1.576	100.00	668.184	

Nitrate $\bar{x}$ - ND RPD -

Fluoride $\bar{x}$ - ND RPD -

After Initials nb

JUL 26 2010

☐ Wrong Peak/Peak not Found
☒ Baseline/shoulder Incorrect
☐ Other

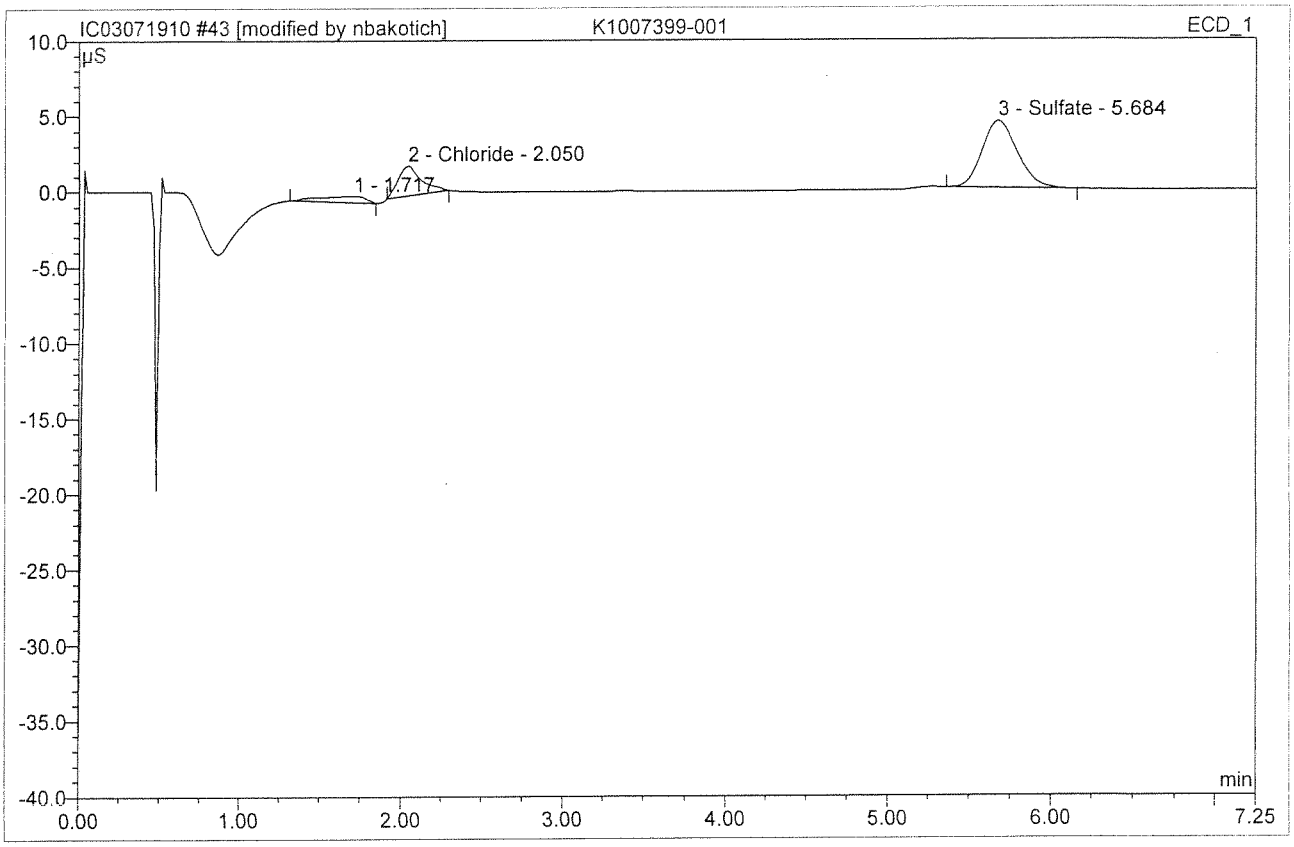
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

43 K1007399-001

D

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**41**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 16:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.72	n.a.	0.416	0.140	8.85	n.a.	BMB*
2	2.05	Chloride	1.969	0.327	20.70	104.900	BMB*
3	5.68	Sulfate	4.438	1.114	70.46	565.932	BMB
Total:			6.823	1.581	100.00	670.832	

O.K to Report SO4. Concentration > 20 hit in CCB5. 8/7/2010

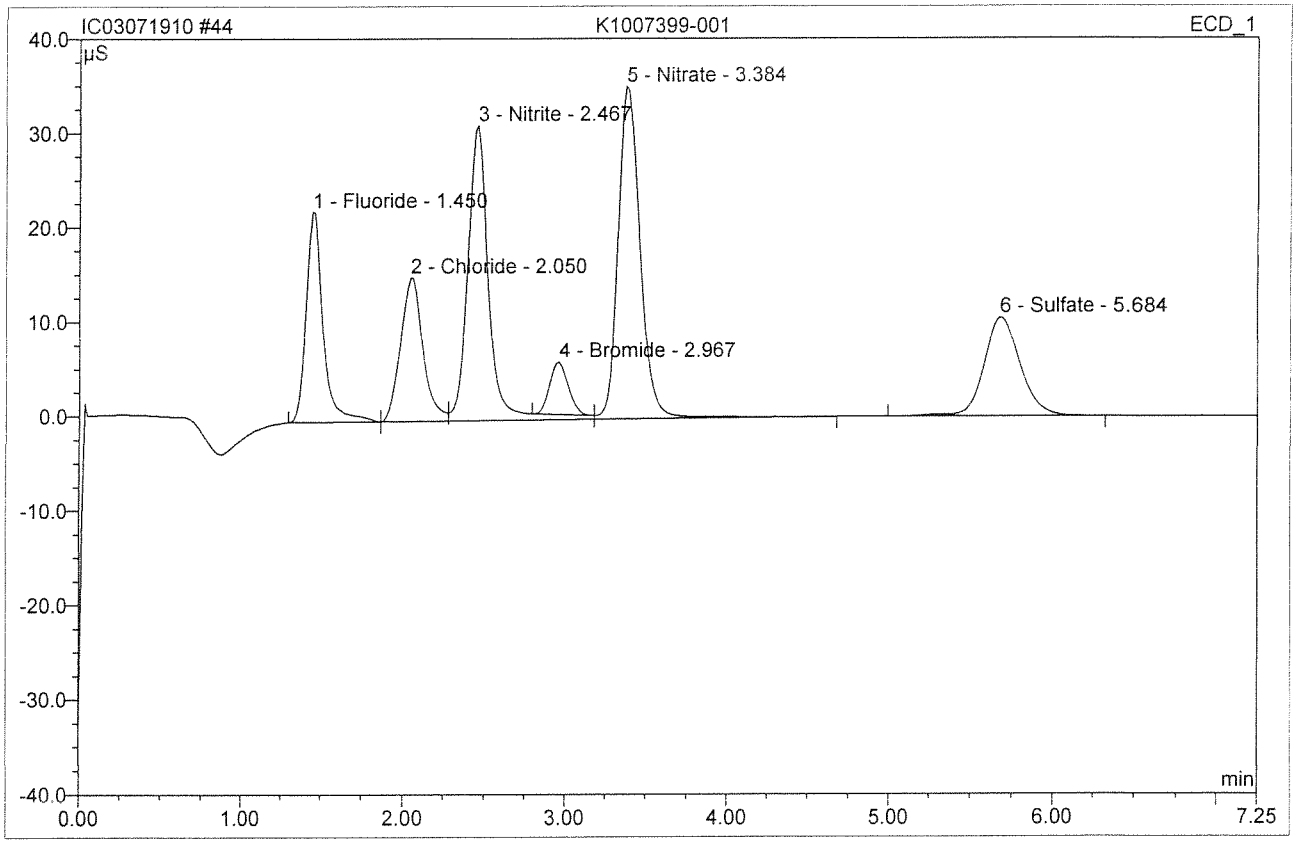
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

44 K1007399-001

MS

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 16:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.45	Fluoride Rec=96	22.259	2.767	14.60	723.025	BMb
2	2.05	Chloride Rec=90	15.172	2.429	12.82	778.778	bM
3	2.47	Nitrite	31.257	4.695	24.77	812.973	M
4	2.97	Bromide	5.563	0.749	3.95	698.493	Rd
5	3.38	Nitrate Rec=101	35.237	5.602	29.56	760.304	MB
6	5.68	Sulfate Rec=109	10.484	2.708	14.29	1375.926	BMB
Total:			119.973	18.950	100.00	5149.499	

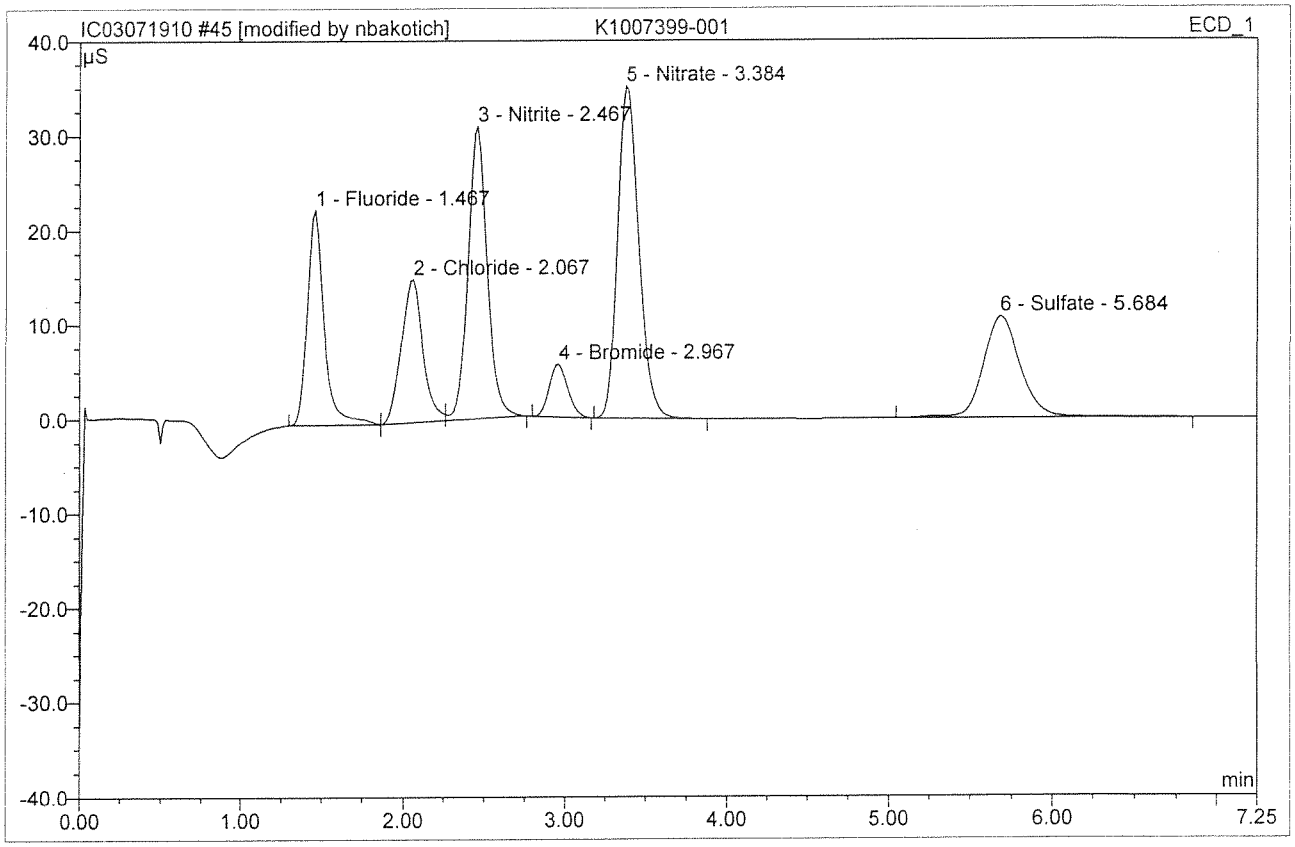
spk lvl 750

O.K to Report SO4 conc. > 20 times Mit in CCB5

45 K1007399-001

MSD

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 16:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.47	Fluoride Rec-97	22.772	2.772	15.16	724.283	BMb
2	2.07	Chloride Rec-87	15.122	2.351	12.85	753.854	bM *
3	2.47	Nitrite	30.991	4.235	23.15	733.362	MB*
4	2.97	Bromide	5.576	0.753	4.11	702.237	BMB*
5	3.38	Nitrate Rec-97	35.168	5.376	29.39	729.714	BMB
6	5.68	Sulfate Rec-~~117~~ 115%	10.706	2.804	15.33	1424.705	BMB
Total:			120.335	18.292	100.00	5068.154	

spike 750

O.K After rpt + 50% conc 7 2c like hit M also

Initials

JUL 26 2010

default/Integration

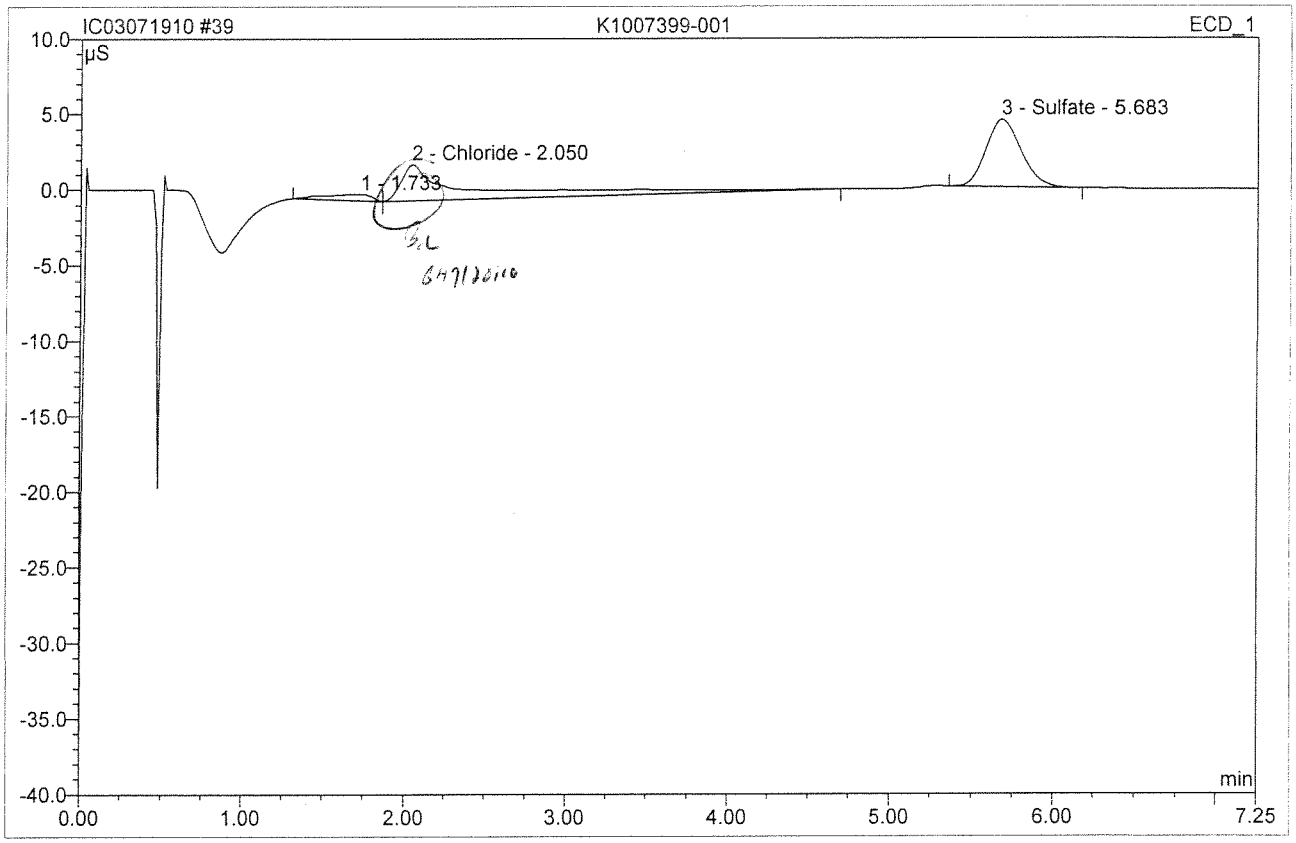
☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder incorrect
☐ Other

67

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

39 K1007399-001

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 15:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	n.a.	0.429	0.142	5.69	n.a.	BMb
2	2.05	Chloride	2.388	1.247	49.84	399.795	bMB
3	5.68	Sulfate	4.447	1.113	44.47	565.308	BMB
Total:			7.265	2.502	100.00	965.103	

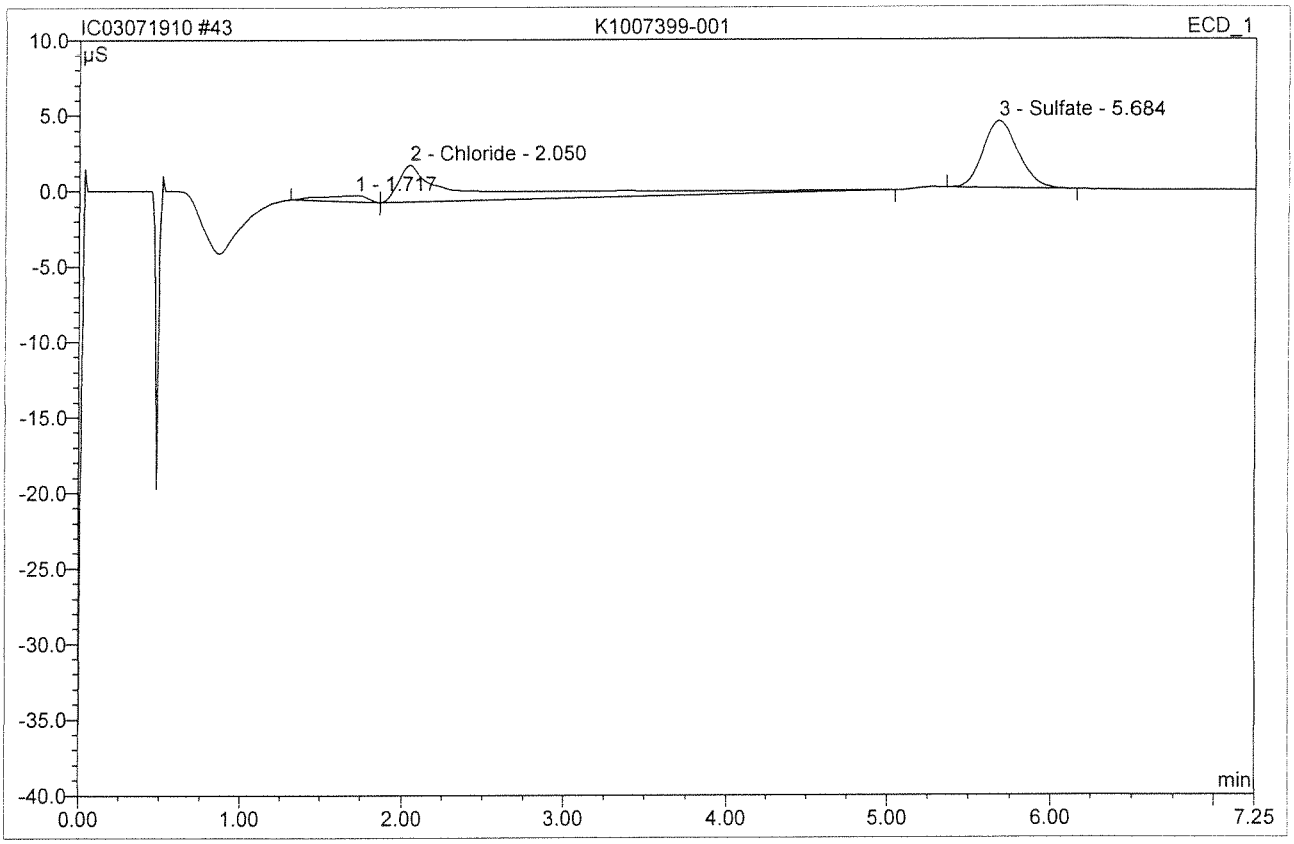
Before

JUL 26 2010

43 K1007399-001

D

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**41**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 16:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.72	n.a.	0.424	0.143	5.36	n.a.	BMb
2	2.05	Chloride	2.442	1.403	52.76	449.939	bMB
3	5.68	Sulfate	4.438	1.114	41.88	565.932	BMB
Total:			7.304	2.660	100.00	1015.871	

O.K to report Sulfate > 20 Mg/L in CCS

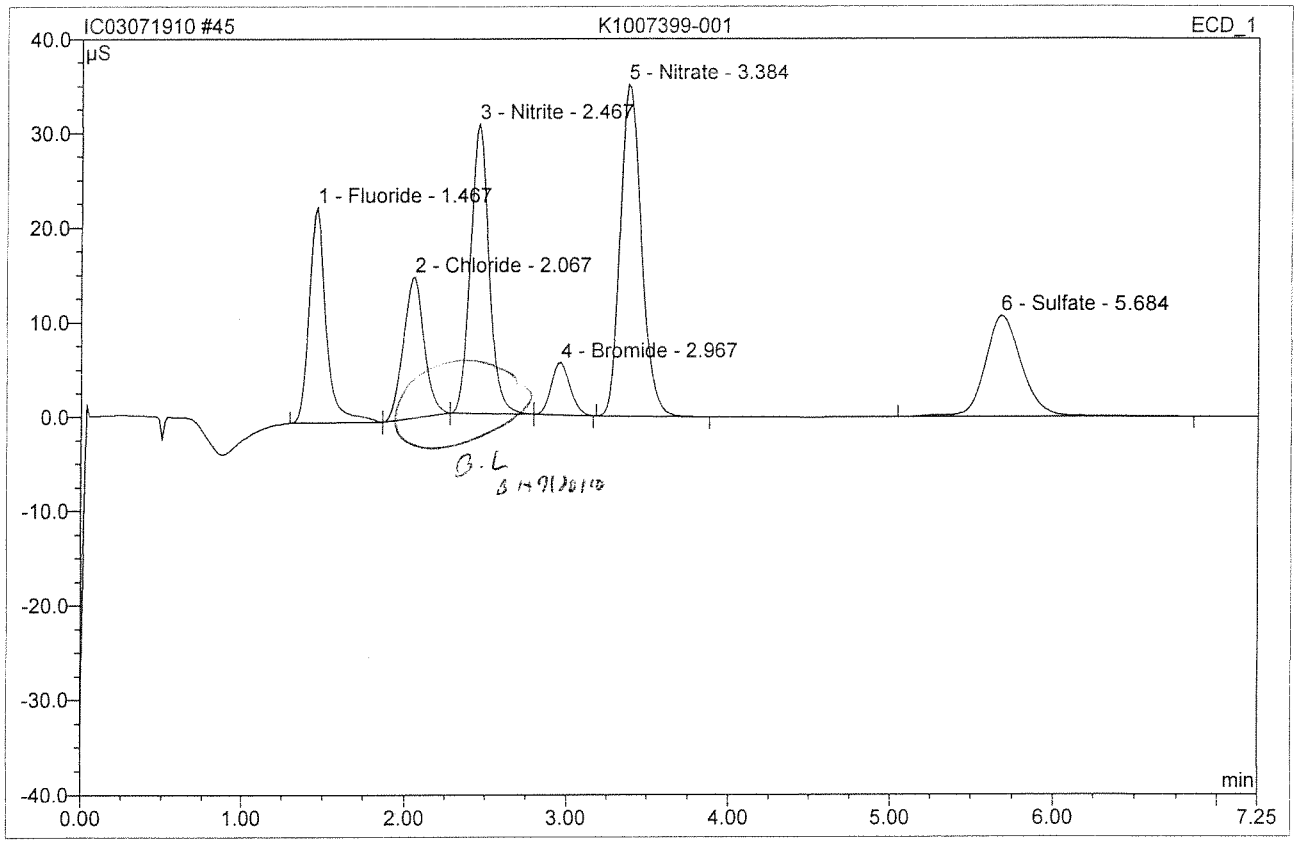
Before

JUL 26 2010

45 K1007399-001

MSD

Sample Name:	**K1007399-001**	*Injection Volume:*	**200.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/19/2010 16:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.47	Fluoride	22.772	2.772	15.35	724.283	BMb
2	2.07	Chloride	14.868	2.250	12.46	721.486	bMb
3	2.47	Nitrite	30.677	4.108	22.74	711.348	bMb
4	2.97	Bromide	5.576	0.753	4.17	702.237	bMB
5	3.38	Nitrate	35.168	5.376	29.76	729.714	BMB
6	5.68	Sulfate	10.706	2.804	15.52	1424.705	BMB
Total:			119.767	18.063	100.00	5013.773	

Before

JUL 26 2010

Sequence # ICC3071910 | Ion Chromatography Data Quality Report Inorganics | Run # 209248

1. Holding times met for all samples analyzed? yes/no/NA
2. Are dilutions within upper limits of the curve? yes/no/NA
3. Are analysis/extraction stickers included on report? yes/no/NA
4. Are detection limits reported correctly? yes/no/NA
5. Are all quality control criteria met? nb 7/21 yes/no/NA
   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? yes/no/NA
   b. Are CCV's and CCB's all within acceptance limits? yes/no/NA
   c. Are results for Method Blanks all ND? yes/no/NA
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) yes/no/NA
   e. Are all exceptions explained? yes/no/NA
6. Are all samples labelled correctly? yes/no/NA

CCBs has hit reanalyze all analytes of interest <20x blk hit.

CAS Standard Identification Codes and Abbreviated Footnotes for Chromatograms

G1 Sample was analyzed past the end of recommended holding time. See Nonconformity sheet.
G2 Sample was reanalyzed past holding time. Initial analysis was performed within recommended holding time.
G4 Sample was received past the end of recommended holding time.
R1 High RPD is because the duplicate sample results are less than three times the method reporting limit.
i MRL is elevated because of matrix interferences and the sample required diluting.
F Sample filtered primary to analysis.

LCS

Fluoride	True Value = 13.5 ppm	CAS ID # = AN1-33-T	Expires: 12.22.10
Chloride	True Value = 5.0ppm	CAS ID # = ERA#0107-10-02	Expires: 8.10
Nitrite	True Value = 100 ppm	CAS ID # = AN11-29-I	Expires: 7.19.10
Bromide	True Value = 4.0 ppm	CAS ID # = AN1-33-L	Expires: 10.8.10
Nitrate	True Value = 21.0 ppm	CAS ID # = AN1-33-E	Expires: 7.21.10
Sulfate	True Value = 5.0 ppm	CAS ID # = ERA#0107-10-02	Expires: 8.10

CCV CAS ID # = AN11-80-W Expires 7.19.10

Fluoride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-M	Expires: 10.28.10
Chloride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-F	Expires: 8.5.10
Nitrite	True Value = 2.0 ppm	10K CAS ID # = AN1-33-N	Expires: 10.28.10
Bromide	True Value = 2.0 ppm	10K CAS ID # = AN1-33-U	Expires: 12.22.10
Nitrate	True Value = 2.0 ppm	10K CAS ID # = AN1-33-I	Expires: 9.9.10
Sulfate	True Value = 5.0 ppm	10K CAS ID # = AN1-33-G	Expires: 8.5.10

Spike
2.0ppm X dilution factor CAS ID# = AN11-70-BB Expires 7.19.10

Fluoride	10K CAS ID # = AN1-33-M	Expires: ↑ CCV
Chloride	10K CAS ID # = AN1-33-F	Expires: ↓
Nitrite	10K CAS ID # = AN1-33-N	Expires: ↓
Bromide	10K CAS ID # = AN1-33-U	Expires: ↓
Nitrate	10K CAS ID # = AN1-33-I	Expires: ↓
Sulfate	10K CAS ID # = AN1-33-G	Expires: ↓

Analyst: nb Date: 7.19.10

First Review: ↓/nb for BH Date: 7.20.10

Final Review: [signature] Date: 7/26/10

t:\wet\ic\icdqs.xls

7397-1	F	2.5/5			✓
	CL				✓
	NO2				
	Br				
	NO3				
	SO4				✓
-6	F				✓
	CL				✓
	NO2				
	Br				
	NO3				
	SO4		1/100→1/5		✓
-7	F				✓
	CL				✓
	NO2				
	Br				
	NO3				
	SO4		1/5		
-8	F				✓
	CL				✓
	NO2				
	Br				
	NO3				
	SO4		1/100→2.5/5		✓
-9	F				✓
	CL				✓
	NO2				
	Br				
	NO3				
	SO4	↓	1/100→2.5/5		✓
7412-1	F				
	CL				
	NO2				
	Br				
	NO3				
	SO4	↓			✓
7254-1	F				
	CL				✓
	NO2				
	Br				
	NO3				
	SO4				✓
-2	F				
	CL				✓
	NO2				
	Br				
	NO3				
	SO4				✓
-3	F				
	CL				✓
	NO2				
	Br				
	NO3				
	SO4				✓
-5	F				
	CL				✓
	NO2				
	Br				
	NO3				
	SO4	↓			✓

7254-6					F			
					CL			✓
					NO2			
					Br			
					NO3			
					SO4			✓
↓ -7		X			F			
					CL			✓
					NO2			
					Br			
					NO3			
					SO4	↓		✓
7305-1					F	2.5/15		✓
					CL			
					NO2			
					Br			
					NO3			
					SO4			
↓ -2					F	↓		✓
					CL			
					NO2			
					Br			
					NO3			
					SO4			
7281-26					F			
					CL	3.25/15	1/15	
					NO2			
					Br			
					NO3			
					SO4	↓		✓
7336-1					F			
					CL		2.5/15	
					NO2			
					Br			
					NO3			
					SO4	↓	↓	
7299-1		X			F			
					CL			
					NO2			
					Br			
					NO3			
					SO4	11/22→7/15		✓
↓ -2					F			
					CL			
					NO2			
					Br			
					NO3			
					SO4	↓		✓
7295-1					F	2.25/15		✓
					CL			
					NO2			
					Br			
					NO3			
					SO4	↓		
7326-1					F			
					CL	2.5/15		
					NO2			
					Br			✓
					NO3			
					SO4	↓		

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 70
Created: 7/19/2010 9:06:34 AM by ACQWET10
Last Update: 7/19/2010 5:41:55 PM by ACQWET10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	std2/lvl2	Standard	1	200.0	epa300	epa300	Finished	4/26/2010 8:54:58 AM
2	std3/lvl3	Standard	2	200.0	epa300	epa300	Finished	4/26/2010 9:12:26 AM
3	std4/lvl4	Standard	3	200.0	epa300	epa300	Finished	4/26/2010 9:25:24 AM
4	std5/lvl5	Standard	4	200.0	epa300	epa300	Finished	4/26/2010 9:38:21 AM
5	std6/lvl6	Standard	5	200.0	epa300	epa300	Finished	4/26/2010 9:51:19 AM
6	std7/lvl7	Standard	6	200.0	epa300	epa300	Finished	4/26/2010 10:04:17 AM
7	std1/lvl1	Standard	7	200.0	epa300	epa300	Finished	4/26/2010 10:17:14 AM
8	CCV AN11-80-W	Unknown	8	200.0	epa300	epa300	Finished	7/19/2010 9:08:00 AM
9	CCB	Unknown	9	200.0	epa300	epa300	Finished	7/19/2010 9:18:13 AM
10	NO2 AN11-29-I	Unknown	10	200.0	epa300	epa300	Finished	7/19/2010 9:28:25 AM
11	MB	Unknown	11	200.0	epa300	epa300	Finished	7/19/2010 9:38:38 AM
12	NO3 AN1-33-E	Unknown	11	200.0	epa300	epa300	Finished	7/19/2010 9:48:50 AM
13	CLSO4 ERA#0107-10-02	Unknown	12	200.0	epa300	epa300	Finished	7/19/2010 9:59:03 AM
14	F AN 1-33-D	Unknown	13	200.0	epa300	epa300	Finished	7/19/2010 10:09:15 AM
15	Br AN1-33-L	Unknown	14	200.0	epa300	epa300	Finished	7/19/2010 10:19:28 AM
16	SPK AN11-70-BB	Unknown	15	200.0	epa300	epa300	Finished	7/19/2010 10:29:40 AM
17	CCV2	Unknown	15	200.0	epa300	epa300	Finished	7/19/2010 10:39:53 AM
18	CCB2	Unknown	16	200.0	epa300	epa300	Finished	7/19/2010 10:50:05 AM
19	NO3	Unknown	17	200.0	epa300	epa300	Finished	7/19/2010 11:00:18 AM
20	K1007397-001	Unknown	18	200.0	epa300	epa300	Finished	7/19/2010 12:37:50 PM
21	K1007397-006	Unknown	19	200.0	epa300	epa300	Finished	7/19/2010 12:48:03 PM
22	K1007397-007	Unknown	20	200.0	epa300	epa300	Finished	7/19/2010 12:58:15 PM
23	K1007397-008	Unknown	21	200.0	epa300	epa300	Finished	7/19/2010 1:08:28 PM
24	K1007397-009	Unknown	22	200.0	epa300	epa300	Finished	7/19/2010 1:18:41 PM
25	K1007112-001	Unknown	23	200.0	epa300	epa300	Finished	7/19/2010 1:28:53 PM
26	K1007254-001	Unknown	24	200.0	epa300	epa300	Finished	7/19/2010 1:39:06 PM
27	K1007254-002	Unknown	25	200.0	epa300	epa300	Finished	7/19/2010 1:48:49 PM
28	RB	Unknown	26	200.0	epa300	epa300	Finished	7/19/2010 1:58:33 PM
29	CCV3	Unknown	27	200.0	epa300	epa300	Finished	7/19/2010 2:08:16 PM
30	CCB3	Unknown	28	200.0	epa300	epa300	Finished	7/19/2010 2:17:58 PM
31	K1007254-003	Unknown	29	200.0	epa300	epa300	Finished	7/19/2010 2:27:41 PM
32	K1007254-005	Unknown	30	200.0	epa300	epa300	Finished	7/19/2010 2:37:24 PM
33	K1007254-006	Unknown	31	200.0	epa300	epa300	Finished	7/19/2010 2:47:07 PM
34	K1007254-007	Unknown	32	200.0	epa300	epa300	Finished	7/19/2010 2:56:50 PM
35	K1007305-001	Unknown	33	200.0	epa300	epa300	Finished	7/19/2010 3:06:32 PM
36	K1007305-002	Unknown	34	200.0	epa300	epa300	Finished	7/19/2010 3:16:15 PM
37	K1007281-026	Unknown	35	200.0	epa300	epa300	Finished	7/19/2010 3:25:58 PM
38	K1007336-001	Unknown	36	200.0	epa300	epa300	Finished	7/19/2010 3:35:41 PM
39	K1007399-001	Unknown	37	200.0	epa300	epa300	Finished	7/19/2010 3:45:24 PM
40	RB	Unknown	38	200.0	epa300	epa300	Finished	7/19/2010 3:55:07 PM
41	CCV4	Unknown	39	200.0	epa300	epa300	Finished	7/19/2010 4:04:49 PM
42	CCB4	Unknown	40	200.0	epa300	epa300	Finished	7/19/2010 4:14:33 PM

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Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 70
Created: 7/19/2010 9:06:34 AM by ACQWET10
Last Update: 7/19/2010 5:41:55 PM by ACQWET10

No.	Name	Dil. Factor	Comment
1	std2/lvl2	1.0000	
2	std3/lvl3	1.0000	
3	std4/lvl4	1.0000	
4	std5/lvl5	1.0000	
5	std6/lvl6	1.0000	
6	std7/lvl7	1.0000	
7	std1/lvl1	1.0000	
8	CCV AN11-80-W	1.0000	CCV1
9	CCB	1.0000	CCB1
10	NO2 AN11-29-I	25.0000	NO2
11	MB	1.0000	MB
12	NO3 AN1-33-E	20.0000	NO3
13	CLSO4 ERA#0107-10-02	1.0000	CLSO4
14	F AN 1-33-D	2.0000	F
15	Br AN1-33-L	1.0000	Br
16	SPK AN11-70-BB	1.0000	SPK
17	CCV2	1.0000	CCV2
18	CCB2	1.0000	CCB2
19	NO3	20.0000	NO3-2
20	K1007397-001	2.0000	
21	K1007397-006	2.0000	
22	K1007397-007	2.0000	
23	K1007397-008	2.0000	
24	K1007397-009	2.0000	
25	K1007112-001	2.0000	
26	K1007254-001	2.0000	
27	K1007254-002	2.0000	
28	RB	1.0000	
29	CCV3	1.0000	
30	CCB3	1.0000	
31	K1007254-003	2.0000	
32	K1007254-005	2.0000	
33	K1007254-006	2.0000	
34	K1007254-007	2.0000	
35	K1007305-001	2.0000	
36	K1007305-002	2.0000	
37	K1007281-026	20.0000	
38	K1007336-001	20.0000	
39	K1007399-001	500.0000	
40	RB	1.0000	
41	CCV4	1.0000	CCV4
42	CCB4	1.0000	CCB4

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Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 70
Created: 7/19/2010 9:06:34 AM by ACQWET10
Last Update: 7/19/2010 5:41:55 PM by ACQWET10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
43	K1007399-001	Unknown	41	200.0	epa300	epa300	Finished	7/19/2010 4:24:15 PM
44	K1007399-001	Unknown	42	200.0	epa300	epa300	Finished	7/19/2010 4:33:59 PM
45	K1007399-001	Unknown	43	200.0	epa300	epa300	Finished	7/19/2010 4:43:43 PM
46	K1007399-002	Unknown	44	200.0	epa300	epa300	Finished	7/19/2010 4:53:26 PM
47	K1007395-001	Unknown	45	200.0	epa300	epa300	Finished	7/19/2010 5:03:09 PM
48	K1007426-001	Unknown	46	200.0	epa300	epa300	Finished	7/19/2010 5:12:52 PM
49	K1007397-006	Unknown	47	200.0	epa300	epa300	Finished	7/19/2010 5:25:46 PM
50	K1007397-007	Unknown	48	200.0	epa300	epa300	Finished	7/19/2010 5:35:29 PM
51	K1007397-008	Unknown	49	200.0	epa300	epa300	Finished	7/19/2010 5:45:12 PM
52	RB	Unknown	50	200.0	epa300	epa300	Finished	7/19/2010 5:54:55 PM
53	CCV5	Unknown	51	200.0	epa300	epa300	Finished	7/19/2010 6:04:38 PM
54	CCB5	Unknown	52	200.0	epa300	epa300	Finished	7/19/2010 6:14:21 PM
55	K1007254-007	Unknown	53	200.0	epa300	epa300	Finished	7/19/2010 6:24:04 PM
56	K1007254-007	Unknown	54	200.0	epa300	epa300	Finished	7/19/2010 6:33:46 PM
57	K1007254-007	Unknown	55	200.0	epa300	epa300	Finished	7/19/2010 6:43:29 PM
58	K1007397-009	Unknown	56	200.0	epa300	epa300	Finished	7/19/2010 6:53:11 PM
59	K1007281-026	Unknown	57	200.0	epa300	epa300	Finished	7/19/2010 7:02:54 PM
60	K1007336-001	Unknown	58	200.0	epa300	epa300	Finished	7/19/2010 7:12:37 PM
61	RB	Unknown	59	200.0	epa300	epa300	Finished	7/19/2010 7:22:20 PM
62	CCV6	Unknown	60	200.0	epa300	epa300	Finished	7/19/2010 7:32:03 PM
63	CCB6	Unknown	61	200.0	epa300	epa300	Finished	7/19/2010 7:41:46 PM
64	F1	Unknown	62	200.0	epa300	epa300	Finished	7/19/2010 7:51:28 PM
65	F2	Unknown	63	200.0	epa300	epa300	Finished	7/19/2010 8:01:11 PM
66	F3	Unknown	64	200.0	epa300	epa300	Finished	7/19/2010 8:10:53 PM
67	F4	Unknown	65	200.0	epa300	epa300	Finished	7/19/2010 8:20:36 PM
68	F5	Unknown	66	200.0	epa300	epa300	Finished	7/19/2010 8:30:19 PM
69	F6	Unknown	67	200.0	epa300	epa300	Finished	7/19/2010 8:40:01 PM
70	STOP IT	Unknown	68	200.0	shutdown 120	epa300	Finished	7/19/2010 8:49:44 PM

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Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 70
Created: 7/19/2010 9:06:34 AM by ACQWET10
Last Update: 7/19/2010 5:41:55 PM by ACQWET10

No.	Name	Dil. Factor	Comment
43	K1007399-001	500.0000	D
44	K1007399-001	500.0000	MS
45	K1007399-001	500.0000	MSD
46	K1007399-002	500.0000	
47	K1007395-001	20.0000	
48	K1007426-001	2.0000	
49	K1007397-006	500.0000	
50	K1007397-007	5.0000	
51	K1007397-008	200.0000	
52	RB	1.0000	
53	CCV5	1.0000	CCV5
54	CCB5	1.0000	CCB5
55	K1007254-007	2.0000	D
56	K1007254-007	2.0000	MS
57	K1007254-007	2.0000	MSD
58	K1007397-009	200.0000	
59	K1007281-026	5.0000	
60	K1007336-001	2.0000	
61	RB	1.0000	
62	CCV6	1.0000	CCV6
63	CCB6	1.0000	CCB6
64	F1	1.0000	FILTER
65	F2	1.0000	FILTER
66	F3	1.0000	FILTER
67	F4	1.0000	FILTER
68	F5	1.0000	FILTER
69	F6	1.0000	FILTER
70	STOP IT	1.0000	FILTER

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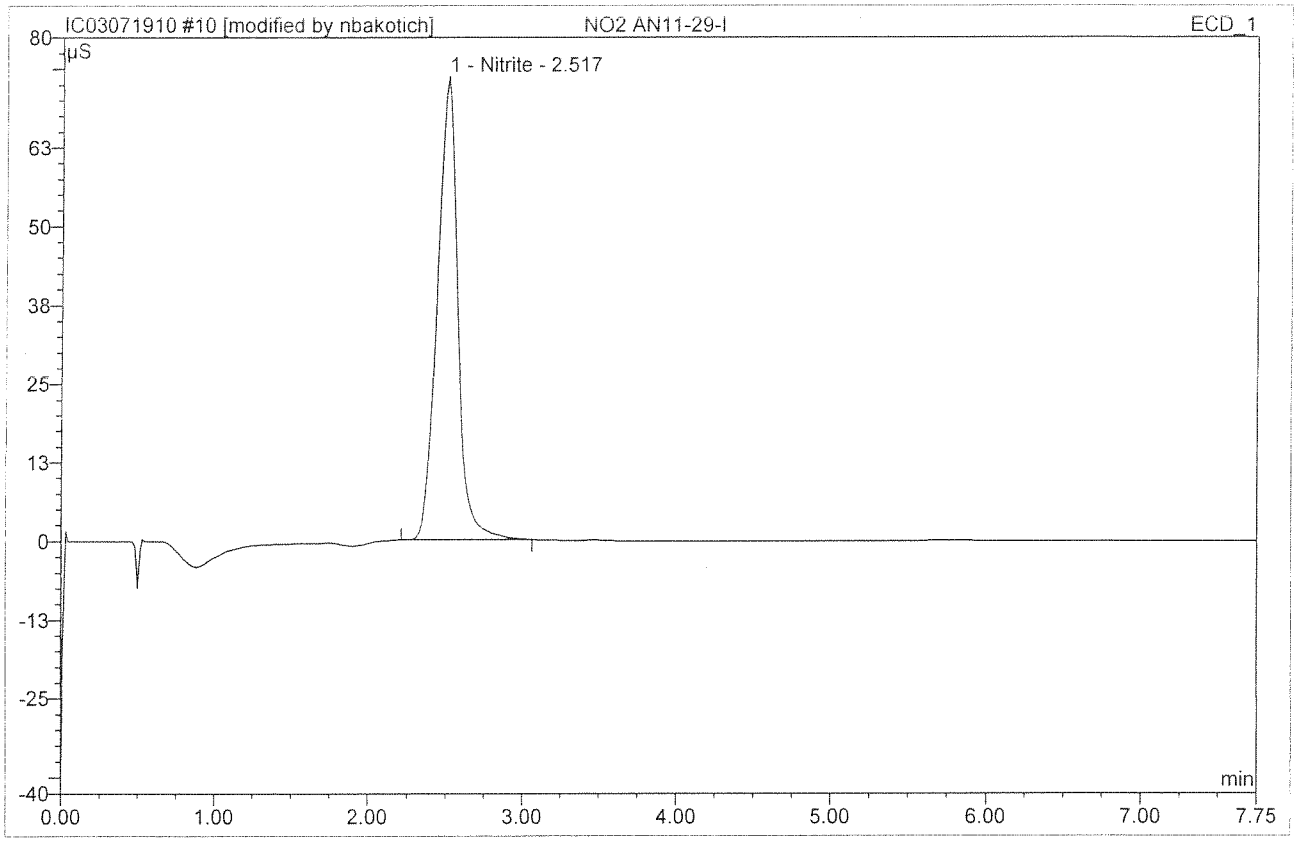
10 NO2 AN11-29-I

NO2

Sample Name:	**NO2 AN11-29-I**	*Injection Volume:*	**200.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/19/2010 9:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.52	Nitrite	73.640	11.409	100.00	98.786	BMB*
Total:			73.640	11.409	100.00	98.786	

After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other _____

default/Integration

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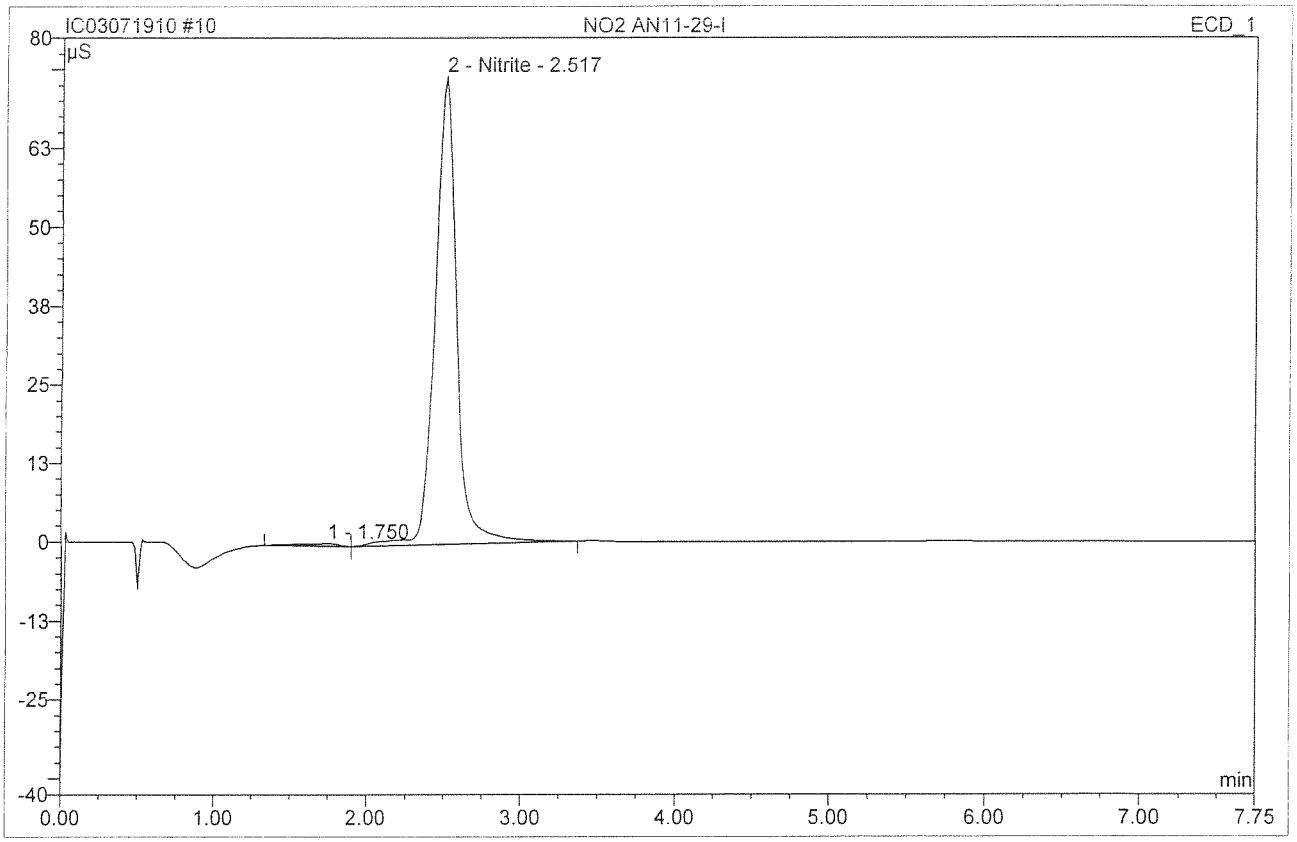
Version 6.80 SP1 Build 2238

10 NO2 AN11-29-I

NO2

Sample Name:	**NO2 AN11-29-I**	*Injection Volume:*	**200.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/19/2010 9:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



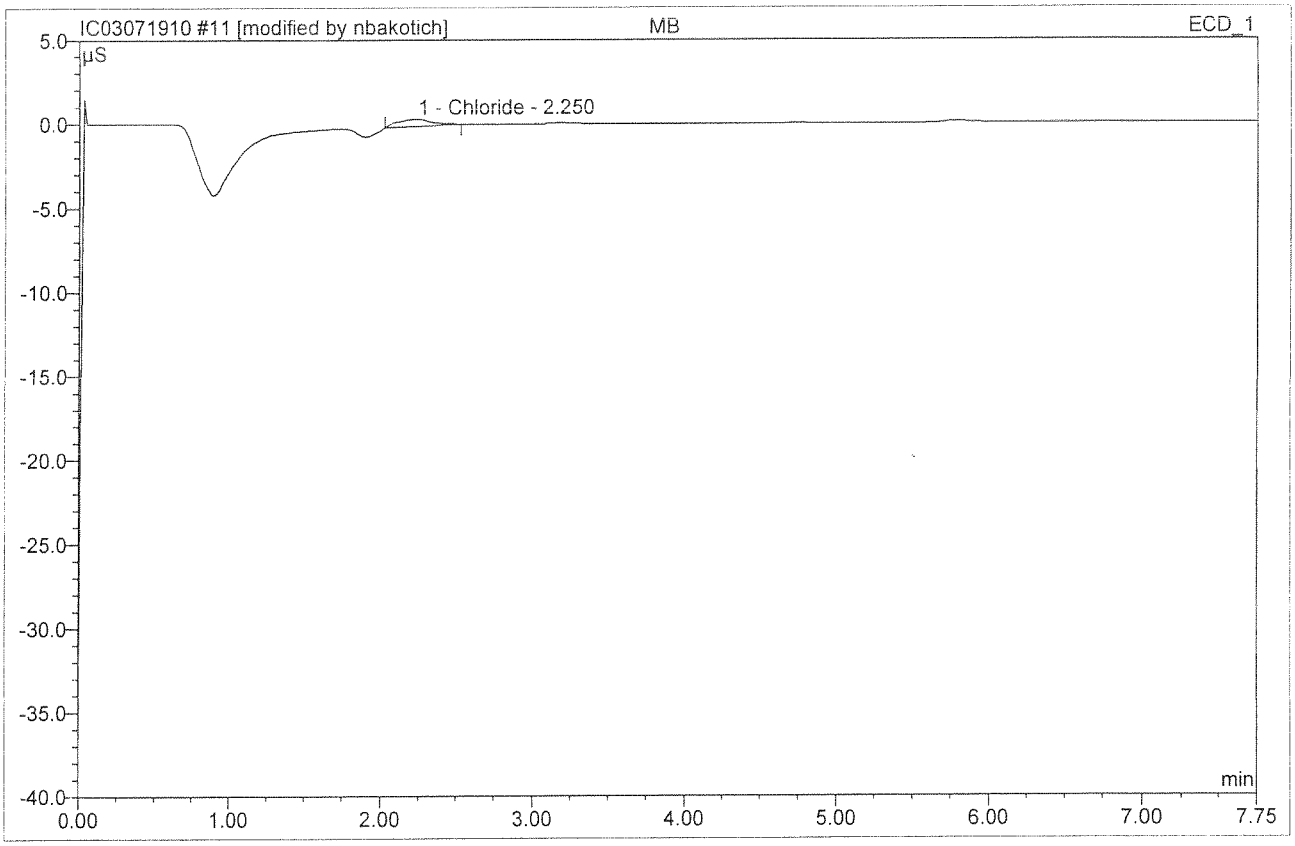
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	n.a.	0.426	0.137	1.12	n.a.	BMb
2	2.52	Nitrite	74.297	12.117	98.88	104.912	bMB
Total:			74.722	12.253	100.00	104.912	

Before
JUL 19 2010

11 MB

MB

Sample Name:	**MB**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.25	Chloride	0.413	0.105	100.00	0.068	BMB*
Total:			0.413	0.105	100.00	0.068	

After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other _____

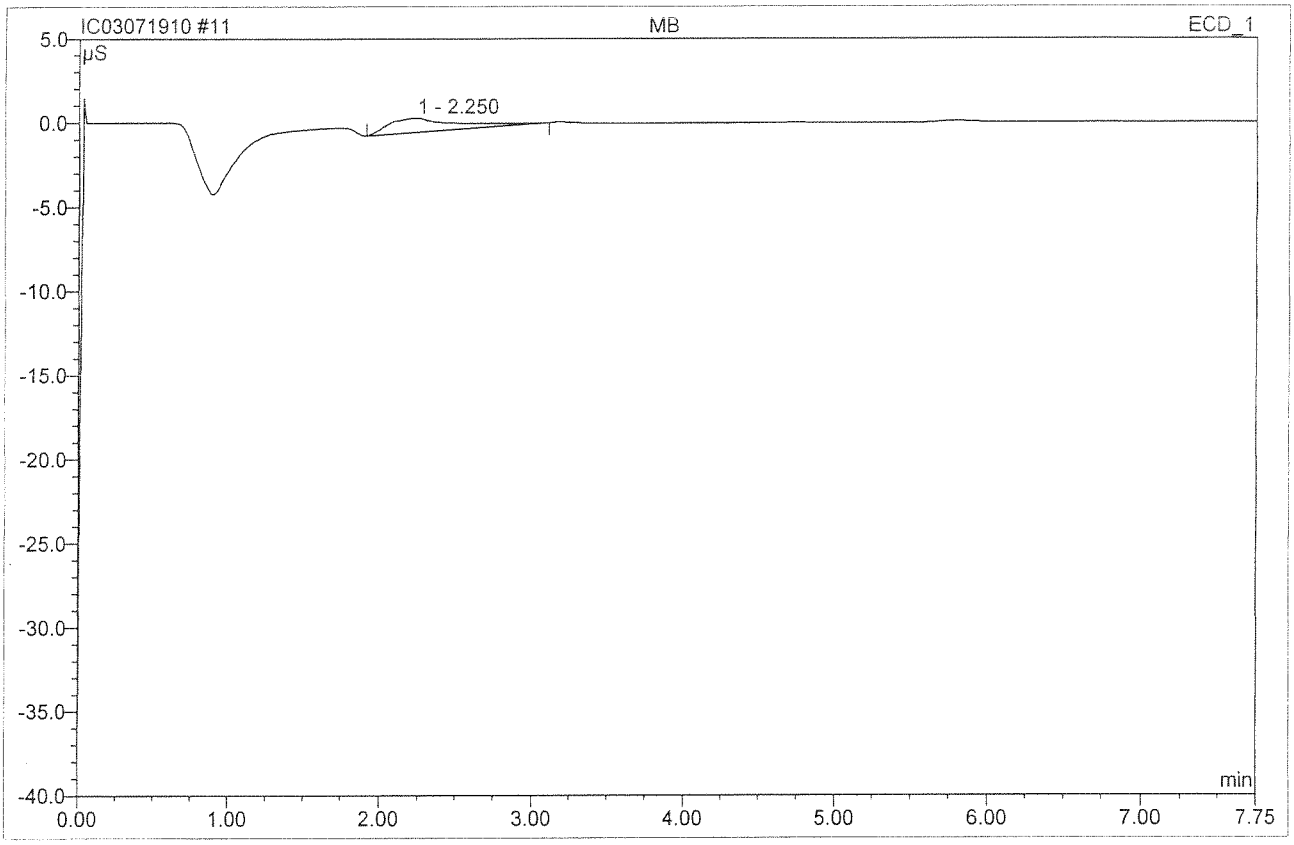
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

11 MB

MB

Sample Name:	**MB**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



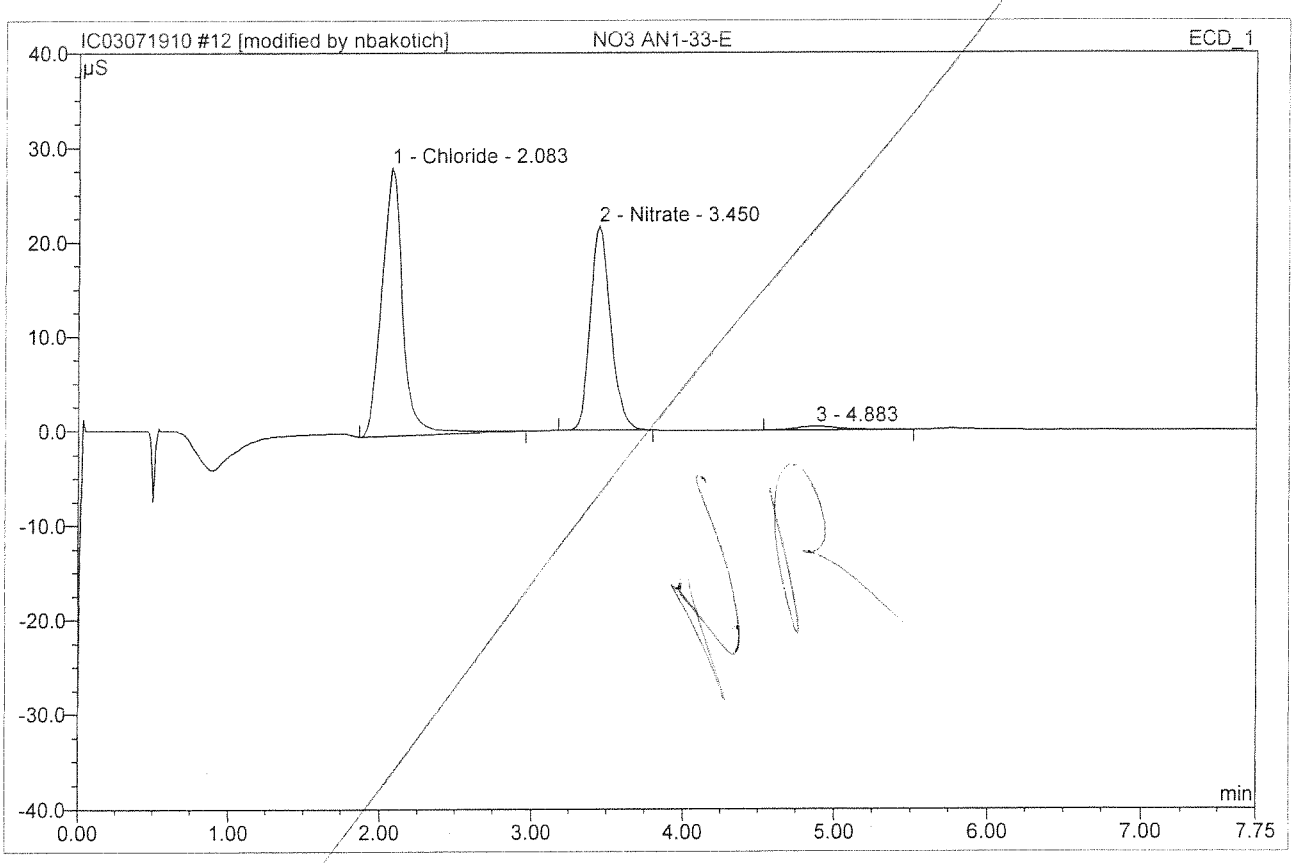
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.25	n.a.	0.837	0.425	100.00	n.a.	BMB
Total:			0.837	0.425	100.00	0.000	

Before
[illegible] 2010

12 NO3 AN1-33-E

NO3

Sample Name:	**NO3 AN1-33-E**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/19/2010 9:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**

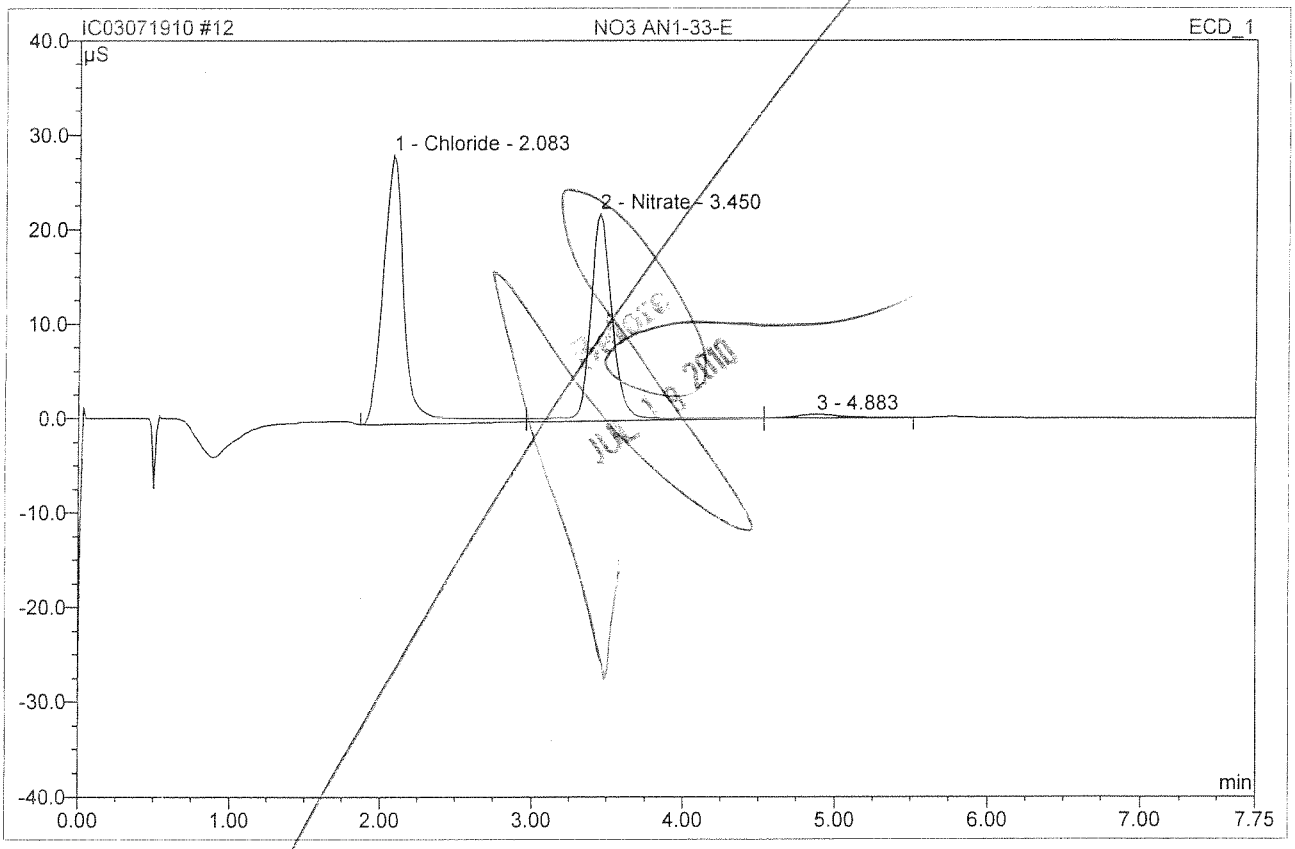


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.08	Chloride	28.458	4.562	56.33	58.501	BMB*
2	3.45	Nitrate	21.635	3.393	41.90	18.423	BMB*
3	4.88	n.a.	0.414	0.143	1.77	n.a.	BMB*
Total:			50.508	8.098	100.00	76.924	

12 NO3 AN1-33-E

NO3

Sample Name:	**NO3 AN1-33-E**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/19/2010 9:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**

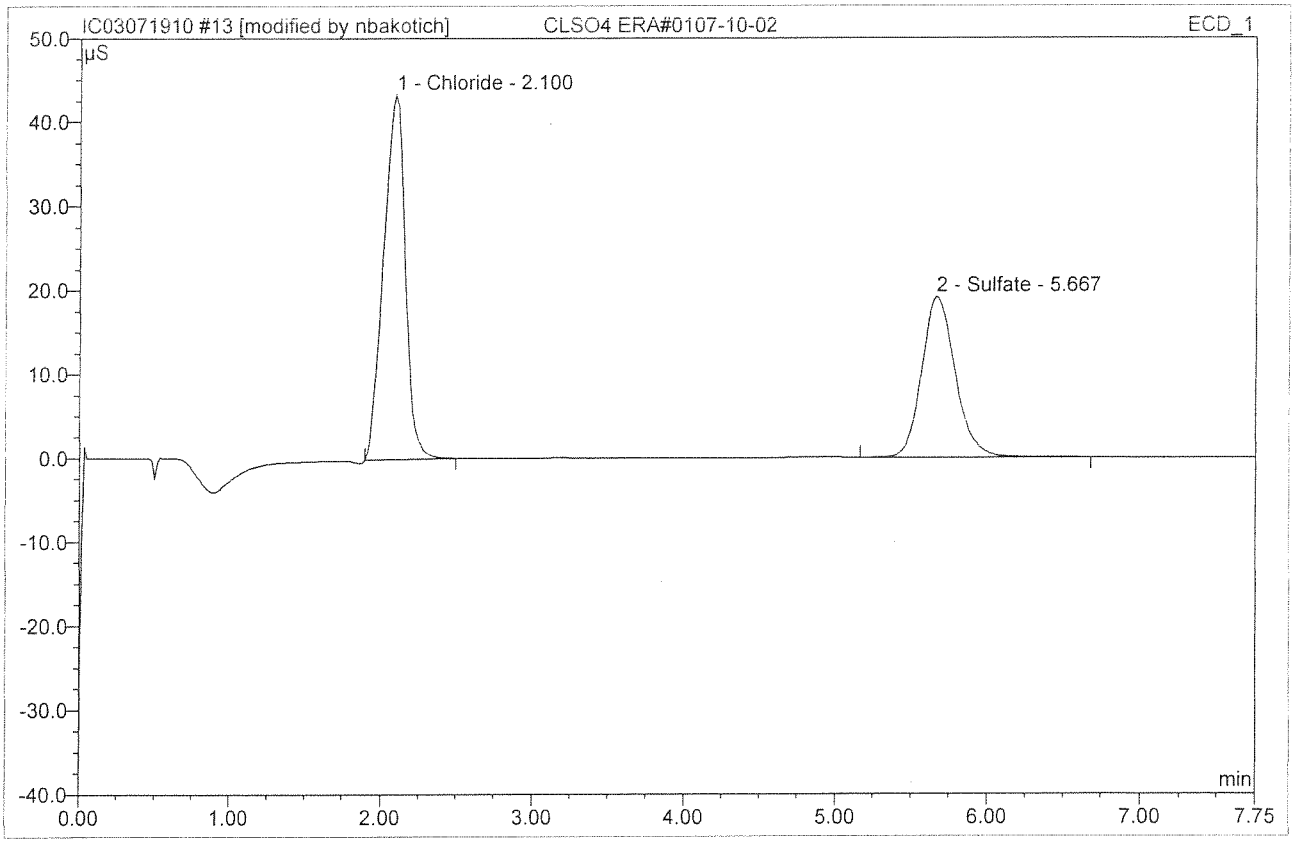


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.08	Chloride	28.526	4.753	55.16	60.948	BM
2	3.45	Nitrate	21.949	3.721	43.18	20.201	MB
3	4.88	n.a.	0.414	0.143	1.66	n.a.	bMB
Total:			50.890	8.617	100.00	81.149	

13 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	**CLSO4 ERA#0107-10-02**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.10	Chloride	43.465	7.203	59.72	4.619	BMB*
2	5.67	Sulfate	19.110	4.858	40.28	4.937	BMB
Total:			62.574	12.062	100.00	9.556	

After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

default/Integration

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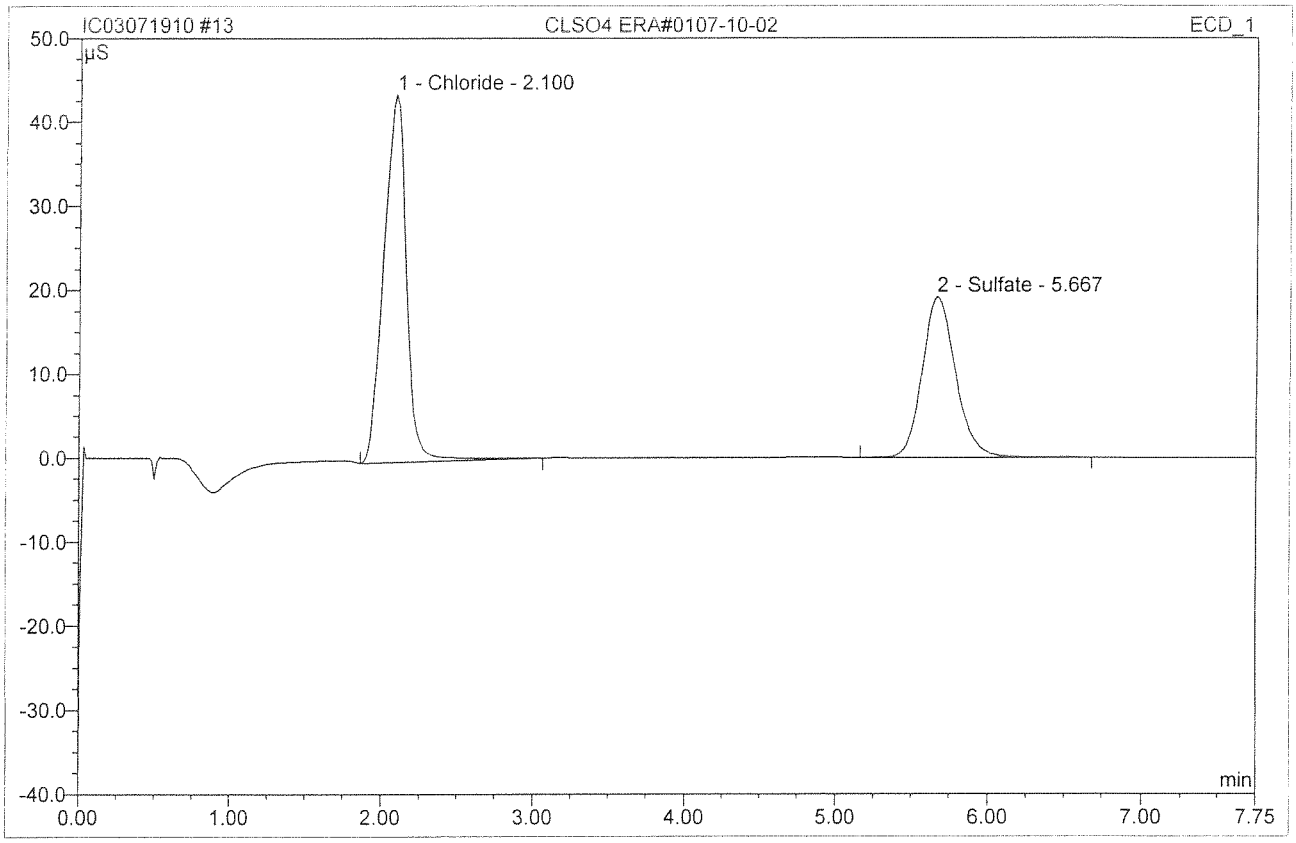
Version 6.80 SP1 Build 2238

13 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	**CLSO4 ERA#0107-10-02**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



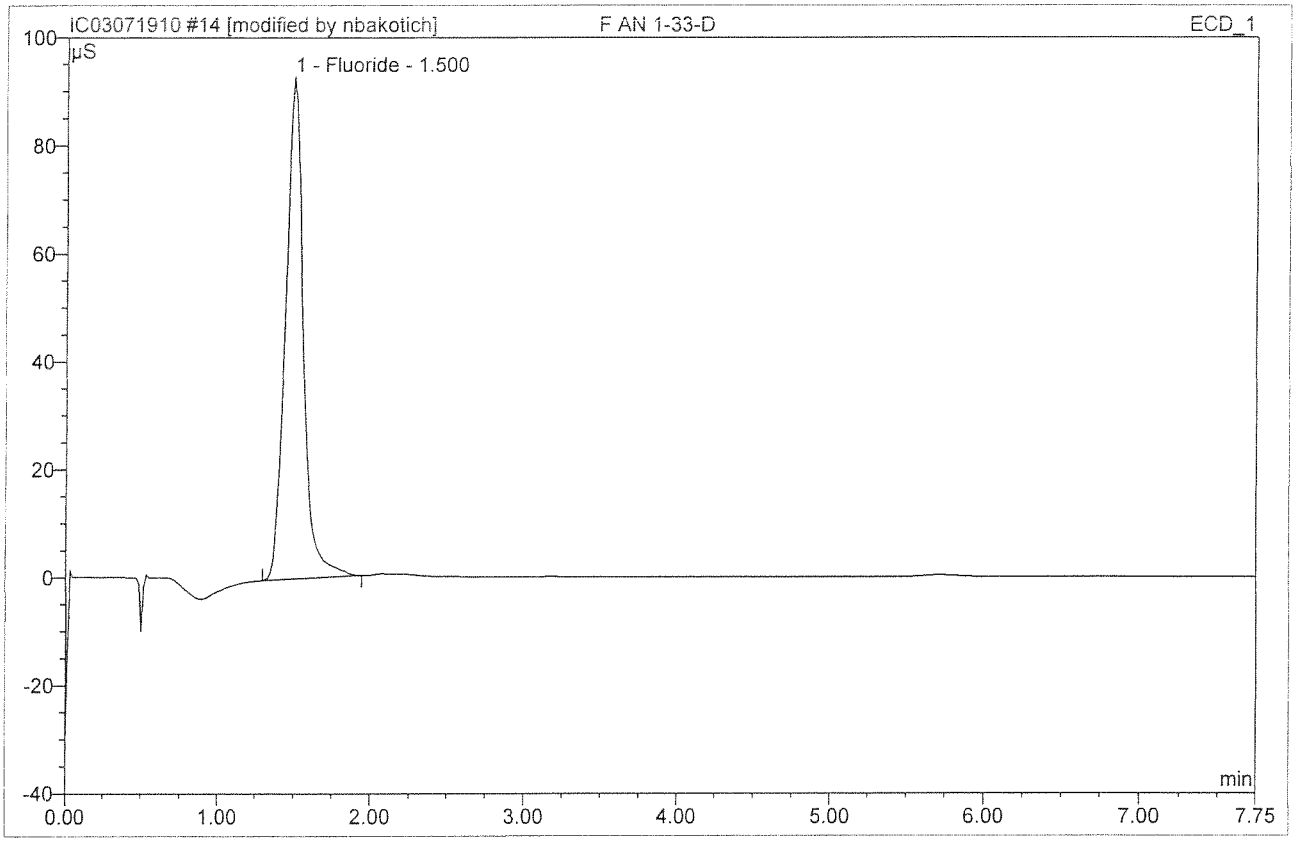
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.10	Chloride	43.855	7.509	60.72	4.815	BMB
2	5.67	Sulfate	19.110	4.858	39.28	4.937	BMB
Total:			62.965	12.368	100.00	9.752	

Before
JUL 19 2010

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/19/2010 10:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.50	Fluoride	93.084	12.679	100.00	13.250	BMB*
Total:			93.084	12.679	100.00	13.250	

After Initials nb

JUL 19 2010

☐ Wrong Peak/Peak not Found
☒ Baseline/shoulder Incorrect
☐ Other_____

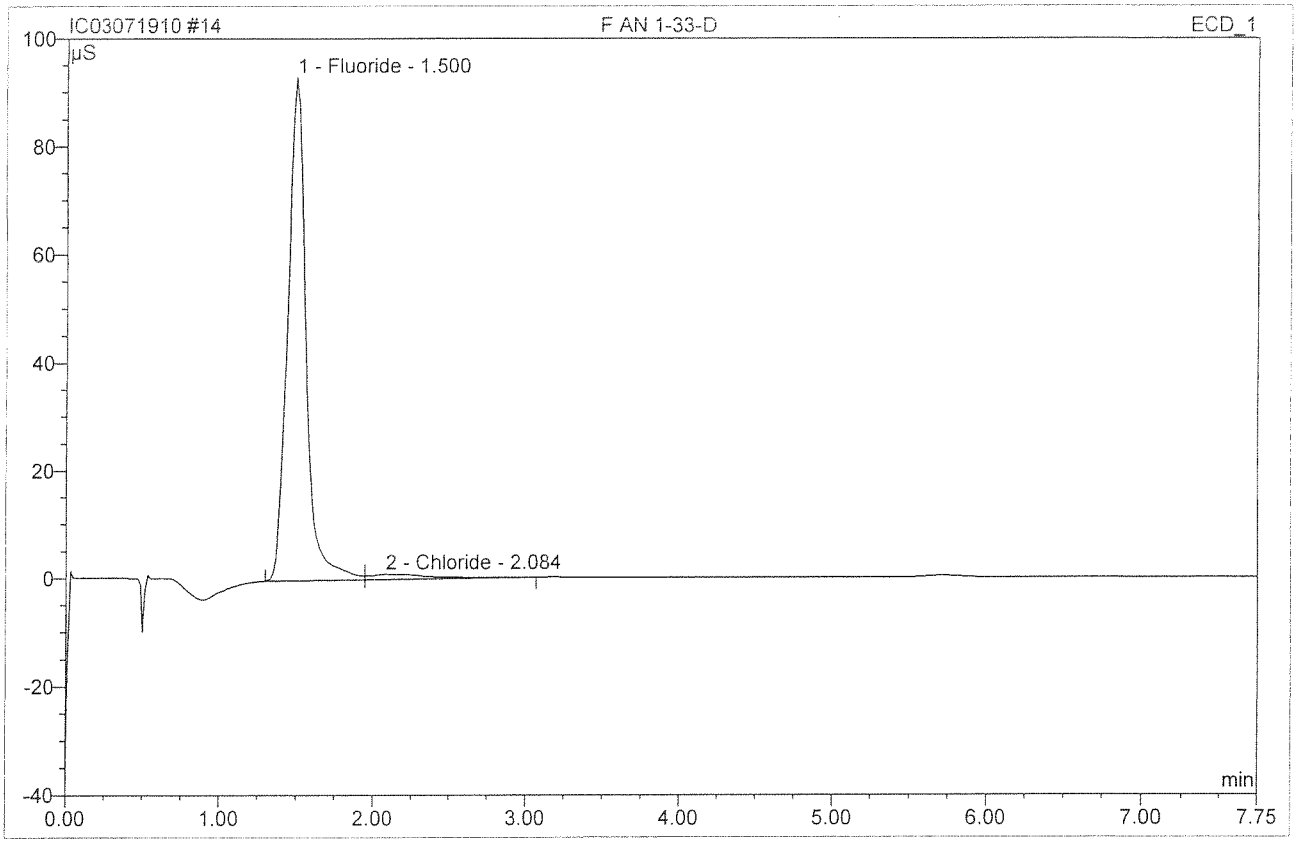
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/19/2010 10:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



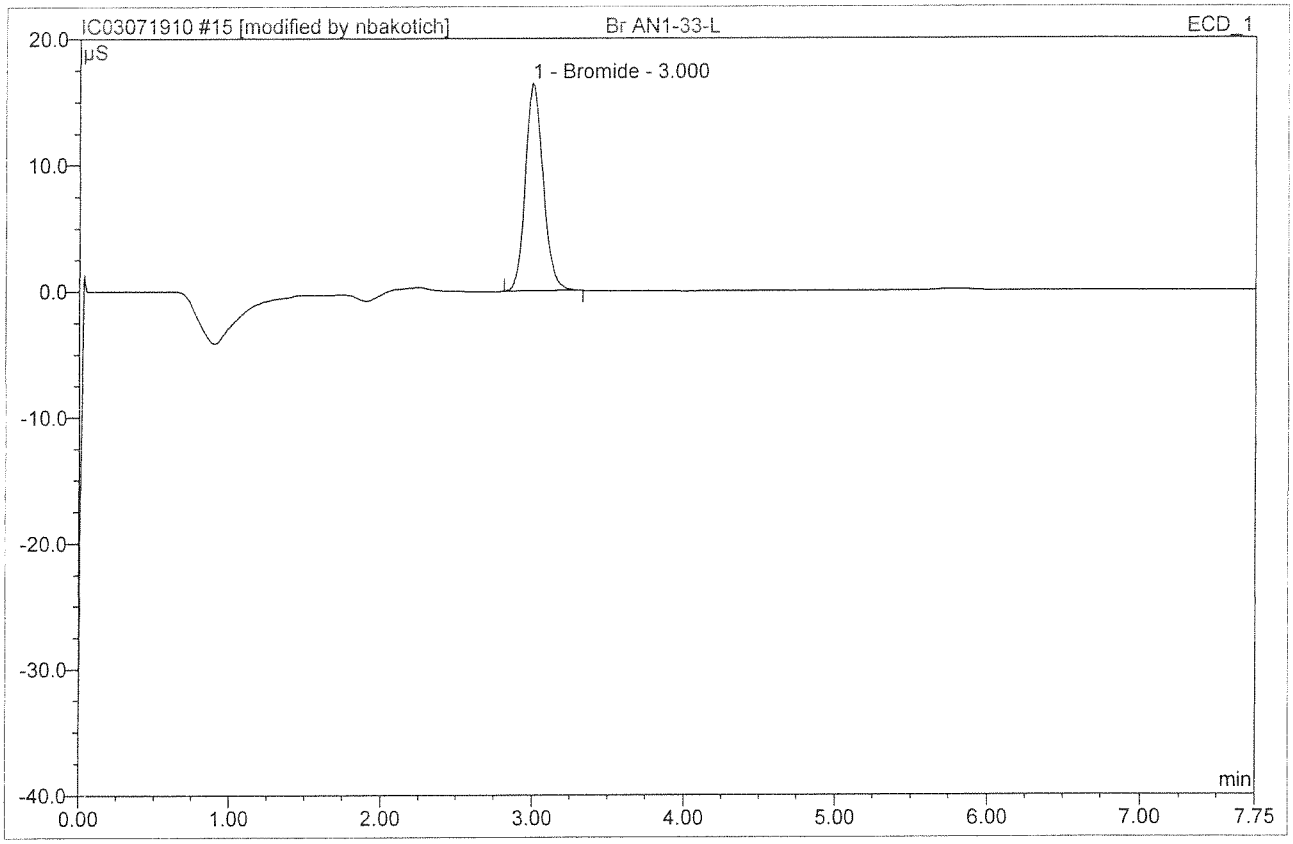
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.50	Fluoride	93.303	12.909	96.61	13.491	BM
2	2.08	Chloride	1.004	0.453	3.39	0.581	MB
Total:			94.307	13.362	100.00	14.072	

JUL 19 2010

15 Br AN1-33-L

Br

Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.00	Bromide	16.470	2.260	100.00	4.218	BMB*
Total:			16.470	2.260	100.00	4.218	

After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☒ Baseline/shoulder Incorrect
☐ Other _____

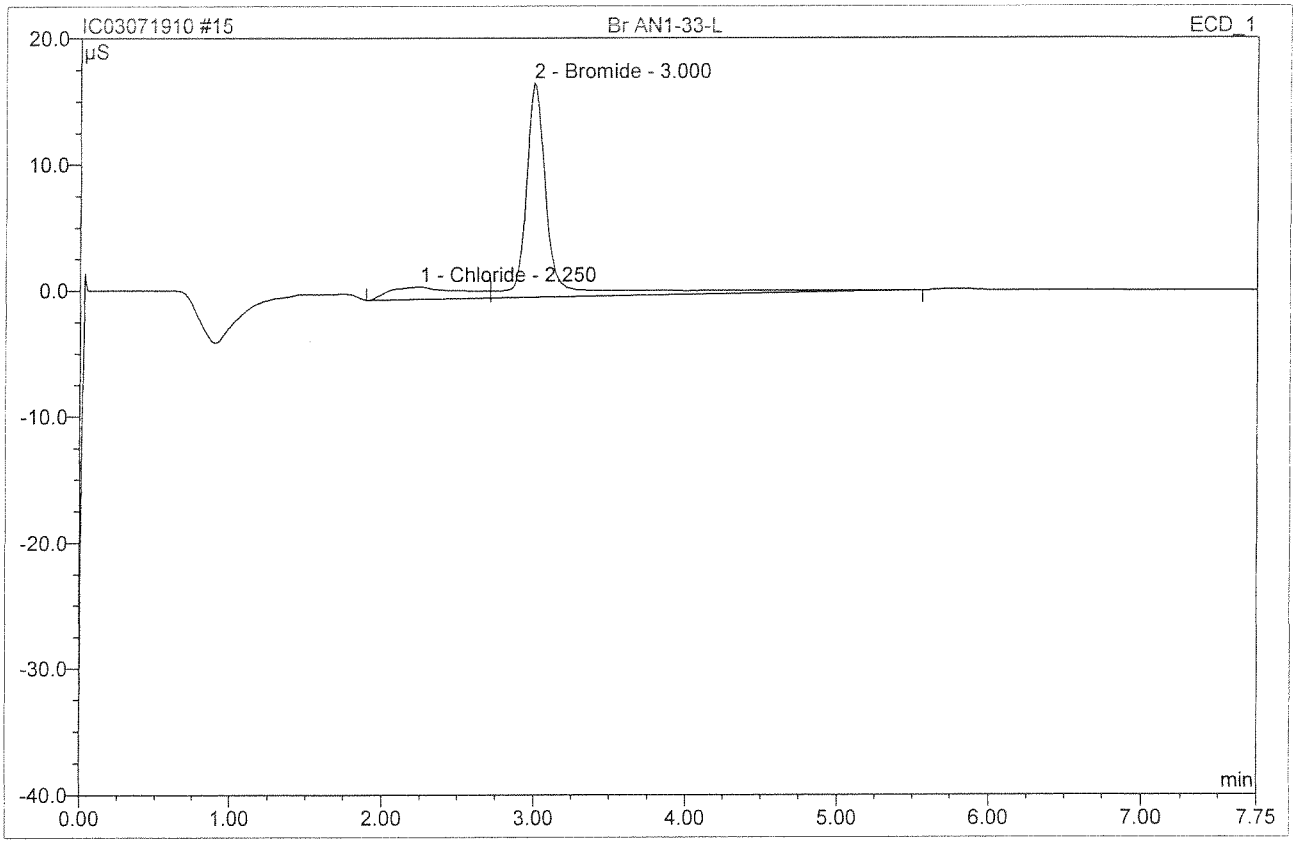
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

15 Br AN1-33-L

Br

Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



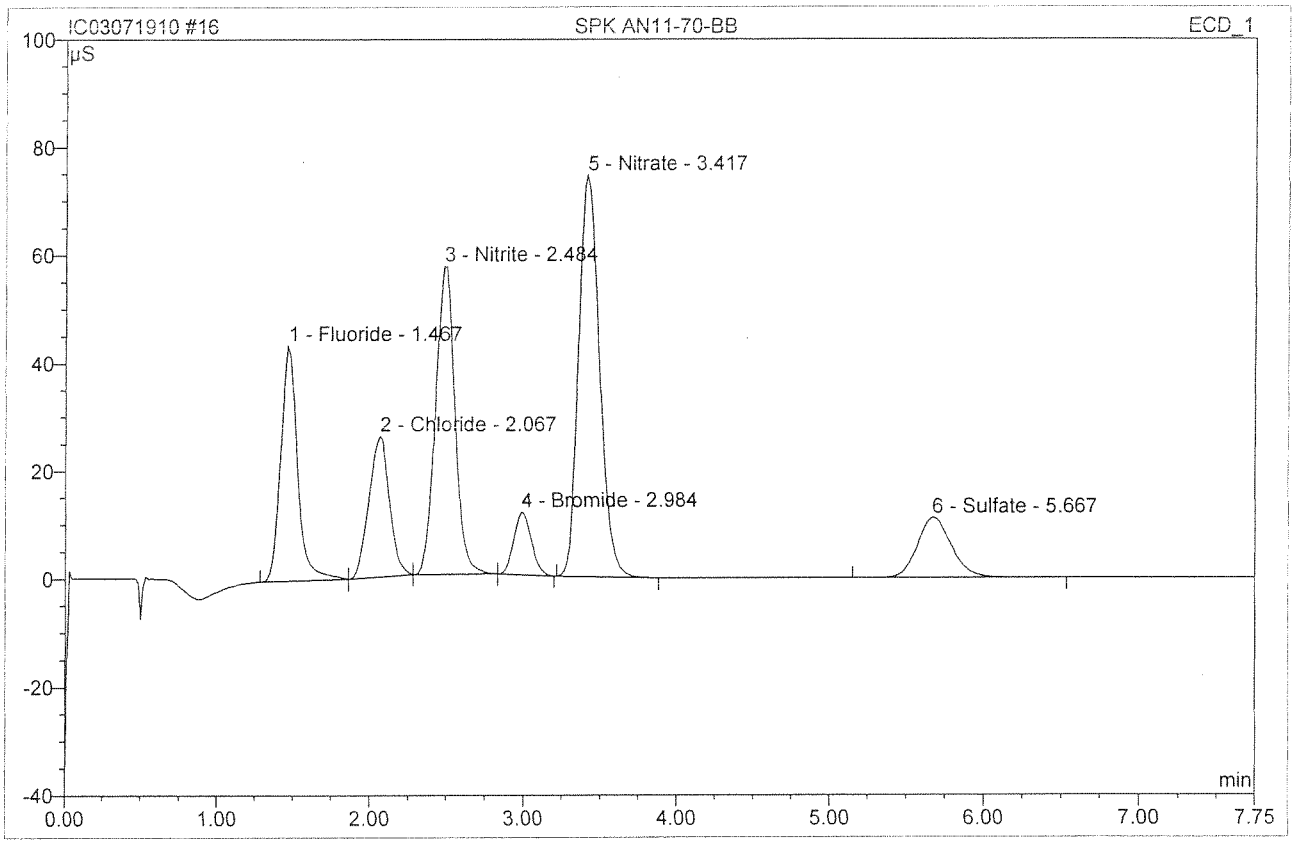
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.25	Chloride	0.996	0.543	14.96	0.348	BM
2	3.00	Bromide	17.011	3.089	85.04	5.765	MB
Total:			18.007	3.632	100.00	6.113	

Before
JUL 19 2010

16 SPK AN11-70-BB

SPK

Sample Name:	**SPK AN11-70-BB**	*Injection Volume:*	**200.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**

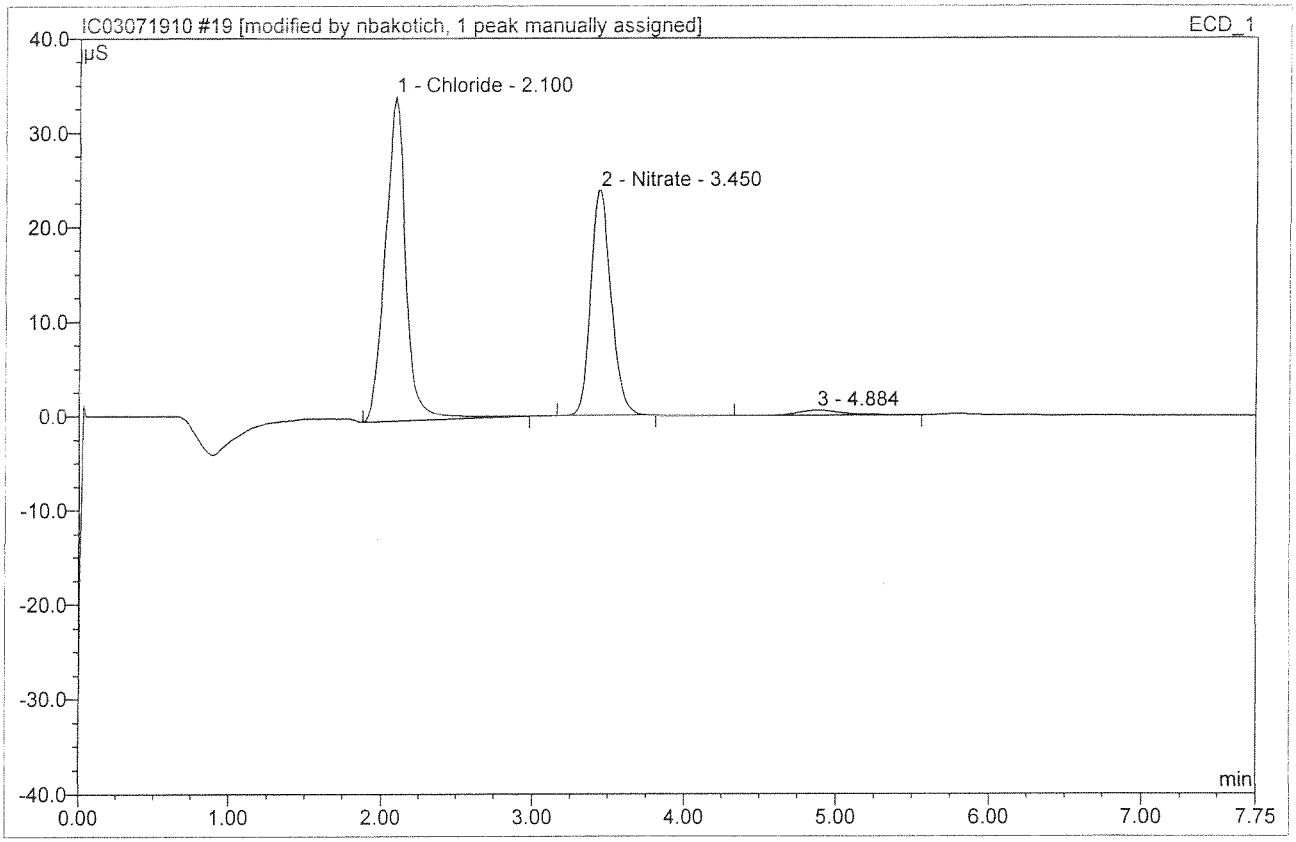


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.47	Fluoride	43.700	5.534	16.23	2.892	BMb
2	2.07	Chloride	26.182	4.028	11.82	2.583	bMb
3	2.48	Nitrite	57.090	8.324	24.42	2.883	bMb
4	2.98	Bromide	11.645	1.555	4.56	2.903	bMB
5	3.42	Nitrate	74.456	11.758	34.49	3.192	BMB
6	5.67	Sulfate	11.204	2.889	8.48	2.936	BMB
Total:			224.277	34.088	100.00	17.388	

19 NO3

NO3-2

Sample Name:	**NO3**	*Injection Volume:*	**200.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/19/2010 11:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.10	Chloride	34.319	5.472	58.22	70.171	BMB*
2	3.45	Nitrate	23.775	3.742	39.81	20.313	BMB*^
3	4.88	n.a.	0.529	0.185	1.97	n.a.	BMB*
Total:			58.623	9.398	100.00	90.484	

After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other _____

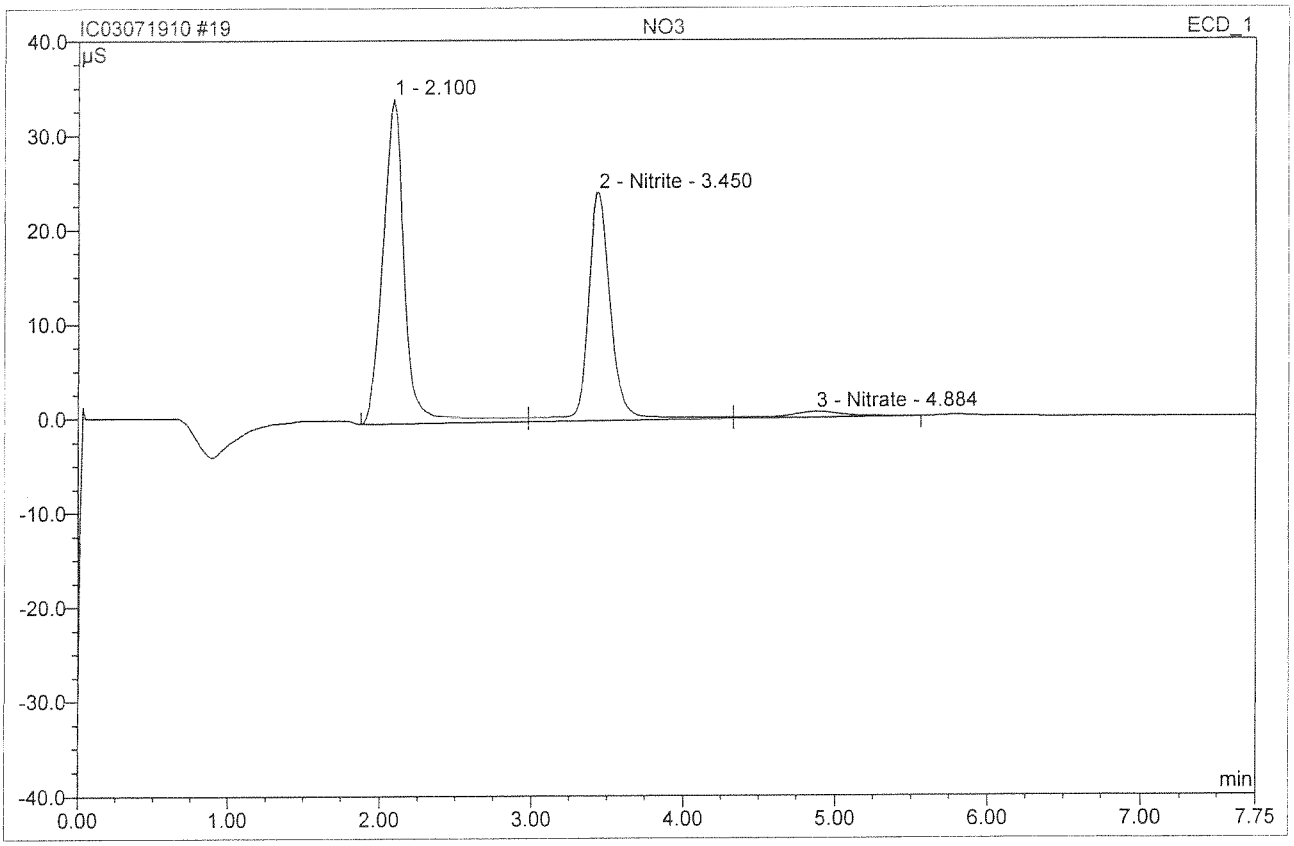
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

19 NO3

NO3-2

Sample Name:	**NO3**	*Injection Volume:*	**200.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/19/2010 11:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.10	n.a.	34.398	5.691	56.07	n.a.	BM
2	3.45	Nitrite	24.159	4.175	41.13	28.917	M
3	4.88	Nitrate	0.618	0.284	2.79	1.540	MB
Total:			59.175	10.150	100.00	30.456	

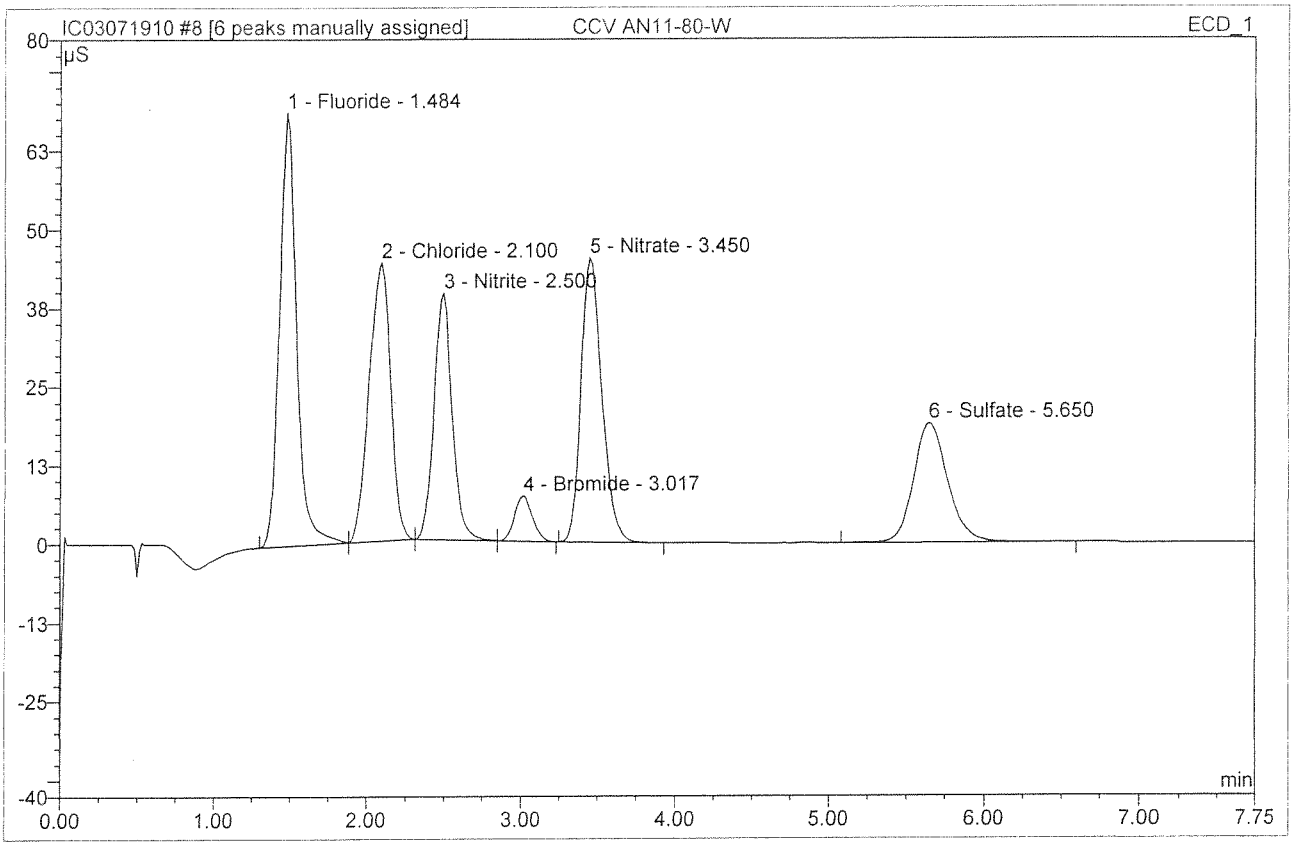
Before

JUL 19 2010

8 CCV AN11-80-W

CCV1

Sample Name:	**CCV AN11-80-W**	*Injection Volume:*	**200.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	68.872	9.026	26.09	4.716	BM ^
2	2.10	Chloride	44.185	7.181	20.76	4.605	Mb^
3	2.50	Nitrite	39.164	5.392	15.58	1.867	bMb^
4	3.02	Bromide	7.239	0.977	2.82	1.823	bMB^
5	3.45	Nitrate	45.266	7.154	20.68	1.942	BMB^
6	5.65	Sulfate	19.075	4.866	14.07	4.945	BMB^
Total:			223.802	34.595	100.00	19.898	

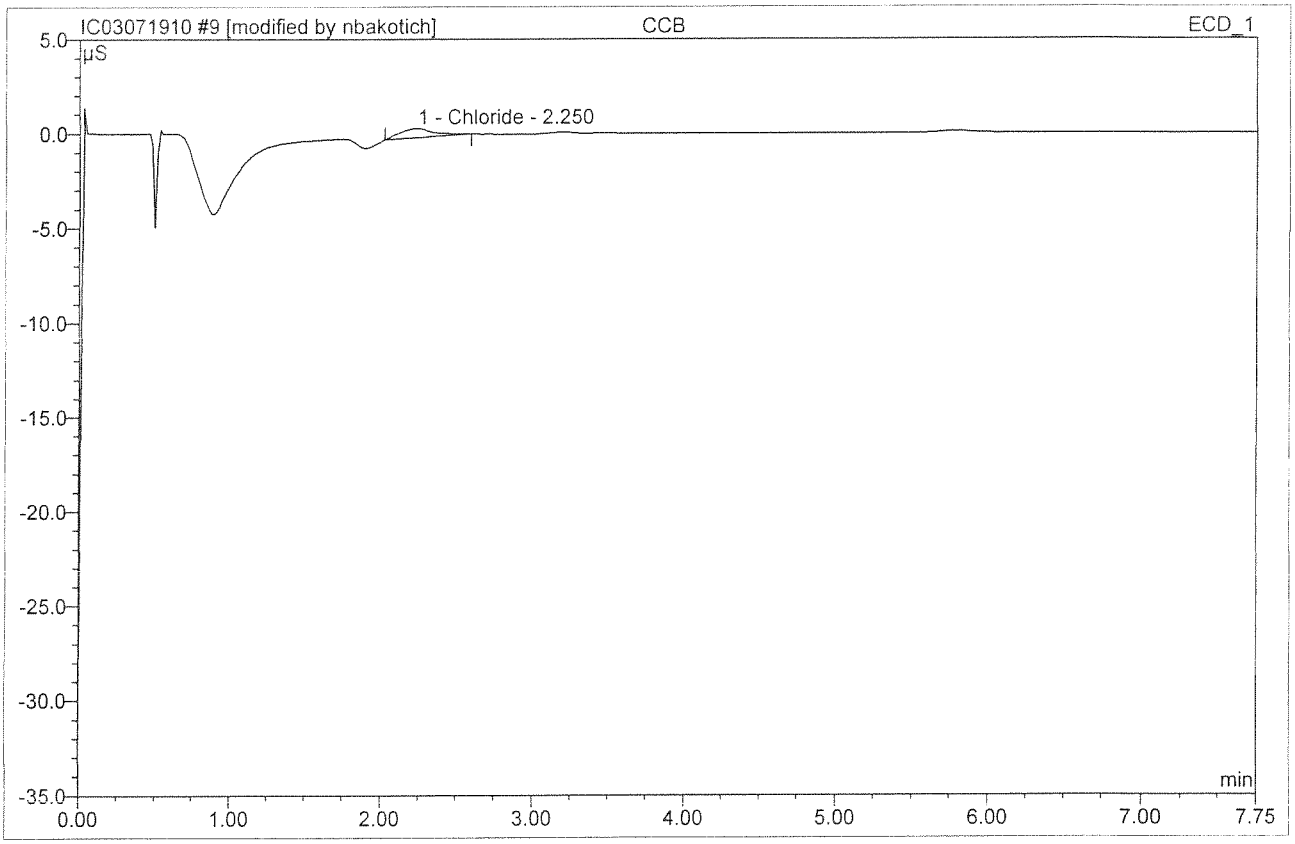
JUL 19 2010

Peak/Peak not Found
Baseline incorrect

9 CCB

CCB1

Sample Name:	**CCB**	*Injection Volume:*	**200.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.25	Chloride	0.484	0.129	100.00	0.083	BMB*
Total:			0.484	0.129	100.00	0.083	

After Initials _____

JUL 19 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other _____

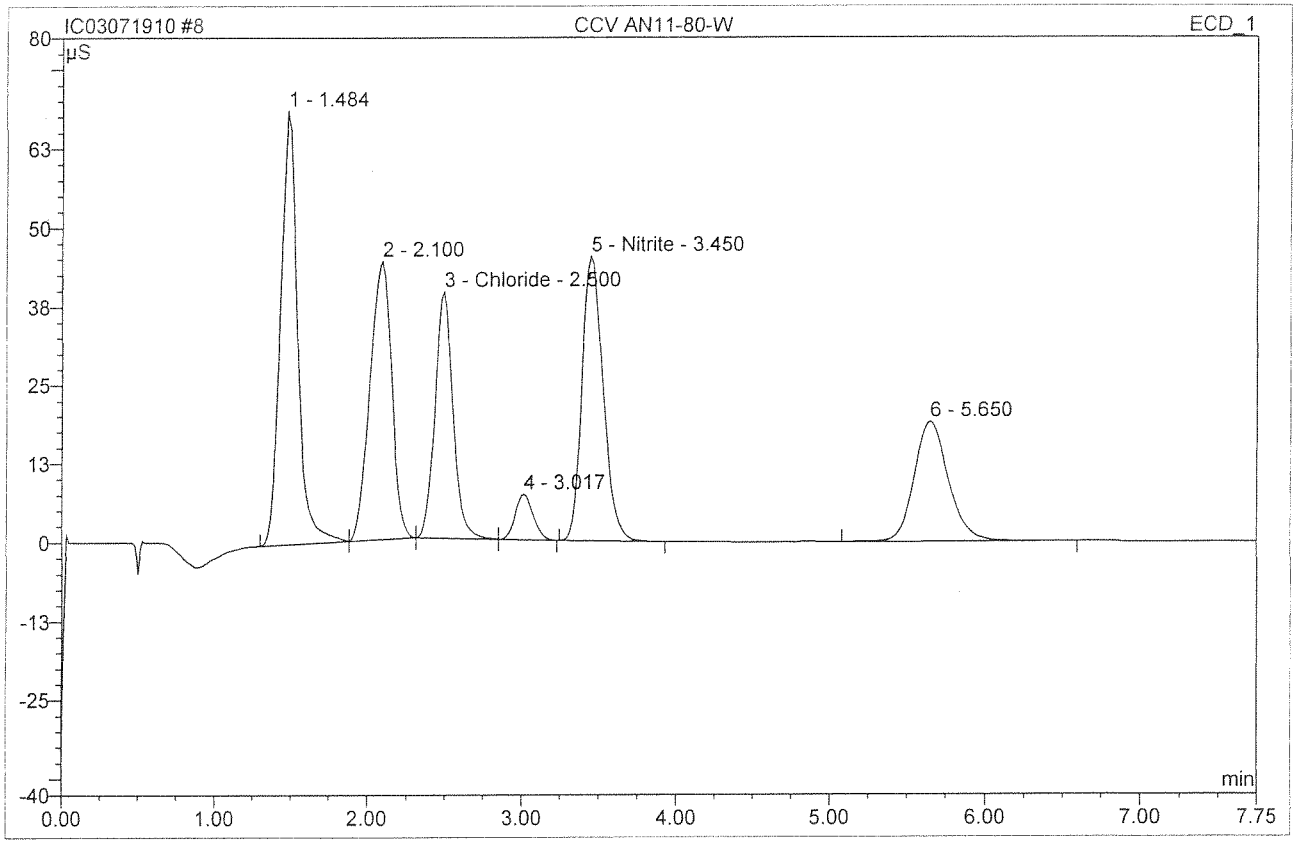
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 CCV AN11-80-W

CCV1

Sample Name:	**CCV AN11-80-W**	*Injection Volume:*	**200.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



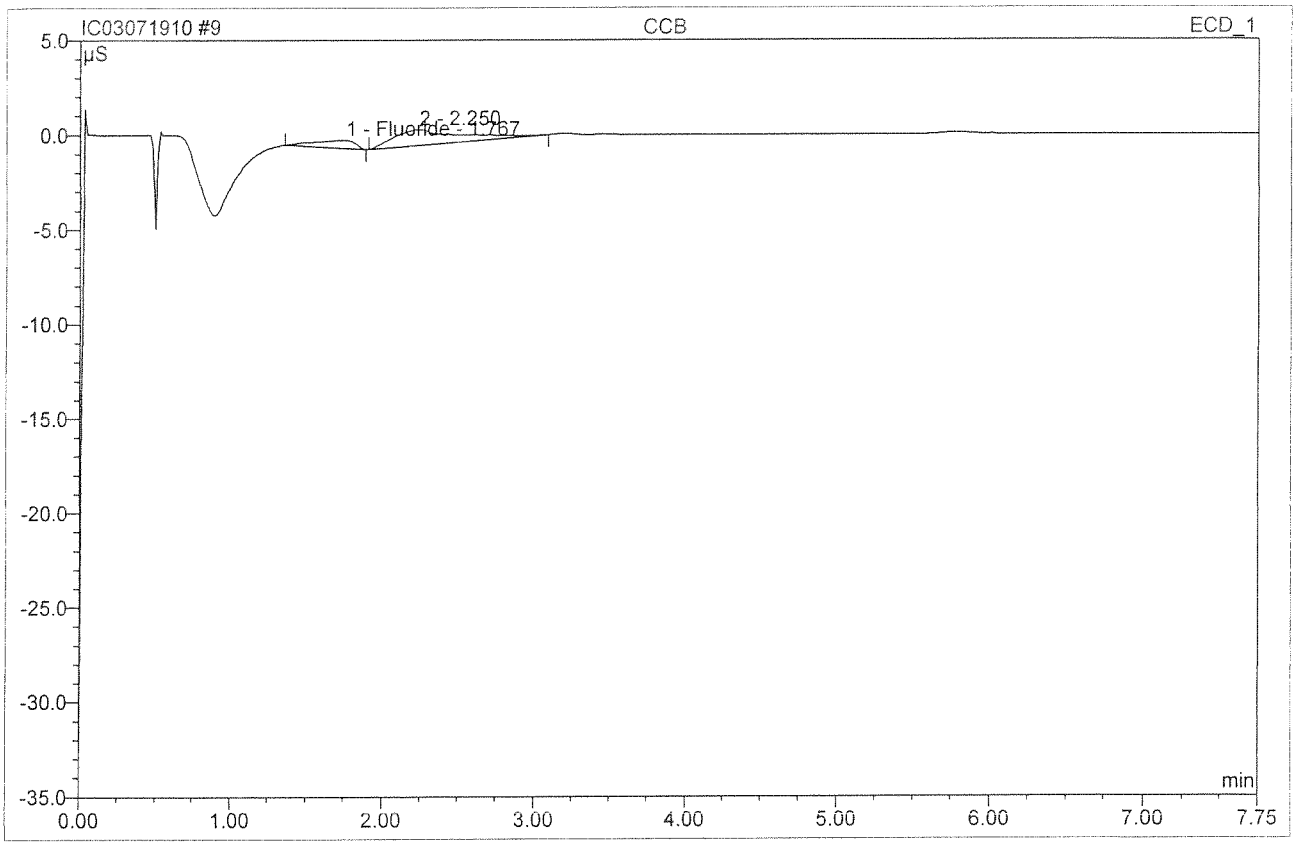
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	n.a.	68.872	9.026	26.09	n.a.	BM
2	2.10	n.a.	44.185	7.181	20.76	n.a.	Mb
3	2.50	Chloride	39.164	5.392	15.58	3.457	bMb
4	3.02	n.a.	7.239	0.977	2.82	n.a.	bMB
5	3.45	Nitrite	45.266	7.154	20.68	2.478	BMB
6	5.65	n.a.	19.075	4.866	14.07	n.a.	BMB
Total:			223.802	34.595	100.00	5.935	

Before
JUL 19 2010

9 CCB

CCB1

Sample Name:	**CCB**	*Injection Volume:*	**200.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 9:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



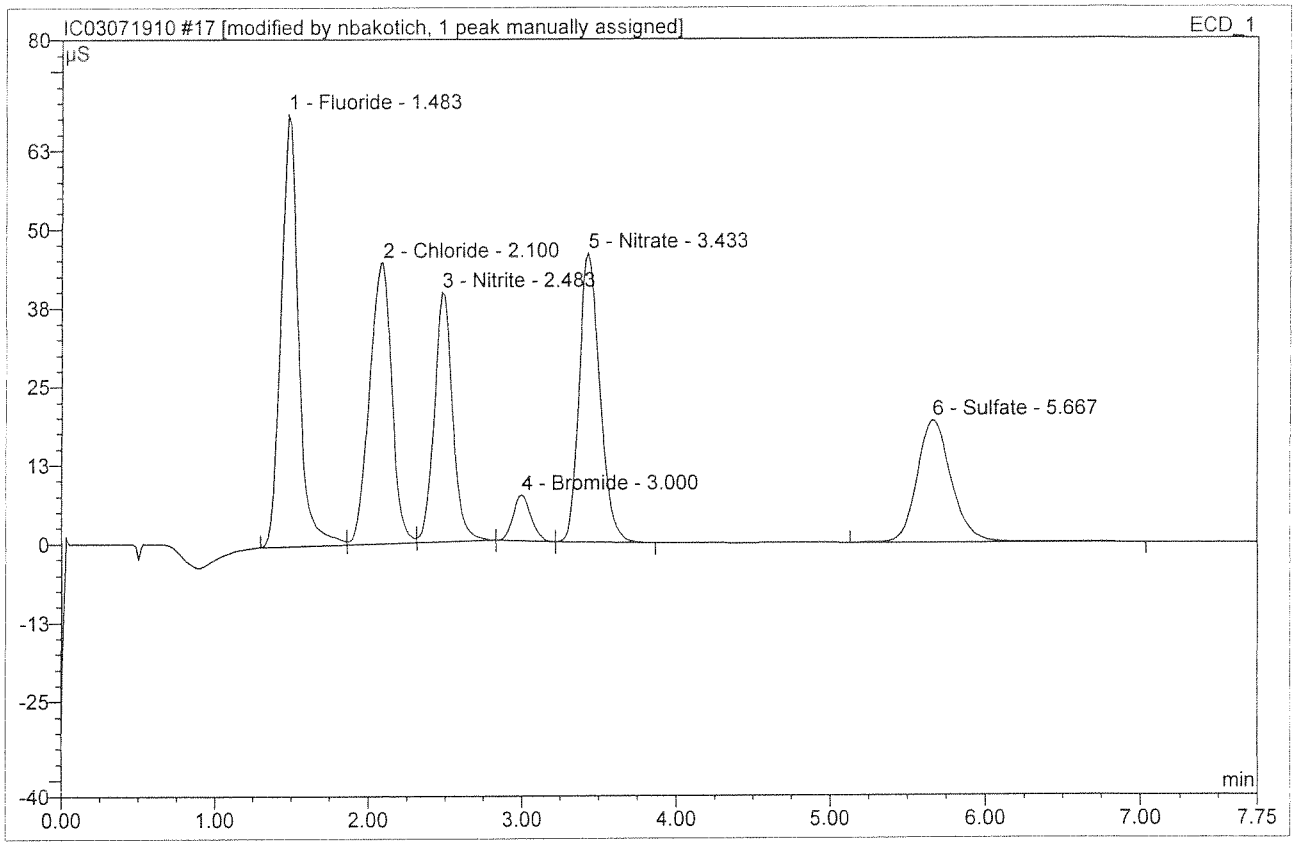
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	0.419	0.129	24.19	0.067	BMB
2	2.25	n.a.	0.823	0.403	75.81	n.a.	BMB
Total:			1.242	0.532	100.00	0.067	

JUL 19 2010

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**200.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	68.735	9.181	26.05	4.797	BM *^
2	2.10	Chloride	44.676	7.418	21.05	4.757	M *
3	2.48	Nitrite	39.687	5.564	15.79	1.927	Mb*
4	3.00	Bromide	7.298	0.981	2.78	1.831	bMb*
5	3.43	Nitrate	45.923	7.146	20.28	1.940	bMB*
6	5.67	Sulfate	19.470	4.947	14.04	5.027	BMB
Total:			225.790	35.238	100.00	20.279	

After Initials _____

JUL 19 2010

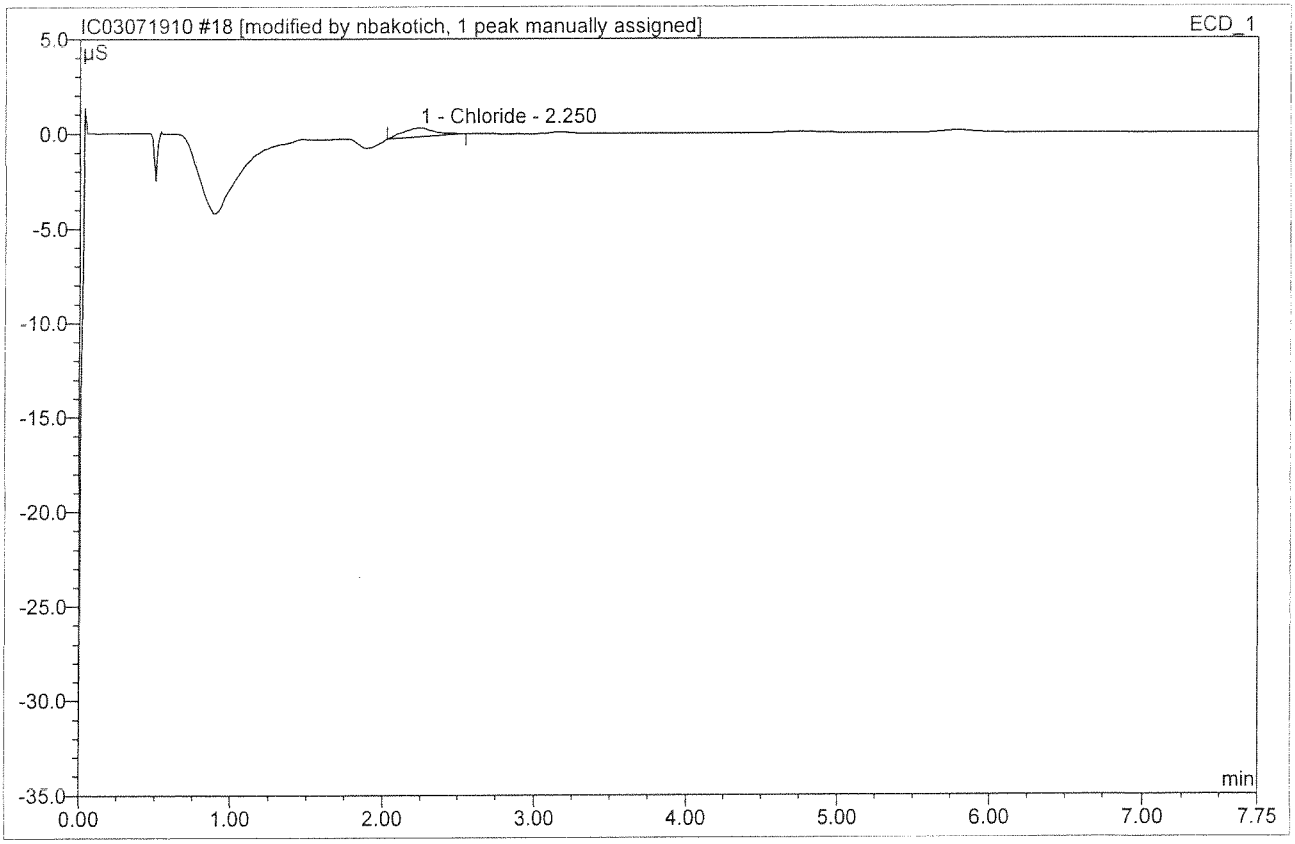
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other _____

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

18 CCB2

CCB2

Sample Name:	**CCB2**	*Injection Volume:*	**200.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.25	Chloride	0.476	0.116	100.00	0.075	BMB*^
Total:			0.476	0.116	100.00	0.075	

After Initials nb

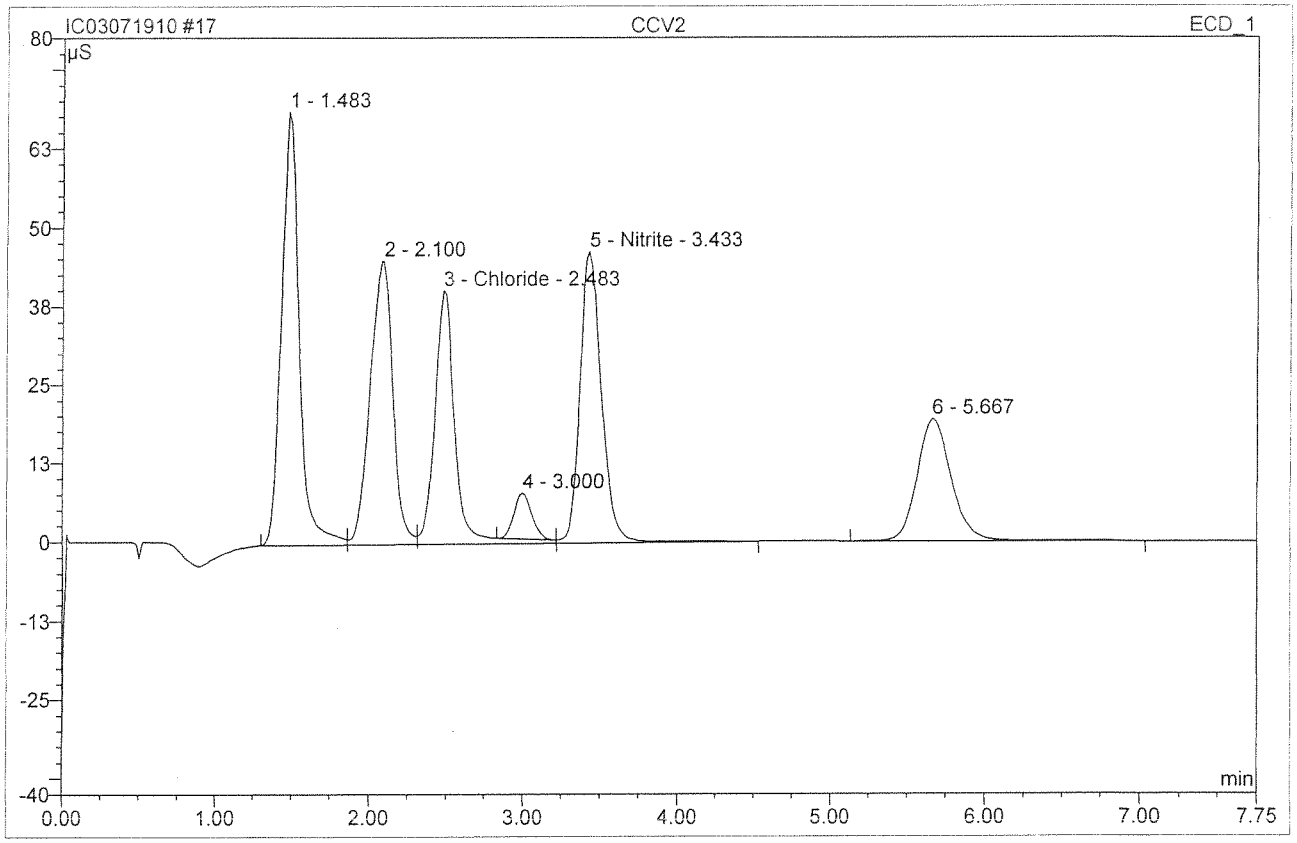
JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other_____

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**200.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	n.a.	68.833	9.267	25.47	n.a.	BM
2	2.10	n.a.	45.105	7.609	20.91	n.a.	M
3	2.48	Chloride	40.321	6.171	16.96	3.957	M
4	3.00	n.a.	7.298	0.981	2.70	n.a.	Rd
5	3.43	Nitrite	46.316	7.411	20.37	2.567	MB
6	5.67	n.a.	19.470	4.947	13.60	n.a.	BMB
Total:			227.344	36.386	100.00	6.524	

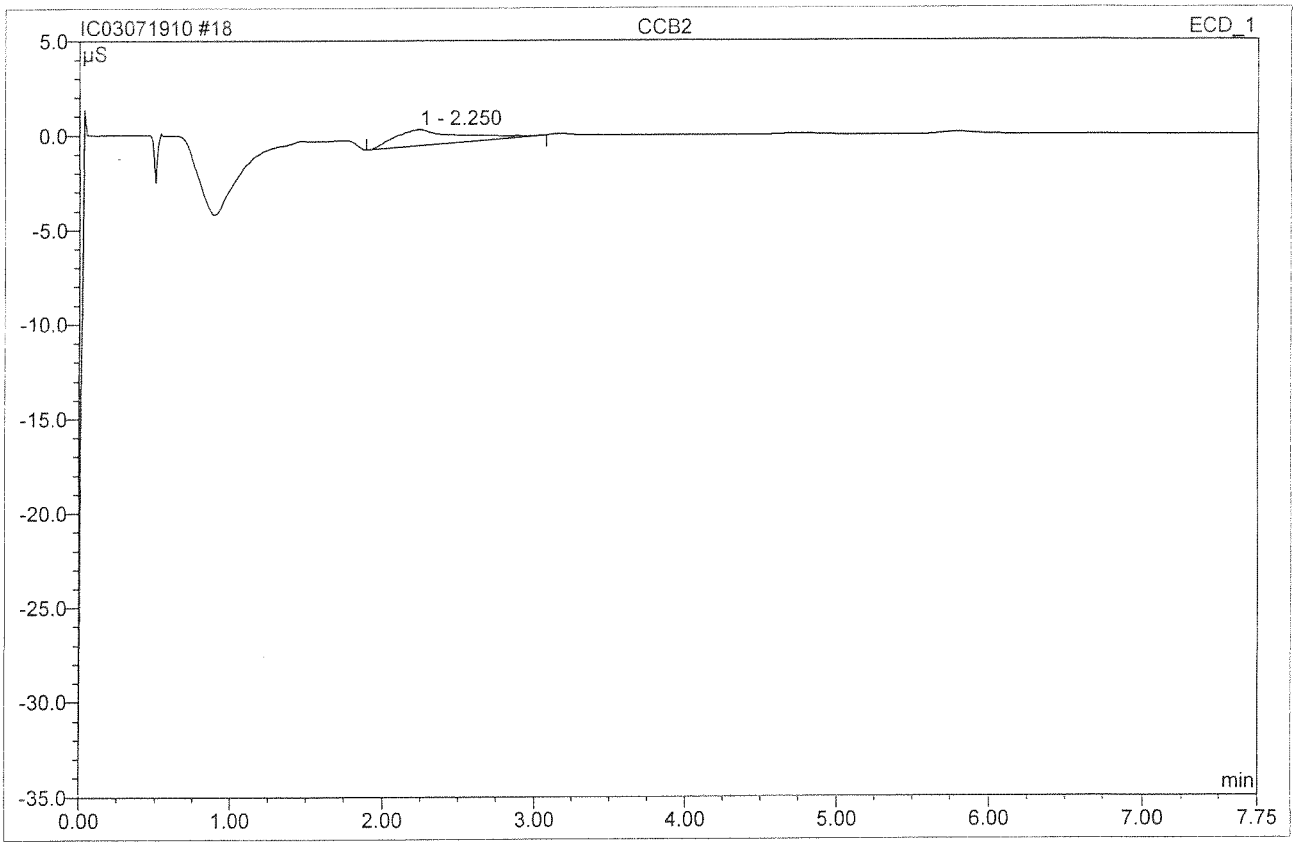
Before

JUL 19 2010

18 CCB2

CCB2

Sample Name:	**CCB2**	*Injection Volume:*	**200.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 10:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.75**	*Sample Amount:*	**1.0000**



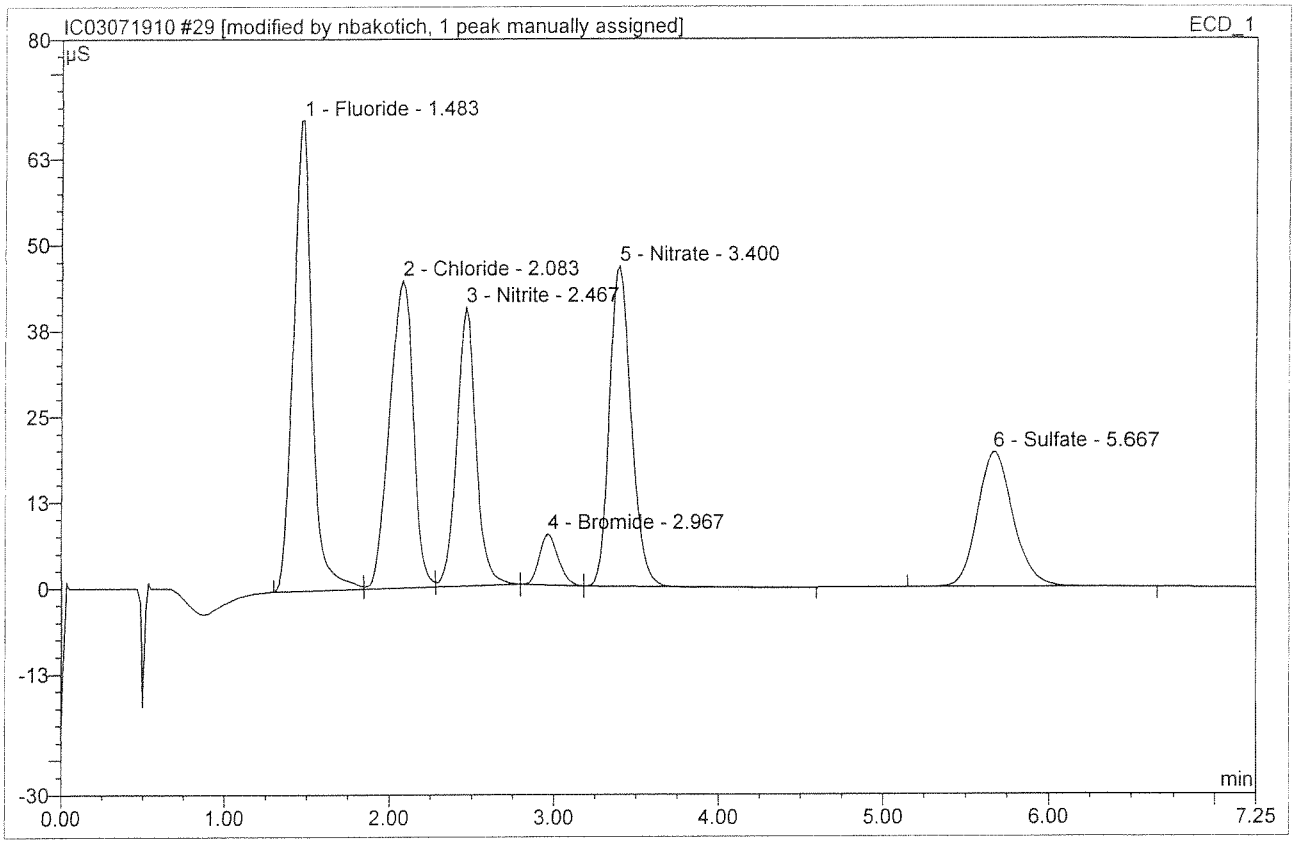
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.25	n.a.	0.857	0.412	100.00	n.a.	BMB
Total:			0.857	0.412	100.00	0.000	

Before

JUL 19 2010

29 CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**200.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 14:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	68.481	9.087	25.91	4.748	BM *^
2	2.08	Chloride	44.839	7.407	21.12	4.750	M *
3	2.47	Nitrite	40.667	5.559	15.85	1.925	Mb*
4	2.97	Bromide	7.432	0.985	2.81	1.839	bMb*
5	3.40	Nitrate	46.726	7.107	20.26	1.929	bMB*
6	5.67	Sulfate	19.669	4.924	14.04	5.003	BMB
Total:			227.814	35.069	100.00	20.195	

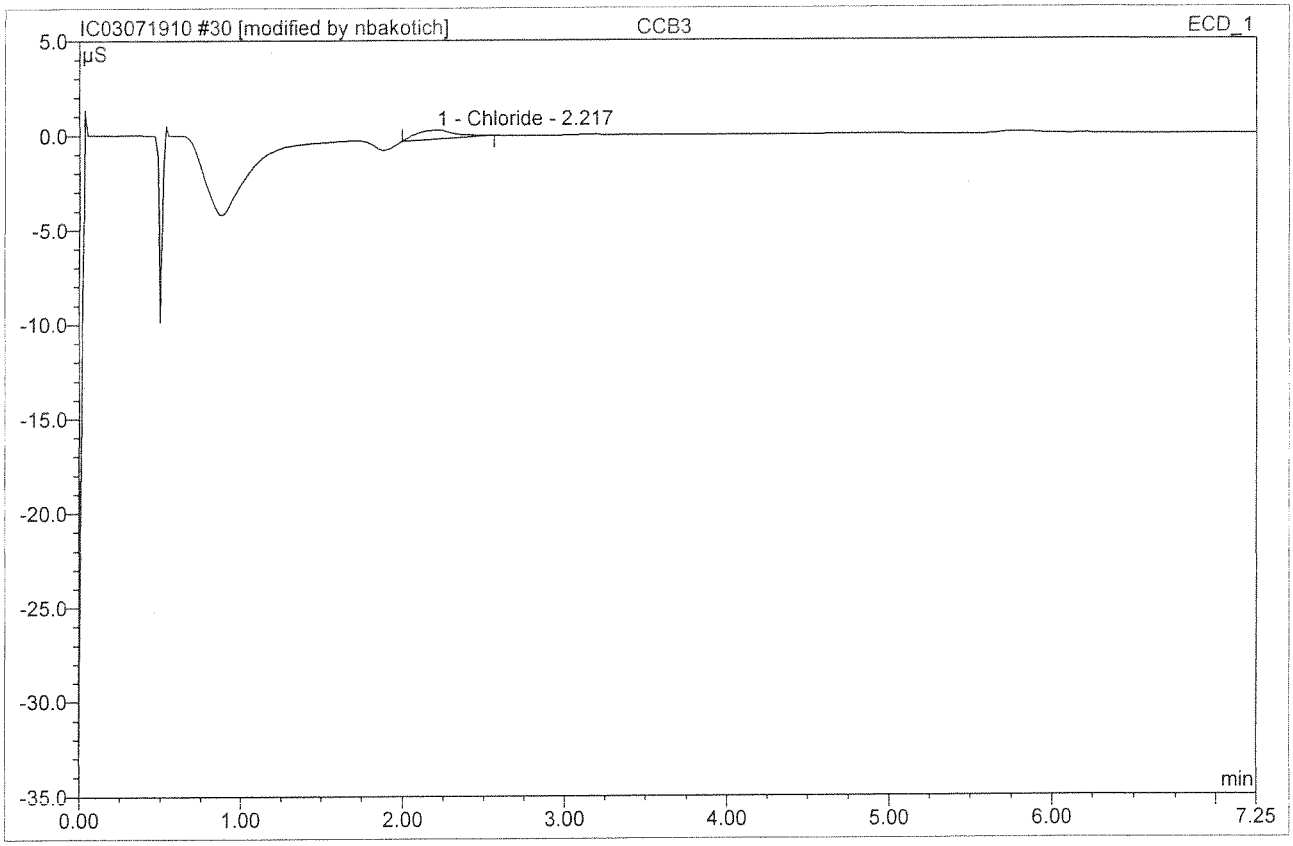
After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

30 CCB3

Sample Name:	**CCB3**	*Injection Volume:*	**200.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 14:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.22	Chloride	0.477	0.136	100.00	0.087	BMB*
Total:			0.477	0.136	100.00	0.087	

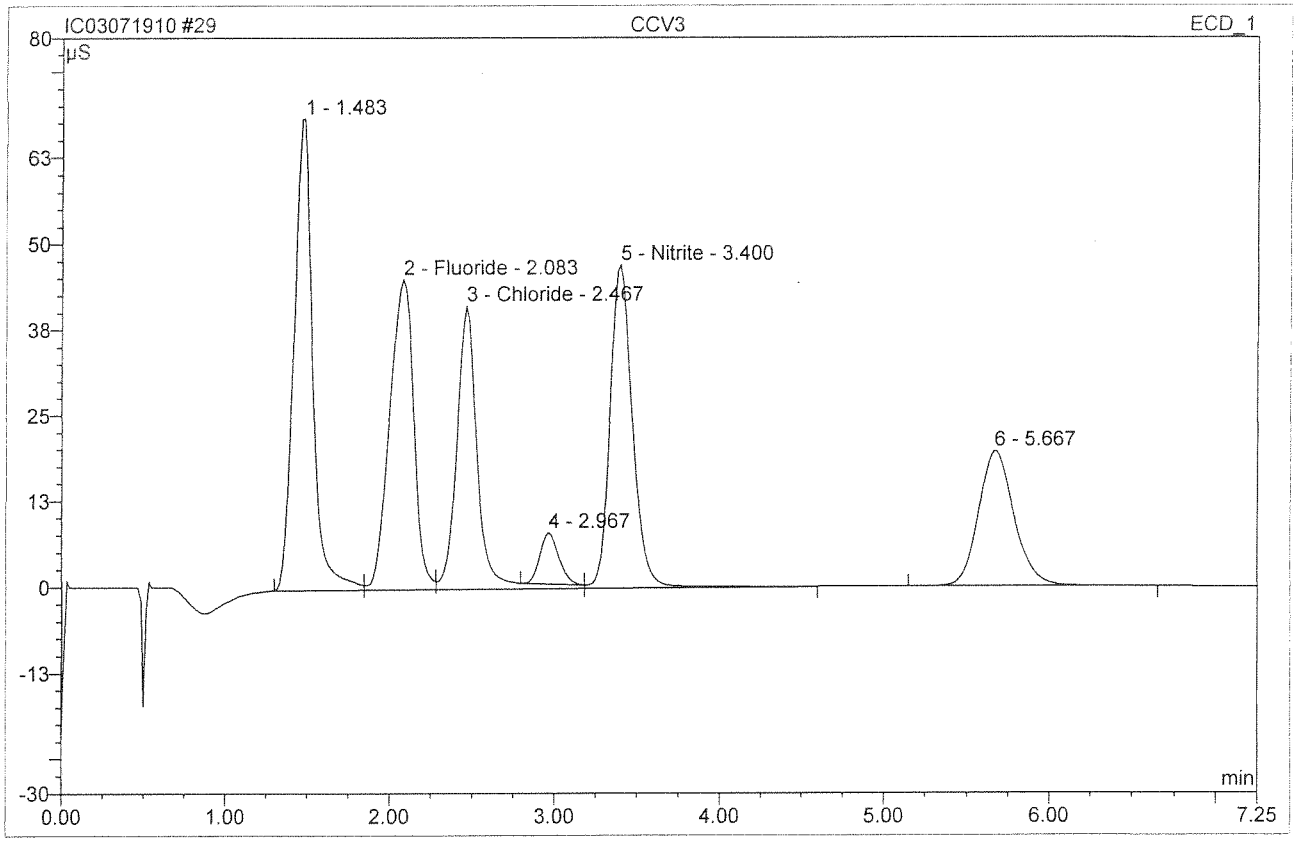
After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

29 CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**200.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 14:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**

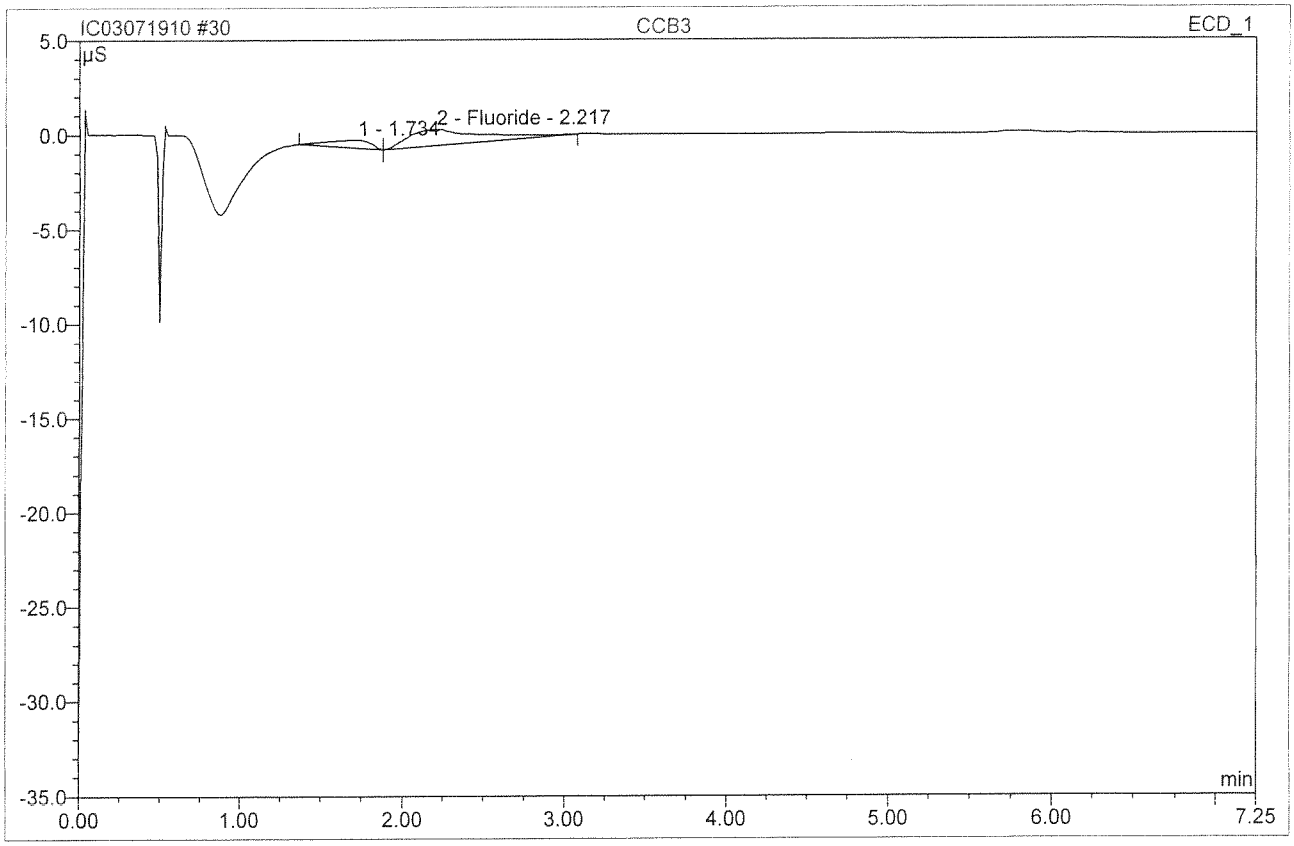


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	n.a.	68.576	9.165	25.31	n.a.	BM
2	2.08	Fluoride	45.243	7.579	20.93	3.960	M
3	2.47	Chloride	41.269	6.126	16.92	3.928	M
4	2.97	n.a.	7.432	0.985	2.72	n.a.	Rd
5	3.40	Nitrite	47.115	7.431	20.52	2.574	MB
6	5.67	n.a.	19.669	4.924	13.60	n.a.	BMB
Total:			229.303	36.211	100.00	10.462	

Reform
JUL 19 2010

30 CCB3

Sample Name:	**CCB3**	*Injection Volume:*	**200.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 14:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



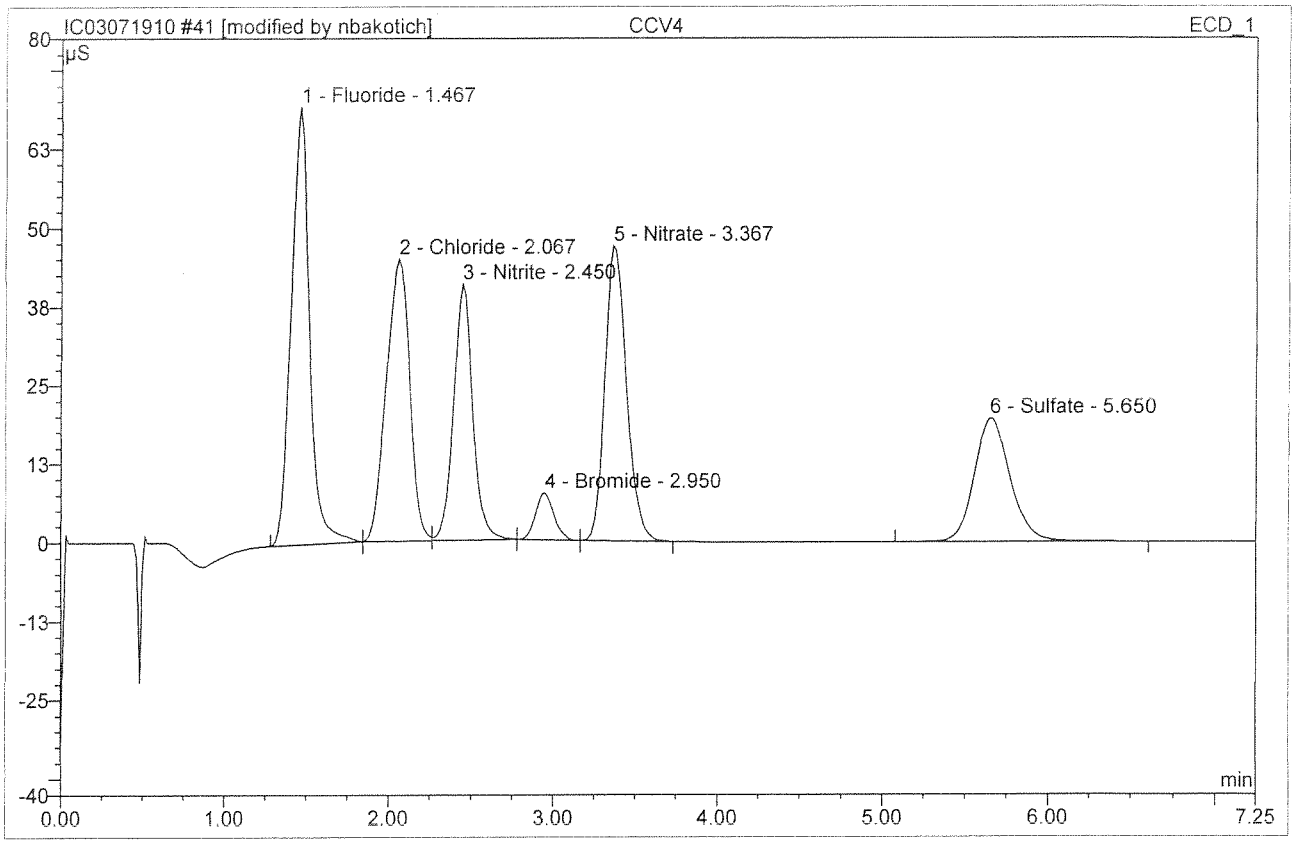
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	n.a.	0.430	0.125	22.33	n.a.	BMb
2	2.22	Fluoride	0.848	0.433	77.67	0.226	bMB
Total:			1.278	0.558	100.00	0.226	

Before
JUL 19 2010

41 CCV4

CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**200.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 16:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.47	Fluoride	69.546	9.037	25.86	4.722	BMb
2	2.07	Chloride	44.841	7.300	20.89	4.681	bM *
3	2.45	Nitrite	40.738	5.540	15.85	1.919	Mb*
4	2.95	Bromide	7.444	0.980	2.81	1.830	bMb*
5	3.37	Nitrate	46.990	7.183	20.56	1.950	bMB*
6	5.65	Sulfate	19.686	4.905	14.04	4.984	BMB
Total:			229.245	34.945	100.00	20.085	

After Initials _____

JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

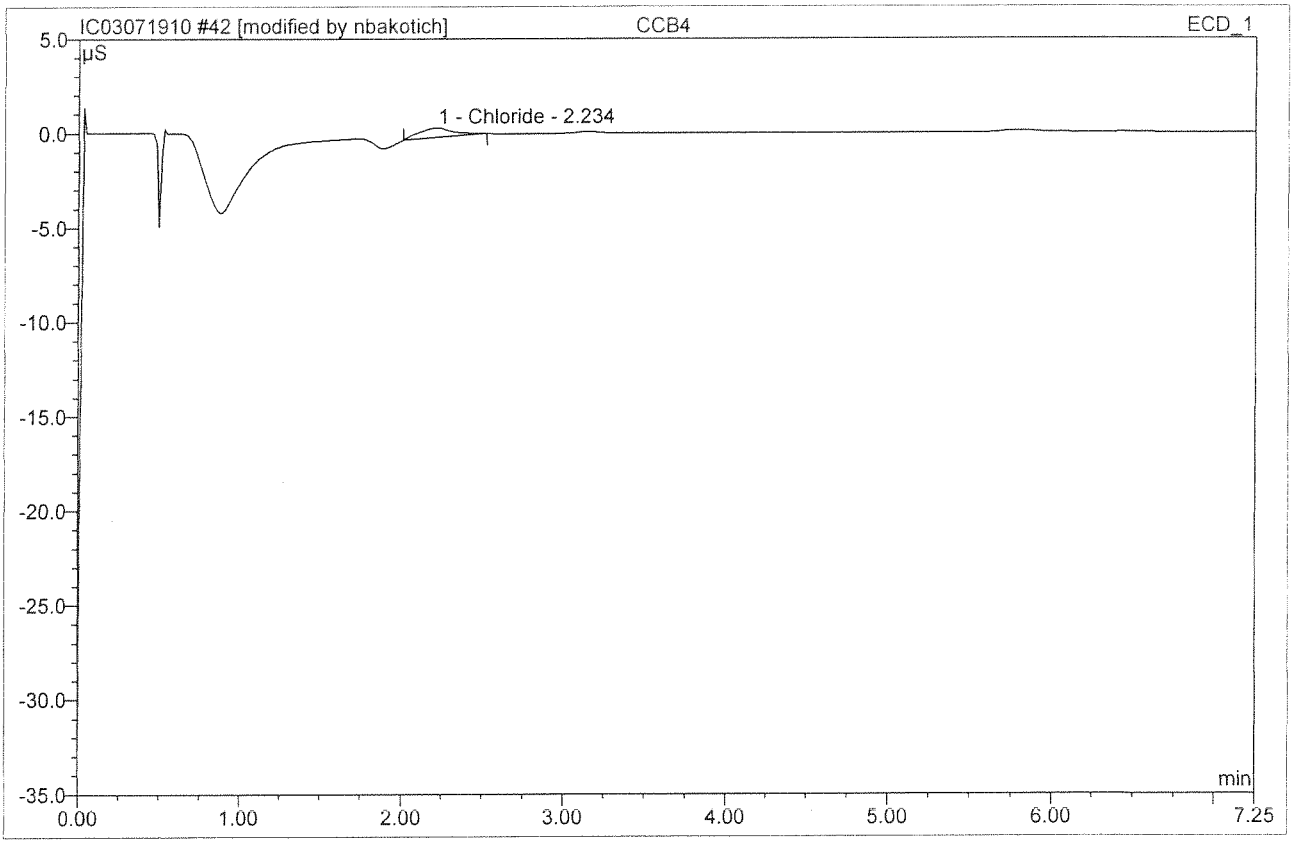
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

42 CCB4

CCB4

Sample Name:	**CCB4**	*Injection Volume:*	**200.0**
Vial Number:	**40**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 16:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.23	Chloride	0.481	0.122	100.00	0.078	BMB*
Total:			0.481	0.122	100.00	0.078	

After Initials nb

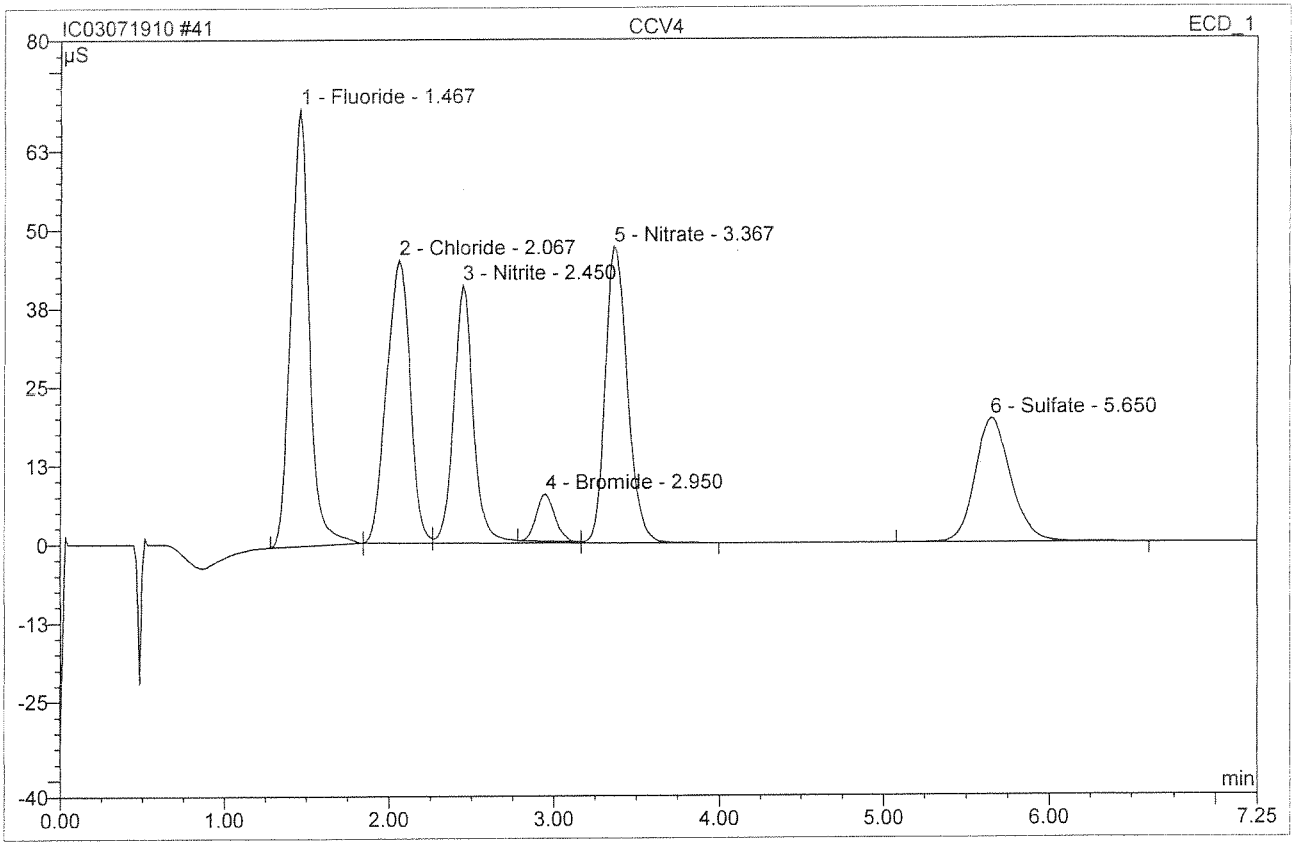
JUL 19 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

41 CCV4

CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**200.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 16:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



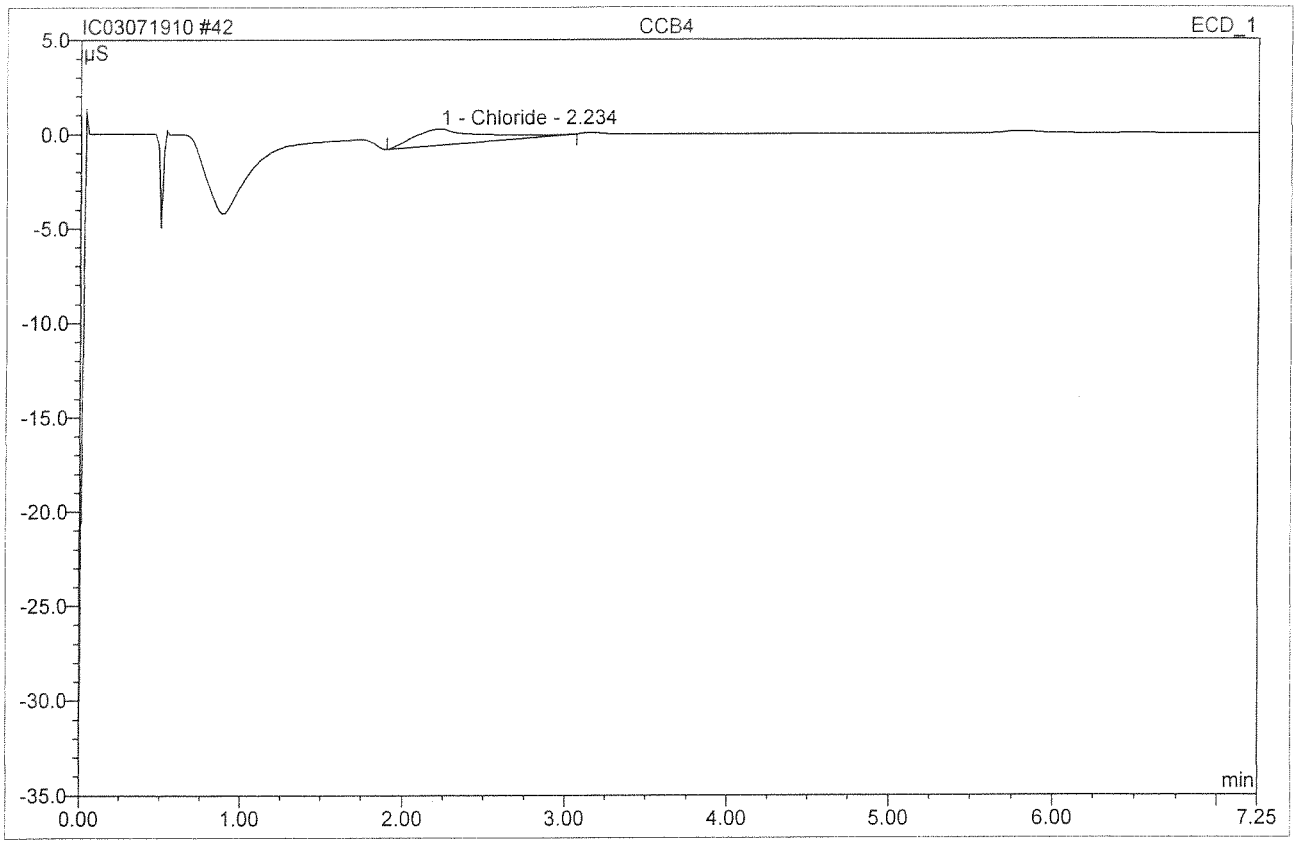
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.47	Fluoride	69.546	9.037	25.59	4.722	BMb
2	2.07	Chloride	44.935	7.337	20.78	4.705	bM
3	2.45	Nitrite	40.996	5.798	16.42	2.008	M
4	2.95	Bromide	7.444	0.980	2.78	1.830	Rd
5	3.37	Nitrate	47.116	7.251	20.54	1.968	MB
6	5.65	Sulfate	19.686	4.905	13.89	4.984	BMB
Total:			229.722	35.309	100.00	20.217	

Beton
JUL 19 2010

42 CCB4

CCB4

Sample Name:	**CCB4**	*Injection Volume:*	**200.0**
Vial Number:	**40**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 16:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



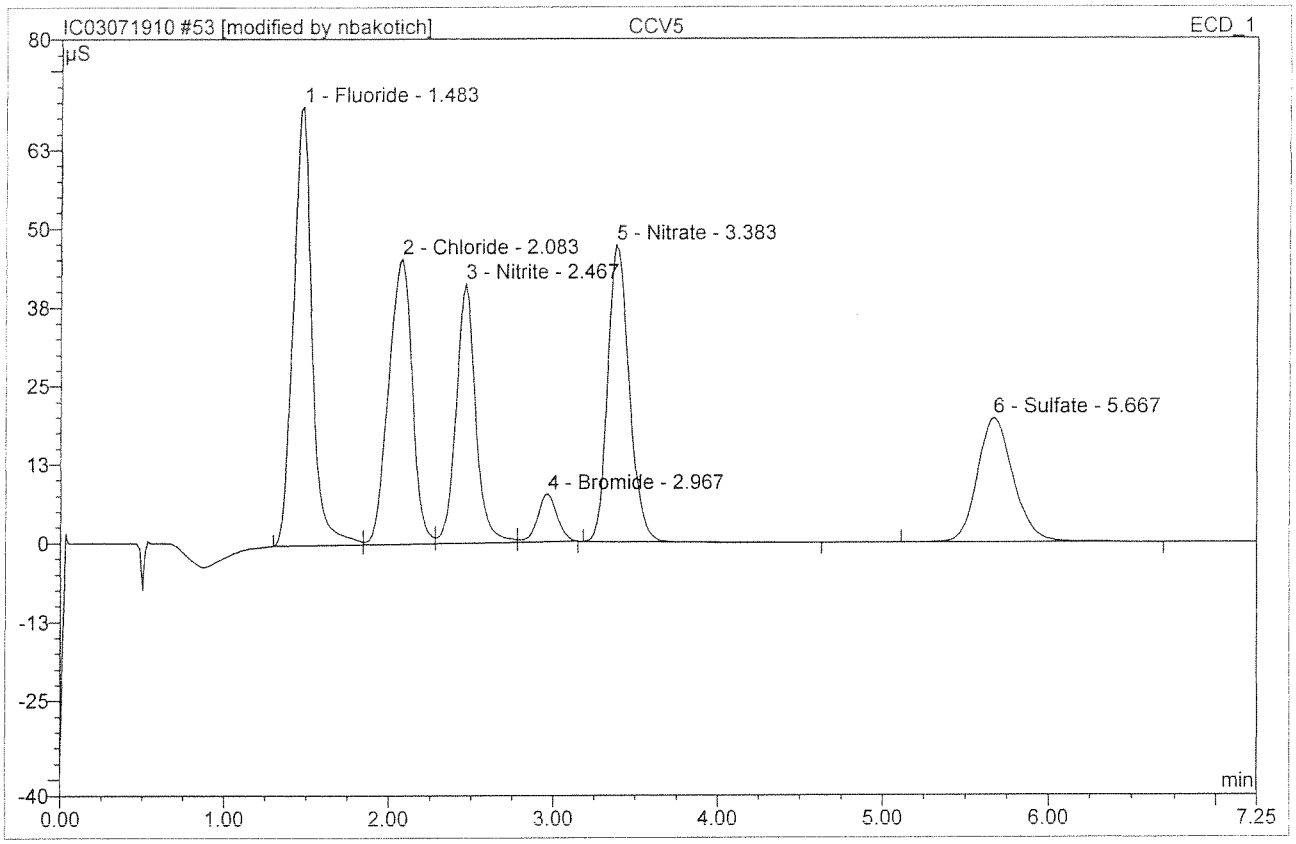
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.23	Chloride	0.843	0.408	100.00	0.261	BMB
Total:			0.843	0.408	100.00	0.261	

Reiore
JUL 19 2010

53 CCV5

CCV5

Sample Name:	**CCV5**	*Injection Volume:*	**200.0**
Vial Number:	**51**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 18:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	69.762	9.219	25.92	96 4.817	BM *
2	2.08	Chloride	45.295	7.435	20.91	95 4.768	M *
3	2.47	Nitrite	41.268	5.760	16.20	100 1.995	M *
4	2.97	Bromide	7.633	1.055	2.97	99 1.968	MB*
5	3.38	Nitrate	47.233	7.158	20.13	97 1.943	BMB*
6	5.67	Sulfate	19.743	4.934	13.87	100 5.014	BMB
Total:			230.934	35.562	100.00	20.505	

BA 7/20/10

...ter
...ials nb

JUL 26 2010

Wrong Peak/Peak not Found
...seline/shoulder Incorrect
...ther

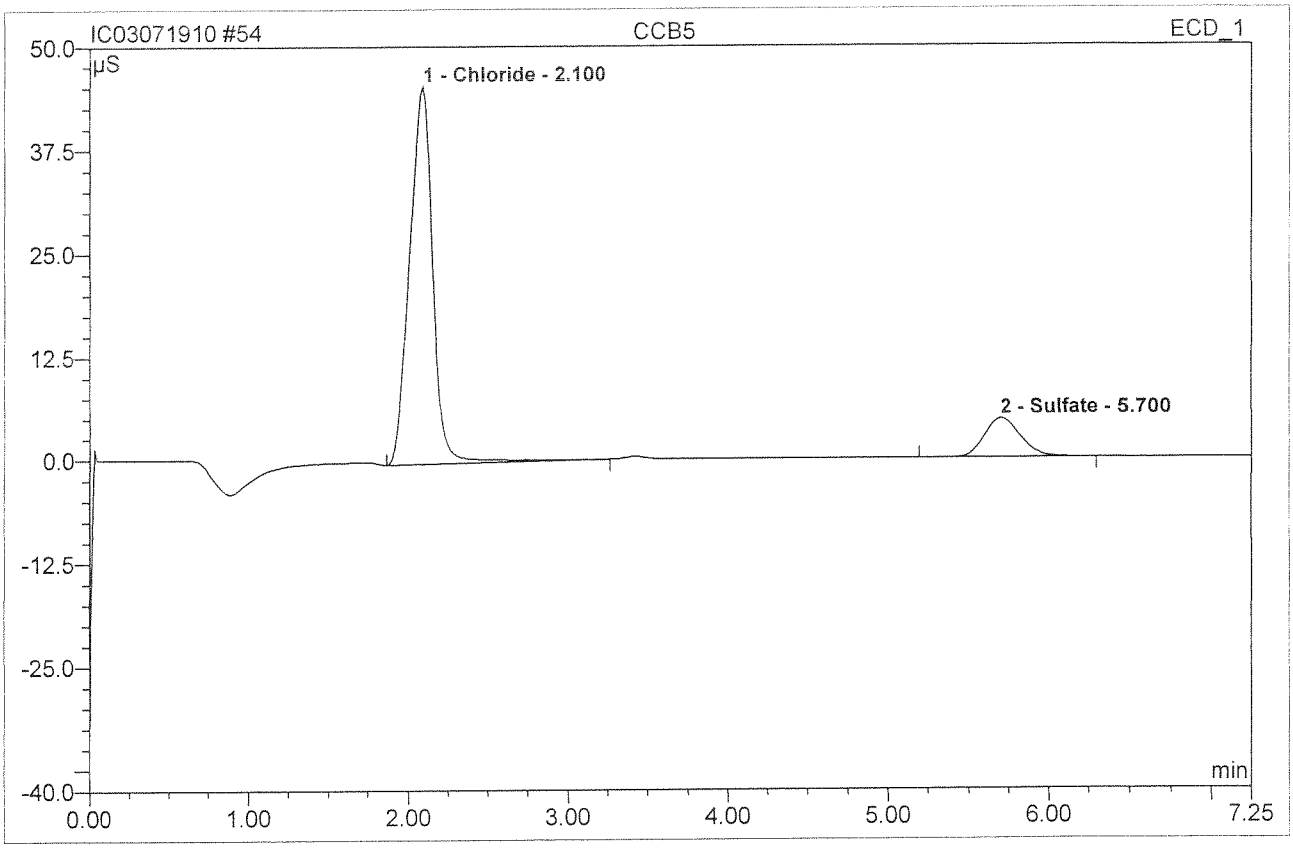
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

54 CCB5

CCB5

Sample Name:	**CCB5**	*Injection Volume:*	**200.0**
Vial Number:	**52**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 18:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



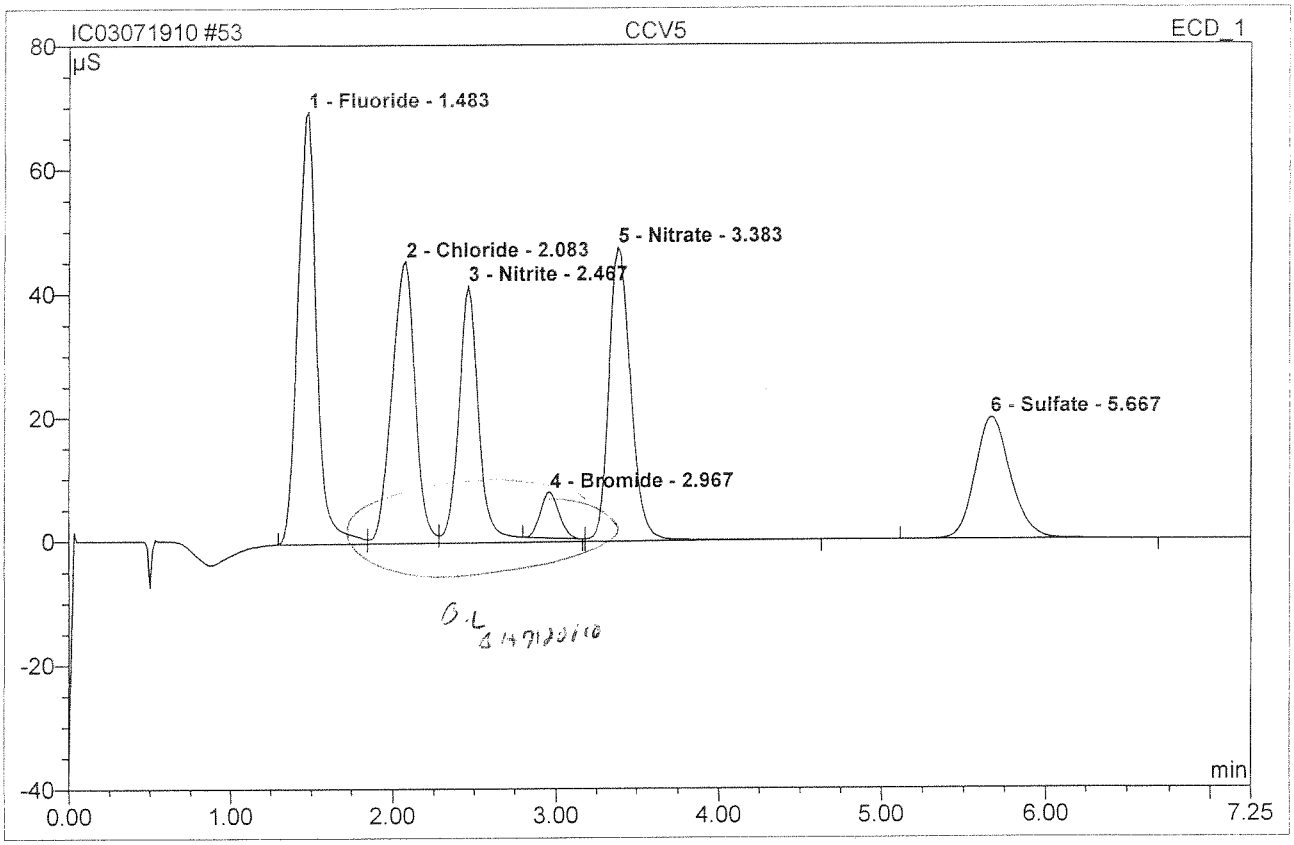
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.10	Chloride	45.773	7.890	86.40	5.059	BMB
2	5.70	Sulfate	4.772	1.242	13.60	1.262	BMB
Total:			50.545	9.132	100.00	6.321	

All samples Reported in this bracket are at least 20 x that of the blank concentration.

53 CCV5

CCV5

Sample Name:	**CCV5**	*Injection Volume:*	**200.0**
Vial Number:	**51**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 18:04**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



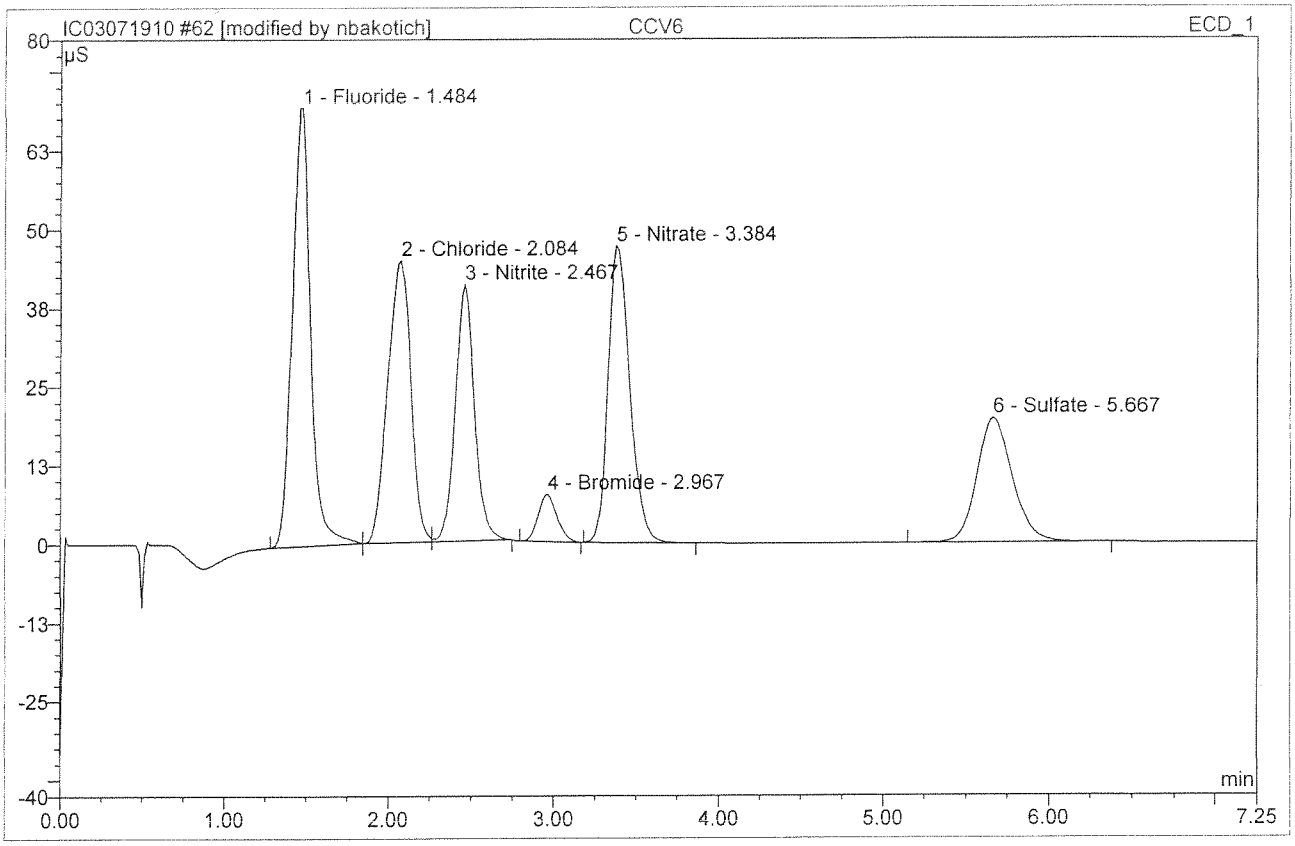
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	69.808	9.258	25.50	4.837	BM
2	2.08	Chloride	45.494	7.520	20.71	4.822	M
3	2.47	Nitrite	41.565	6.154	16.95	2.131	M
4	2.97	Bromide	7.448	0.987	2.72	1.842	Rd
5	3.38	Nitrate	47.584	7.454	20.53	2.023	MB
6	5.67	Sulfate	19.743	4.934	13.59	5.014	BMB
Total:			231.642	36.307	100.00	20.670	

JUL 2 6 2010

62 CCV6

CCV6

Sample Name:	**CCV6**	*Injection Volume:*	**200.0**
Vial Number:	**60**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 19:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	69.524	9.106	25.99	95 4.758	BMb
2	2.08	Chloride	44.755	7.260	20.72	93 4.655	bM *
3	2.47	Nitrite	40.739	5.515	15.74	96 1.910	MB*
4	2.97	Bromide	7.471	0.993	2.84	93 1.854	BMB*
5	3.38	Nitrate	47.114	7.240	20.67	99 1.965	BMB
6	5.67	Sulfate	19.803	4.917	14.04	100 4.996	BMB
Total:			229.407	35.030	100.00	20.139	

6 1/7/2010

After Initials nD

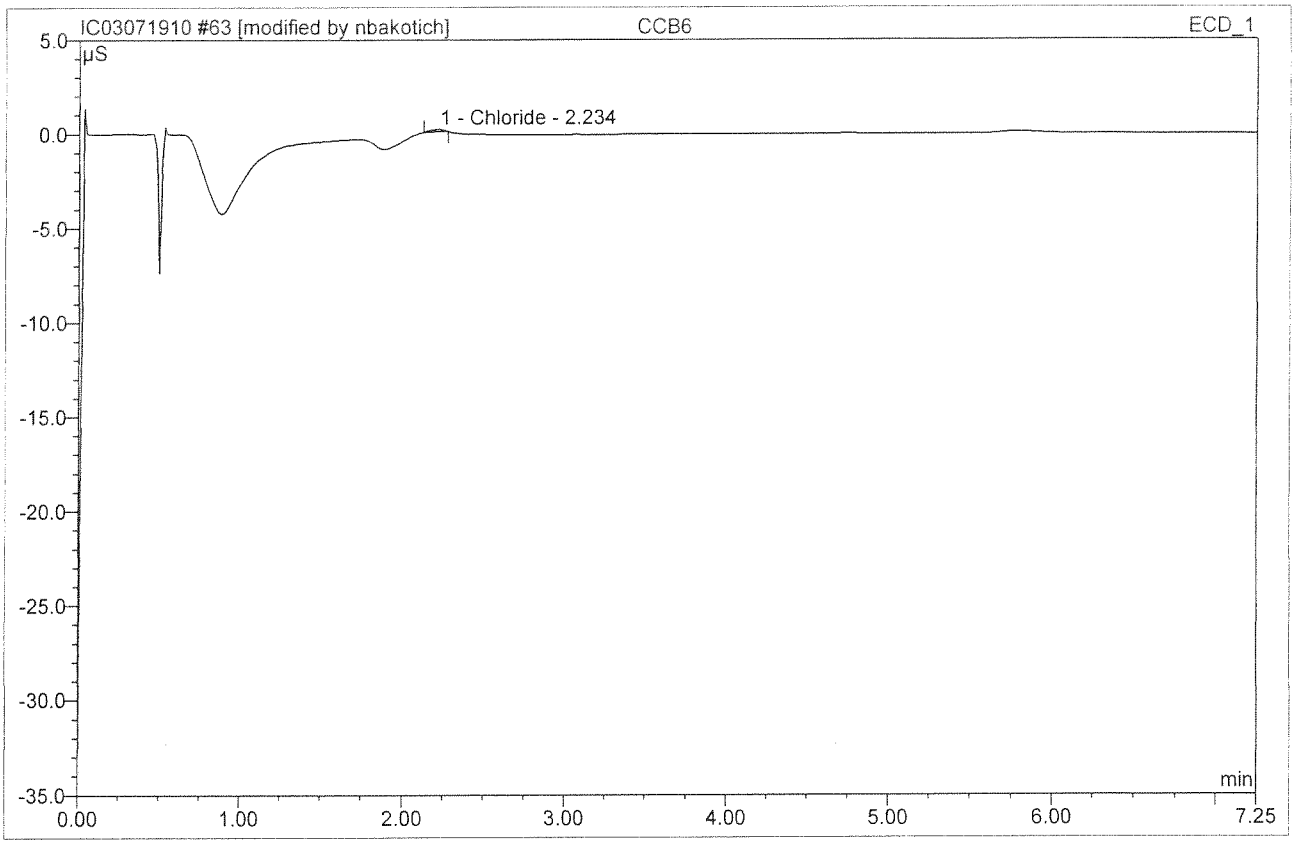
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

63 CCB6

CCB6

Sample Name:	**CCB6**	*Injection Volume:*	**200.0**
Vial Number:	**61**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 19:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.23	Chloride	0.121	0.012	100.00	0.008	BMB*
Total:			0.121	0.012	100.00	0.008	

After Initials nb

JUL 26 2010

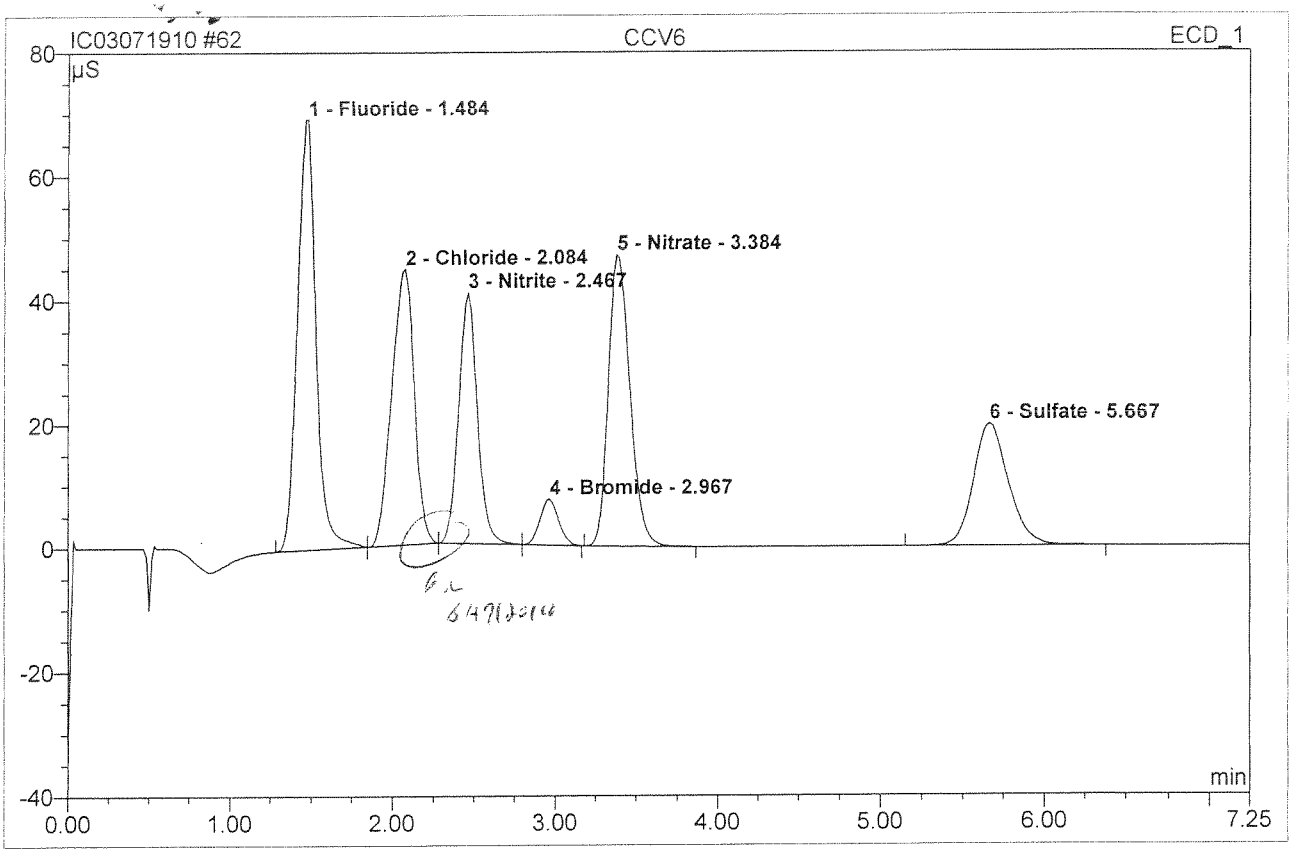
BA 7/23/10

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other_____

62 CCV6

CCV6

Sample Name:	**CCV6**	*Injection Volume:*	**200.0**
Vial Number:	**60**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 19:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.48	Fluoride	69.524	9.106	26.10	4.758	BMb
2	2.08	Chloride	44.546	7.184	20.59	4.606	bMb
3	2.47	Nitrite	40.546	5.445	15.61	1.886	bMb
4	2.97	Bromide	7.471	0.993	2.85	1.854	bMB
5	3.38	Nitrate	47.114	7.240	20.75	1.965	BMB
6	5.67	Sulfate	19.803	4.917	14.09	4.996	BMB
Total:			229.005	34.883	100.00	20.065	

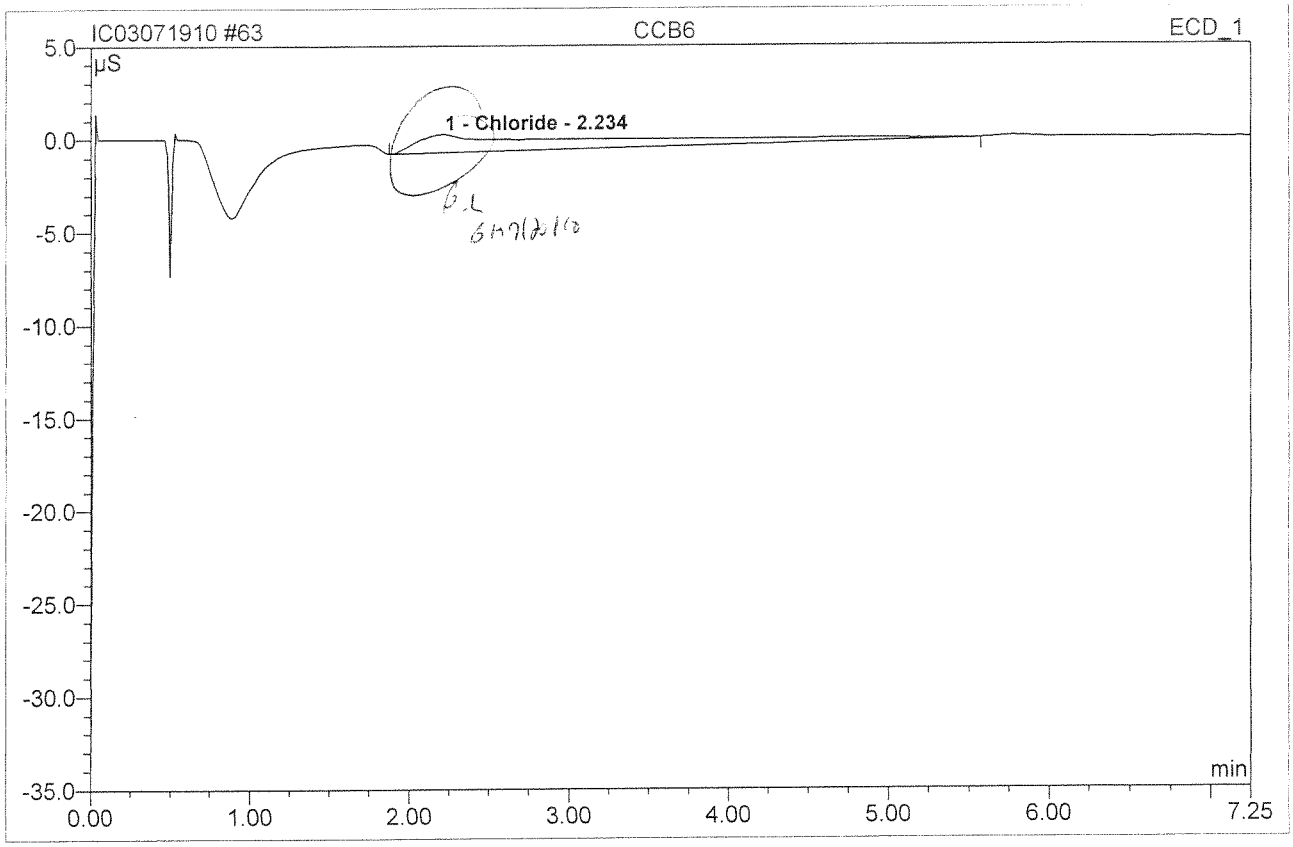
Before

JUL 26 2010

63 CCB6

CCB6

Sample Name:	**CCB6**	*Injection Volume:*	**200.0**
Vial Number:	**61**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/19/2010 19:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**7.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.23	Chloride	0.979	1.386	100.00	0.889	BMB
Total:			0.979	1.386	100.00	0.889	

Before

JUL 26 2010

COLUMBIA ANALYTICAL SERVICES, INC.

Ion Chromatography Calibration Data

Sequence: IC03072010c

Date: 07/20/10

Anion	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Corr.Coeff.	Slope
F	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9588	1.8676
Cl	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9324	1.5522
NO2	0.0	0.1	0.5	1.0	2.0	5.0	-	99.9911	3.1836
Br	0.0	0.1	0.5	1.0	2.0	5.0	-	99.9445	0.5299
NO3	0.0	0.1	0.5	1.0	2.0	5.0	-	99.8858	3.7330
SO4	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9680	0.9943

All calibration standard concentrations are in mg/L unless otherwise noted.
Zero point forced through zero.

No.	Peak Name	Cal.Type	#Points	Rel.Std.Dev. %	Corr.Coeff. %	Offset	Slope	Curve
1	Fluoride	Lin	6	3.0407	99.9588	0	1.8676	0
2	Chloride	Lin	6	5.0312	99.9324	0	1.5522	0
n.a.	Nitrite	Lin	5	1.5619	99.9911	0	3.1836	0
n.a.	Bromide	Lin	5	6.1127	99.9445	0	0.5299	0
n.a.	Nitrate	Lin	5	9.4241	99.8858	0	3.733	0
3	Sulfate	Lin	6	3.3145	99.968	0	0.9943	0
Average:			5.5	4.7475	99.9468	0	1.9768	0

EC 7/23/10

Sequence: IC03072010C
Operator: nbakotich
Printed: 7/20/2010 4:48:36 PM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 12
Created: 7/20/2010 12:05:20 PM by ACQWET10
Last Update: 7/20/2010 4:44:25 PM by ACQWET10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	std2/lvl2	Standard	1	200.0	epa300	epa300	Finished	7/20/2010 1:14:08 PM
2	std3/lvl3	Standard	2	200.0	epa300	epa300	Finished	7/20/2010 1:30:36 PM
3	std4/lvl4	Standard	3	200.0	epa300	epa300	Finished	7/20/2010 1:45:33 PM
4	std5/lvl5	Standard	4	200.0	epa300	epa300	Finished	7/20/2010 2:00:31 PM
5	std6/lvl6	Standard	5	200.0	epa300	epa300	Finished	7/20/2010 2:14:58 PM
6	std7/lvl7	Standard	6	200.0	epa300	epa300	Finished	7/20/2010 2:29:26 PM
7	std1/lvl1	Standard	7	200.0	epa300	epa300	Finished	7/20/2010 2:43:54 PM
8	NO2 AN11-29-J	Unknown	10	200.0	epa300	epa300	Finished	7/20/2010 2:58:21 PM
9	NO3 AN1-33-E	Unknown	11	200.0	epa300	epa300	Finished	7/20/2010 3:12:49 PM
10	CLSO4 ERA#0107-10-02	Unknown	12	200.0	epa300	epa300	Finished	7/20/2010 3:27:17 PM
11	F AN 1-33-D	Unknown	13	200.0	epa300	epa300	Finished	7/20/2010 3:41:44 PM
12	Br AN1-33-L	Unknown	14	200.0	epa300	epa300	Finished	7/20/2010 3:56:12 PM

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

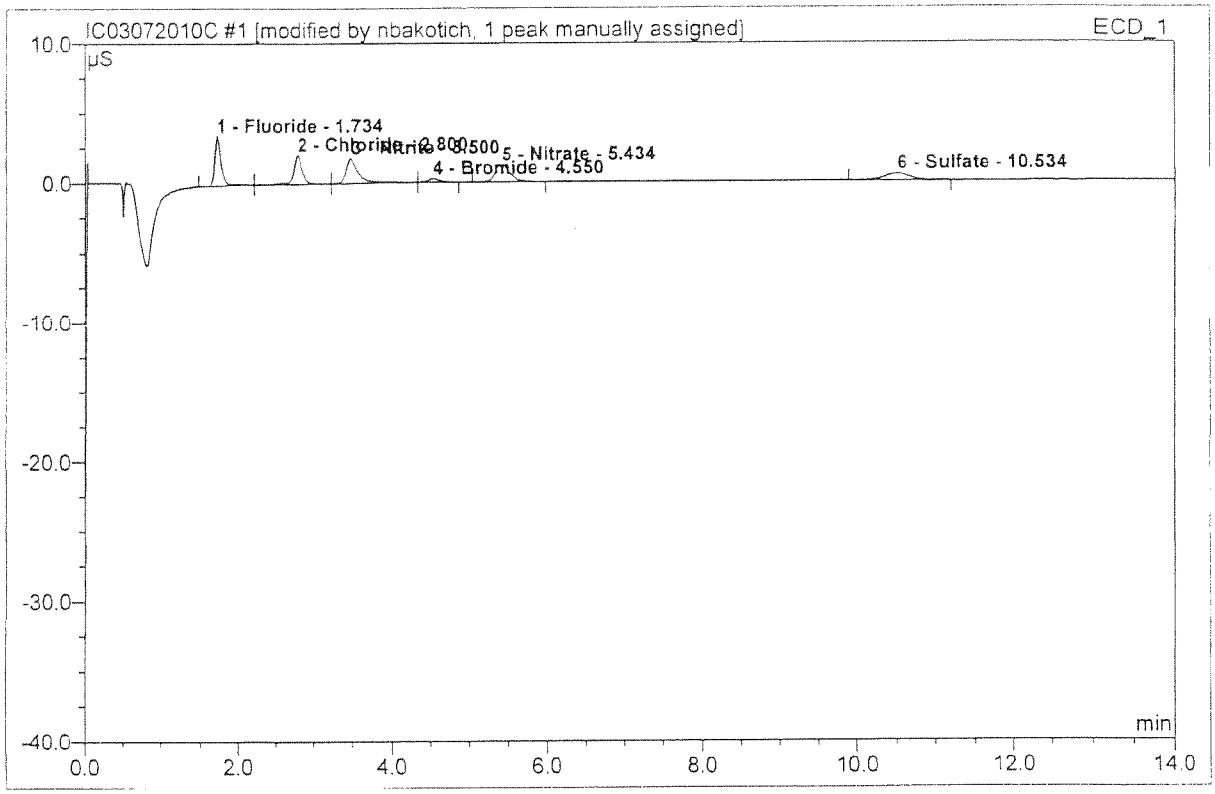
Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 12
Created: 7/20/2010 12:05:20 PM by ACQWET10
Last Update: 7/20/2010 4:44:25 PM by ACQWET10

No.	Name	Dil. Factor	Comment
1	std2/lvl2	1.0000	
2	std3/lvl3	1.0000	
3	std4/lvl4	1.0000	
4	std5/lvl5	1.0000	
5	std6/lvl6	1.0000	
6	std7/lvl7	1.0000	
7	std1/lvl1	1.0000	
8	NO2 AN11-29-J	25.0000	NO2
9	NO3 AN1-33-E	20.0000	NO3
10	CLSO4 ERA#0107-10-02	1.0000	CLSO4
11	F AN 1-33-D	2.0000	F
12	Br AN1-33-L	1.0000	Br

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

1 std2/lvl2

Sample Name:	std2/lvl2	*Injection Volume:*	200.0
Vial Number:	1	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 13:14	*Sample Weight:*	1.0000
Run Time (min):	14.00	*Sample Amount:*	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride	3.545	0.363	24.73	0.194	BMb*
2	2.80	Chloride	2.071	0.272	18.54	0.175	bM
3	3.50	Nitrite	1.805	0.321	21.85	0.101	Mb*
4	4.55	Bromide	0.255	0.045	3.04	0.084	bMB*
5	5.43	Nitrate	1.263	0.280	19.07	0.075	BMB
6	10.53	Sulfate	0.499	0.187	12.77	0.188	BMB^
Total:			9.438	1.468	100.00	0.818	

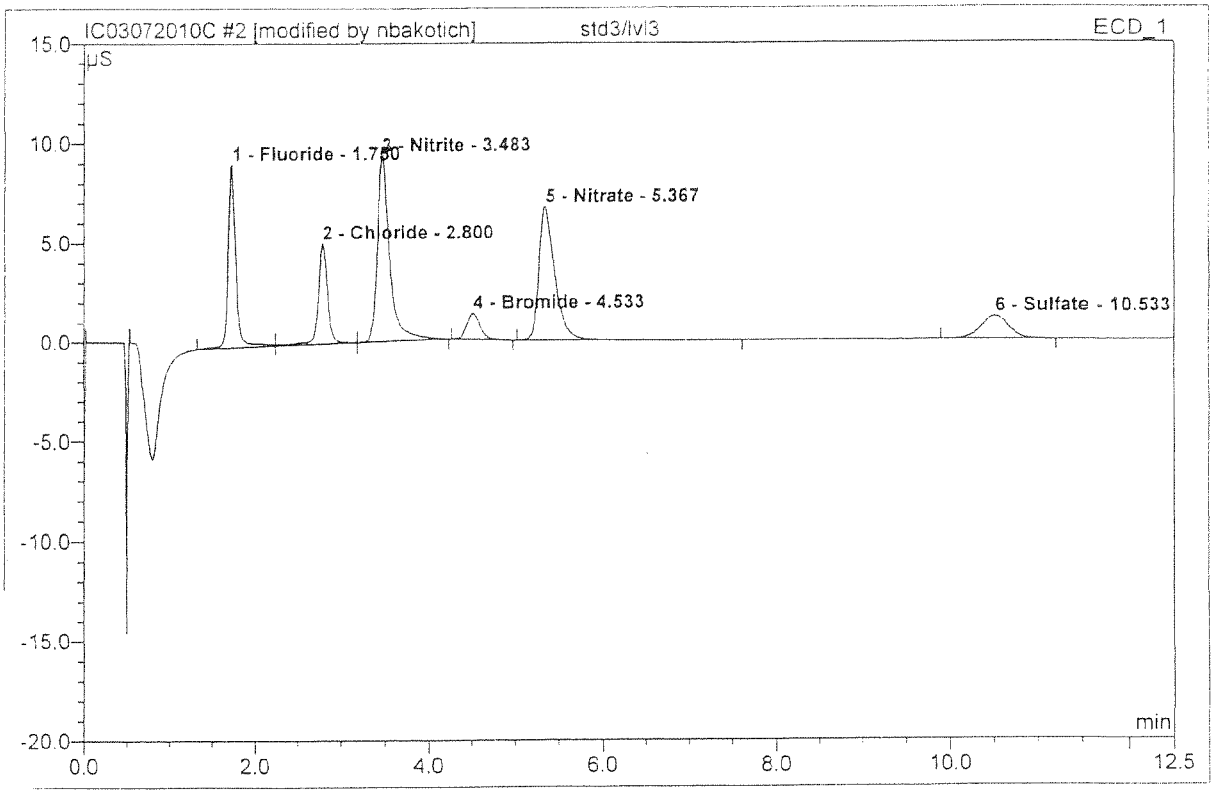
7/20/10

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2 std3/lvl3

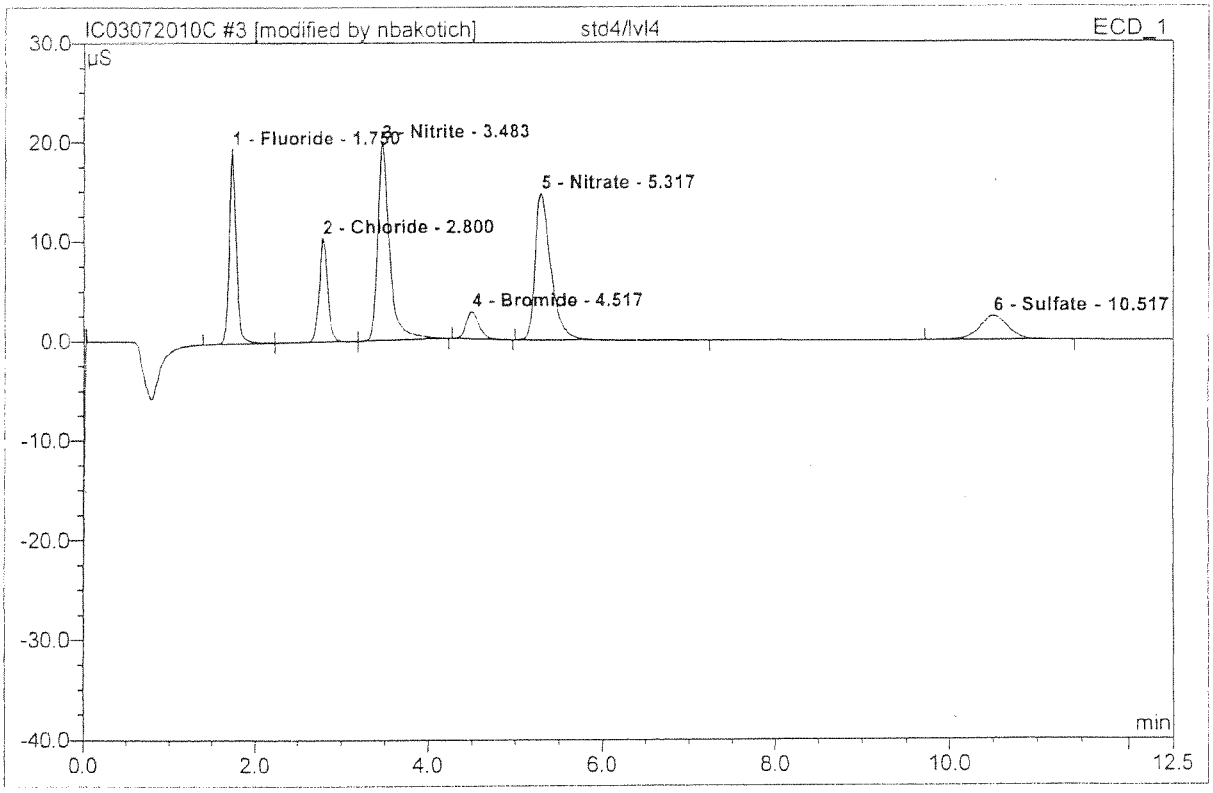
Sample Name:	std3/lvl3	*Injection Volume:*	200.0
Vial Number:	2	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 13:30	*Sample Weight:*	1.0000
Run Time (min):	12.50	*Sample Amount:*	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	9.205	0.973	18.42	0.521	BM *
2	2.80	Chloride	5.081	0.655	12.41	0.422	M *
3	3.48	Nitrite	9.350	1.560	29.54	0.490	MB*
4	4.53	Bromide	1.315	0.230	4.35	0.434	BMB*
5	5.37	Nitrate	6.707	1.436	27.19	0.385	BMB*
6	10.53	Sulfate	1.163	0.428	8.10	0.430	BMB
Total:			32.821	5.283	100.00	2.682	

3 std4/lvl4

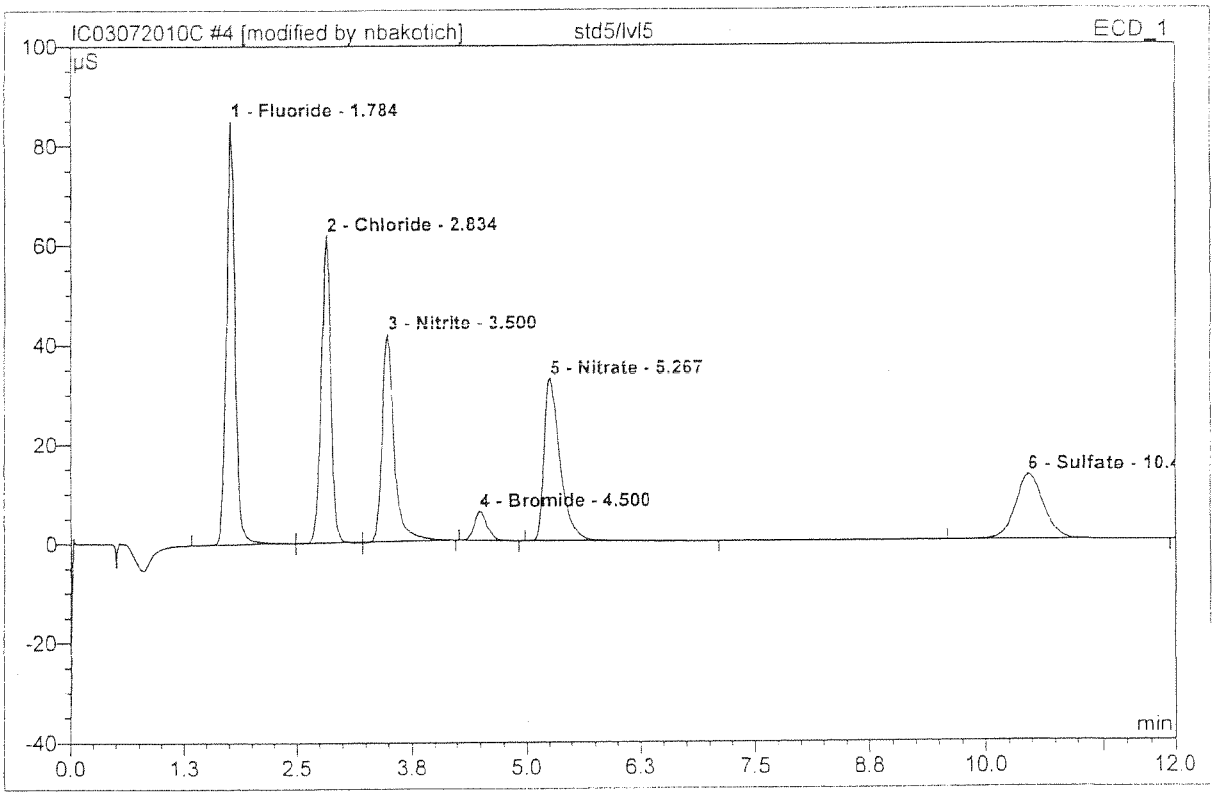
Sample Name:	std4/lvl4	*Injection Volume:*	200.0
Vial Number:	3	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 13:45	*Sample Weight:*	1.0000
Run Time (min):	12.50	*Sample Amount:*	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	19.535	1.902	17.78	1.019	BM *
2	2.80	Chloride	10.376	1.197	11.19	0.771	M *
3	3.48	Nitrite	19.878	3.181	29.73	0.999	MB*
4	4.52	Bromide	2.746	0.469	4.38	0.885	BMB*
5	5.32	Nitrate	14.681	3.069	28.68	0.822	BMB*
6	10.52	Sulfate	2.364	0.882	8.24	0.887	BMB
Total:			69.581	10.700	100.00	5.383	

4 std5/lvl5

Sample Name:	std5/lvl5	*Injection Volume:*	200.0
Vial Number:	4	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 14:00	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



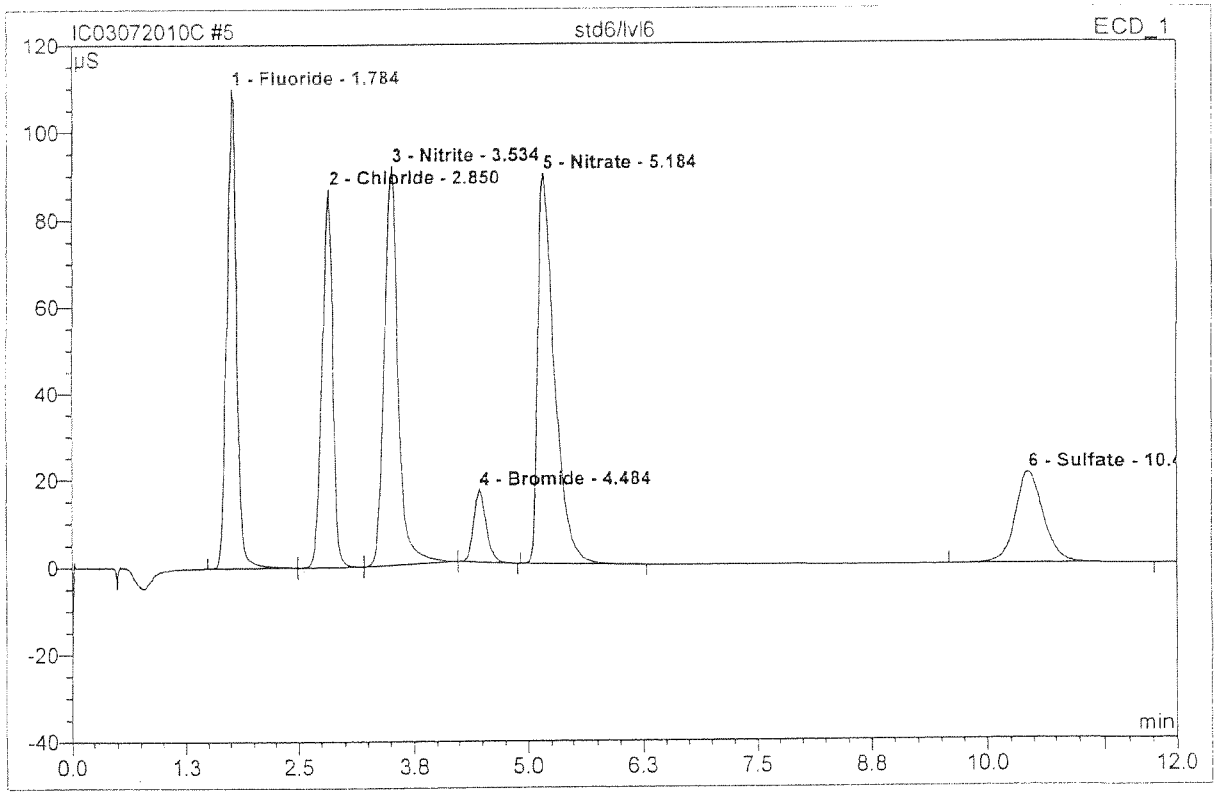
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	85.132	9.610	26.73	5.145	BM *
2	2.83	Chloride	61.798	7.298	20.30	4.702	M *
3	3.50	Nitrite	41.755	6.525	18.15	2.050	MB*
4	4.50	Bromide	5.906	0.991	2.76	1.870	BMB*
5	5.27	Nitrate	32.796	6.764	18.82	1.812	BMB*
6	10.47	Sulfate	13.153	4.758	13.24	4.785	BMB
Total:			240.541	35.945	100.00	20.364	

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 std6/lvl6

Sample Name:	std6/lvl6	*Injection Volume:*	200.0
Vial Number:	5	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 14:14	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



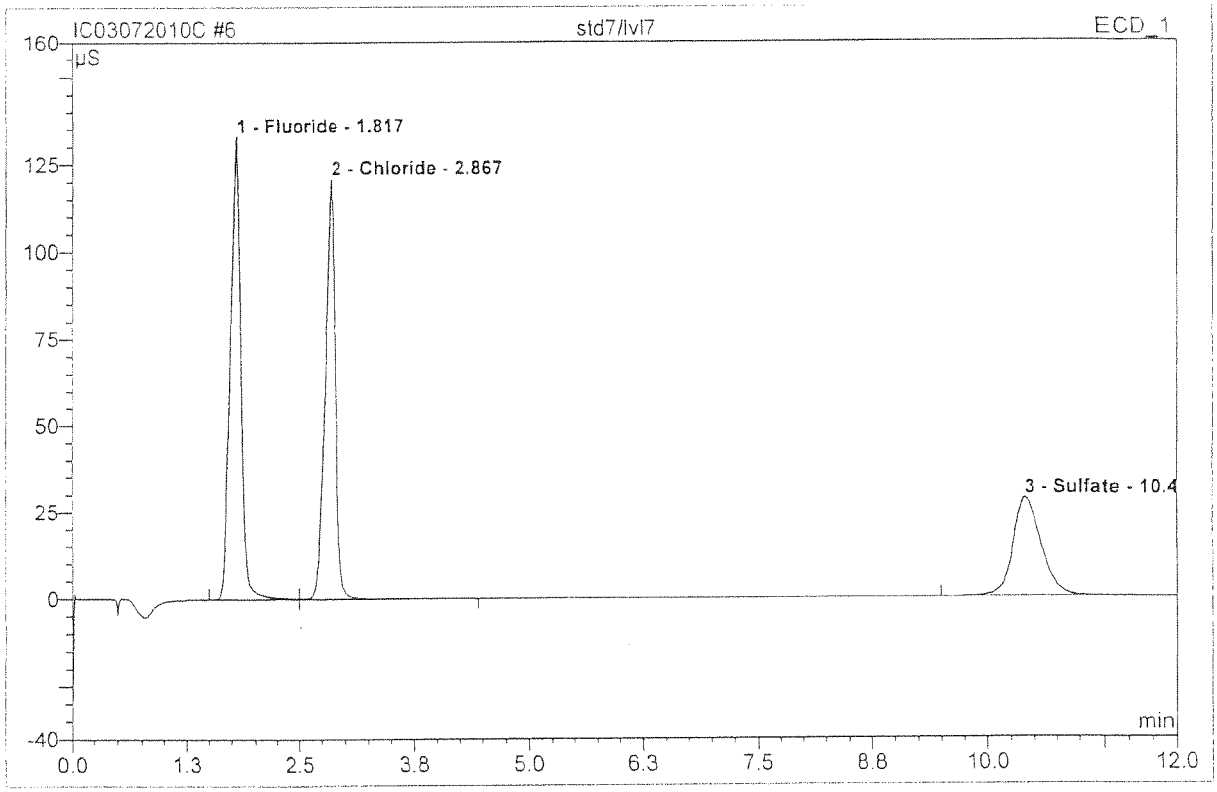
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	110.065	14.275	20.13	7.644	BMb
2	2.85	Chloride	87.060	11.556	16.29	7.445	bMB
3	3.53	Nitrite	91.775	15.859	22.36	4.981	bMb
4	4.48	Bromide	16.593	2.693	3.80	5.082	bMB
5	5.18	Nitrate	89.877	19.123	26.96	5.123	BMB
6	10.47	Sulfate	20.826	7.423	10.47	7.466	BMB
Total:			416.196	70.929	100.00	37.741	

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 std7/lvl7

Sample Name:	std7/lvl7	*Injection Volume:*	200.0
Vial Number:	6	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 14:29	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



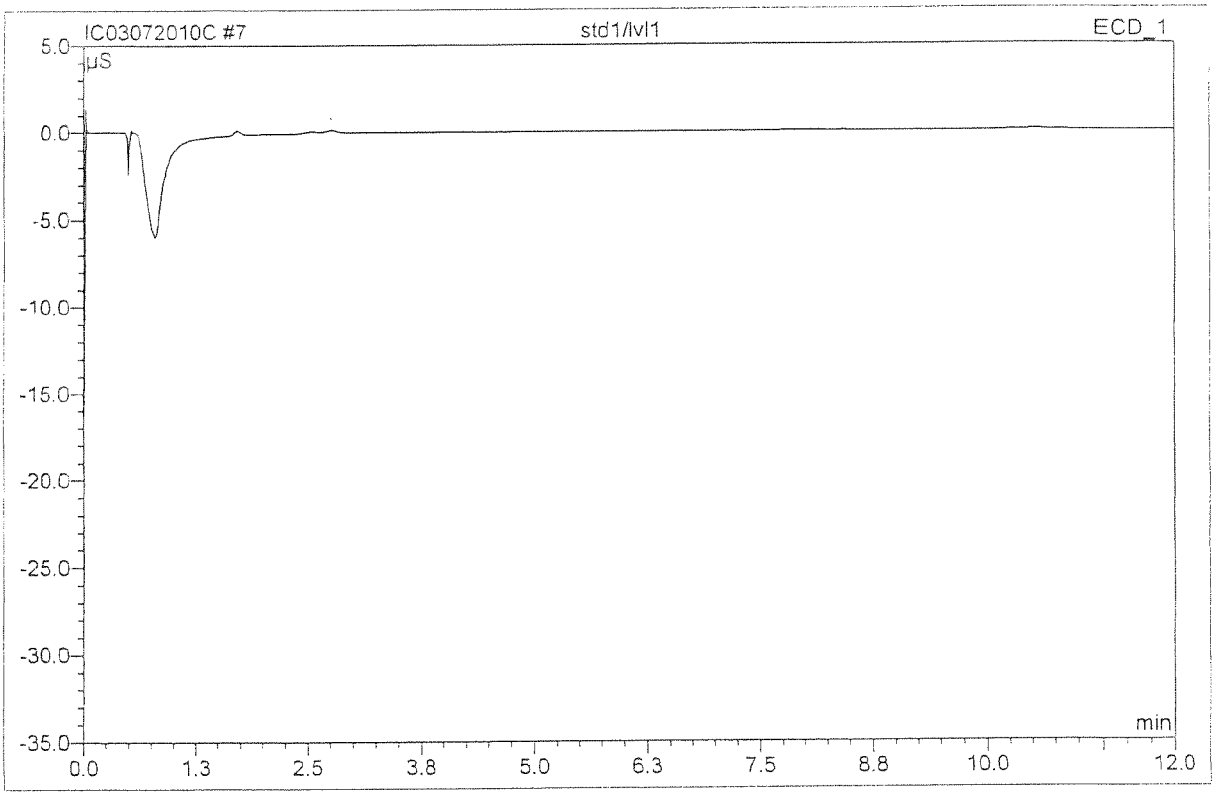
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.82	Fluoride	133.296	18.334	41.40	9.817	BM
2	2.87	Chloride	120.903	15.859	35.81	10.217	MB
3	10.42	Sulfate	28.395	10.091	22.79	10.148	BMB
Total:			282.595	44.284	100.00	30.183	

default/integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 std1/lvl1

Sample Name:	std1/lvl1	*Injection Volume:*	200.0
Vial Number:	7	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 14:43	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000

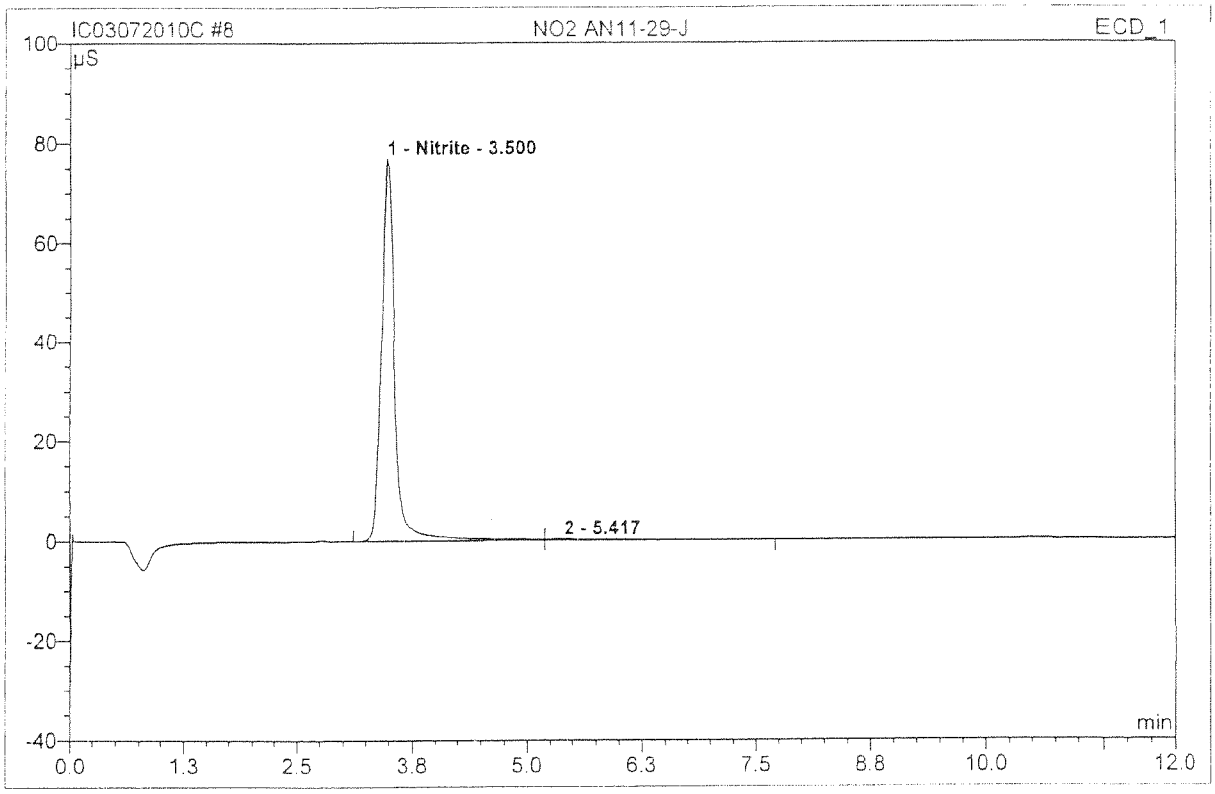


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

8 NO2 AN11-29-J

NO2

Sample Name:	NO2 AN11-29-J	*Injection Volume:*	200.0
Vial Number:	10	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	25.0000
Recording Time:	7/20/2010 14:58	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.50	Nitrite	76.868	13.074	98.03	102.665	BM
2	5.42	n.a.	0.335	0.263	1.97	n.a.	MB
Total:			77.202	13.336	100.00	102.665	

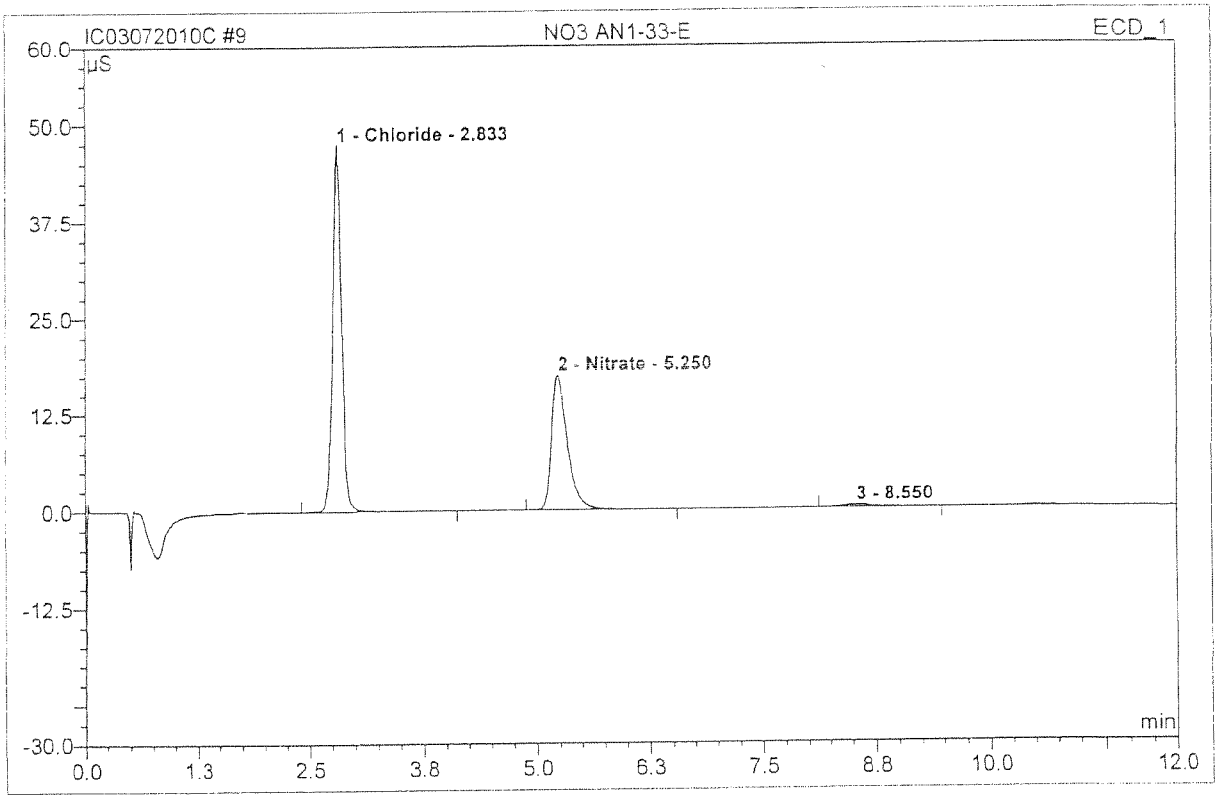
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 NO3 AN1-33-E

NO3

Sample Name:	NO3 AN1-33-E	*Injection Volume:*	200.0
Vial Number:	11	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	20.0000
Recording Time:	7/20/2010 15:12	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



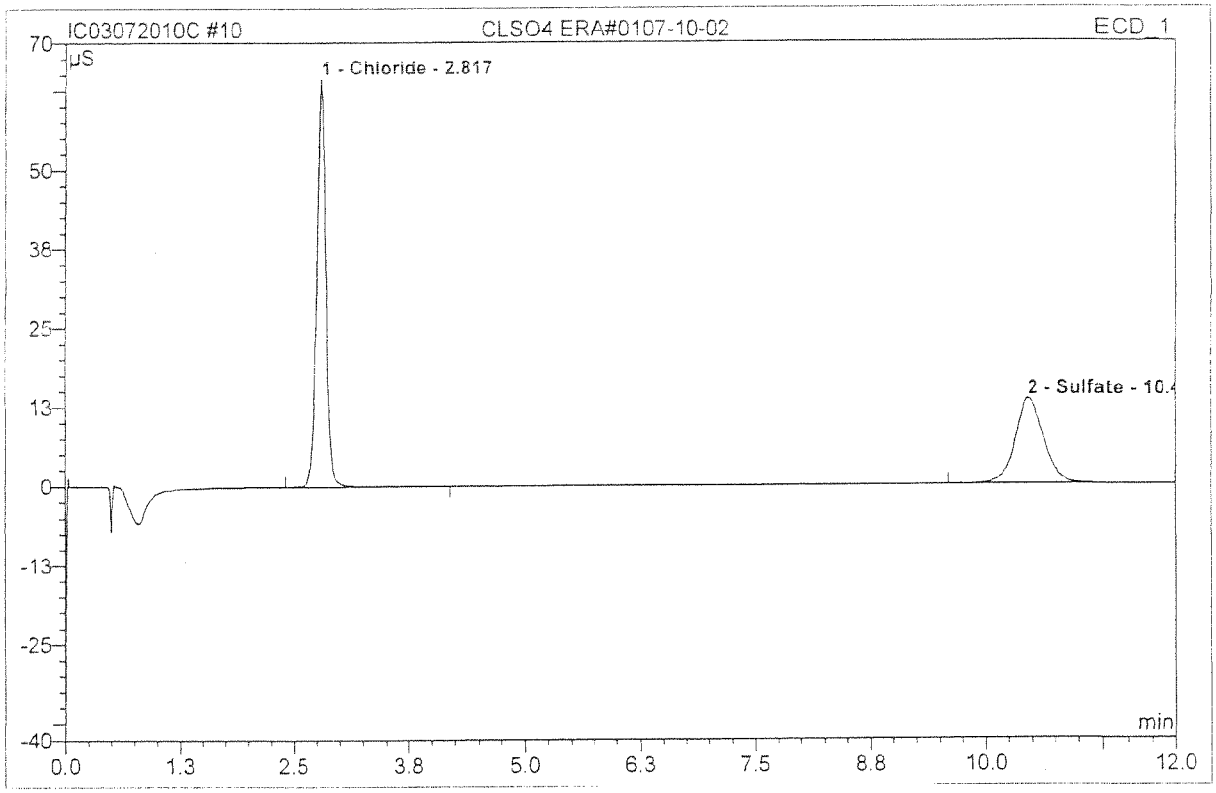
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.83	Chloride	47.477	5.326	58.89	68.625	BMB
2	5.25	Nitrate	17.429	3.581	39.60	19.185	BMB
3	8.55	n.a.	0.347	0.136	1.51	n.a.	BMB
Total:			65.253	9.043	100.00	87.811	

nb 7.20.10

10 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	CLSO4 ERA#0107-10-02	*Injection Volume:*	200.0
Vial Number:	12	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 15:27	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000

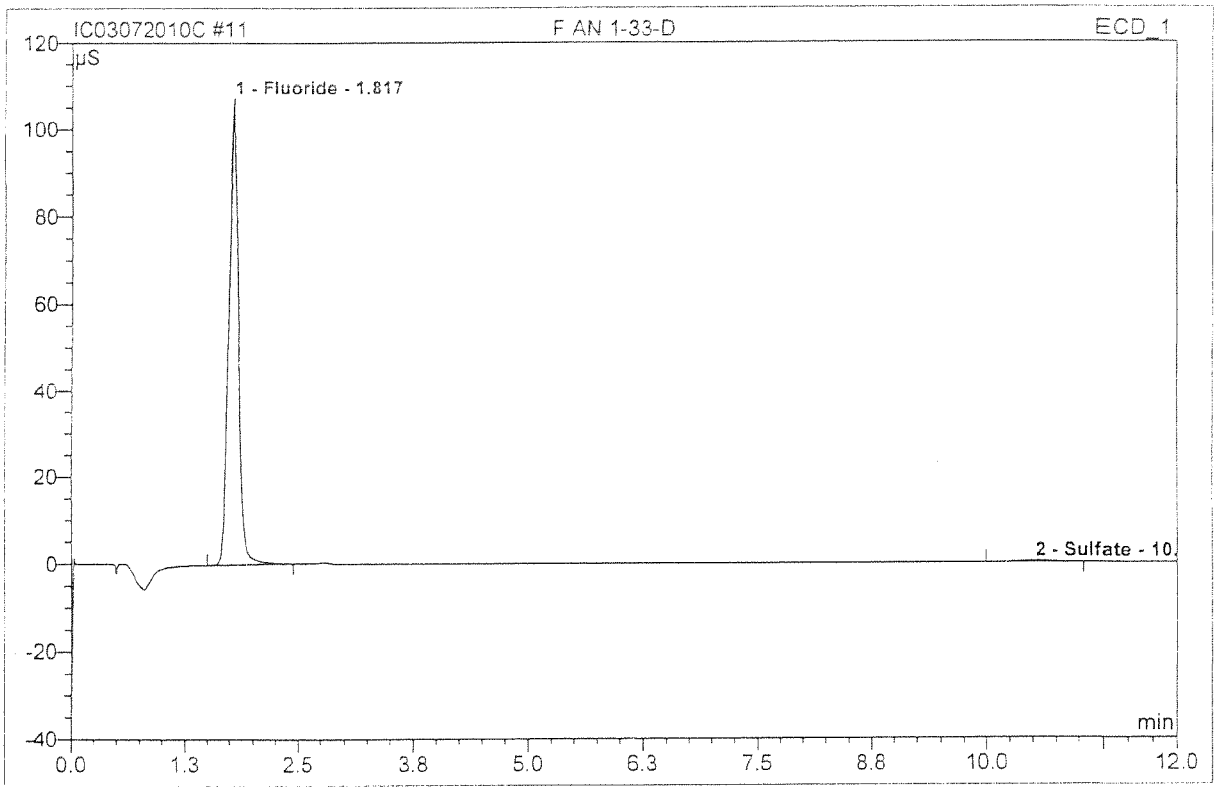


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.82	Chloride	64.536	7.515	60.92	4.842	BMB
2	10.47	Sulfate	13.372	4.820	39.08	4.848	BMB
Total:			77.908	12.335	100.00	9.689	

11 F AN 1-33-D

F

Sample Name:	F AN 1-33-D	*Injection Volume:*	200.0
Vial Number:	13	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	2.0000
Recording Time:	7/20/2010 15:41	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



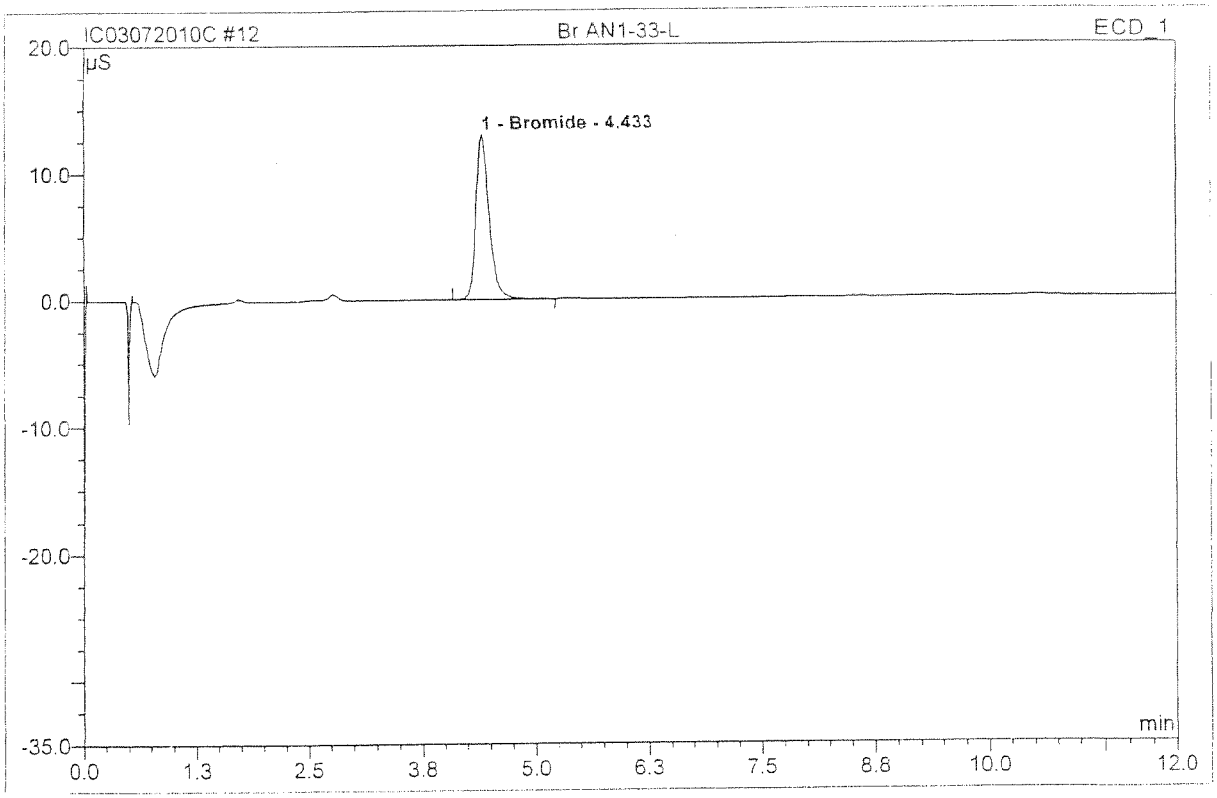
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.82	Fluoride	107.266	13.275	99.10	14.216	BMB
2	10.53	Sulfate	0.331	0.121	0.90	0.243	BMB
Total:			107.597	13.396	100.00	14.459	

nb 7.20.10

12 Br AN1-33-L

Br

Sample Name:	Br AN1-33-L	*Injection Volume:*	200.0
Vial Number:	14	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 15:56	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000

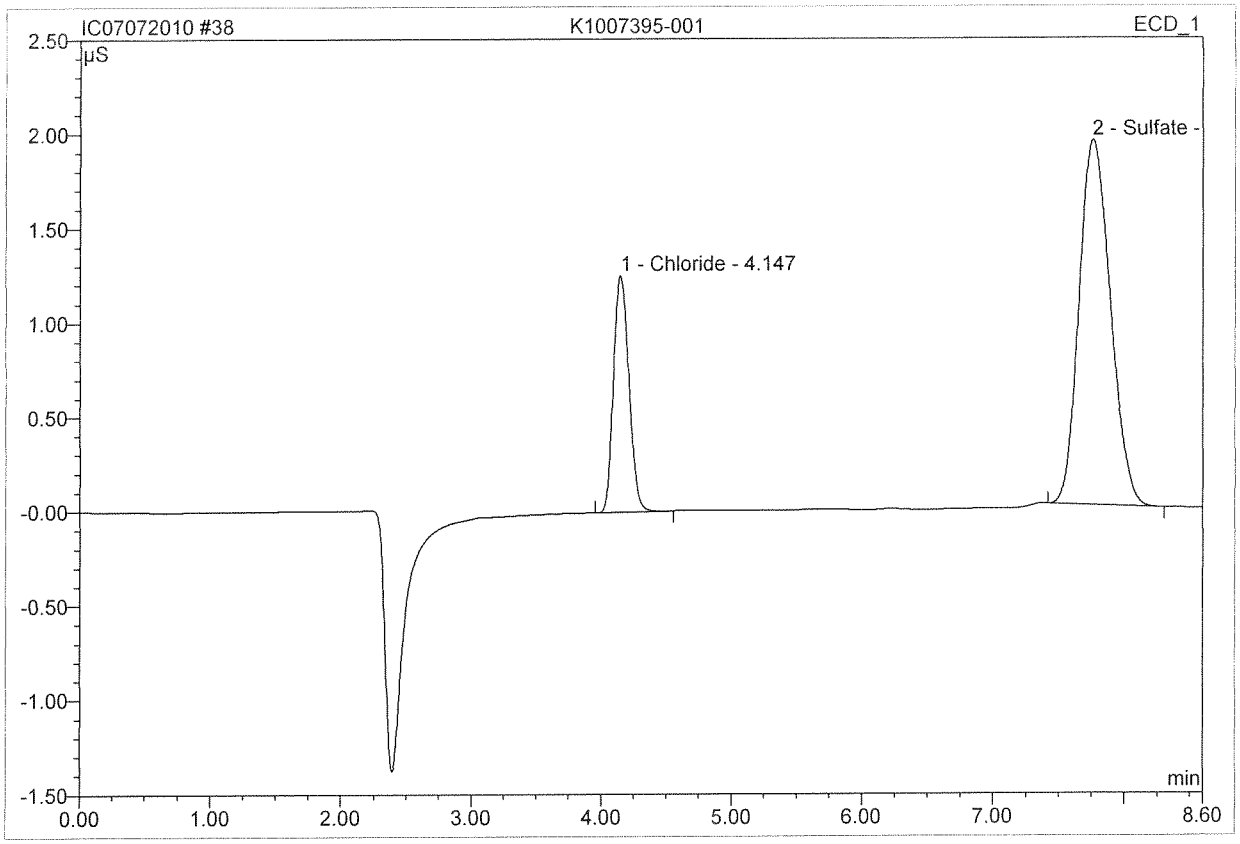


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.43	Bromide	13.016	2.174	100.00	4.103	BMB
Total:			13.016	2.174	100.00	4.103	

7/20/10

38 K1007395-001

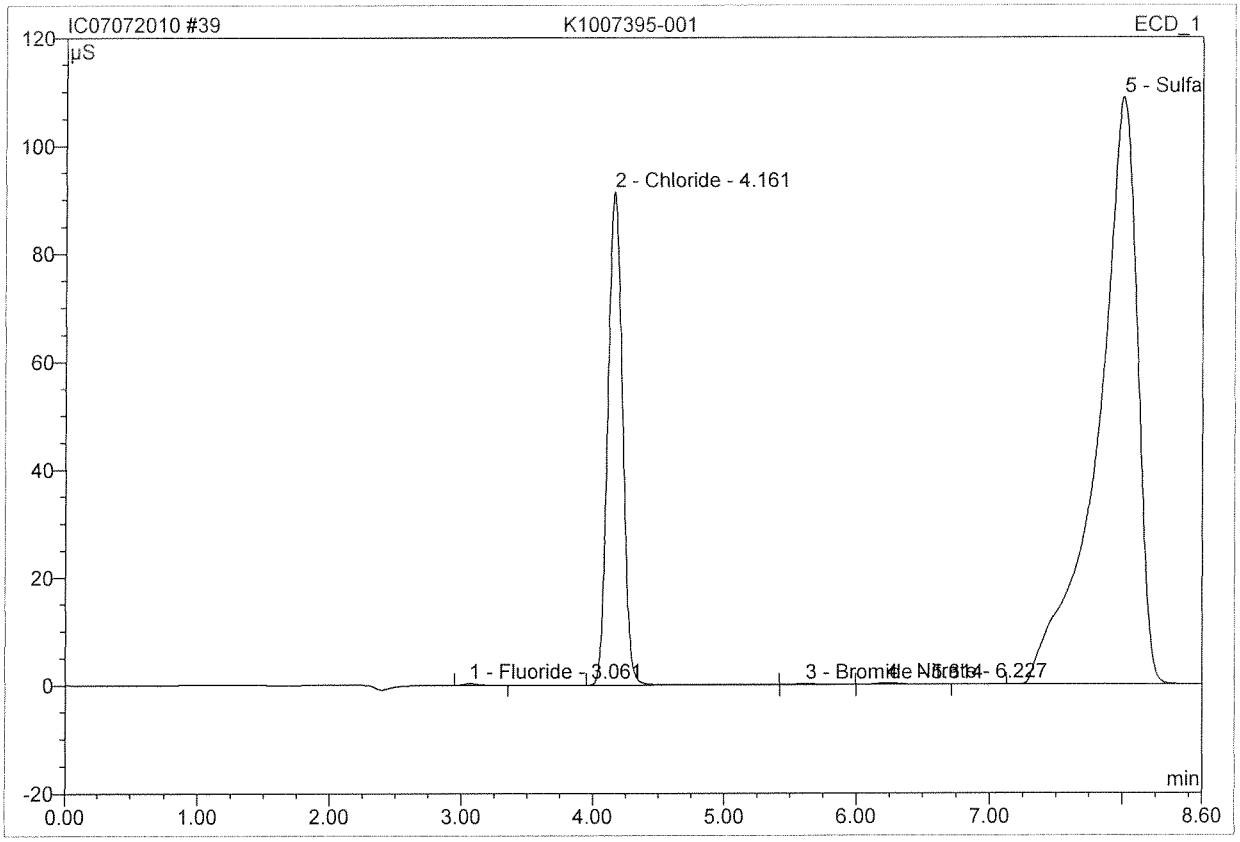
Sample Name:	**K1007395-001**	*Injection Volume:*	**25.0**
Vial Number:	**31**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/20/2010 14:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.15	Chloride	1.252	0.172	24.24	104.256	BMB
2	7.76	Sulfate	1.936	0.539	75.76	467.528	BMB
Total:			3.187	0.711	100.00	571.784	

39 K1007395-001

Sample Name:	**K1007395-001**	*Injection Volume:*	**25.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/20/2010 15:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

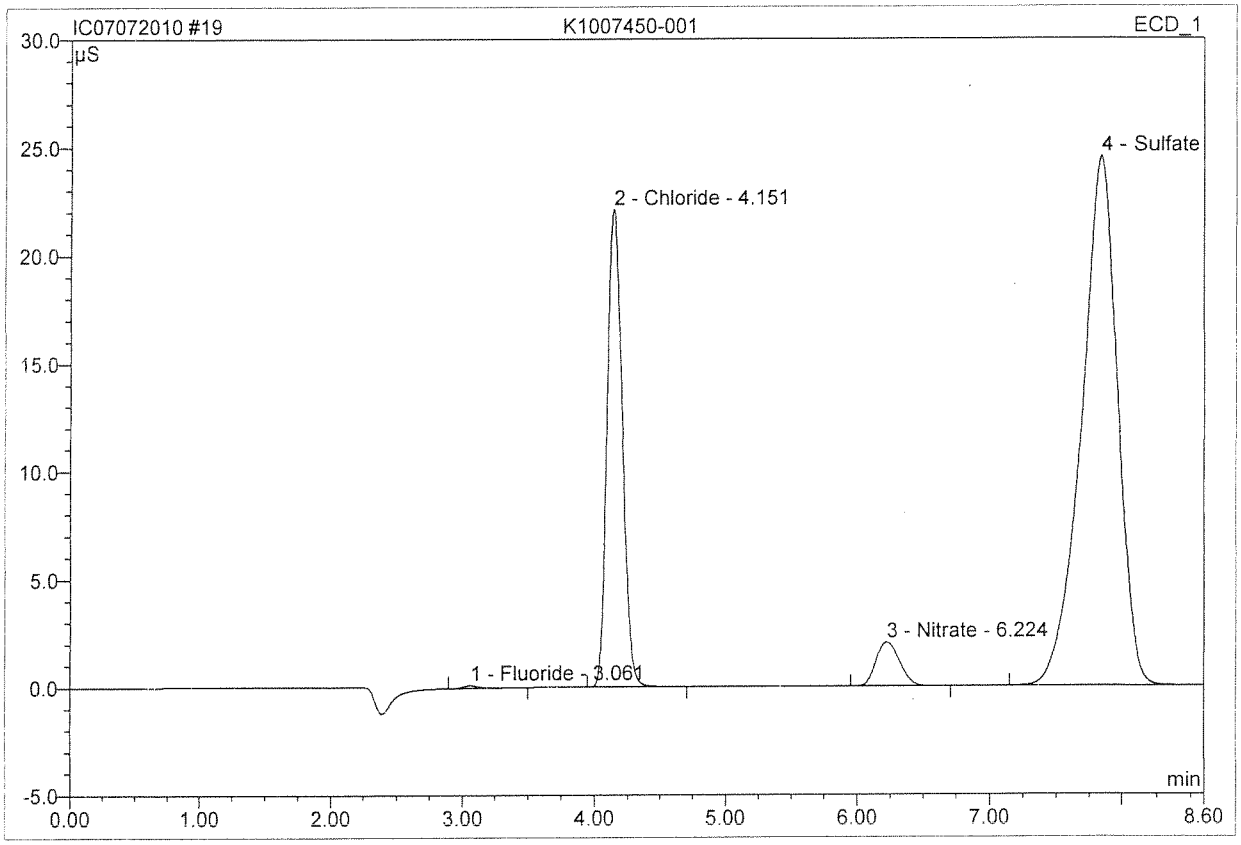


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	0.339	0.039	0.08	0.331	BMB
2	4.16	Chloride	91.470	11.855	24.05	143.338	BM
3	5.61	Bromide	0.179	0.041	0.08	1.193	M
4	6.23	Nitrate	0.339	0.074	0.15	0.354	MB
5	8.01	Sulfate	108.874	37.283	75.64	646.944	BMB
Total:			201.200	49.293	100.00	792.159	

19 K1007450-001

F

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**10.0000**
Recording Time:	**7/20/2010 11:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



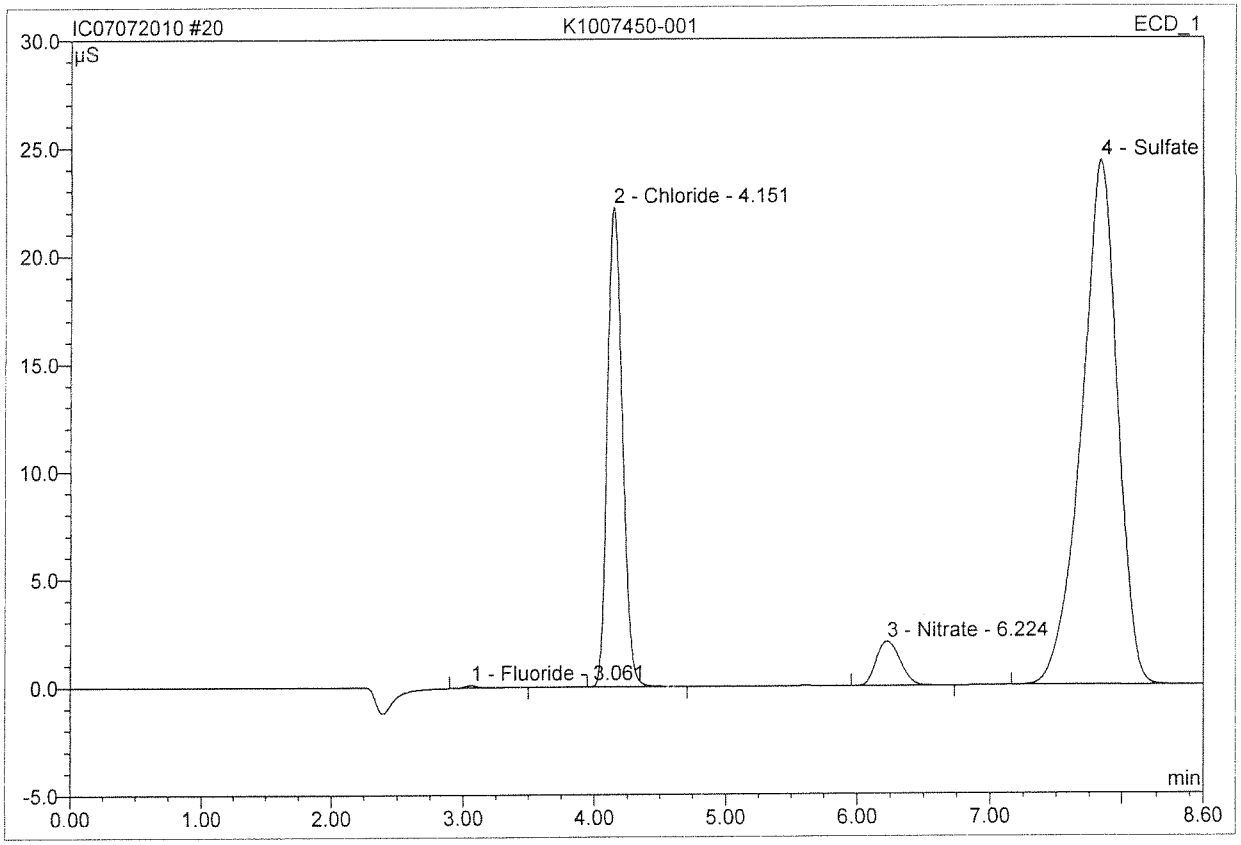
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	0.125	0.016	0.15	0.680	BMB
2	4.15	Chloride	22.113	2.925	26.47	176.847	BMB
3	6.22	Nitrate	2.035	0.425	3.84	10.157	BMB
4	7.85	Sulfate	24.511	7.687	69.55	666.967	BMB
Total:			48.784	11.054	100.00	854.651	

Nitrate
Bromide

20 K1007450-001

F D

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**10.0000**
Recording Time:	**7/20/2010 11:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



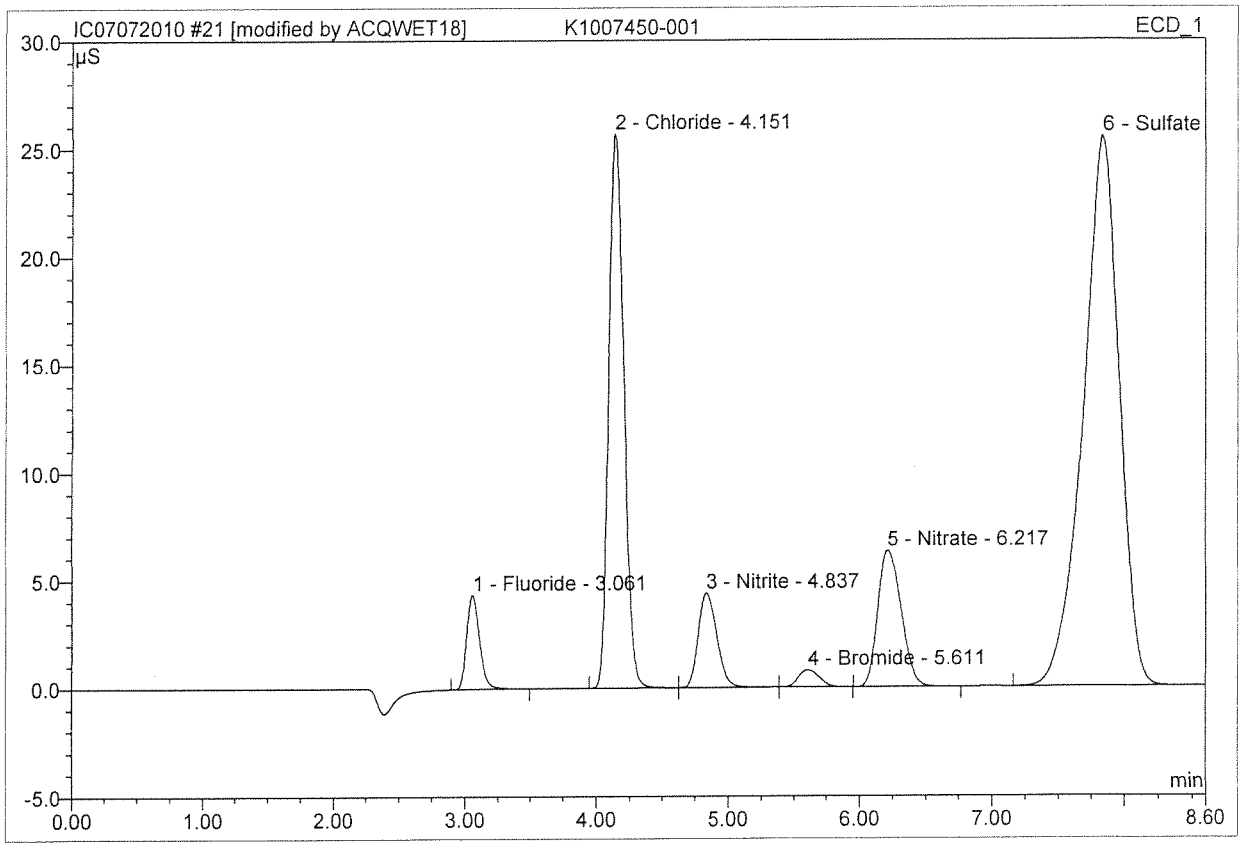
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride ×	0.127	0.017	0.16	0.713	BMB
2	4.15	Chloride	22.204	2.938	26.73	177.624	BMB
3	6.22	Nitrate	2.042	0.427	3.88	10.210	BMB
4	7.85	Sulfate	24.315	7.609	69.23	660.171	BMB
Total:			48.688	10.991	100.00	848.719	

Nitrite
Bromide > < 1.0 2-NM RM -

21 K1007450-001

F MS

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**10.0000**
Recording Time:	**7/20/2010 12:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride Rec-101	4.375	0.500	3.56	20.915	BMB
2	4.15	Chloride	25.696	3.382	24.12	204.447	BM
3	4.84	Nitrite Rec-107	4.390	0.724	5.16	20.716	M *
4	5.61	Bromide Rec-110	0.801	0.150	1.07	21.922	MB*
5	6.22	Nitrate Rec-106	6.340	1.308	9.33	31.291	BMB
6	7.85	Sulfate	25.483	7.955	56.75	690.214	BMB
Total:			67.085	14.019	100.00	989.505	

SPK-36
CAL180/4

After Initials AL ac

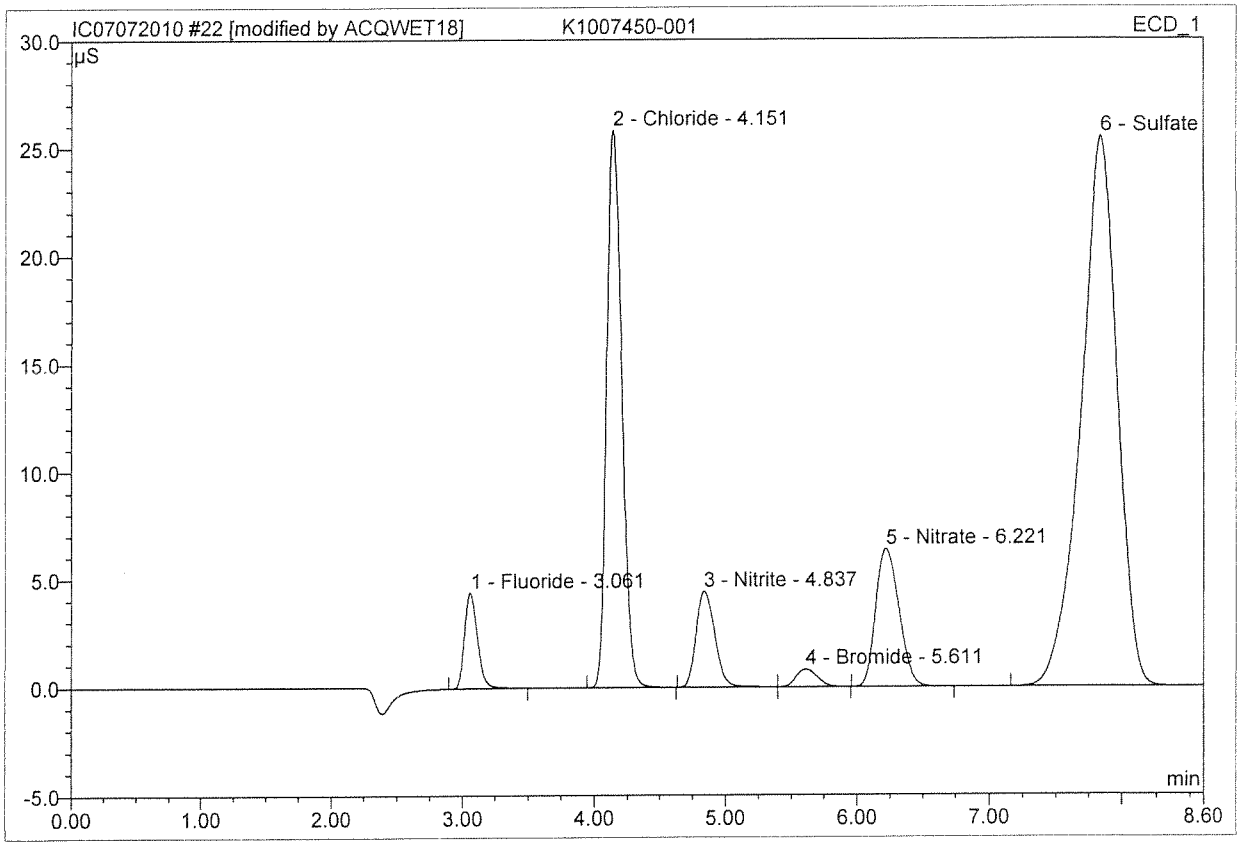
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

22 K1007450-001

F MSD

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**10.0000**
Recording Time:	**7/20/2010 12:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	4.426	0.505	3.59	21.130	BMB
2	4.15	Chloride	25.828	3.400	24.15	205.539	BMB
3	4.84	Nitrite	4.433	0.732	5.20	20.939	BM *
4	5.61	Bromide	0.807	0.151	1.07	22.001	MB*
5	6.22	Nitrate	6.383	1.317	9.36	31.509	BMB
6	7.85	Sulfate	25.506	7.974	56.64	691.797	BMB
Total:			67.383	14.078	100.00	992.914	

After Initials

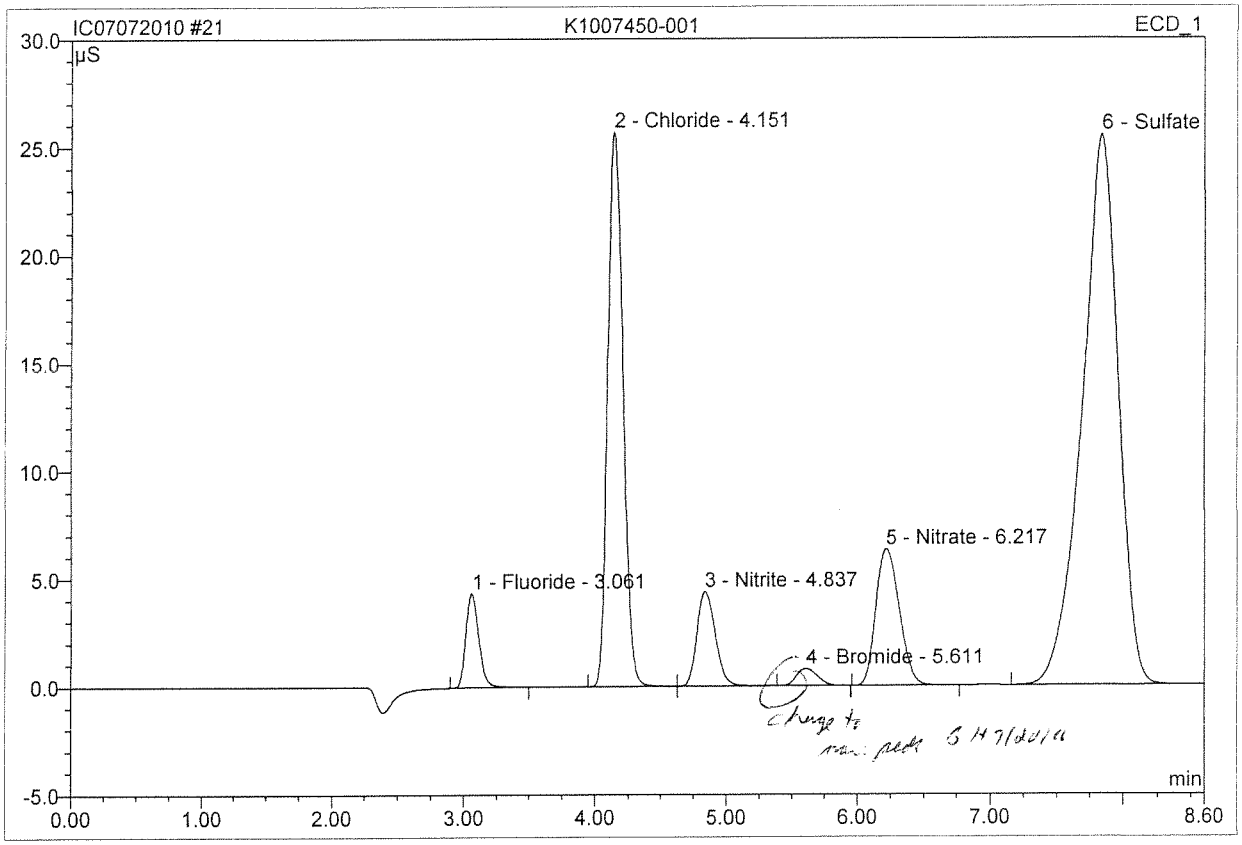
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder incorrect
☐ Other

21 K1007450-001

F MS

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**10.0000**
Recording Time:	**7/20/2010 12:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	4.375	0.500	3.56	20.915	BMB
2	4.15	Chloride	25.696	3.382	24.12	204.447	BM
3	4.84	Nitrite	4.390	0.726	5.18	20.770	MB
4	5.61	Bromide	0.797	0.148	1.06	21.648	Rd
5	6.22	Nitrate	6.340	1.308	9.33	31.291	BMB
6	7.85	Sulfate	25.483	7.955	56.75	690.214	BMB
Total:			67.081	14.019	100.00	989.285	

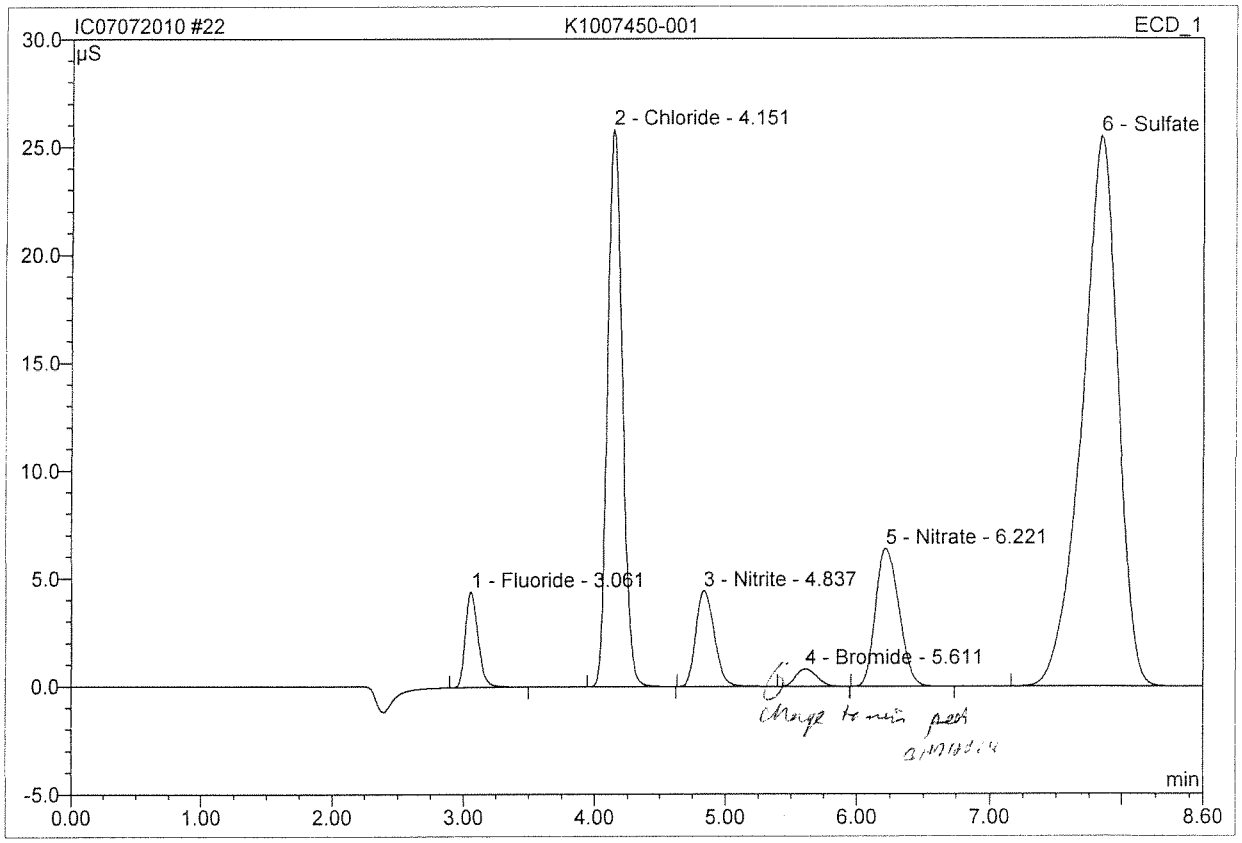
Before

JUL 26 2010

22 K1007450-001

F MSD

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**10.0000**
Recording Time:	**7/20/2010 12:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	4.426	0.505	3.59	21.130	BMB
2	4.15	Chloride	25.828	3.400	24.15	205.539	BMB
3	4.84	Nitrite	4.433	0.734	5.21	20.990	BMB
4	5.61	Bromide	0.803	0.149	1.06	21.737	Rd
5	6.22	Nitrate	6.383	1.317	9.36	31.509	BMB
6	7.85	Sulfate	25.506	7.974	56.64	691.797	BMB
Total:			67.379	14.078	100.00	992.702	

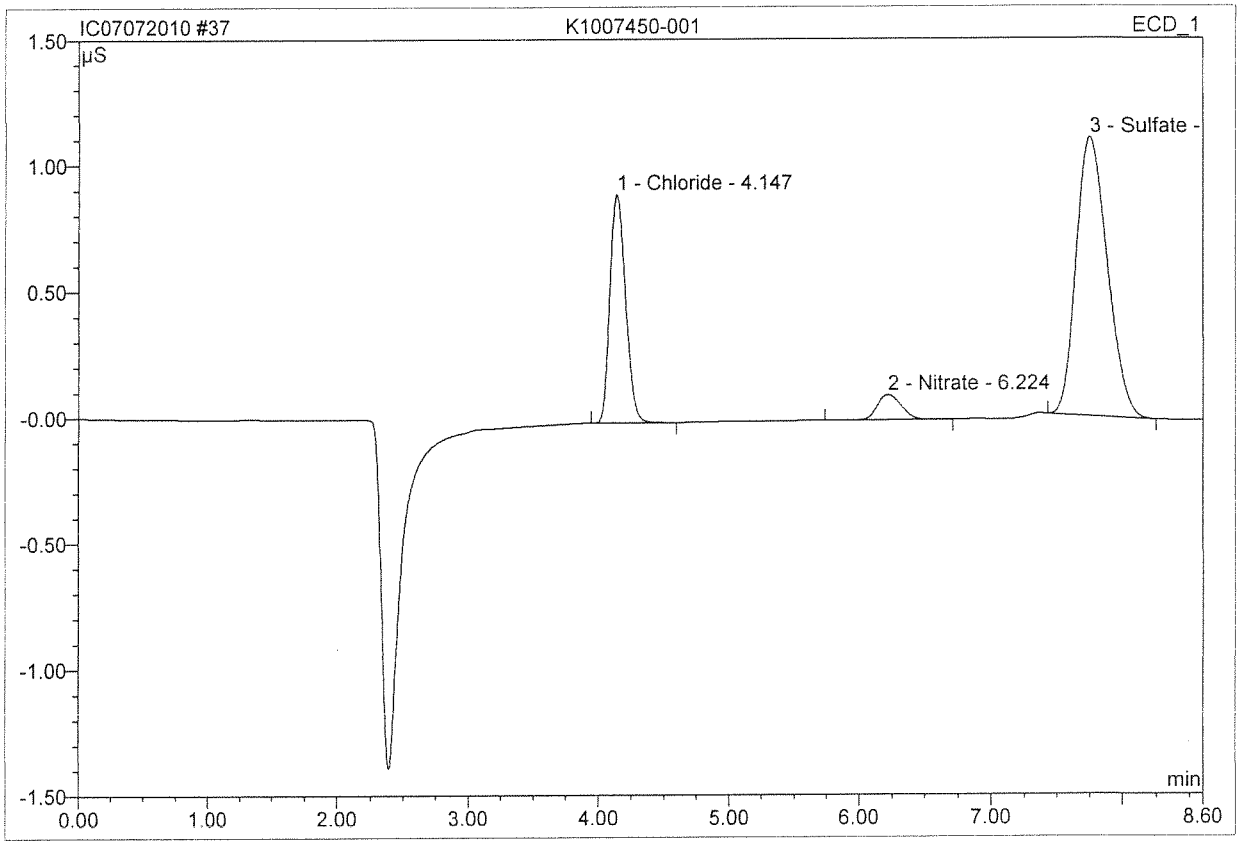
Before

JUL 2 6 2010

37 K1007450-001

F

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/20/2010 14:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



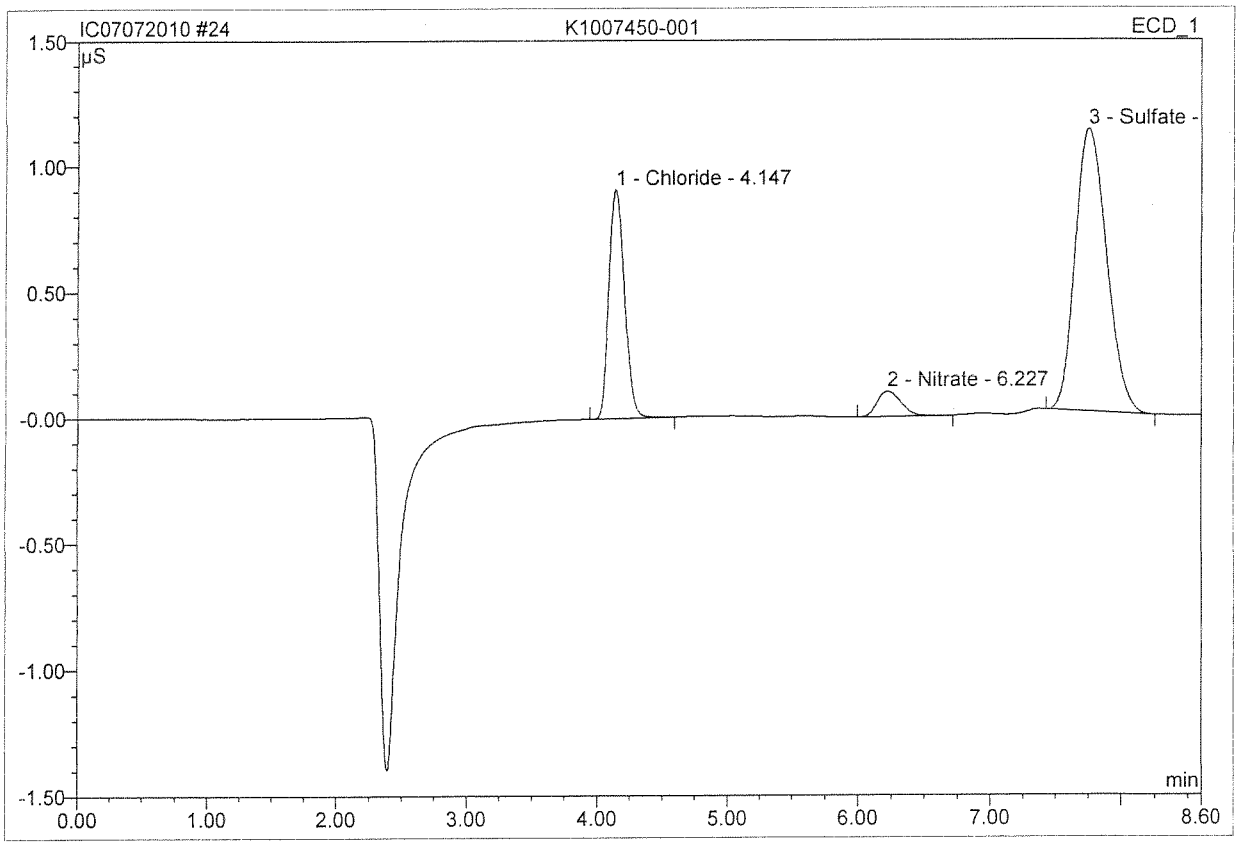
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.15	Chloride R = 153 RM = 1%	0.904	0.125	27.59	151.367	BMB
2	6.22	Nitrate	0.101	0.021	4.72	10.243	BMB
3	7.76	Sulfate R = 538 RM = 2%	1.106	0.307	67.69	533.027	BMB
Total:			2.111	0.454	100.00	694.637	

EE
SPK 100
SM 7/20/10

24 K1007450-001

F D

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/20/2010 12:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

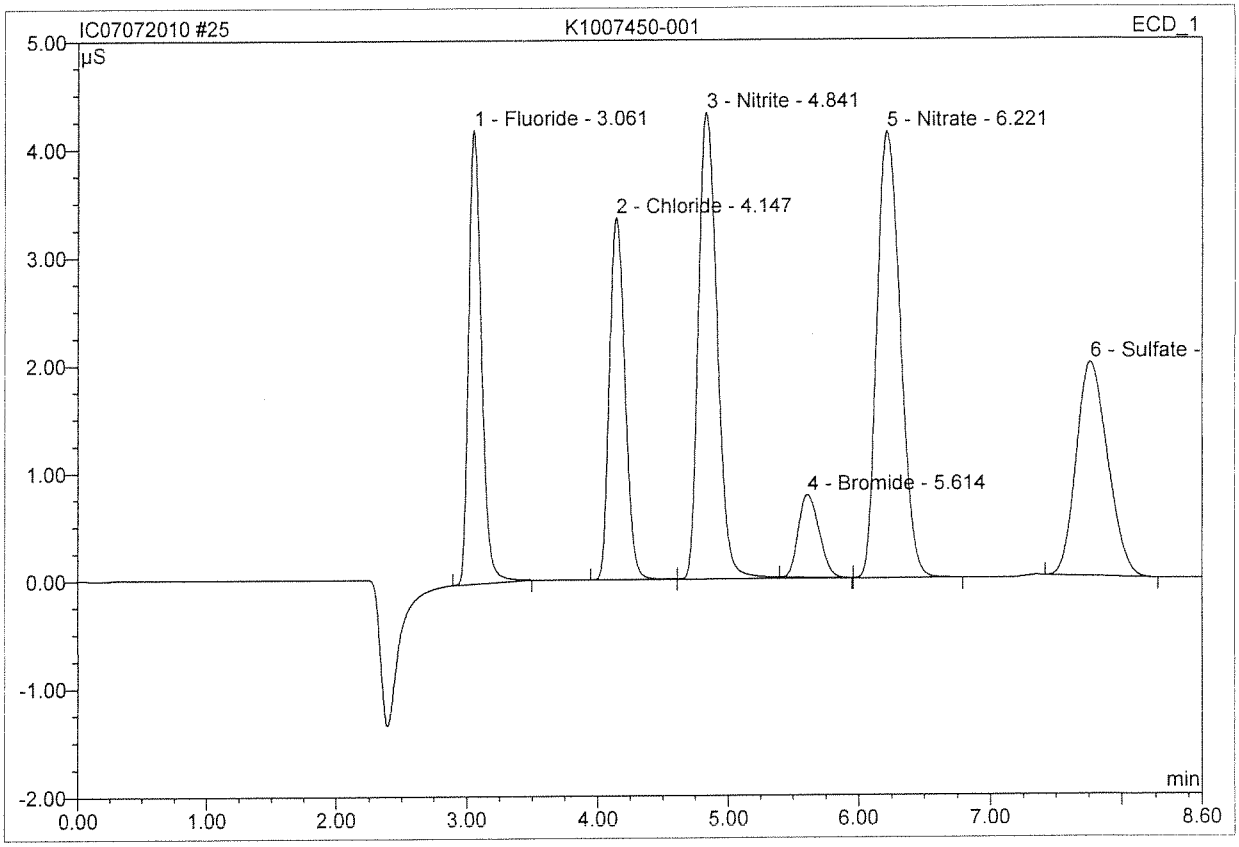


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.15	Chloride	0.908	0.126	27.44	152.824	BMB
2	6.23	Nitrate	0.100	0.021	4.57	10.063	BMB
3	7.76	Sulfate	1.122	0.313	67.99	543.366	BMB
Total:			2.129	0.461	100.00	706.253	

25 K1007450-001

F MS

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/20/2010 12:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



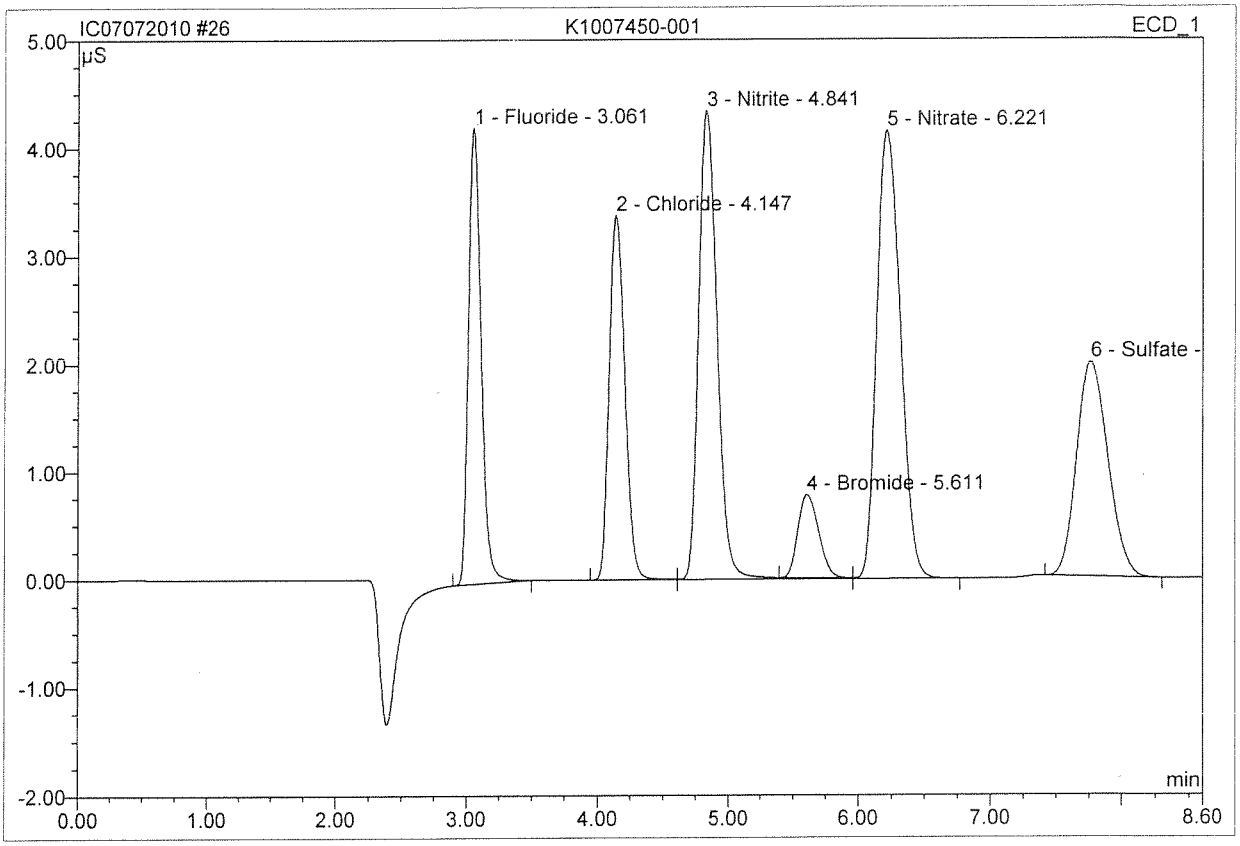
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	4.207	0.479	14.87	400.899	BMB
2	4.15	Chloride Rec: 105	3.360	0.464	14.40	560.751	BM
3	4.84	Nitrite	4.328	0.723	22.44	413.539	M
4	5.61	Bromide	0.768	0.142	4.40	414.485	Rd
5	6.22	Nitrate	4.143	0.858	26.64	410.374	MB
6	7.77	Sulfate Rec: 108	1.988	0.555	17.25	963.870	BMB
Total:			18.794	3.220	100.00	3163.918	

SPK-400

26 K1007450-001

F MSD

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/20/2010 12:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



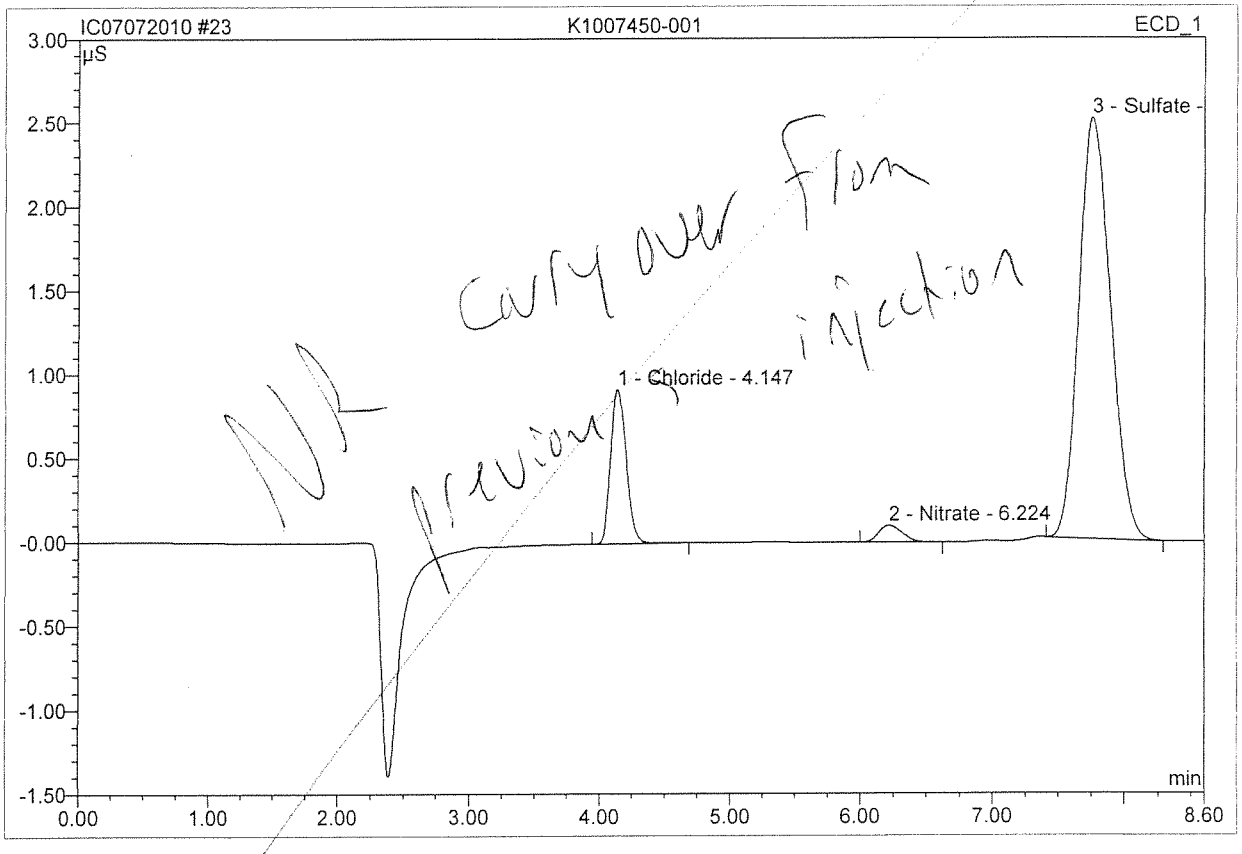
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	4.227	0.481	14.88	402.531	BMB
2	4.15	Chloride Rec=103	3.375	0.465	14.40	562.560	BM
3	4.84	Nitrite	4.346	0.725	22.43	414.935	M
4	5.61	Bromide	0.772	0.143	4.42	417.938	Rd
5	6.22	Nitrate	4.157	0.861	26.64	411.941	MB
6	7.77	Sulfate Rec=109	1.994	0.557	17.24	966.758	BMB
Total:			18.871	3.232	100.00	3176.664	

spk=400

23 K1007450-001

F

Sample Name:	**K1007450-001**	*Injection Volume:*	**25.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/20/2010 12:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.15	Chloride	0.922	0.128	15.04	155.192	BMB
2	6.22	Nitrate	0.101	0.021	2.46	10.033	BMB
3	7.77	Sulfate	2.512	0.704	82.50	1221.567	BMB
Total:			3.534	0.853	100.00	1386.792	

Sequence # AN072010 | Ion Chromatography Data Quality Report Inorganics | Run # 209381

1. Holding times met for all samples analyzed? yes/no/NA
2. Are dilutions within upper limits of the curve? yes/no/NA
3. Are analysis/extraction stickers included on report? yes/no/NA
4. Are detection limits reported correctly? yes/no/NA
5. Are all quality control criteria met? yes/no/NA
   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? yes/no/NA
   b. Are CCV's and CCB's all within acceptance limits? yes/no/NA
   c. Are results for Method Blanks all ND? yes/no/NA
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) yes/no/NA
   e. Are all exceptions explained? yes/no/NA
6. Are all samples labelled correctly? yes/no/NA

CAS Standard Identification Codes and Abbreviated Footnotes for Chromatograms

G1 Sample was analyzed past the end of recommended holding time. See Nonconformity sheet.
G2 Sample was reanalyzed past holding time. Initial analysis was performed within recommended holding time.
G4 Sample was received past the end of recommended holding time.
R1 High RPD is because the duplicate sample results are less than three times the method reporting limit.
i MRL is elevated because of matrix interferences and the sample required diluting.
F Sample filtered primary to analysis.

LCS

Fluoride	True Value = 13.5 ppm	CAS ID # = AN1-33-T	Expires: 12.22.10
Chloride	True Value = 5.0ppm	CAS ID # = ERA#0107-10-02	Expires: 8.10
Nitrite	True Value = 100 ppm	CAS ID # = AN1-29-J	Expires: 7.20.10
Bromide	True Value = 4.0 ppm	CAS ID # = AN1-33-L	Expires: 10.8.10
Nitrate	True Value = 21.0 ppm	CAS ID # = AN1-33-E	Expires: 7.21.10
Sulfate	True Value = 5.0 ppm	CAS ID # = ERA#0107-10-02	Expires: 8.10

CCV — CAS ID # = AN1-80-X — Expires 7.20.10

Fluoride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-M	Expires: 10.28.10
Chloride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-F	Expires: 8.5.10
Nitrite	True Value = 2.0 ppm	10K CAS ID # = AN1-33-N	Expires: 10.28.10
Bromide	True Value = 2.0 ppm	10K CAS ID # = AN1-33-U	Expires: 12.22.10
Nitrate	True Value = 2.0 ppm	10K CAS ID # = AN1-33-I	Expires: 9.9.10
Sulfate	True Value = 5.0 ppm	10K CAS ID # = AN1-33-G	Expires: 8.5.10

Spike — 2.0ppm X dilution factor — CAS ID# = AN1-70-CC — Expires 7.20.10

Fluoride	10K CAS ID # = AN1-33-M	Expires: see CCV
Chloride	10K CAS ID # = AN1-33-F	Expires:
Nitrite	10K CAS ID # = AN1-33-N	Expires:
Bromide	10K CAS ID # = AN1-33-U	Expires:
Nitrate	10K CAS ID # = AN1-33-I	Expires:
Sulfate	10K CAS ID # = AN1-33-G	Expires:

Analyst: nb Date: 7.20.10

First Review: JV Date: 7.22.10

Final Review: QC Date: 7/27/10

t:\wet\ic\icdqs.xls

Sequence: IC07072010
Operator: ACQWET18
Printed: 7/21/2010 9:10:13 AM

Title:
Datasource: ACQWET18_local
Location: K-IC-07\AUDIT
Timebase: K-IC-07
#Samples: 65

Created: 7/20/2010 9:49:14 AM by ACQWET18
Last Update: 7/20/2010 4:35:29 PM by ACQWET18

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	STD2/LVL2	Standard	1	25.0	300	300	Finished	7/12/2010 10:28:48 AM
2	STD3/LVL3	Standard	2	25.0	300	300	Finished	7/12/2010 10:54:39 AM
3	STD4/LVL4	Standard	3	25.0	300	300	Finished	7/12/2010 11:05:06 AM
4	STD5/LVL5	Standard	4	25.0	300	300	Finished	7/12/2010 11:15:33 AM
5	STD6/LVL6	Standard	5	25.0	300	300	Finished	7/12/2010 11:26:00 AM
6	STD7/LVL7	Standard	6	25.0	300	300	Finished	7/12/2010 11:36:26 AM
7	STD1/LVL1	Standard	7	25.0	300	300	Finished	7/12/2010 11:46:53 AM
8	CCV AN1-80-X	Unknown	1	25.0	300	300	Finished	7/20/2010 9:57:20 AM
9	CCB	Unknown	2	25.0	300	300	Finished	7/20/2010 10:07:29 AM
10	NO2 AN11-29-J	Unknown	3	25.0	300	300	Finished	7/20/2010 10:17:55 AM
11	MB	Unknown	4	25.0	300	300	Finished	7/20/2010 10:27:58 AM
12	NO3 AN1-33-E	Unknown	5	25.0	300	300	Finished	7/20/2010 10:38:00 AM
13	CL-SO4 ERA#0107-10-02	Unknown	6	25.0	300	300	Finished	7/20/2010 10:48:03 AM
14	F AN1-33-T	Unknown	7	25.0	300	300	Finished	7/20/2010 10:58:06 AM
15	Br AN1-33-L	Unknown	8	25.0	300	300	Finished	7/20/2010 11:08:08 AM
16	SPKchk	Unknown	9	25.0	300	300	Finished	7/20/2010 11:18:11 AM
17	CCV2	Unknown	10	25.0	300	300	Finished	7/20/2010 11:28:13 AM
18	CCB2	Unknown	11	25.0	300	300	Finished	7/20/2010 11:38:16 AM
19	K1007450-001	Unknown	12	25.0	300	300	Finished	7/20/2010 11:48:19 AM
20	K1007450-001	Unknown	13	25.0	300	300	Finished	7/20/2010 11:58:11 AM
21	K1007450-001	Unknown	14	25.0	300	300	Finished	7/20/2010 12:08:14 PM
22	K1007450-001	Unknown	15	25.0	300	300	Finished	7/20/2010 12:18:17 PM
23	K1007450-001	Unknown	16	25.0	300	300	Finished	7/20/2010 12:28:19 PM
24	K1007450-001	Unknown	17	25.0	300	300	Finished	7/20/2010 12:38:22 PM
25	K1007450-001	Unknown	18	25.0	300	300	Finished	7/20/2010 12:48:24 PM
26	K1007450-001	Unknown	19	25.0	300	300	Finished	7/20/2010 12:58:27 PM
27	K1007450-008	Unknown	20	25.0	300	300	Finished	7/20/2010 1:08:29 PM
28	RB	Unknown	21	25.0	300	300	Finished	7/20/2010 1:18:31 PM
29	CCV3	Unknown	22	25.0	300	300	Finished	7/20/2010 1:28:34 PM
30	CCB3	Unknown	23	25.0	300	300	Finished	7/20/2010 1:38:37 PM
31	K1007450-009	Unknown	24	25.0	300	300	Finished	7/20/2010 1:48:39 PM
32	K1007451-001	Unknown	25	25.0	300	300	Finished	7/20/2010 1:58:42 PM
33	K1007451-002	Unknown	26	25.0	300	300	Finished	7/20/2010 2:08:45 PM
34	K1007451-003	Unknown	27	25.0	300	300	Finished	7/20/2010 2:18:48 PM
35	K1007451-004	Unknown	28	25.0	300	300	Finished	7/20/2010 2:28:50 PM
36	K1007451-005	Unknown	29	25.0	300	300	Finished	7/20/2010 2:38:52 PM
37	K1007450-001	Unknown	30	25.0	300	300	Finished	7/20/2010 2:48:55 PM
38	K1007395-001	Unknown	31	25.0	300	300	Finished	7/20/2010 2:58:58 PM
39	K1007395-001	Unknown	32	25.0	300	300	Finished	7/20/2010 3:09:00 PM
40	RB	Unknown	33	25.0	300	300	Finished	7/20/2010 3:19:03 PM
41	CCV4	Unknown	34	25.0	300	300	Finished	7/20/2010 3:29:05 PM
42	CCB4	Unknown	35	25.0	300	300	Finished	7/20/2010 3:39:07 PM

Title:
Datasource: ACQWET18_local
Location: K-IC-07\AUDIT
Timebase: K-IC-07
#Samples: 65
Created: 7/20/2010 9:49:14 AM by ACQWET18
Last Update: 7/20/2010 4:35:29 PM by ACQWET18

No.	Name	Weight	Dil. Factor	Comment
1	STD2/LVL2	1.0000	1.0000	AN11-54-M
2	STD3/LVL3	1.0000	1.0000	AN11-54-N
3	STD4/LVL4	1.0000	1.0000	AN11-54-O
4	STD5/LVL5	1.0000	1.0000	AN11-54-P
5	STD6/LVL6	1.0000	1.0000	AN11-54-Q
6	STD7/LVL7	1.0000	1.0000	AN11-54-R
7	STD1/LVL1	1.0000	1.0000	AN11-54-S
8	CCV AN1-80-X	1.0000	1.0000	CCV1
9	CCB	1.0000	1.0000	CCB1
10	NO2 AN11-29-J	1.0000	25.0000	NO2 LCS
11	MB	1.0000	1.0000	
12	NO3 AN1-33-E	1.0000	20.0000	NO3 LCS
13	CL-SO4 ERA#0107-10-02	1.0000	1.0000	CL-SO4 LCS
14	F AN1-33-T	1.0000	2.0000	F LCS
15	Br AN1-33-L	1.0000	1.0000	Br LCS
16	SPKchk	1.0000	1.0000	
17	CCV2	1.0000	1.0000	CCV2
18	CCB2	1.0000	1.0000	CCB2
19	K1007450-001	1.0000	10.0000	F
20	K1007450-001	1.0000	10.0000	F D
21	K1007450-001	1.0000	10.0000	F MS
22	K1007450-001	1.0000	10.0000	F MSD
23	K1007450-001	1.0000	200.0000	F
24	K1007450-001	1.0000	200.0000	F D
25	K1007450-001	1.0000	200.0000	F MS
26	K1007450-001	1.0000	200.0000	F MSD
27	K1007450-008	1.0000	1.0000	
28	RB	1.0000	10.0000	
29	CCV3	1.0000	1.0000	CCV3
30	CCB3	1.0000	1.0000	CCB3
31	K1007450-009	1.0000	200.0000	F
32	K1007451-001	1.0000	20.0000	
33	K1007451-002	1.0000	20.0000	F
34	K1007451-003	1.0000	20.0000	
35	K1007451-004	1.0000	20.0000	F
36	K1007451-005	1.0000	20.0000	F
37	K1007450-001	1.0000	200.0000	F
38	K1007395-001	1.0000	100.0000	
39	K1007395-001	1.0000	2.0000	
40	RB	1.0000	1.0000	
41	CCV4	1.0000	1.0000	
42	CCB4	1.0000	1.0000	

Title:
Datasource: ACQWET18_local
Location: K-IC-07\AUDIT
Timebase: K-IC-07
#Samples: 65
Created: 7/20/2010 9:49:14 AM by ACQWET18
Last Update: 7/20/2010 4:35:29 PM by ACQWET18

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
43	K1007426-001	Unknown	36	25.0	300	300	Finished	7/20/2010 3:49:09 PM
44	K1007397-007	Unknown	37	25.0	300	300	Finished	7/20/2010 3:59:12 PM
45	K1007281-026	Unknown	38	25.0	300	300	Finished	7/20/2010 4:09:15 PM
46	K1007336-001	Unknown	39	25.0	300	300	Finished	7/20/2010 4:19:17 PM
47	K1007450-009	Unknown	40	25.0	300	300	Finished	7/20/2010 4:29:20 PM
48	K1007451-001	Unknown	41	25.0	300	300	Finished	7/20/2010 4:39:22 PM
49	K1007451-002	Unknown	42	25.0	300	300	Finished	7/20/2010 4:49:25 PM
50	K1007451-003	Unknown	43	25.0	300	300	Finished	7/20/2010 4:59:27 PM
51	K1007451-004	Unknown	44	25.0	300	300	Finished	7/20/2010 5:09:30 PM
52	RB	Unknown	45	25.0	300	300	Finished	7/20/2010 5:19:32 PM
53	CCV5	Unknown	46	25.0	300	300	Finished	7/20/2010 5:29:35 PM
54	CCB5	Unknown	47	25.0	300	300	Finished	7/20/2010 5:39:37 PM
55	K1007451-001	Unknown	48	25.0	300	300	Finished	7/20/2010 5:49:39 PM
56	K1007451-002	Unknown	49	25.0	300	300	Finished	7/20/2010 5:59:42 PM
57	K1007451-003	Unknown	50	25.0	300	300	Finished	7/20/2010 6:09:45 PM
58	K1007451-004	Unknown	1	25.0	300	300	Finished	7/20/2010 6:19:48 PM
59	K1007451-005	Unknown	2	25.0	300	300	Finished	7/20/2010 6:29:50 PM
60	K1007451-004	Unknown	3	25.0	300	300	Finished	7/20/2010 6:39:53 PM
61	K1007451-005	Unknown	4	25.0	300	300	Finished	7/20/2010 6:49:55 PM
62	RB	Unknown	5	25.0	300	300	Finished	7/20/2010 6:59:58 PM
63	CCV6	Unknown	6	25.0	300	300	Finished	7/20/2010 7:10:00 PM
64	CCB6	Unknown	7	25.0	300	300	Finished	7/20/2010 7:20:03 PM
65	STOP	Unknown	8	25.0	Shutdown	300	Interrupted	7/20/2010 7:30:06 PM

Title:
Datasource: ACQWET18_local
Location: K-IC-07\AUDIT
Timebase: K-IC-07
#Samples: 65
Created: 7/20/2010 9:49:14 AM by ACQWET18
Last Update: 7/20/2010 4:35:29 PM by ACQWET18

No.	Name	Weight	Dil. Factor	Comment
43	K1007426-001	1.0000	2.0000	
44	K1007397-007	1.0000	5.0000	
45	K1007281-026	1.0000	5.0000	
46	K1007336-001	1.0000	2.0000	
47	K1007450-009	1.0000	10.0000	F
48	K1007451-001	1.0000	10.0000	
49	K1007451-002	1.0000	5.0000	F
50	K1007451-003	1.0000	5.0000	
51	K1007451-004	1.0000	2.0000	F
52	RB	1.0000	1.0000	
53	CCV5	1.0000	1.0000	CCV5
54	CCB5	1.0000	1.0000	CCB5
55	K1007451-001	1.0000	500.0000	
56	K1007451-002	1.0000	500.0000	F
57	K1007451-003	1.0000	500.0000	
58	K1007451-004	1.0000	50.0000	F
59	K1007451-005	1.0000	500.0000	F
60	K1007451-004	1.0000	5.0000	F
61	K1007451-005	1.0000	2.0000	F
62	RB	1.0000	1.0000	
63	CCV6	1.0000	1.0000	CCV6
64	CCB6	1.0000	1.0000	CCB6
65	STOP	1.0000	1.0000	CCB6

Service Request	Tier	QC	Hold Time	Due Date	Anion	Initial	Final	QC DILUTION	Done?
7450-1F		X			F	0.55→5.5			✓
					CL	1/100→2.75/5.5			✓
					NO2	0.55→5.5			✓
					Br	↓			✓
					NO3	↓			✓
					SO4	1/100→2.75/5.5			✓
-8					F	5.5/5.5			✓
					CL	↓			✓
					NO2	↓			✓
					Br	↓			✓
					NO3	↓			✓
					SO4	↓			✓
-9F					F	1/100→2.75/5.5			✓
					CL	↓			✓
					NO2	↓			✓
					Br	↓			✓
					NO3	↓			✓
					SO4	↓			✓
7451-1					F				
					CL				
					NO2	0.275/5.5	0.550/5		✓
					Br	↓	0.550/5		✓
					NO3	↓			✓
					SO4	↓	1/100→~~1/5~~1.1/5.5		✓
-2F					F				
					CL				
					NO2				✓
					Br				
					NO3				✓
					SO4		1/100→1.1/~~5~~5.5		✓
-2					F				
					CL				
					NO2		1.1/5.5		✓
					Br				
					NO3		1.1/5.5		✓
					SO4		1/100		✓
-4F					F				
					CL				
					NO2		2.75/5.5		✓
					Br				
					NO3		1.1/5.5		✓
					SO4		0.11/5.5		✓
-5F					F				
					CL				
					NO2		2.75/5.5		✓
					Br				
					NO3		~~1/5~~ 2.75/5.5		✓
					SO4	↓	1/100→1.1/5.5		✓
7345-1	IA			8/10	F		2.5/~~5~~5.5		✓
					CL		~~1/10~~		~~✓~~
					NO2				
					Br				
					NO3				
					SO4		1/100		✓
7436-1	I			8/5	F		2.75→5.5		✓
					CL		2.75/5.5		✓
					NO2				
					Br				
					NO3				
					SO4		2.75/5.5		✓

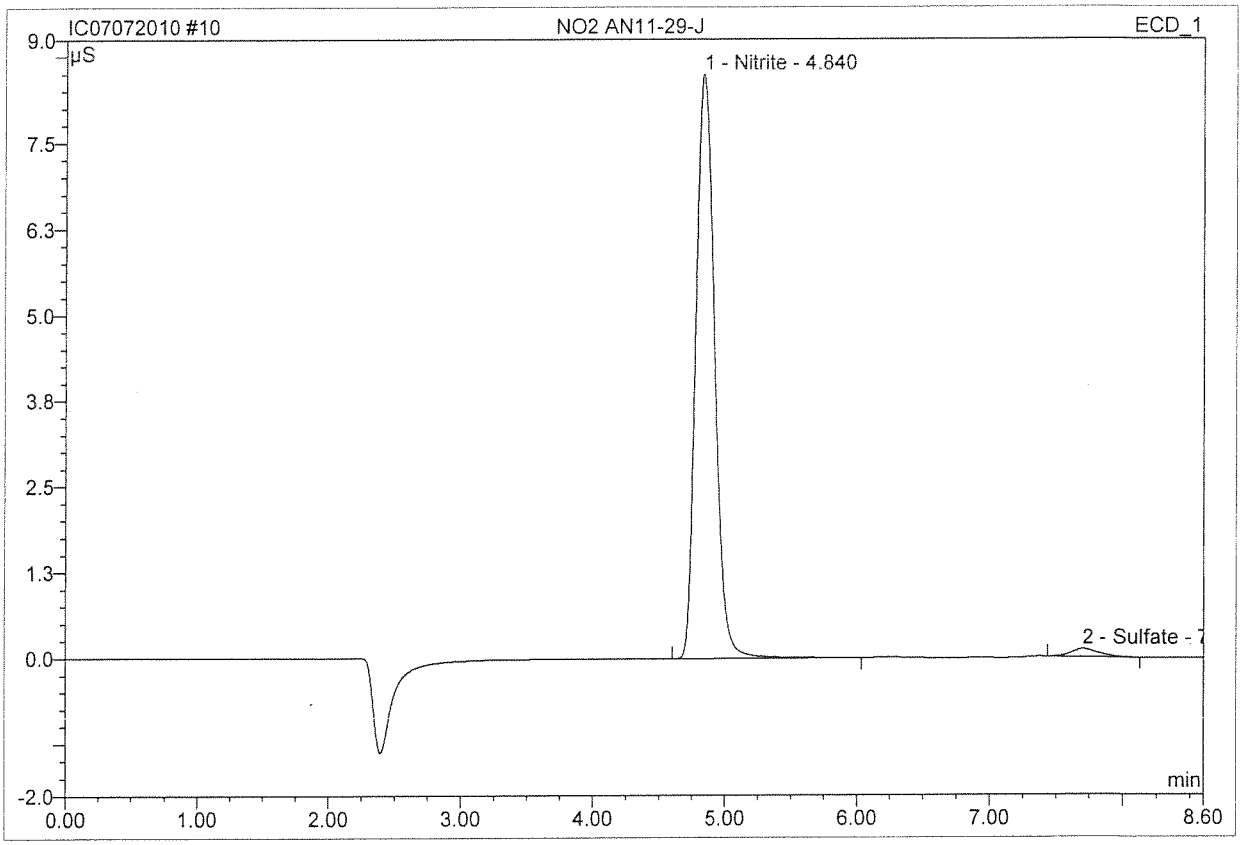
QC 7.21.10

Service Request	Tier	QC	Hold Time	Due Date	Anion	Initial	Final	QC DILUTION	Done?
9341-7	II			7/28	F				
					CL				
					NO2				
					Br				
					NO3				
					SO4		1.10/5~~.5~~.5		✓
9281-26	II			8/1	F				
					CL		1.10/5~~.5~~.5		✓
					NO2				
					Br				
					NO3				
					SO4		1.10/5~~.5~~.5		✓
9336-1	I			8/2	F				
					CL		2.75/5~~.5~~.5		✓
					NO2				
					Br				
					NO3				
					SO4		2.75/5~~.5~~.5		✓
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				

10 NO2 AN11-29-J

NO2 LCS

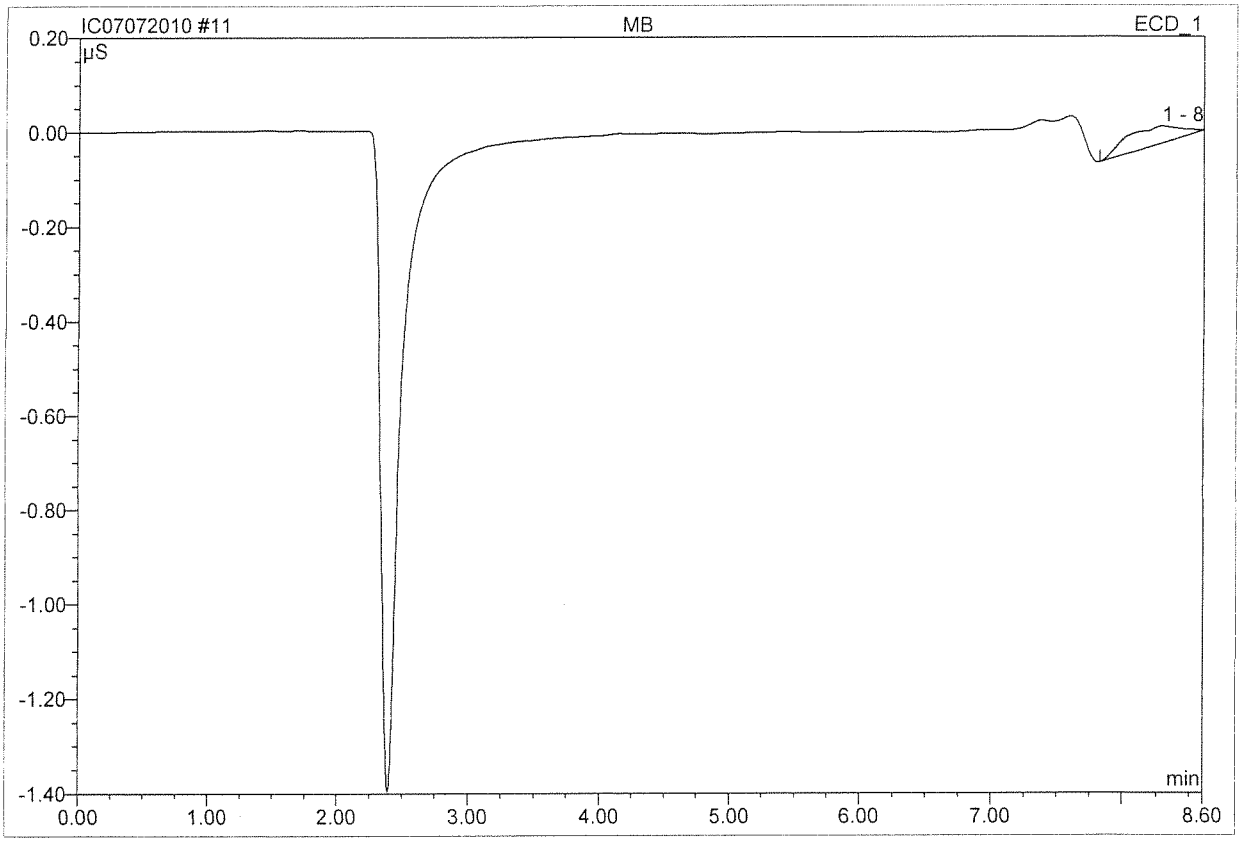
Sample Name:	**NO2 AN11-29-J**	*Injection Volume:*	**25.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/20/2010 10:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.84	Nitrite	8.508	1.413	98.09	101.120	BMB
2	7.70	Sulfate	0.119	0.028	1.91	5.981	BMB
Total:			8.627	1.441	100.00	107.101	

11 MB

Sample Name:	**MB**	*Injection Volume:*	**25.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 10:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



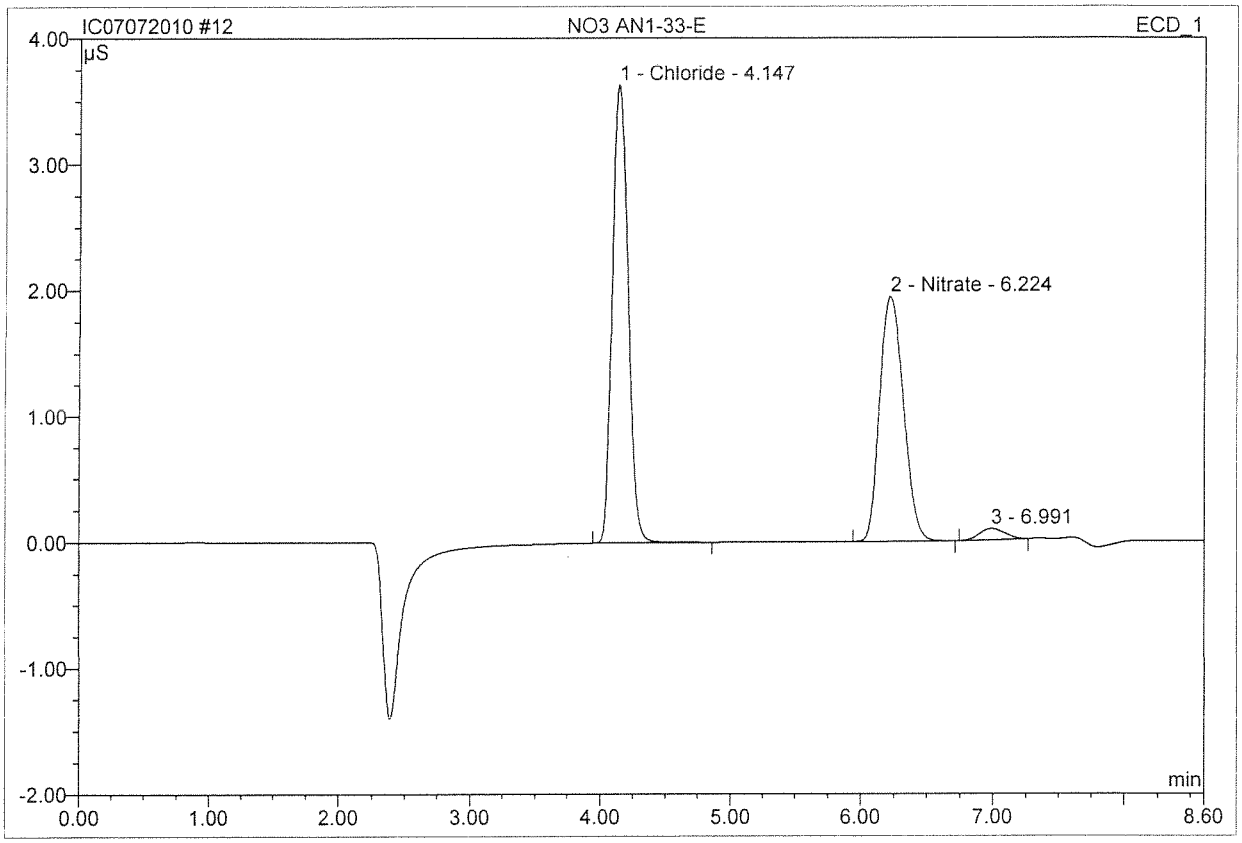
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	8.28	n.a.	0.036	0.018	100.00	n.a.	BMB
Total:			0.036	0.018	100.00	0.000	

7/20/2010

12 NO3 AN1-33-E

NO3 LCS

Sample Name:	**NO3 AN1-33-E**	*Injection Volume:*	**25.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/20/2010 10:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

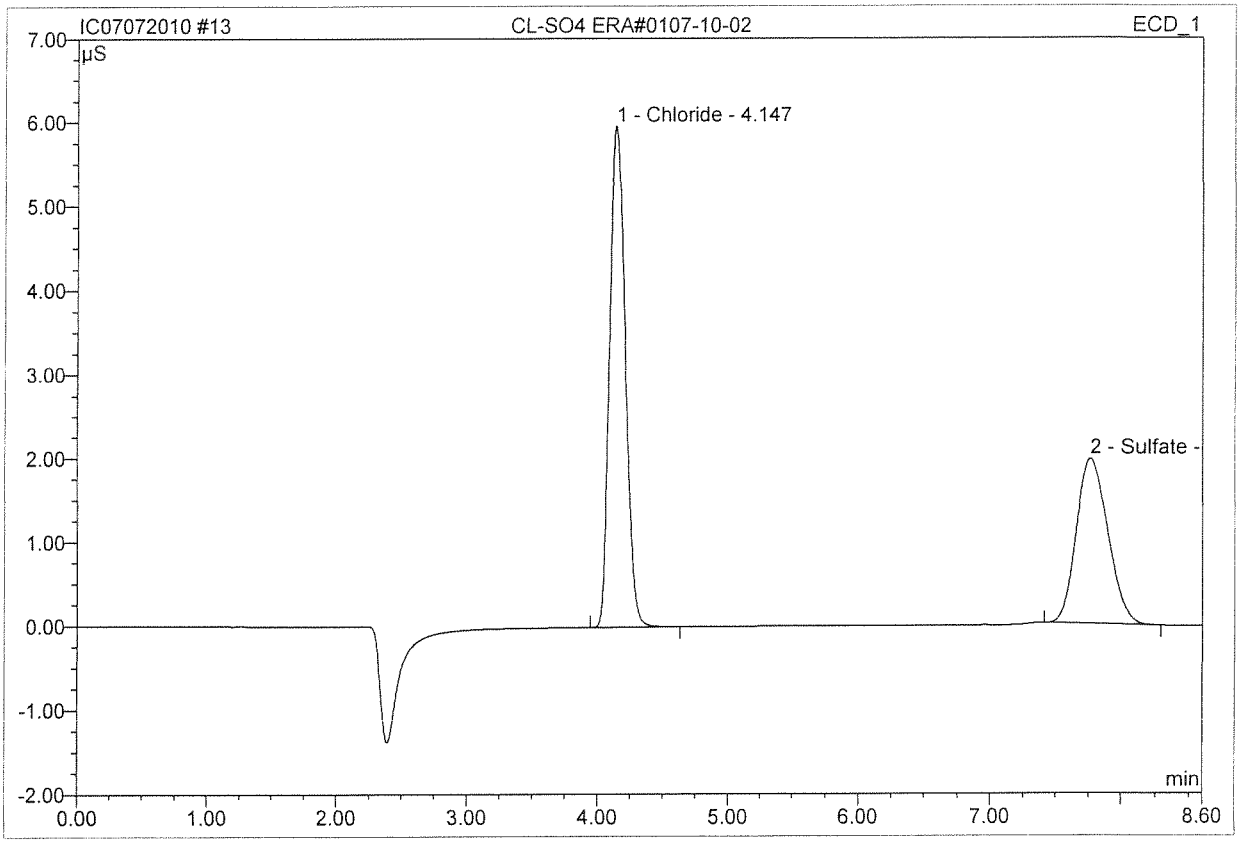


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.15	Chloride	3.639	0.504	54.13	60.945	BMB
2	6.22	Nitrate	1.948	0.407	43.75	19.492	BMB
3	6.99	n.a.	0.088	0.020	2.13	n.a.	BMB
Total:			5.675	0.931	100.00	80.437	

13 CL-SO4 ERA#0107-10-02

CL-SO4 LCS

Sample Name:	**CL-SO4 ERA#0107-10-02**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 10:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

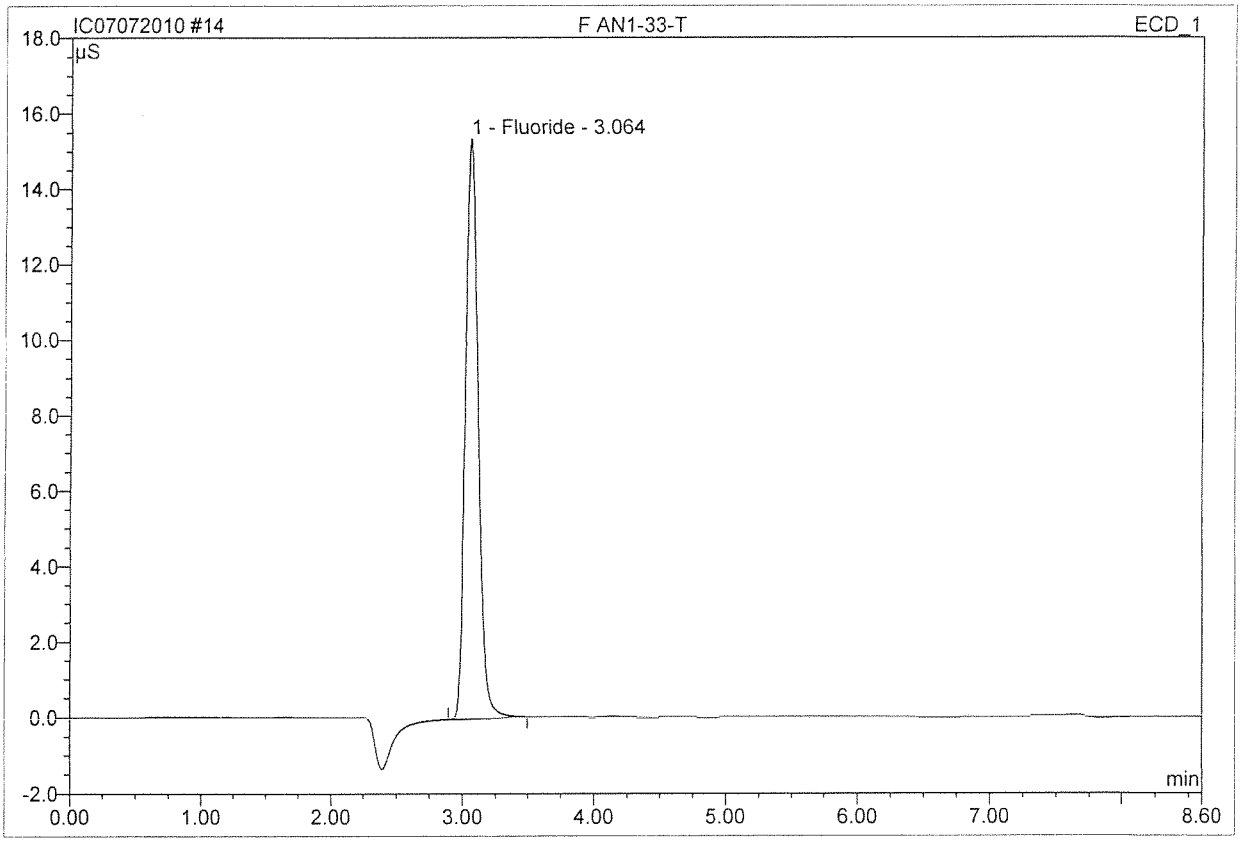


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.15	Chloride	5.973	0.817	59.64	4.941	BMB
2	7.77	Sulfate	1.969	0.553	40.36	4.799	BMB
Total:			7.942	1.370	100.00	9.740	

14 F AN1-33-T

F LCS

Sample Name:	**F AN1-33-T**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/20/2010 10:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

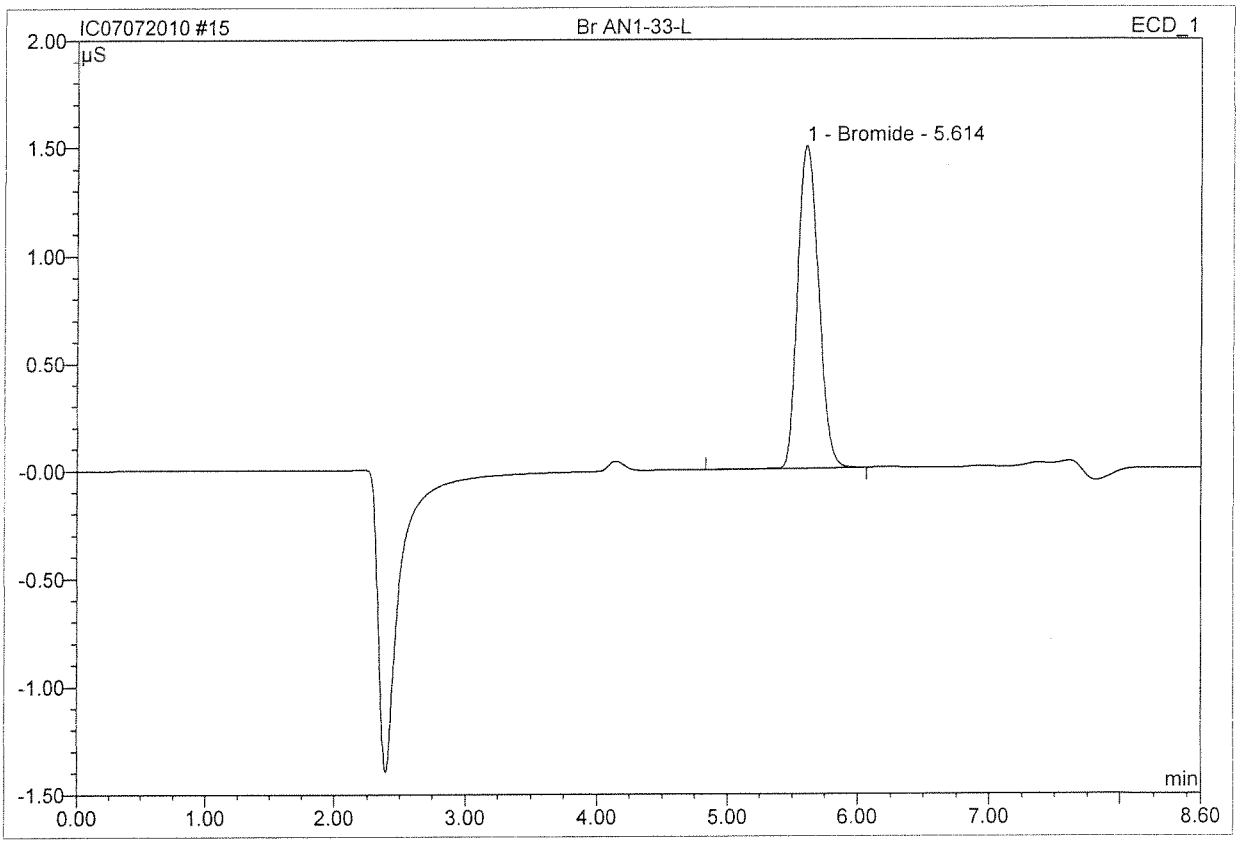


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	15.376	1.712	100.00	14.335	BMB
Total:			15.376	1.712	100.00	14.335	

15 Br AN1-33-L

Br LCS

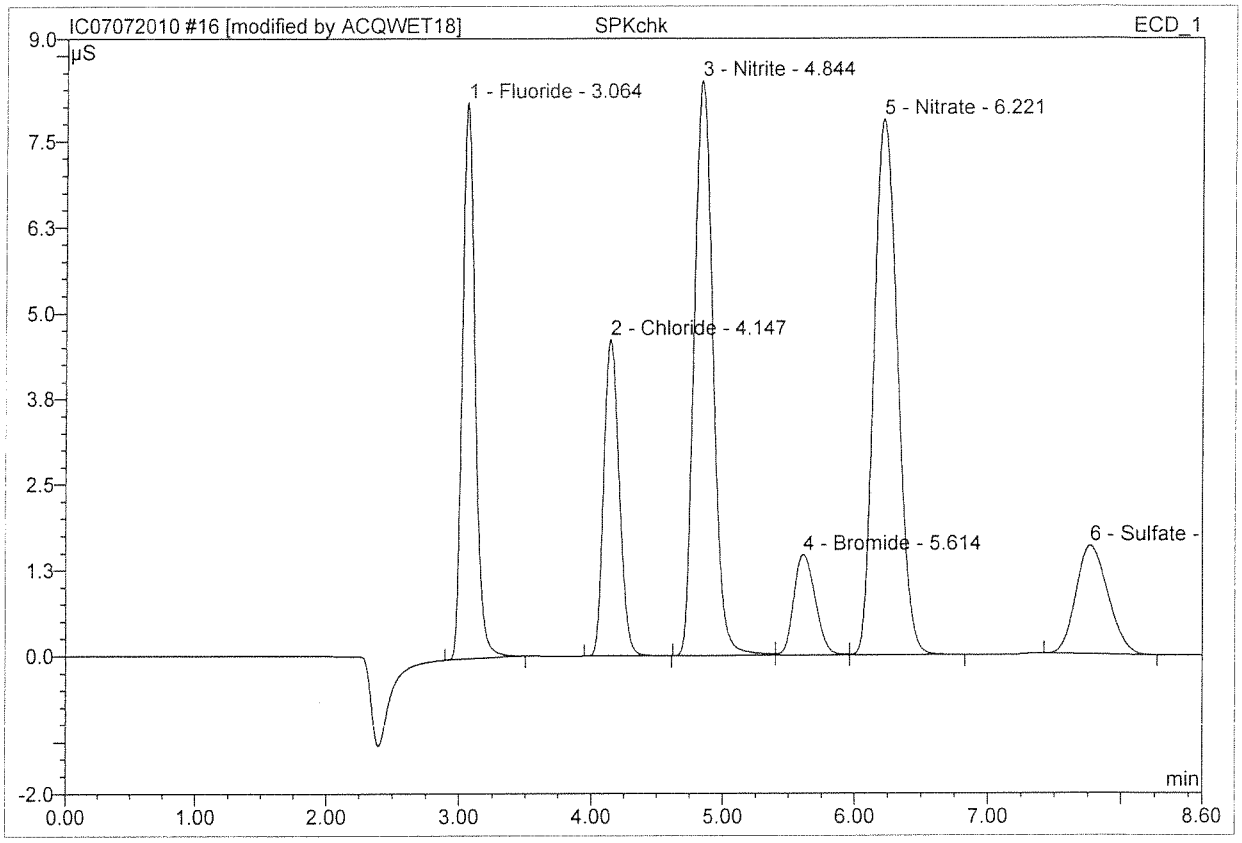
Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**25.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 11:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	5.61	Bromide	1.498	0.280	100.00	4.088	BMB
Total:			1.498	0.280	100.00	4.088	

16 SPKchk

Sample Name:	**SPKchk**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 11:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	8.108	0.913	17.36	3.822	BMB
2	4.15	Chloride	4.616	0.634	12.05	3.832	BMB
3	4.84	Nitrite	8.385	1.382	26.27	3.954	BM *
4	5.61	Bromide	1.467	0.277	5.27	4.048	M *
5	6.22	Nitrate	7.812	1.609	30.60	3.850	MB
6	7.77	Sulfate	1.579	0.444	8.44	3.851	BMB
Total:			31.968	5.259	100.00	23.356	

LVL-4.0

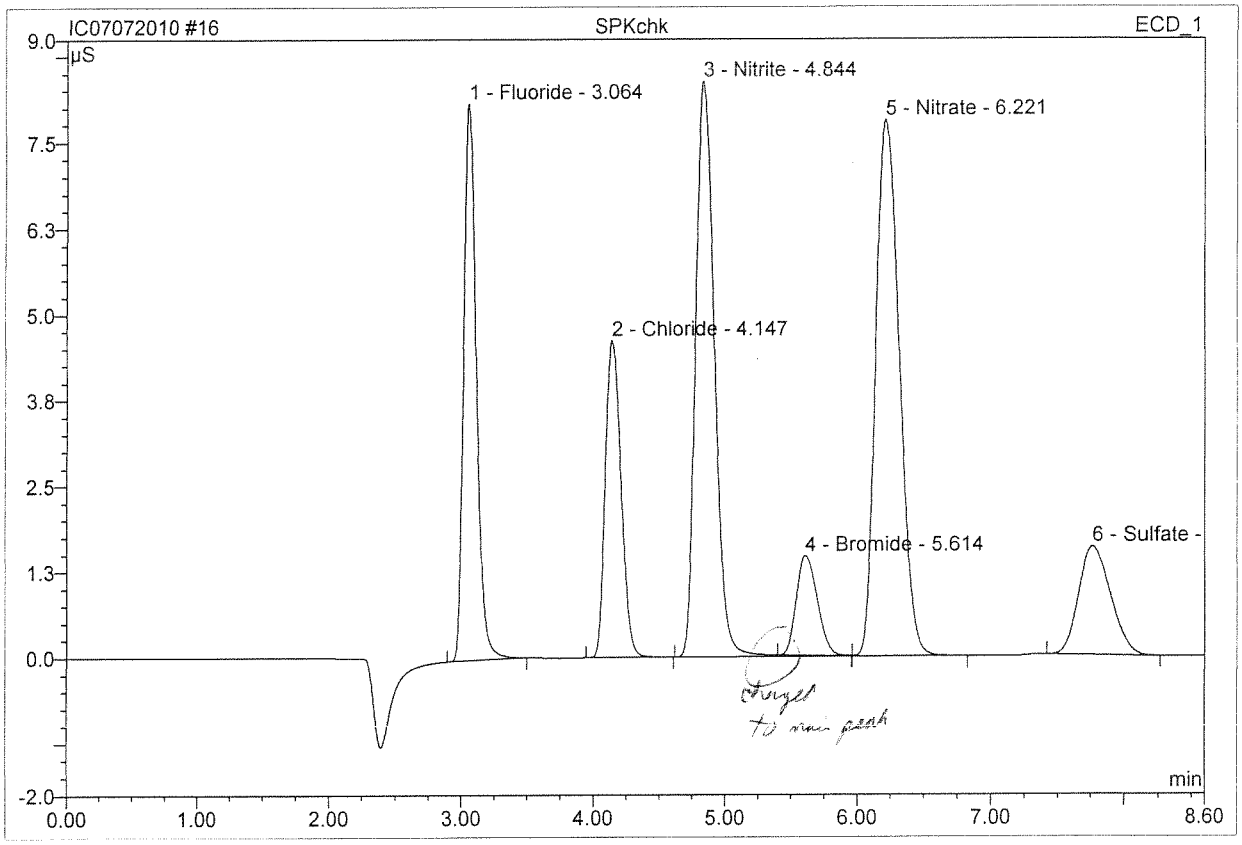
After initials

JUL 2 6 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

16 SPKchk

Sample Name:	**SPKchk**	*Injection Volume:*	**25.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 11:18**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	8.108	0.913	17.36	3.822	BMB
2	4.15	Chloride	4.616	0.634	12.05	3.832	BMB
3	4.84	Nitrite	8.385	1.390	26.44	3.978	BM
4	5.61	Bromide	1.450	0.268	5.10	3.922	Rd
5	6.22	Nitrate	7.812	1.609	30.60	3.850	MB
6	7.77	Sulfate	1.579	0.444	8.44	3.851	BMB
Total:			31.951	5.259	100.00	23.255	

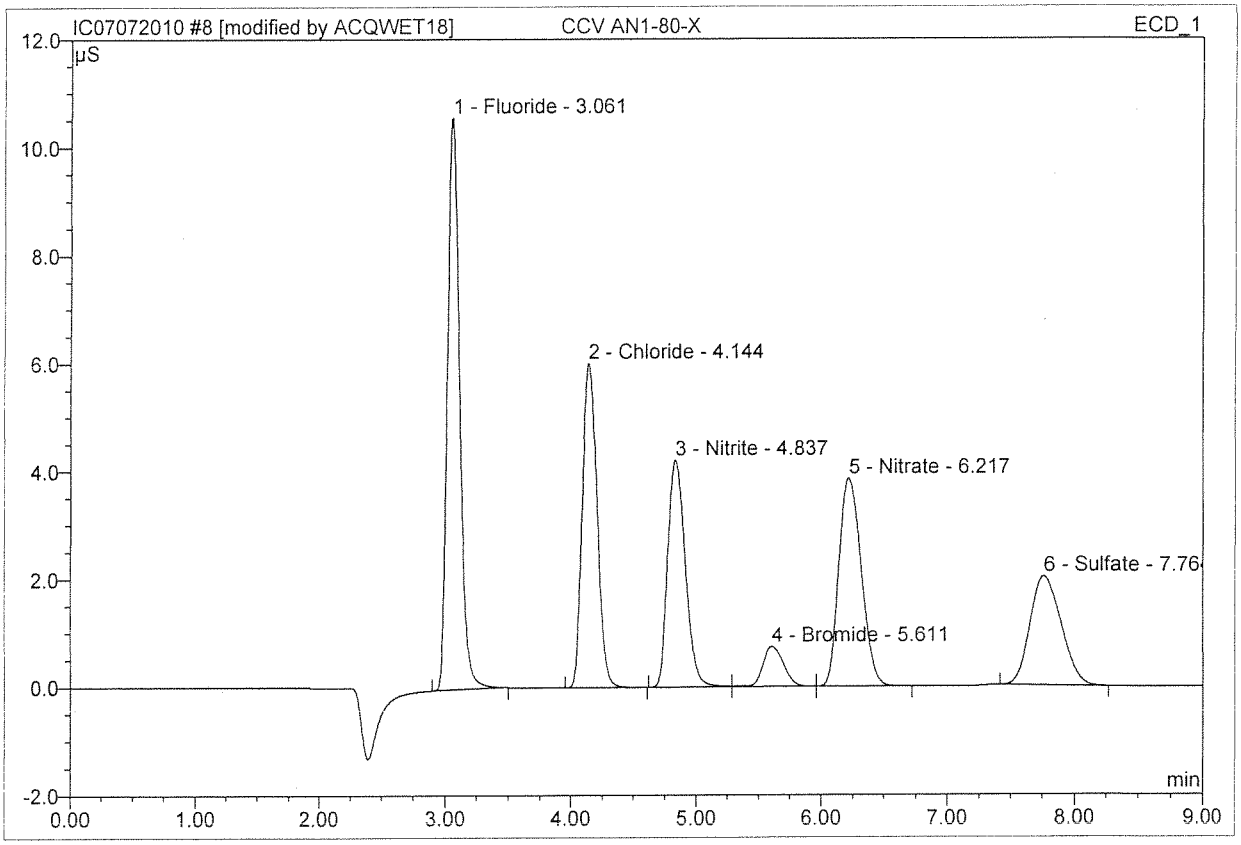
Before

JUL 2 6 2010

8 CCV AN1-80-X

CCV1

Sample Name:	**CCV AN1-80-X**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 9:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.605	1.193	28.13	4.993	BMB
2	4.14	Chloride	6.019	0.827	19.50	4.997	BMB
3	4.84	Nitrite	4.211	0.700	16.51	2.003	BM *
4	5.61	Bromide	0.742	0.143	3.37	2.087	MB*
5	6.22	Nitrate	3.862	0.806	19.01	1.928	BMB
6	7.76	Sulfate	2.026	0.572	13.49	4.961	BMB
Total:			27.465	4.240	100.00	20.968	

After Initials

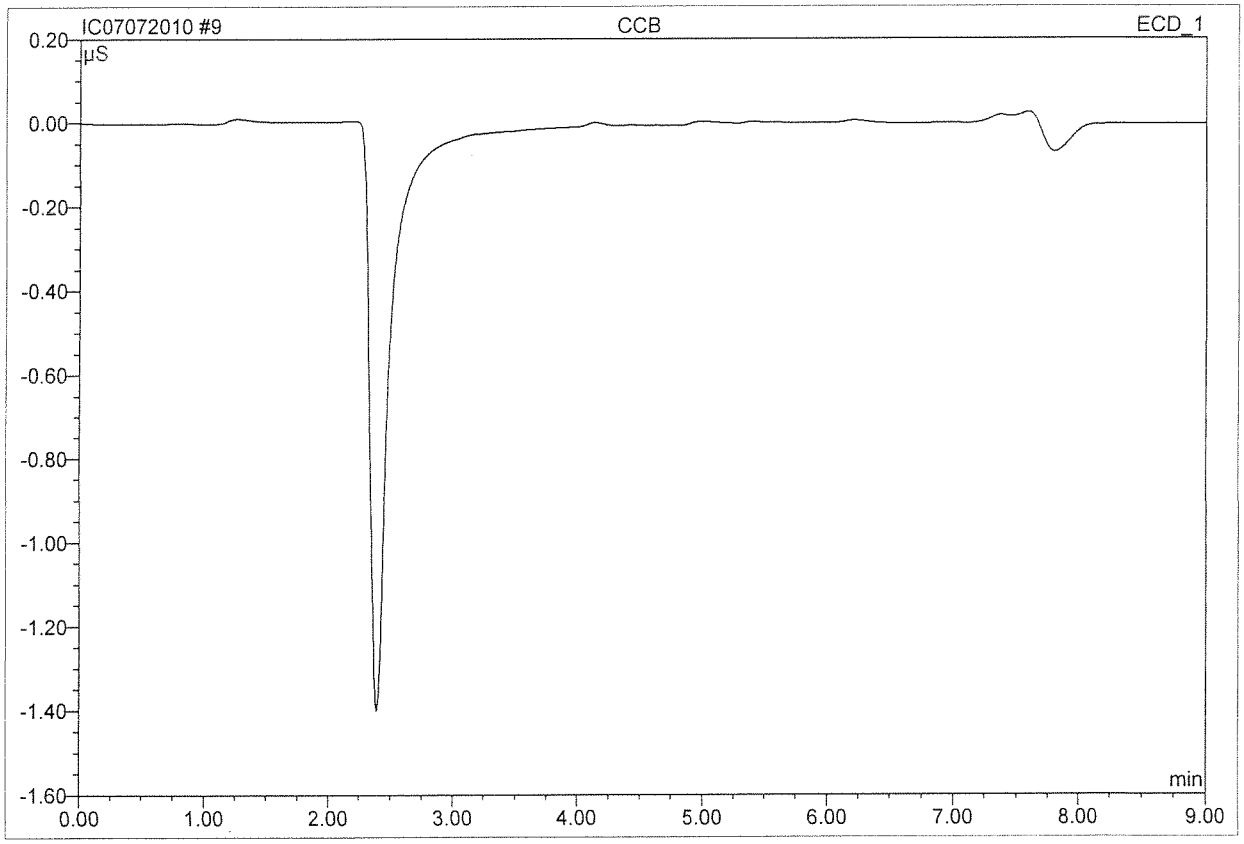
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

9 CCB

CCB1

Sample Name:	**CCB**	*Injection Volume:*	**25.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 10:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**

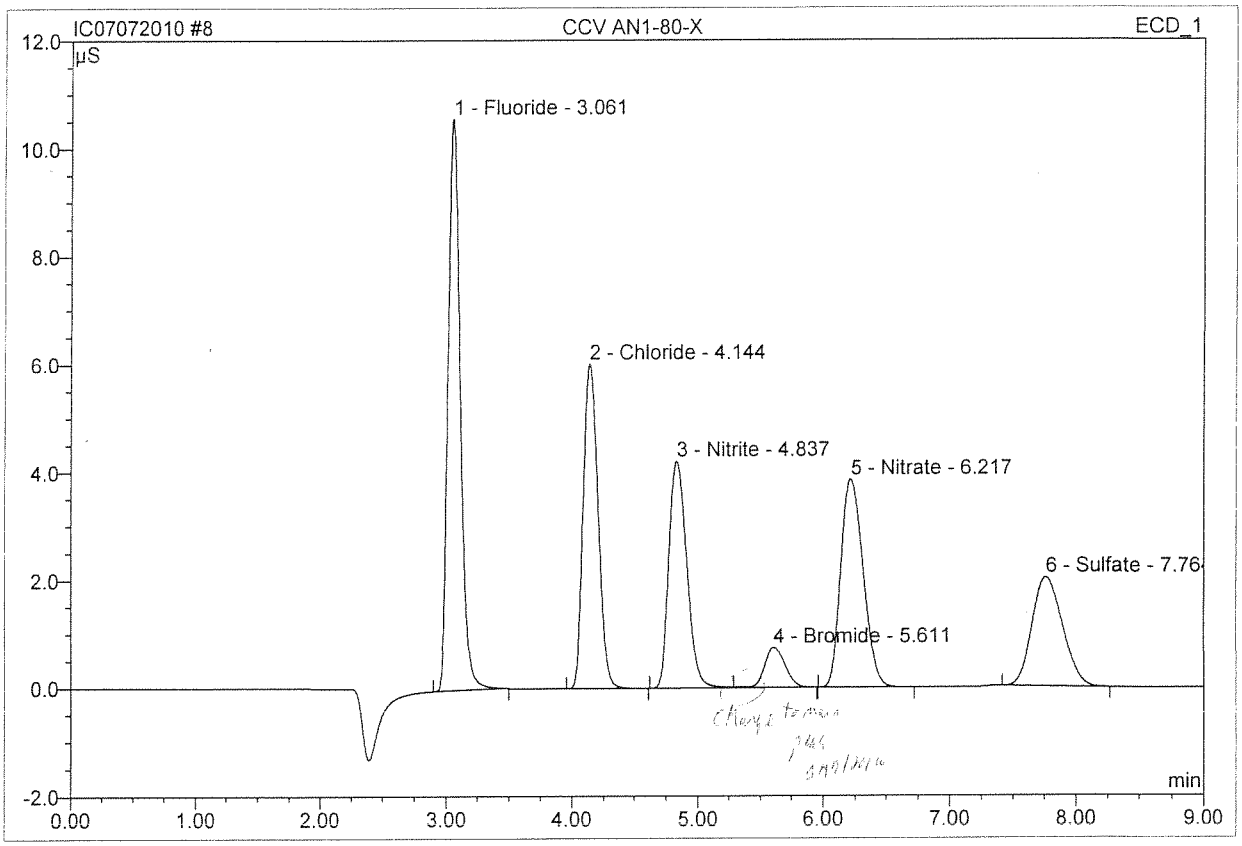


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

8 CCV AN1-80-X

CCV1

Sample Name:	**CCV AN1-80-X**	*Injection Volume:*	**25.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 9:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**9.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.605	1.193	28.13	4.993	BMB
2	4.14	Chloride	6.019	0.827	19.50	4.997	BMB
3	4.84	Nitrite	4.211	0.704	16.61	2.016	BMB
4	5.61	Bromide	0.735	0.138	3.26	2.021	Rd
5	6.22	Nitrate	3.862	0.806	19.01	1.928	BMB
6	7.76	Sulfate	2.026	0.572	13.49	4.961	BMB
Total:			27.458	4.240	100.00	20.915	

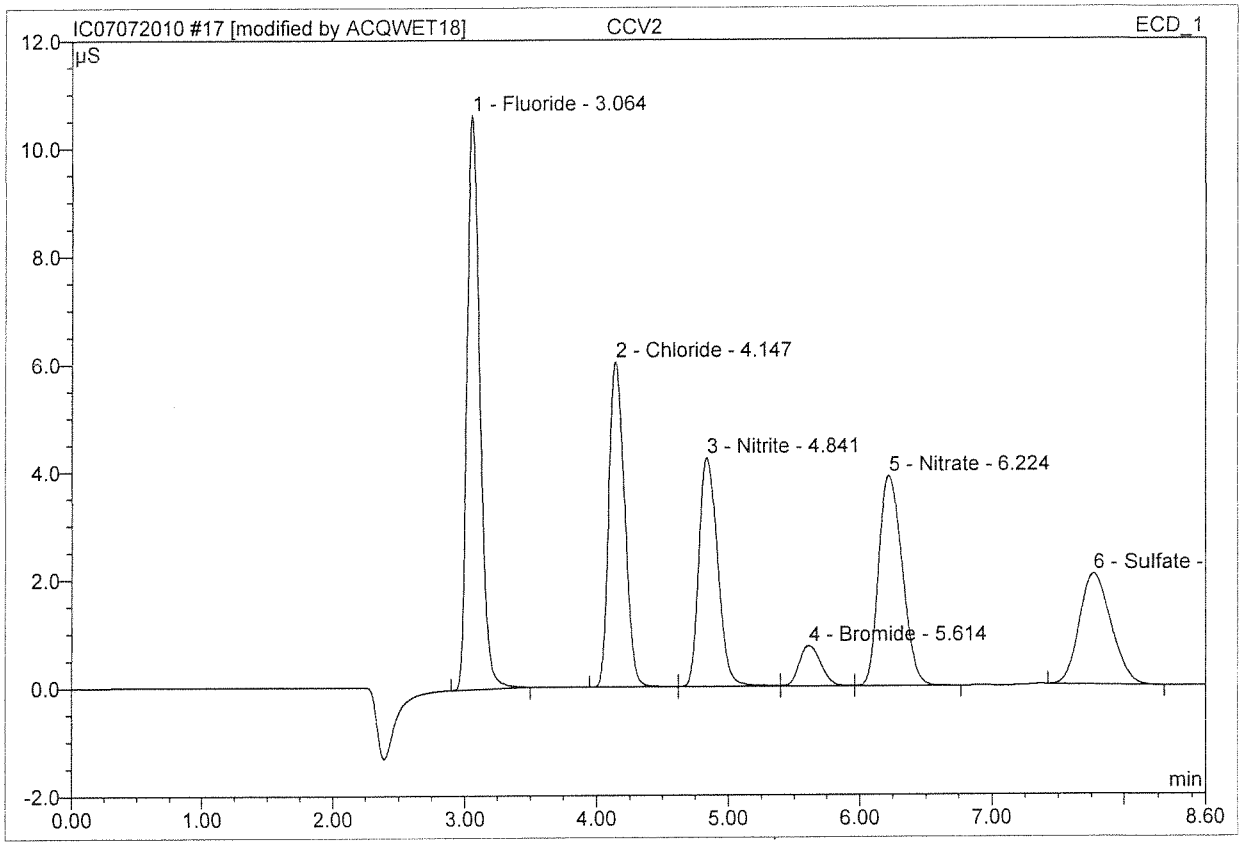
Before

JUL 26 2010

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**25.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 11:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.636	1.192	28.11	4.991	BMB
2	4.15	Chloride	6.029	0.825	19.45	4.988	BM
3	4.84	Nitrite	4.238	0.704	16.58	2.013	M *
4	5.61	Bromide	0.747	0.142	3.34	2.074	M *
5	6.22	Nitrate	3.889	0.808	19.05	1.934	MB
6	7.77	Sulfate	2.038	0.571	13.47	4.957	BMB
Total:			27.578	4.242	100.00	20.956	

After Initials

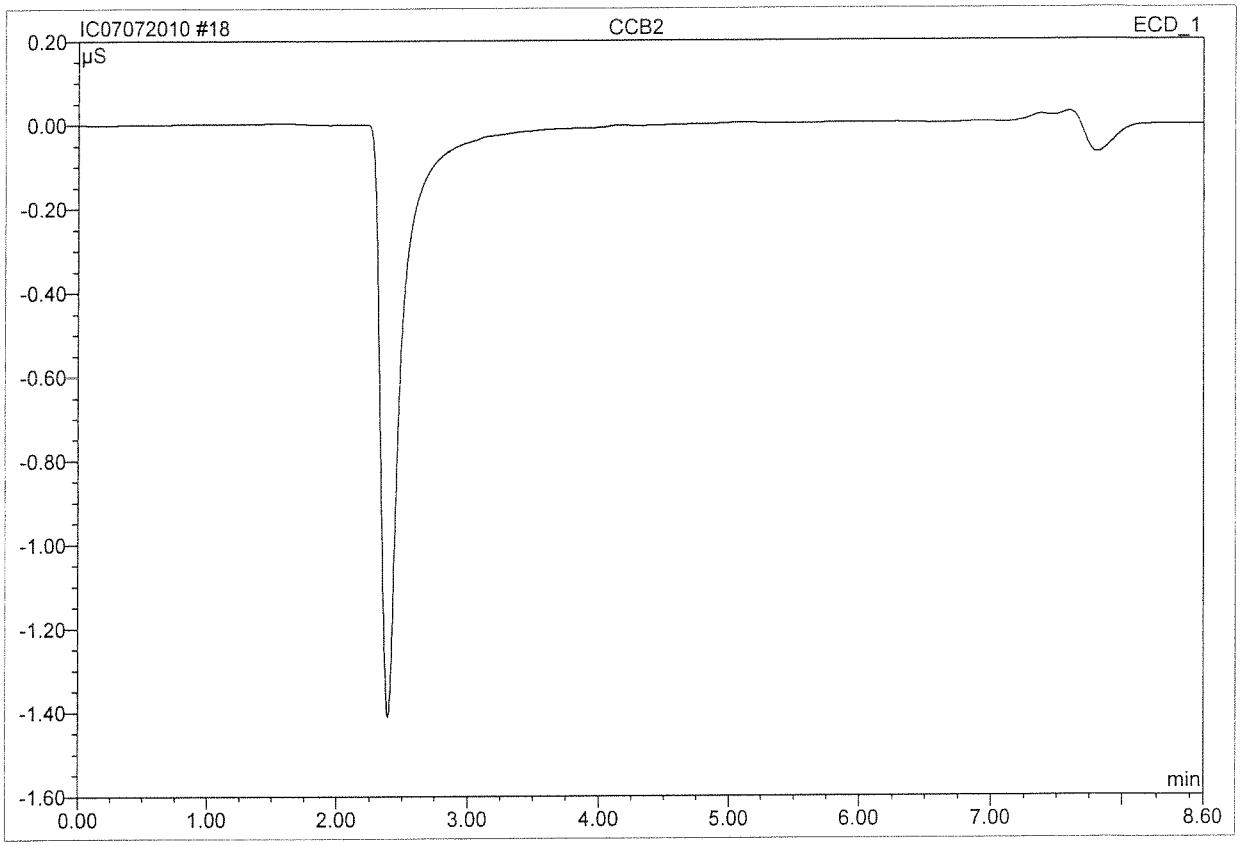
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder incorrect
☐ Other

18 CCB2

CCB2

Sample Name:	**CCB2**	*Injection Volume:*	**25.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 11:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

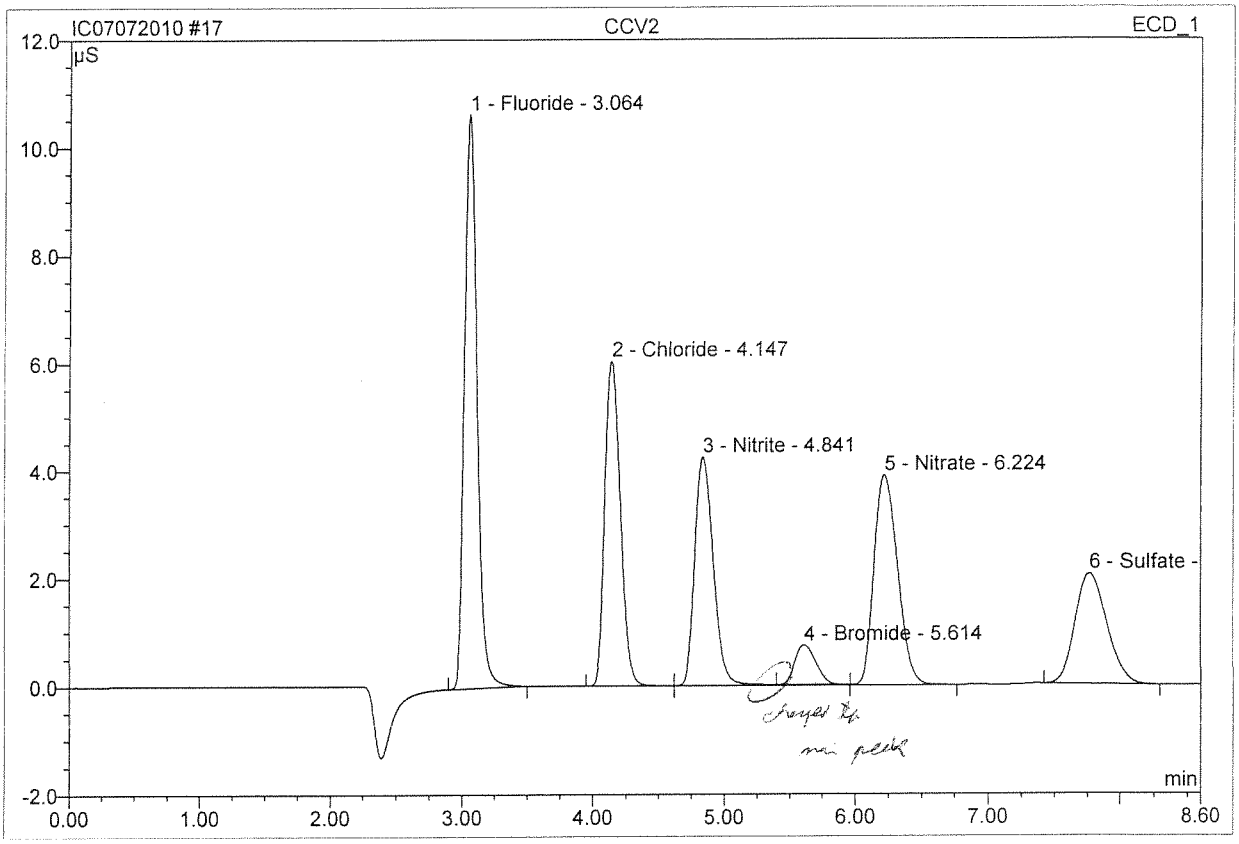


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**25.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 11:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.636	1.192	28.11	4.991	BMB
2	4.15	Chloride	6.029	0.825	19.45	4.988	BM
3	4.84	Nitrite	4.238	0.709	16.71	2.028	M
4	5.61	Bromide	0.737	0.137	3.22	1.997	Rd
5	6.22	Nitrate	3.889	0.808	19.05	1.934	MB
6	7.77	Sulfate	2.038	0.571	13.47	4.957	BMB
Total:			27.568	4.242	100.00	20.894	

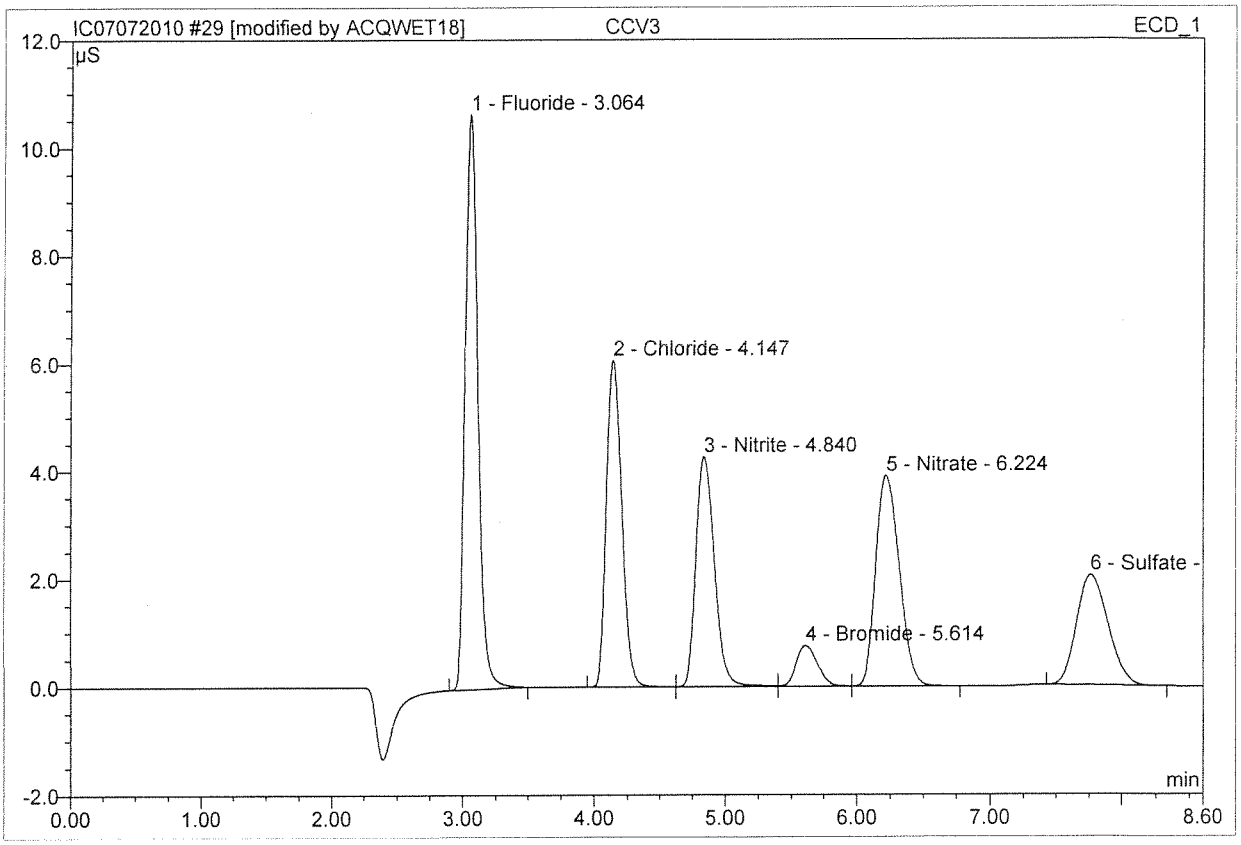
Before

JUL 26 2010

29 CCV3

CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**25.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.663	1.194	28.12	4.996	BMB
2	4.15	Chloride	6.060	0.827	19.49	5.001	BM
3	4.84	Nitrite	4.267	0.706	16.64	2.022	M *
4	5.61	Bromide	0.751	0.142	3.33	2.069	M *
5	6.22	Nitrate	3.905	0.806	18.99	1.929	MB
6	7.77	Sulfate	2.044	0.570	13.42	4.943	BMB
Total:			27.690	4.245	100.00	20.960	

BH7/26/10

After Initials

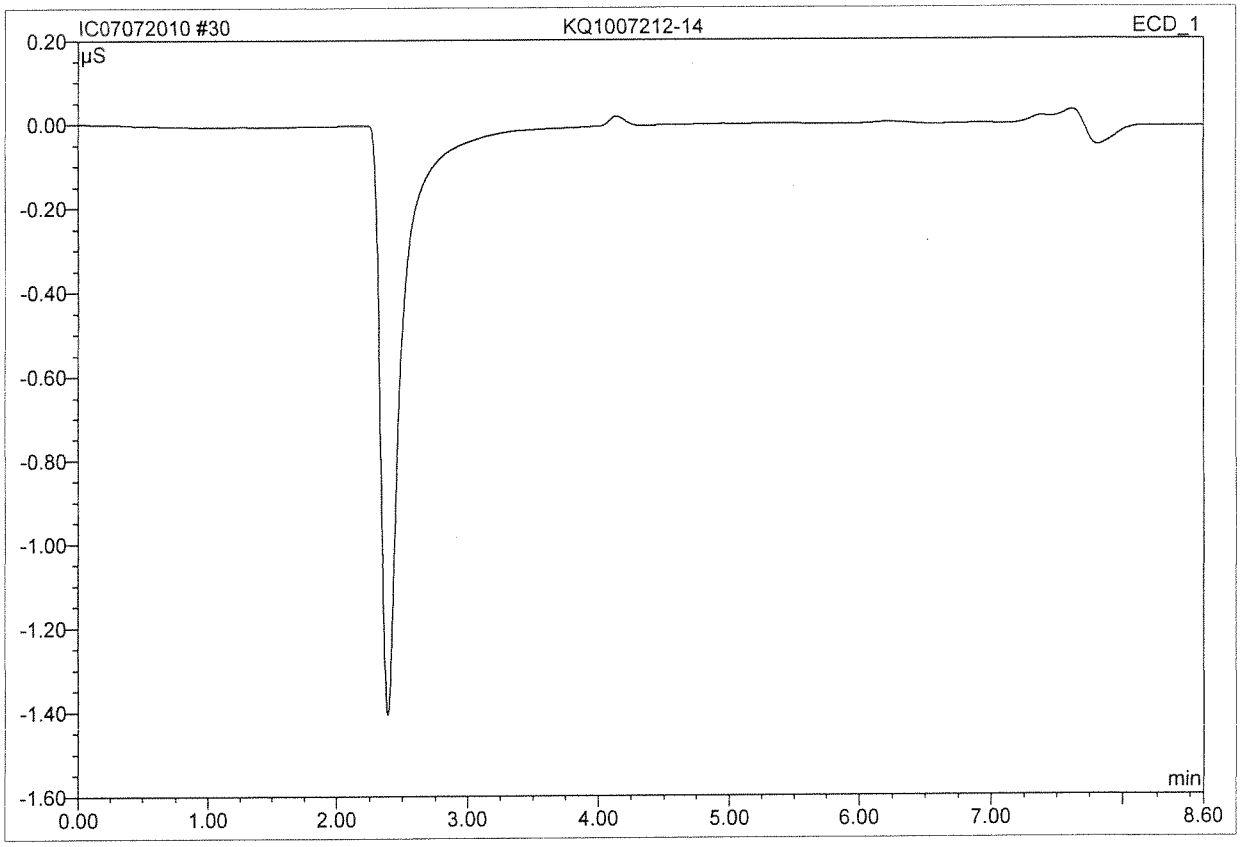
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder incorrect
☐ Other

30 KQ1007212-14

CCB3

Sample Name:	**KQ1007212-14**	*Injection Volume:*	**25.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

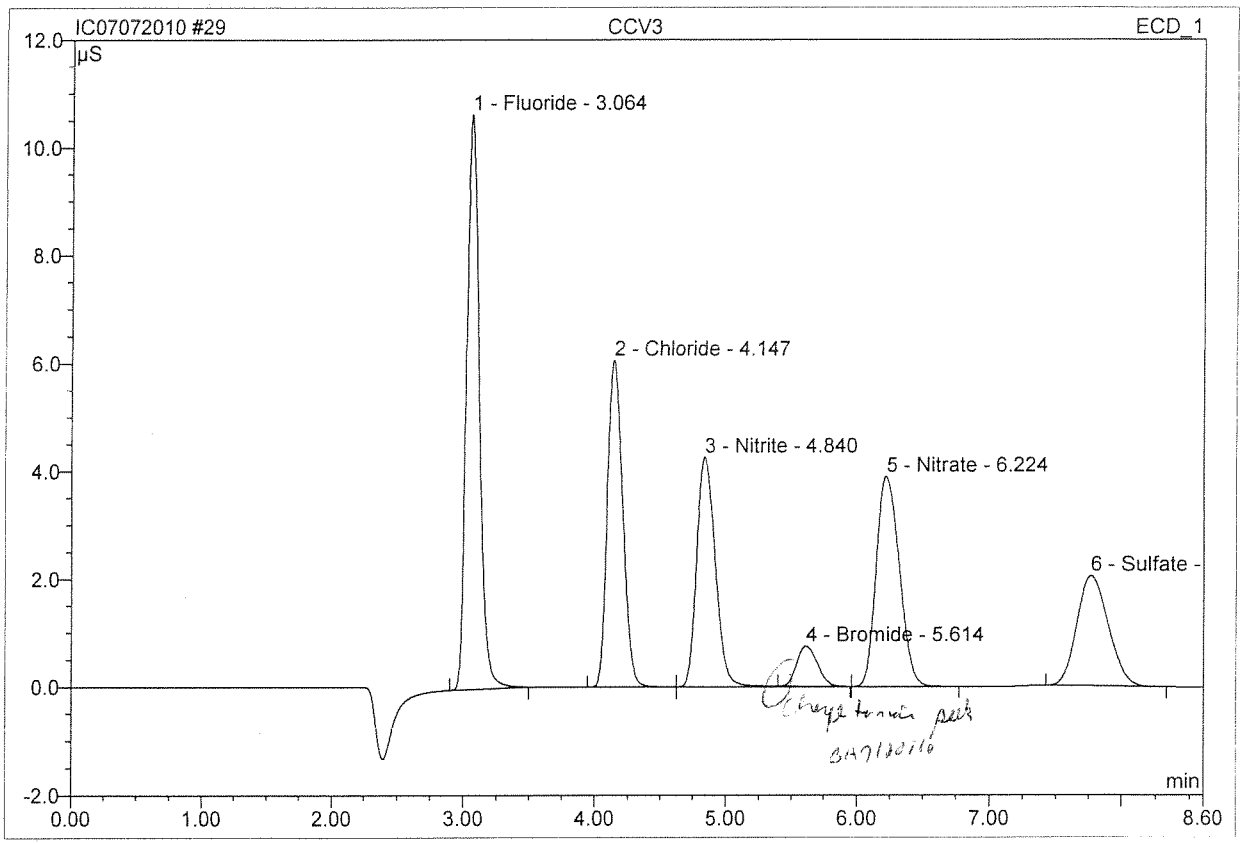


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

29 CCV3

CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**25.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



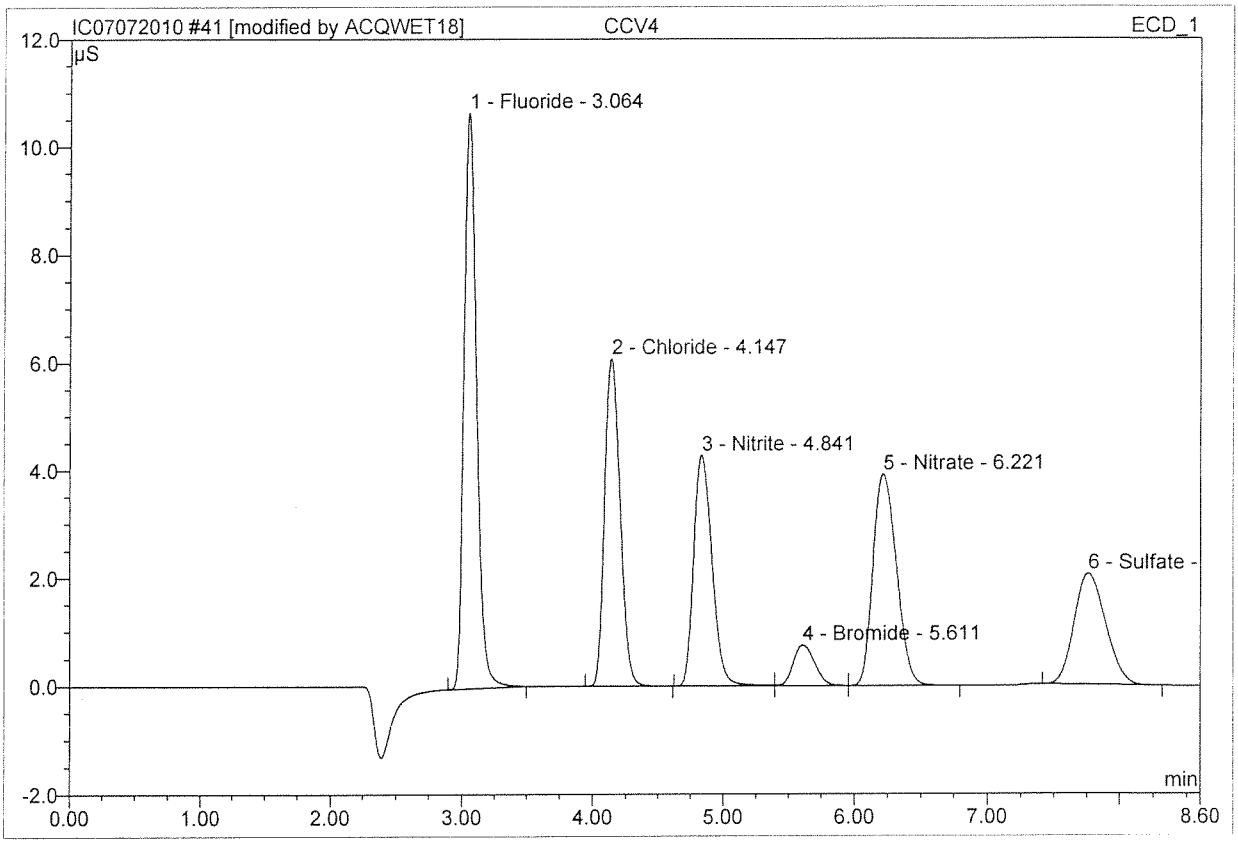
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.663	1.194	28.12	4.996	BMB
2	4.15	Chloride	6.060	0.827	19.49	5.001	BM
3	4.84	Nitrite	4.267	0.711	16.75	2.035	M
4	5.61	Bromide	0.742	0.137	3.23	2.003	Rd
5	6.22	Nitrate	3.905	0.806	18.99	1.929	MB
6	7.77	Sulfate	2.044	0.570	13.42	4.943	BMB
Total:			27.680	4.245	100.00	20.907	

Before

JUL 2 6 2010

41 CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.680	1.192	28.10	4.990	BMB
2	4.15	Chloride	6.070	0.824	19.42	4.980	BMB
3	4.84	Nitrite	4.279	0.705	16.61	2.017	BM *
4	5.61	Bromide	0.753	0.142	3.34	2.072	M *
5	6.22	Nitrate	3.920	0.808	19.05	1.934	MB
6	7.77	Sulfate	2.052	0.572	13.47	4.959	BMB
Total:			27.753	4.242	100.00	20.952	

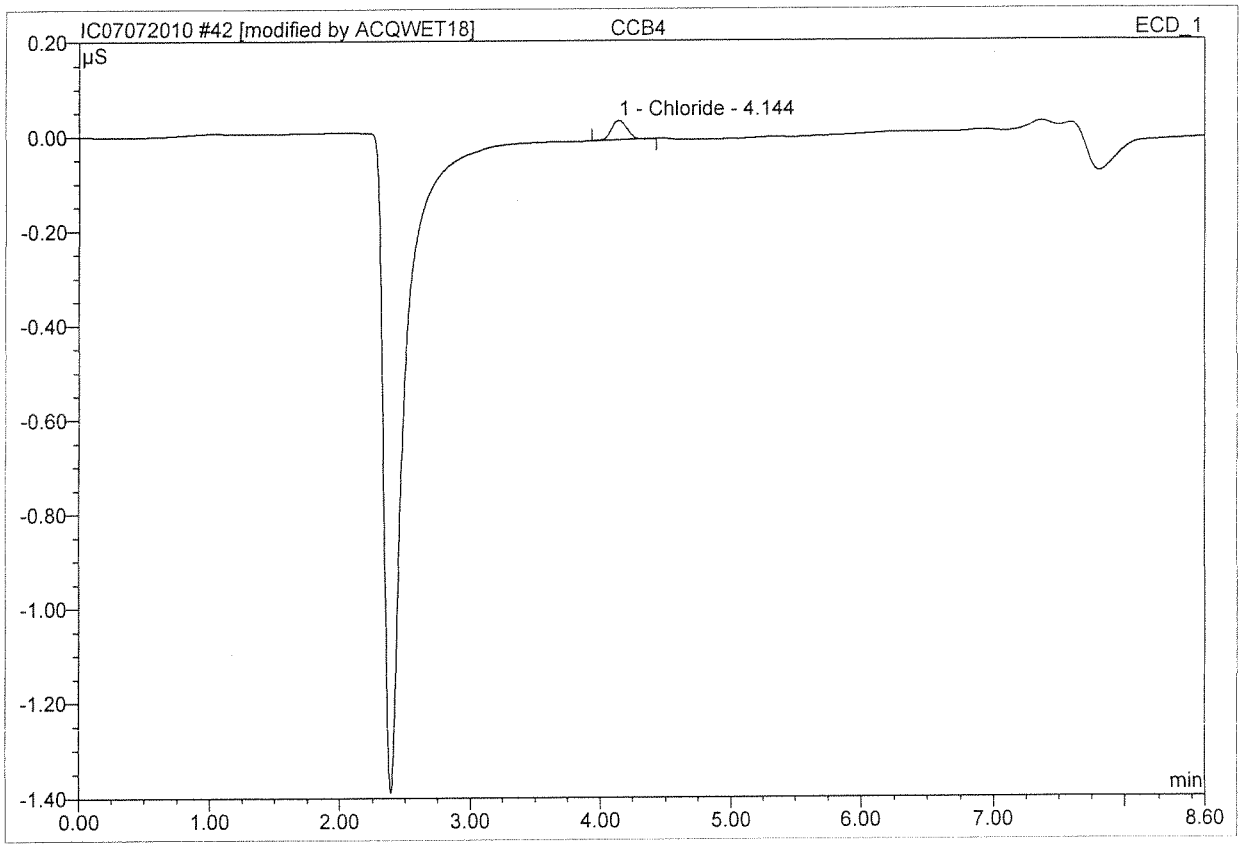
After Initials AB

JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

42 CCB4

Sample Name:	**CCB4**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	4.14	Chloride <0.2	0.041	0.005	100.00	0.033	BMB*
Total:			0.041	0.005	100.00	0.033	

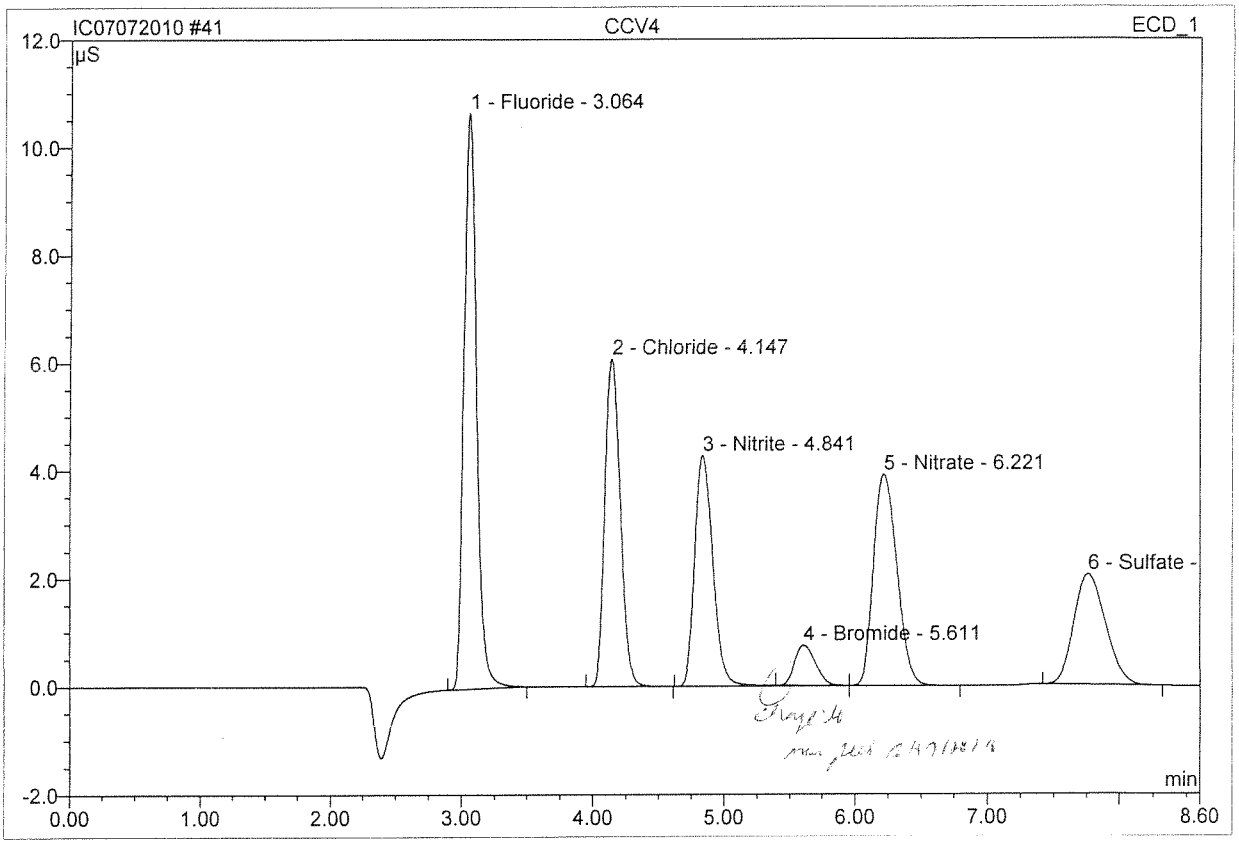
After
Initials AB

JUL 26 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other_____

41 CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**25.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



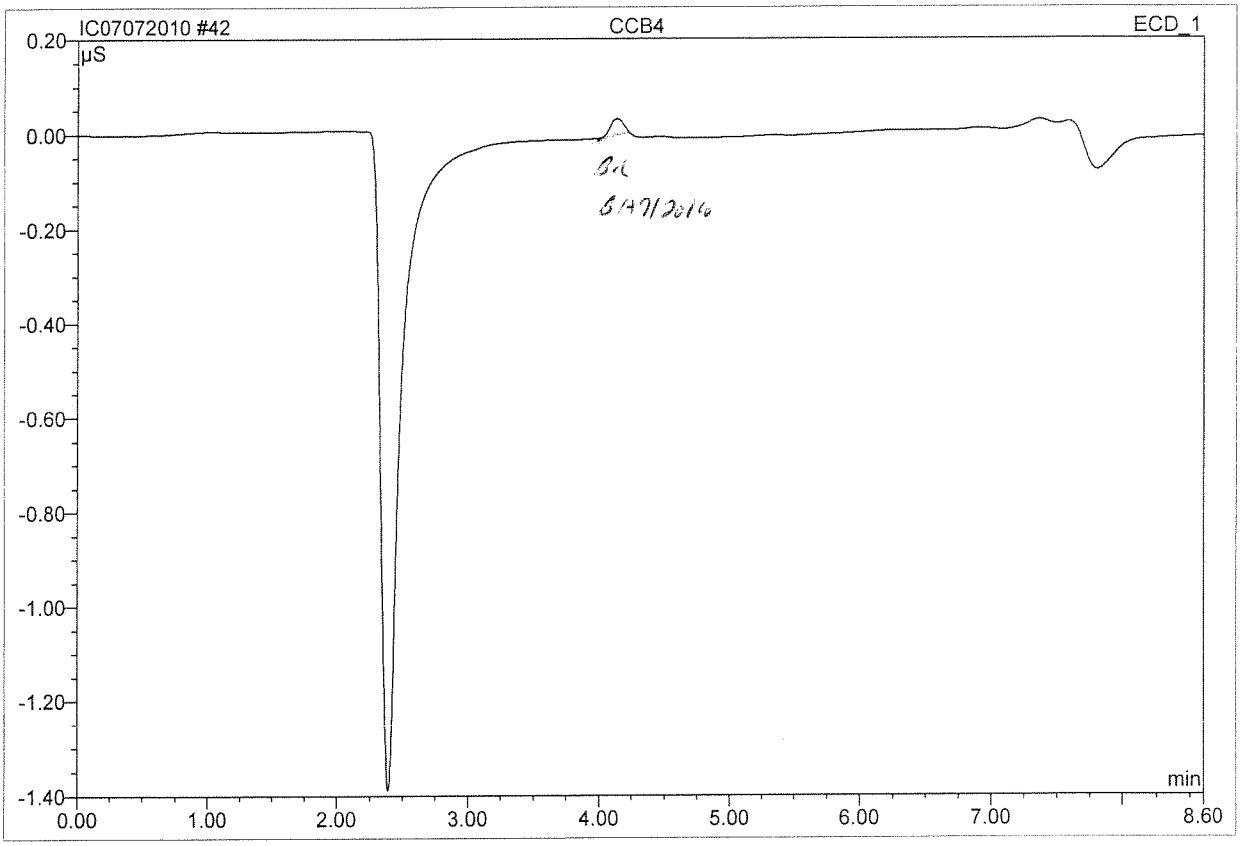
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.680	1.192	28.10	4.990	BMB
2	4.15	Chloride	6.070	0.824	19.42	4.980	BMB
3	4.84	Nitrite	4.279	0.709	16.72	2.030	BM
4	5.61	Bromide	0.743	0.137	3.23	2.003	Rd
5	6.22	Nitrate	3.920	0.808	19.05	1.934	MB
6	7.77	Sulfate	2.052	0.572	13.47	4.959	BMB
Total:			27.744	4.242	100.00	20.896	

Before

JUL 2 6 2010

42 CCB4

Sample Name:	**CCB4**	*Injection Volume:*	**25.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
Total:			0.000	0.000	0.00	0.000	

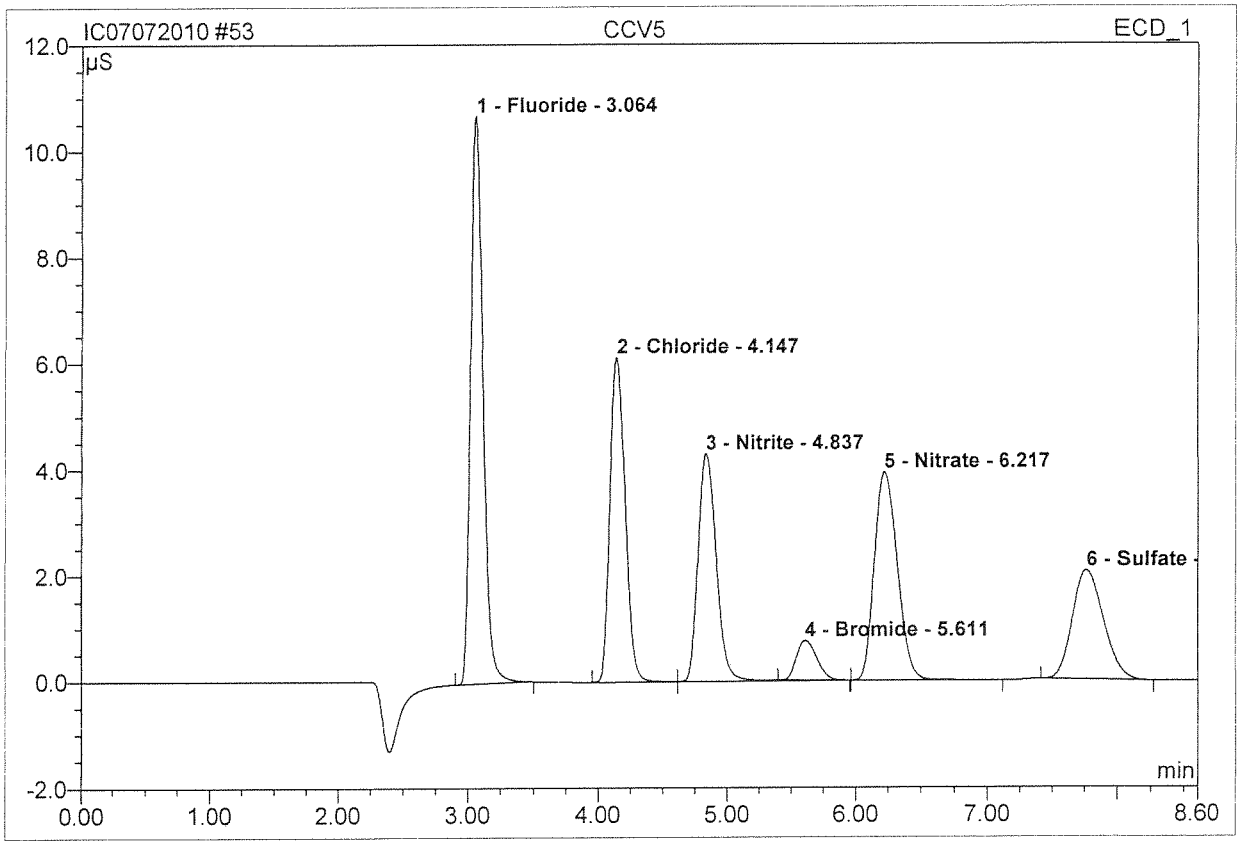
Before

JUL 2 6 2010

53 CCV5

CCV5

Sample Name:	**CCV5**	*Injection Volume:*	**25.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 17:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

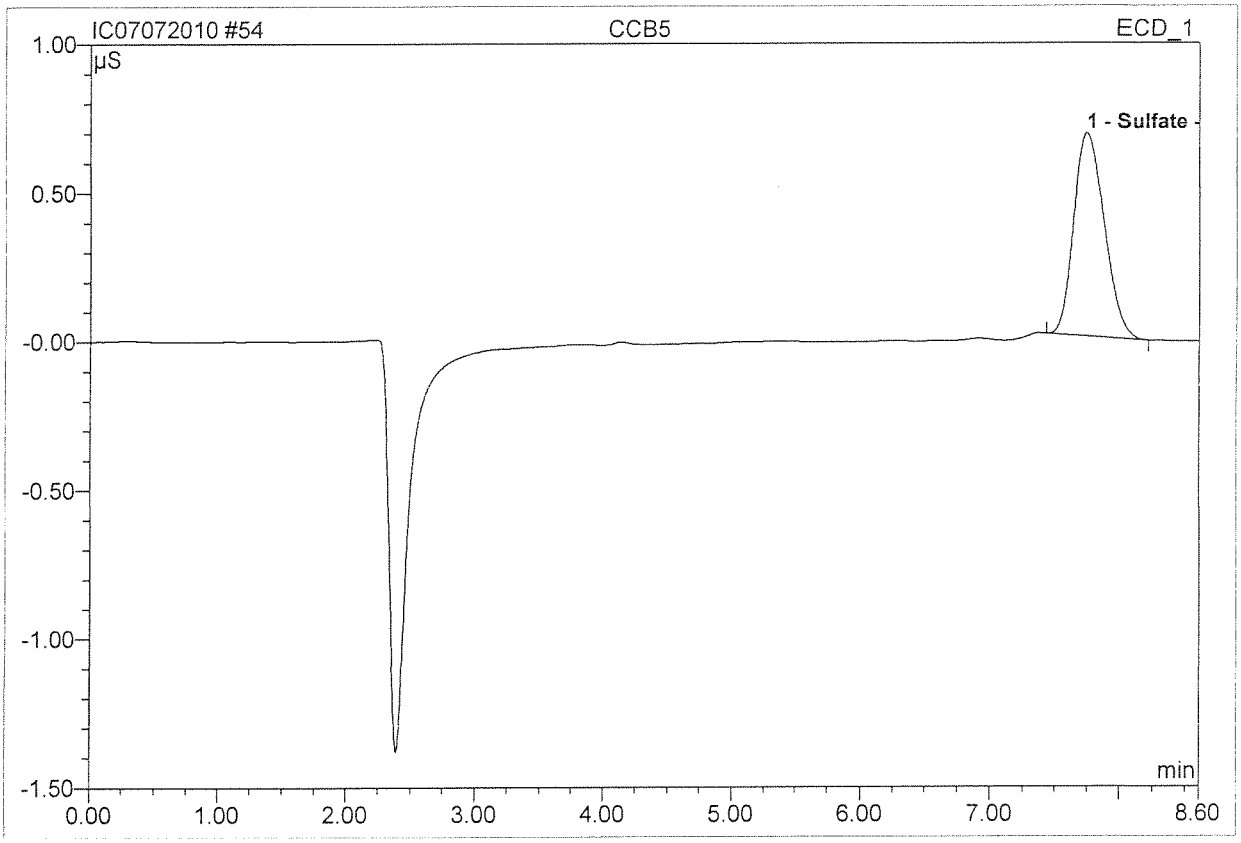


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.692	1.193	28.07	4.992	BMB
2	4.15	Chloride	6.111	0.829	19.51	5.009	BM
3	4.84	Nitrite	4.293	0.707	16.64	2.023	MB
4	5.61	Bromide	0.745	0.137	3.22	2.000	Rd
5	6.22	Nitrate	3.927	0.811	19.08	1.939	bMB
6	7.76	Sulfate	2.060	0.573	13.49	4.971	BMB
Total:			27.828	4.248	100.00	20.934	

54 CCB5

CCB5

Sample Name:	**CCB5**	*Injection Volume:*	**25.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 17:39**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



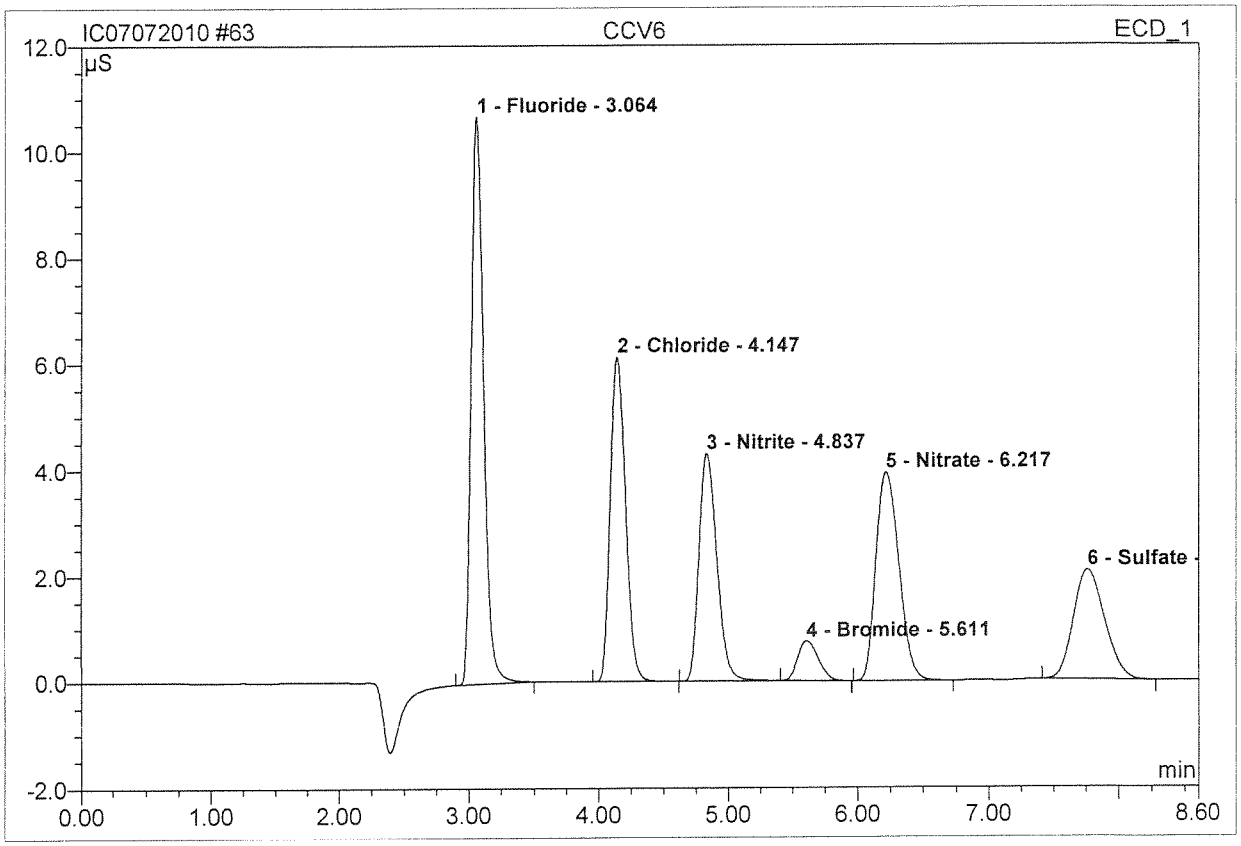
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	7.75	Sulfate	0.684	0.189	100.00	1.637	BMB
Total:			0.684	0.189	100.00	1.637	

SCy hit all sample conc. <20% will be reanalyzed

63 CCV6

CCV6

Sample Name:	**CCV6**	*Injection Volume:*	**25.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 19:10**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**

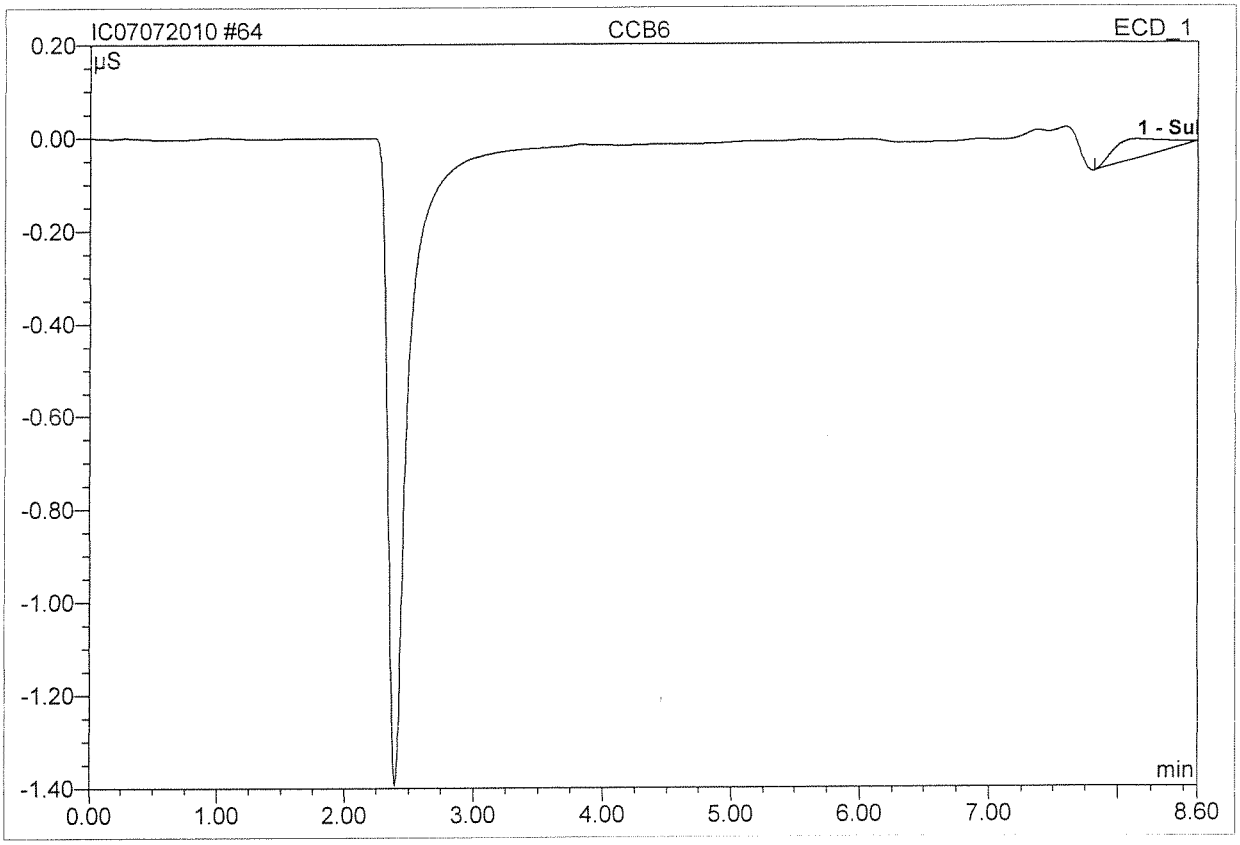


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	3.06	Fluoride	10.699	1.192	28.08	4.991	BMB
2	4.15	Chloride	6.117	0.828	19.49	5.003	BMB
3	4.84	Nitrite	4.298	0.707	16.66	2.024	BMB
4	5.61	Bromide	0.743	0.136	3.20	1.987	Rd
5	6.22	Nitrate	3.934	0.808	19.02	1.932	BMB
6	7.76	Sulfate	2.070	0.575	13.55	4.990	BMB
Total:			27.862	4.246	100.00	20.927	

64 CCB6

CCB6

Sample Name:	**CCB6**	*Injection Volume:*	**25.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 19:20**	*Sample Weight:*	**1.0000**
Run Time (min):	**8.60**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount ppm	Type
1	8.14	Sulfate	0.041	0.018	100.00	0.159	BMB
Total:			0.041	0.018	100.00	0.159	

COLUMBIA ANALYTICAL SERVICES, INC.

Ion Chromatography Calibration Data

Sequence: IC03072010c **Date: 07/20/10**

Anion	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Corr.Coeff.	Slope
F	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9588	1.8676
Cl	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9324	1.5522
NO2	0.0	0.1	0.5	1.0	2.0	5.0	-	99.9911	3.1836
Br	0.0	0.1	0.5	1.0	2.0	5.0	-	99.9445	0.5299
NO3	0.0	0.1	0.5	1.0	2.0	5.0	-	99.8858	3.7330
SO4	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9680	0.9943

All calibration standard concentrations are in mg/L unless otherwise noted.
Zero point forced through zero.

No.	Peak Name	Cal.Type	#Points	Rel.Std.Dev. %	Corr.Coeff. %	Offset	Slope	Curve
1	Fluoride	Lin	6	3.0407	99.9588	0	1.8676	0
2	Chloride	Lin	6	5.0312	99.9324	0	1.5522	0
n.a.	Nitrite	Lin	5	1.5619	99.9911	0	3.1836	0
n.a.	Bromide	Lin	5	6.1127	99.9445	0	0.5299	0
n.a.	Nitrate	Lin	5	9.4241	99.8858	0	3.733	0
3	Sulfate	Lin	6	3.3145	99.968	0	0.9943	0
Average:			5.5	4.7475	99.9468	0	1.9768	0

EC 7/23/10

Sequence: IC03072010C
Operator: nbakotich
Printed: 7/20/2010 4:48:36 PM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 12

Created: 7/20/2010 12:05:20 PM by ACQWET10
Last Update: 7/20/2010 4:44:25 PM by ACQWET10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	std2/lvl2	Standard	1	200.0	epa300	epa300	Finished	7/20/2010 1:14:08 PM
2	std3/lvl3	Standard	2	200.0	epa300	epa300	Finished	7/20/2010 1:30:36 PM
3	std4/lvl4	Standard	3	200.0	epa300	epa300	Finished	7/20/2010 1:45:33 PM
4	std5/lvl5	Standard	4	200.0	epa300	epa300	Finished	7/20/2010 2:00:31 PM
5	std6/lvl6	Standard	5	200.0	epa300	epa300	Finished	7/20/2010 2:14:58 PM
6	std7/lvl7	Standard	6	200.0	epa300	epa300	Finished	7/20/2010 2:29:26 PM
7	std1/lvl1	Standard	7	200.0	epa300	epa300	Finished	7/20/2010 2:43:54 PM
8	NO2 AN11-29-J	Unknown	10	200.0	epa300	epa300	Finished	7/20/2010 2:58:21 PM
9	NO3 AN1-33-E	Unknown	11	200.0	epa300	epa300	Finished	7/20/2010 3:12:49 PM
10	CLSO4 ERA#0107-10-02	Unknown	12	200.0	epa300	epa300	Finished	7/20/2010 3:27:17 PM
11	F AN 1-33-D	Unknown	13	200.0	epa300	epa300	Finished	7/20/2010 3:41:44 PM
12	Br AN1-33-L	Unknown	14	200.0	epa300	epa300	Finished	7/20/2010 3:56:12 PM

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

Sequence: IC03072010C
Operator: nbakotich
Printed: 7/20/2010 4:48:36 PM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 12

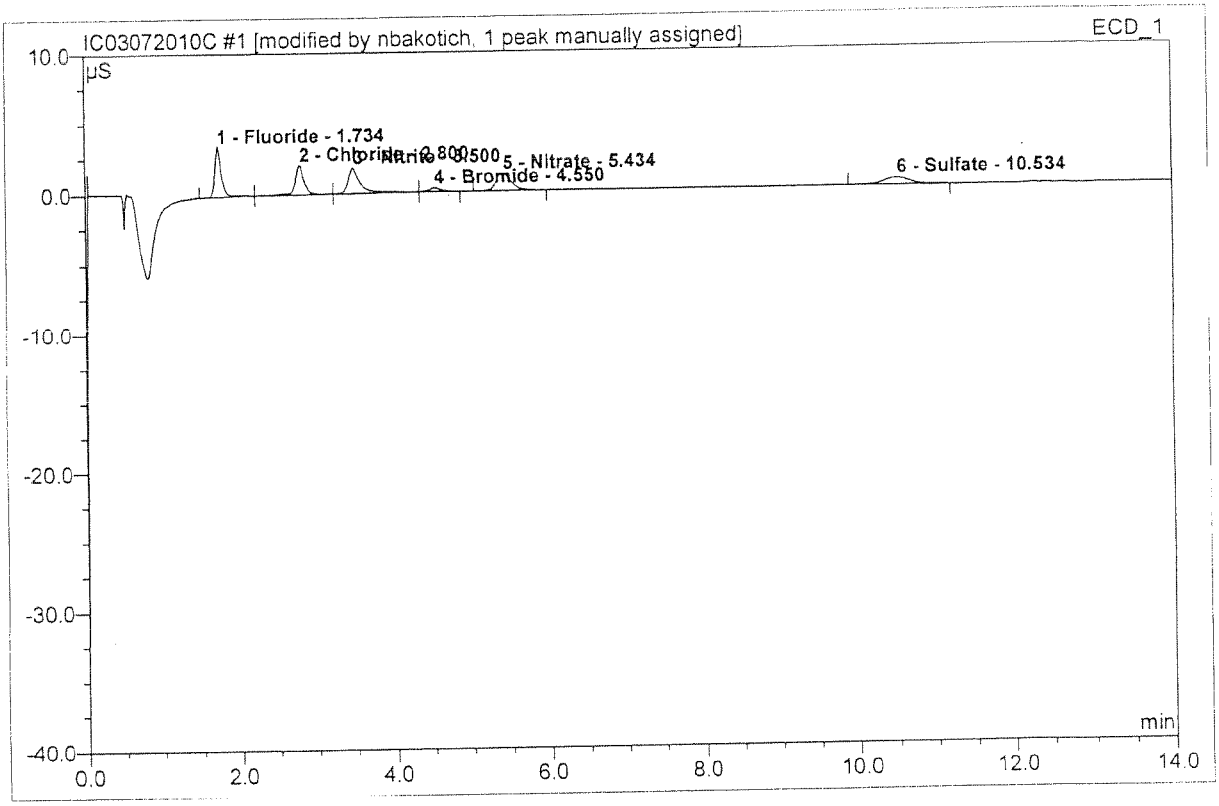
Created: 7/20/2010 12:05:20 PM by ACQWET10
Last Update: 7/20/2010 4:44:25 PM by ACQWET10

No.	Name	Dil. Factor	Comment
1	std2/lvl2	1.0000	
2	std3/lvl3	1.0000	
3	std4/lvl4	1.0000	
4	std5/lvl5	1.0000	
5	std6/lvl6	1.0000	
6	std7/lvl7	1.0000	
7	std1/lvl1	1.0000	
8	NO2 AN11-29-J	25.0000	NO2
9	NO3 AN1-33-E	20.0000	NO3
10	CLSO4 ERA#0107-10-02	1.0000	CLSO4
11	F AN 1-33-D	2.0000	F
12	Br AN1-33-L	1.0000	Br

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

1 std2/lvl2

Sample Name:	std2/lvl2	*Injection Volume:*	200.0
Vial Number:	1	*Channel:*	ECD_1
Sample Type:	standard	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	1.0000
Recording Time:	7/20/2010 13:14	*Sample Weight:*	1.0000
Run Time (min):	14.00	*Sample Amount:*	1.0000



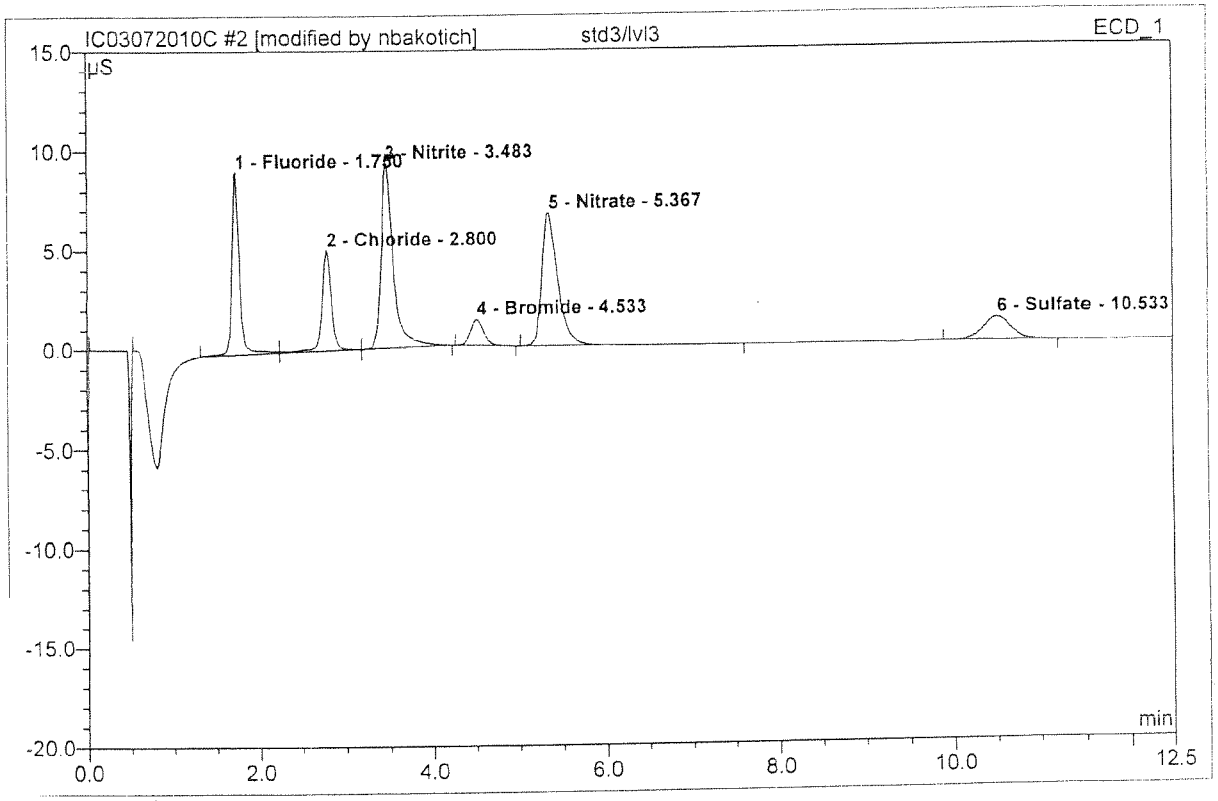
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride	3.545	0.363	24.73	0.194	BMb*
2	2.80	Chloride	2.071	0.272	18.54	0.175	bM
3	3.50	Nitrite	1.805	0.321	21.85	0.101	Mb*
4	4.55	Bromide	0.255	0.045	3.04	0.084	bMB*
5	5.43	Nitrate	1.263	0.280	19.07	0.075	BMB
6	10.53	Sulfate	0.499	0.187	12.77	0.188	BMB^
Total:			9.438	1.468	100.00	0.818	

7/20/10

default/Integration

2 std3/lvl3

Sample Name:	**std3/lvl3**	*Injection Volume:*	**200.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.50**	*Sample Amount:*	**1.0000**



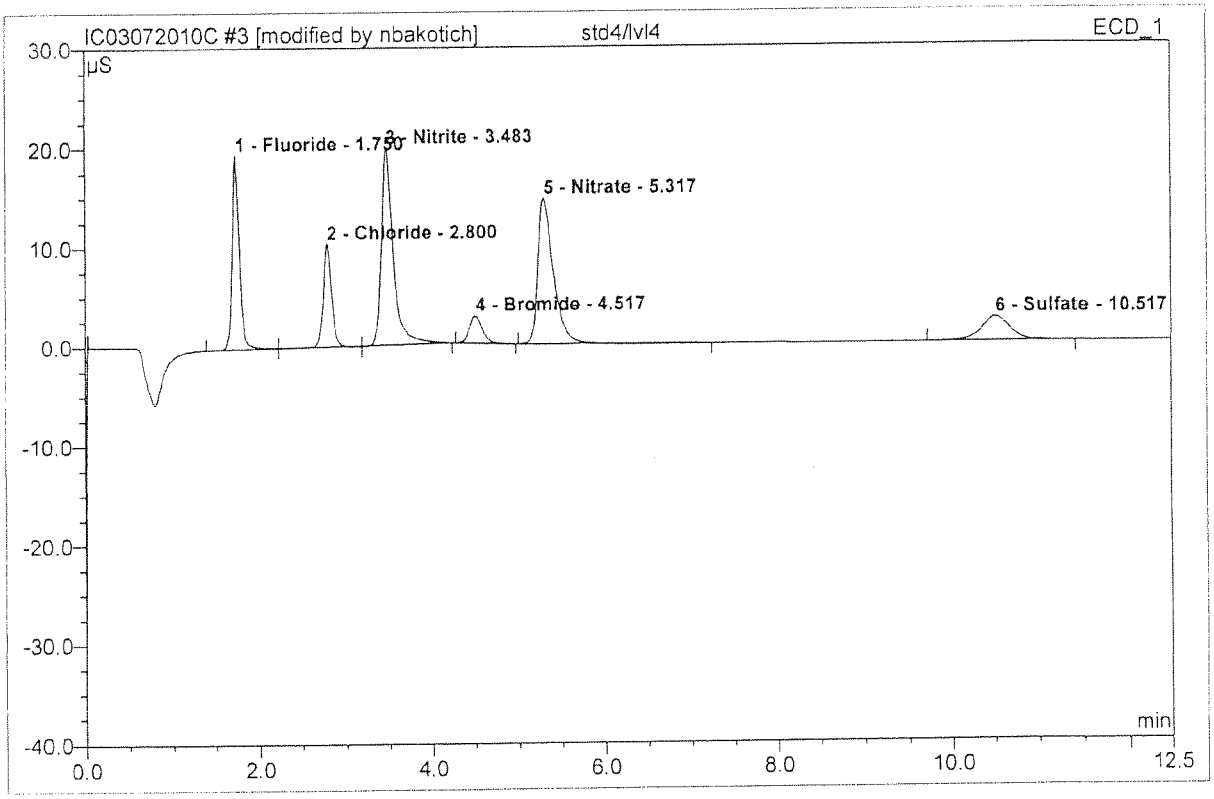
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	9.205	0.973	18.42	0.521	BM *
2	2.80	Chloride	5.081	0.655	12.41	0.422	M *
3	3.48	Nitrite	9.350	1.560	29.54	0.490	MB*
4	4.53	Bromide	1.315	0.230	4.35	0.434	BMB*
5	5.37	Nitrate	6.707	1.436	27.19	0.385	BMB*
6	10.53	Sulfate	1.163	0.428	8.10	0.430	BMB
Total:			32.821	5.283	100.00	2.682	

nb 7/20/10

default/Integration

3 std4/lvl4

Sample Name:	**std4/lvl4**	*Injection Volume:*	**200.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.50**	*Sample Amount:*	**1.0000**



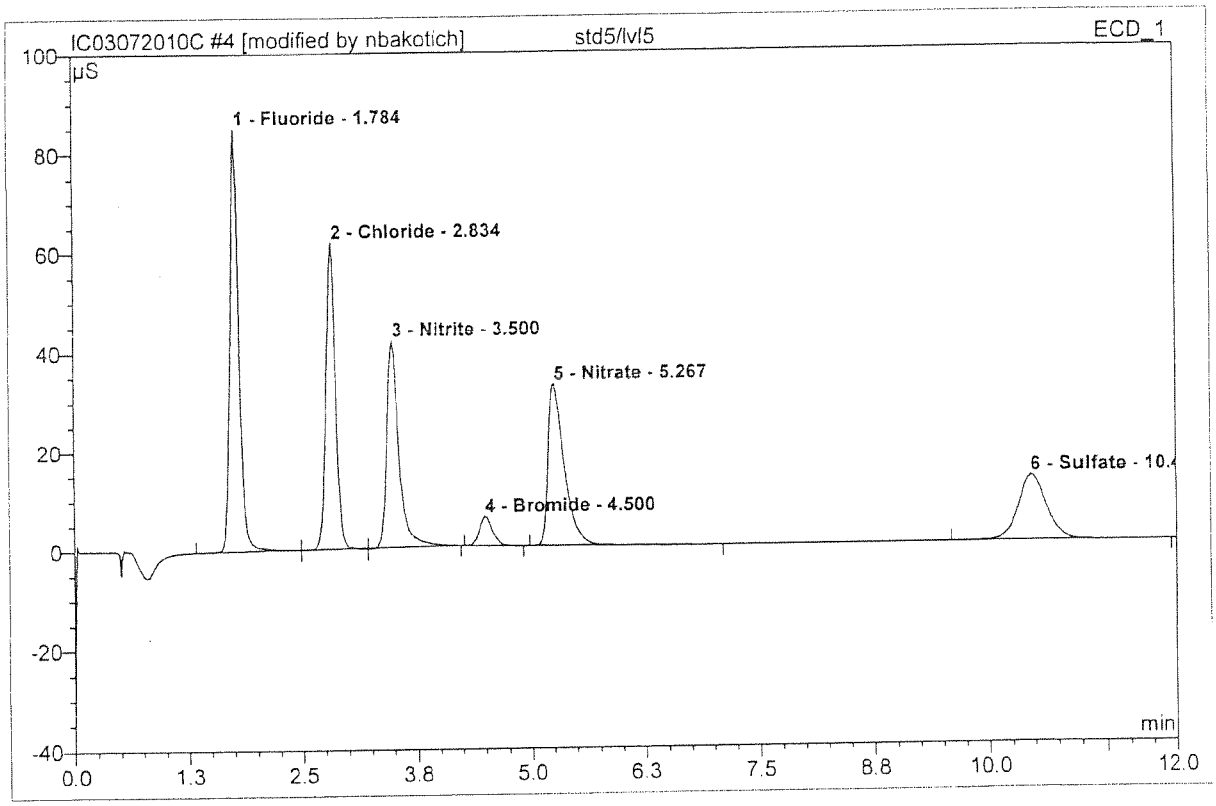
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	19.535	1.902	17.78	1.019	BM *
2	2.80	Chloride	10.376	1.197	11.19	0.771	M *
3	3.48	Nitrite	19.878	3.181	29.73	0.999	MB*
4	4.52	Bromide	2.746	0.469	4.38	0.885	BMB*
5	5.32	Nitrate	14.681	3.069	28.68	0.822	BMB*
6	10.52	Sulfate	2.364	0.882	8.24	0.887	BMB
Total:			69.581	10.700	100.00	5.383	

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 std5/lvl5

Sample Name:	**std5/lvl5**	*Injection Volume:*	**200.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



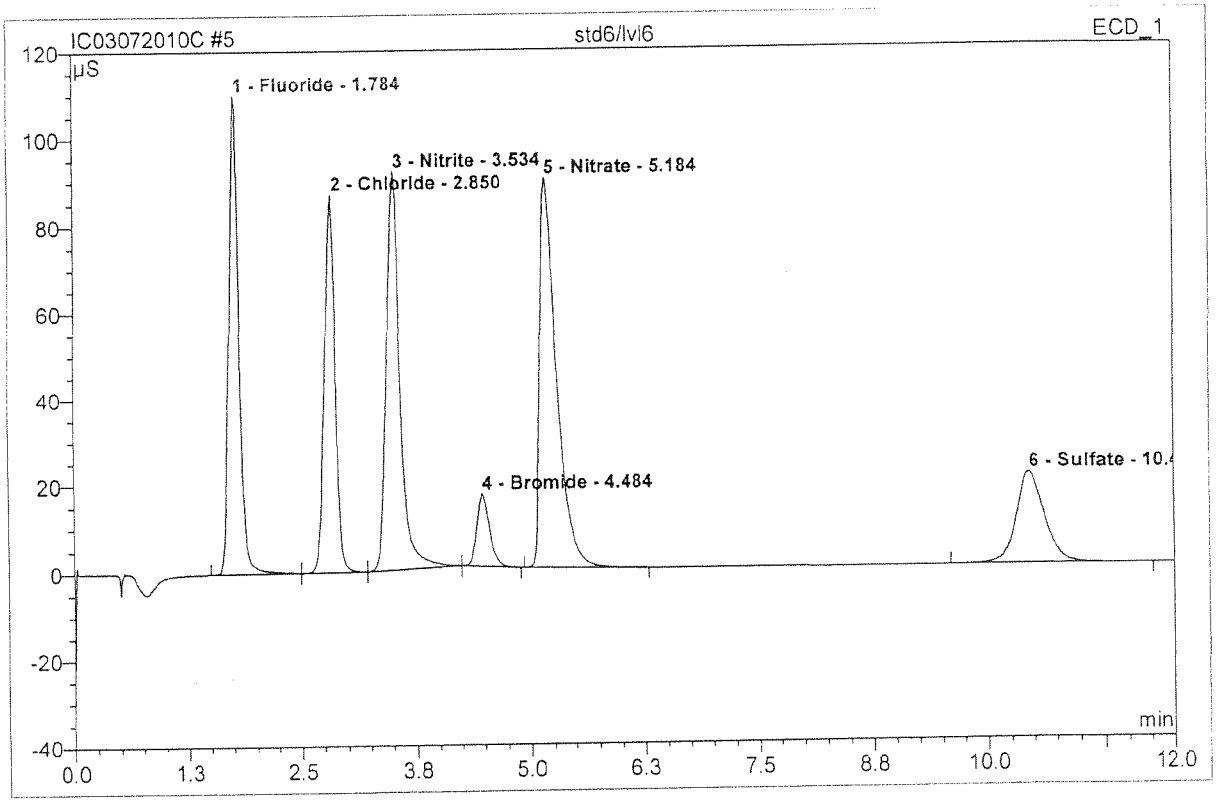
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	85.132	9.610	26.73	5.145	BM *
2	2.83	Chloride	61.798	7.298	20.30	4.702	M *
3	3.50	Nitrite	41.755	6.525	18.15	2.050	MB*
4	4.50	Bromide	5.906	0.991	2.76	1.870	BMB*
5	5.27	Nitrate	32.796	6.764	18.82	1.812	BMB*
6	10.47	Sulfate	13.153	4.758	13.24	4.785	BMB
Total:			240.541	35.945	100.00	20.364	

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 std6/lvl6

Sample Name:	**std6/lvl6**	*Injection Volume:*	**200.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	110.065	14.275	20.13	7.644	BMb
2	2.85	Chloride	87.060	11.556	16.29	7.445	bMB
3	3.53	Nitrite	91.775	15.859	22.36	4.981	bMb
4	4.48	Bromide	16.593	2.693	3.80	5.082	bMB
5	5.18	Nitrate	89.877	19.123	26.96	5.123	BMB
6	10.47	Sulfate	20.826	7.423	10.47	7.466	BMB
Total:			416.196	70.929	100.00	37.741	

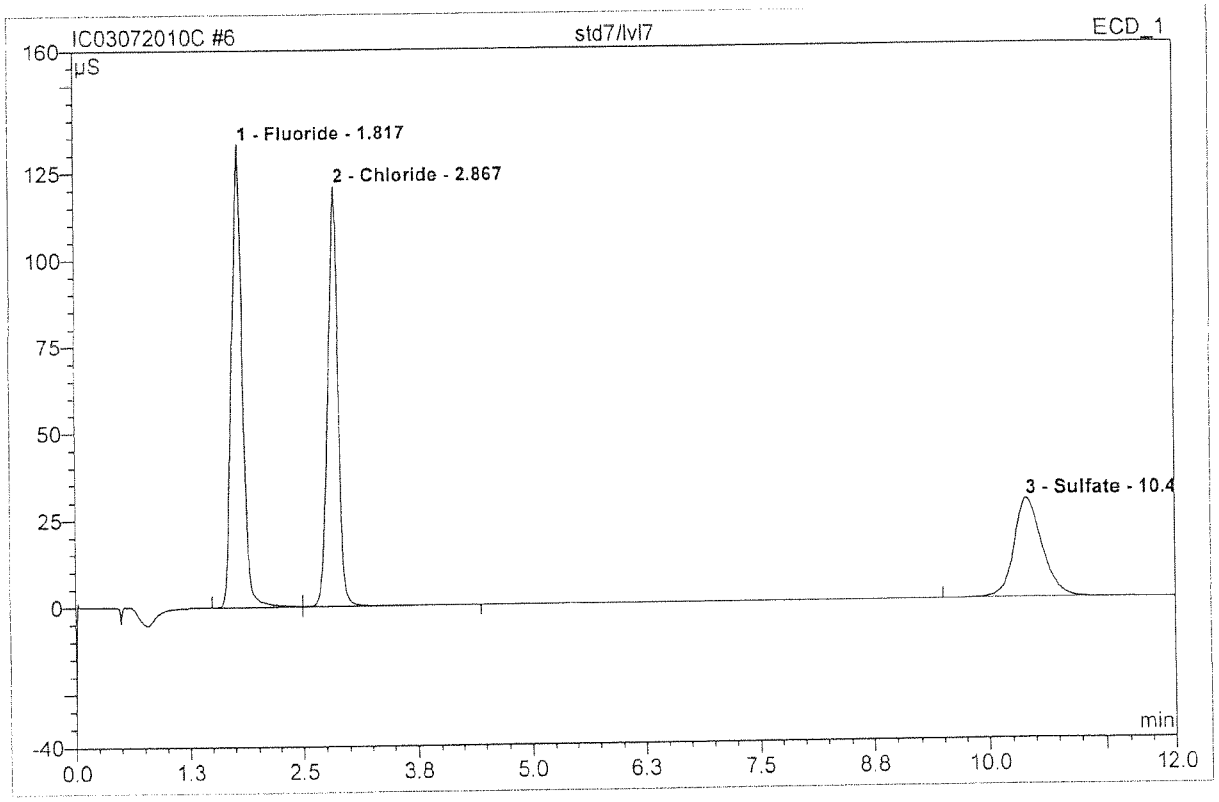
nh 7/20/10

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

6 std7/lvl7

Sample Name:	**std7/lvl7**	*Injection Volume:*	**200.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.82	Fluoride	133.296	18.334	41.40	9.817	BM
2	2.87	Chloride	120.903	15.859	35.81	10.217	MB
3	10.42	Sulfate	28.395	10.091	22.79	10.148	BMB
Total:			282.595	44.284	100.00	30.183	

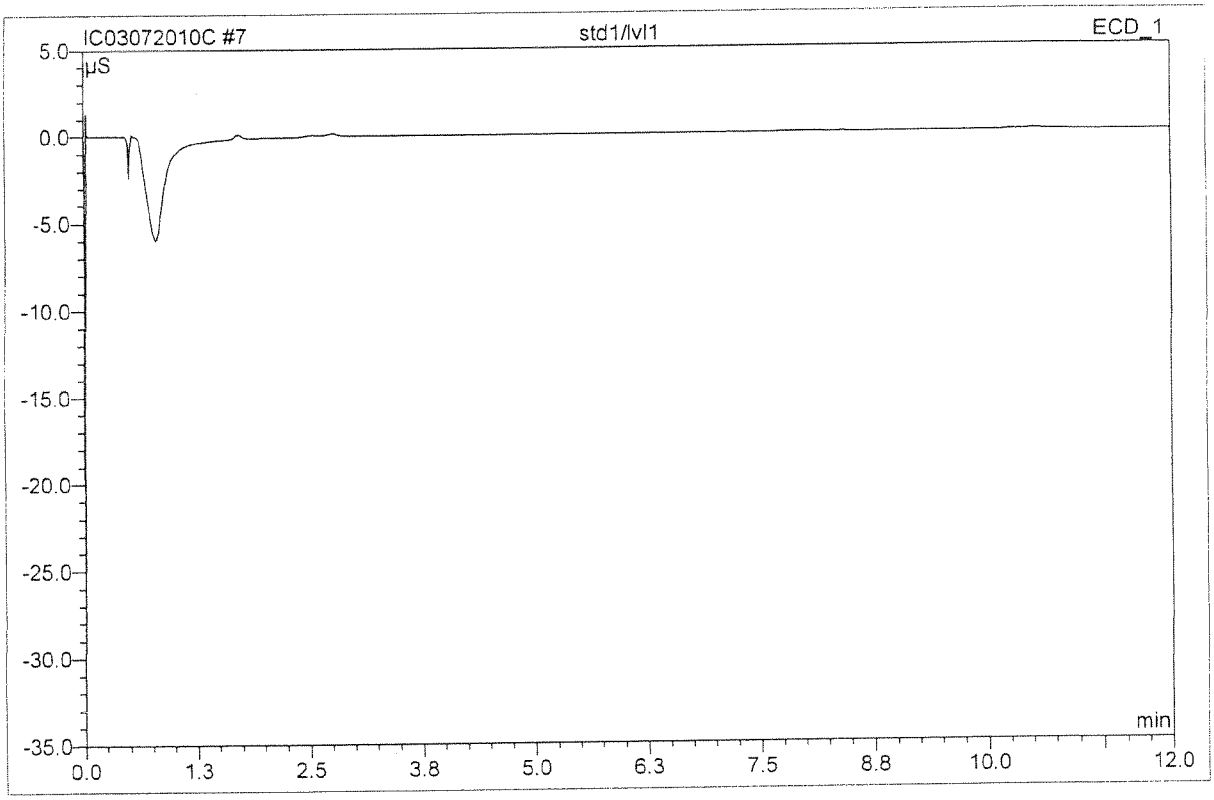
200.0

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 std1/lvl1

Sample Name:	**std1/lvl1**	*Injection Volume:*	**200.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

nb 7.20.10

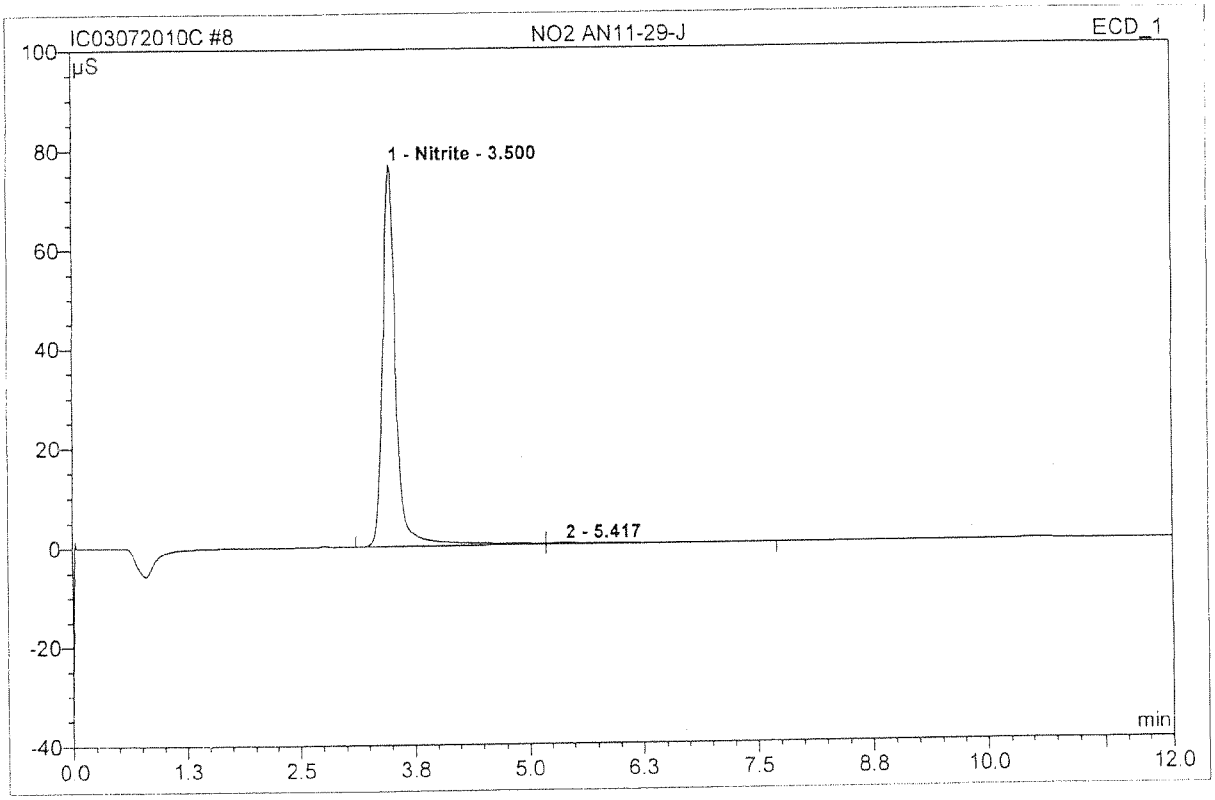
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 NO2 AN11-29-J

NO2

Sample Name:	NO2 AN11-29-J	*Injection Volume:*	200.0
Vial Number:	10	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	25.0000
Recording Time:	7/20/2010 14:58	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



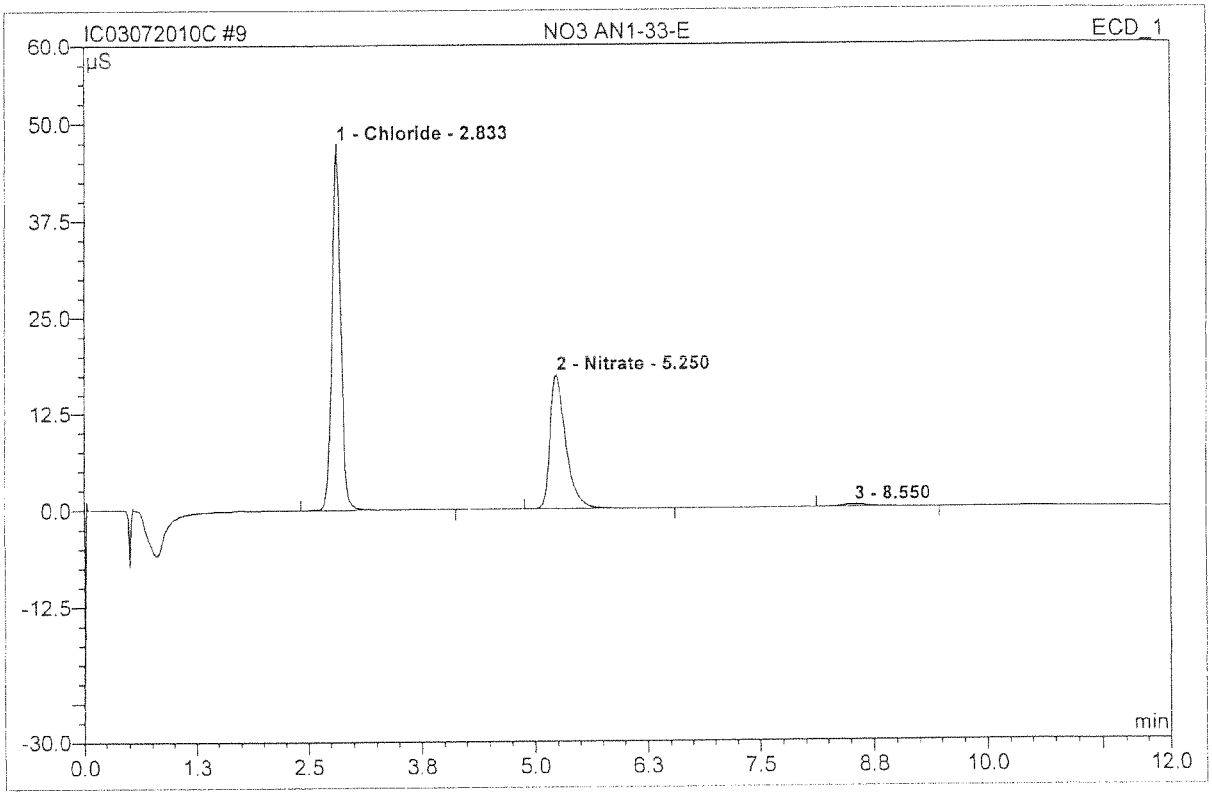
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.50	Nitrite	76.868	13.074	98.03	102.665	BM
2	5.42	n.a.	0.335	0.263	1.97	n.a.	MB
Total:			77.202	13.336	100.00	102.665	

default/Integration

9 NO3 AN1-33-E

NO3

Sample Name:	NO3 AN1-33-E	*Injection Volume:*	200.0
Vial Number:	11	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	20.0000
Recording Time:	7/20/2010 15:12	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



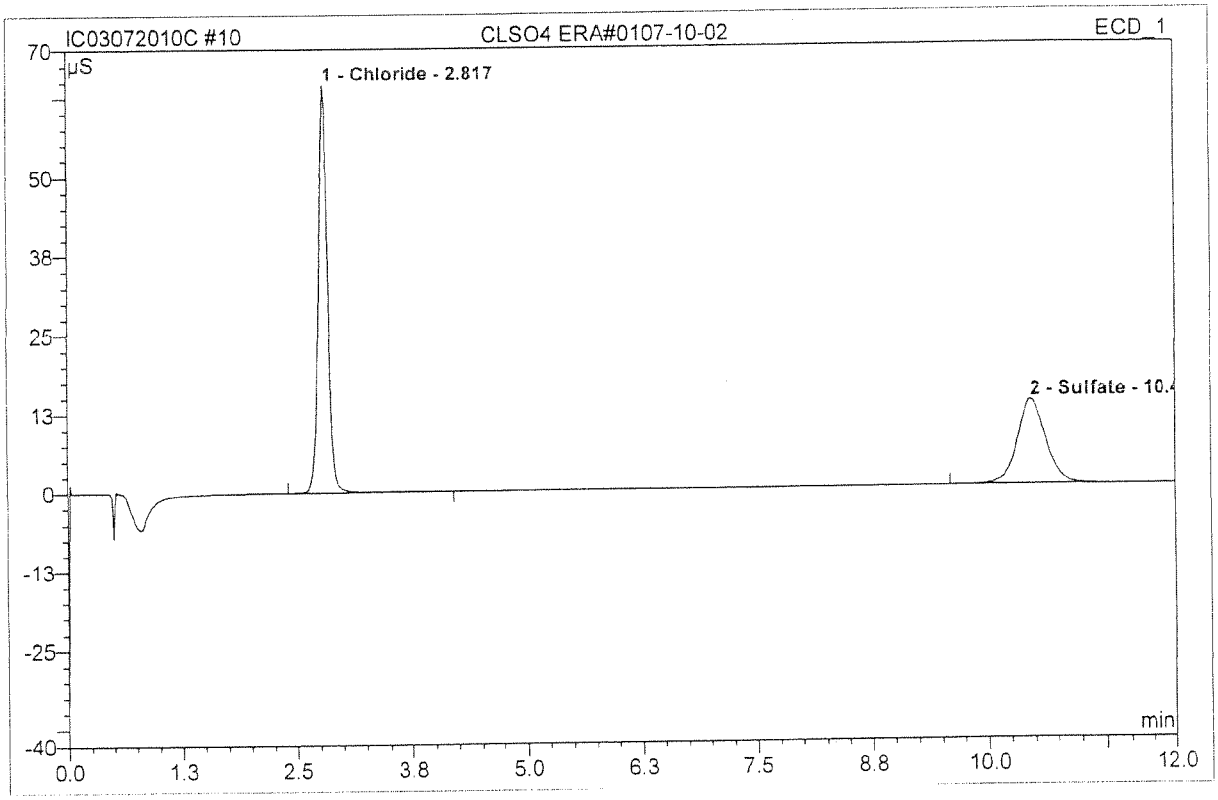
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.83	Chloride	47.477	5.326	58.89	68.625	BMB
2	5.25	Nitrate	17.429	3.581	39.60	19.185	BMB
3	8.55	n.a.	0.347	0.136	1.51	n.a.	BMB
Total:			65.253	9.043	100.00	87.811	

AB 7/20/10

10 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	**CLSO4 ERA#0107-10-02**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



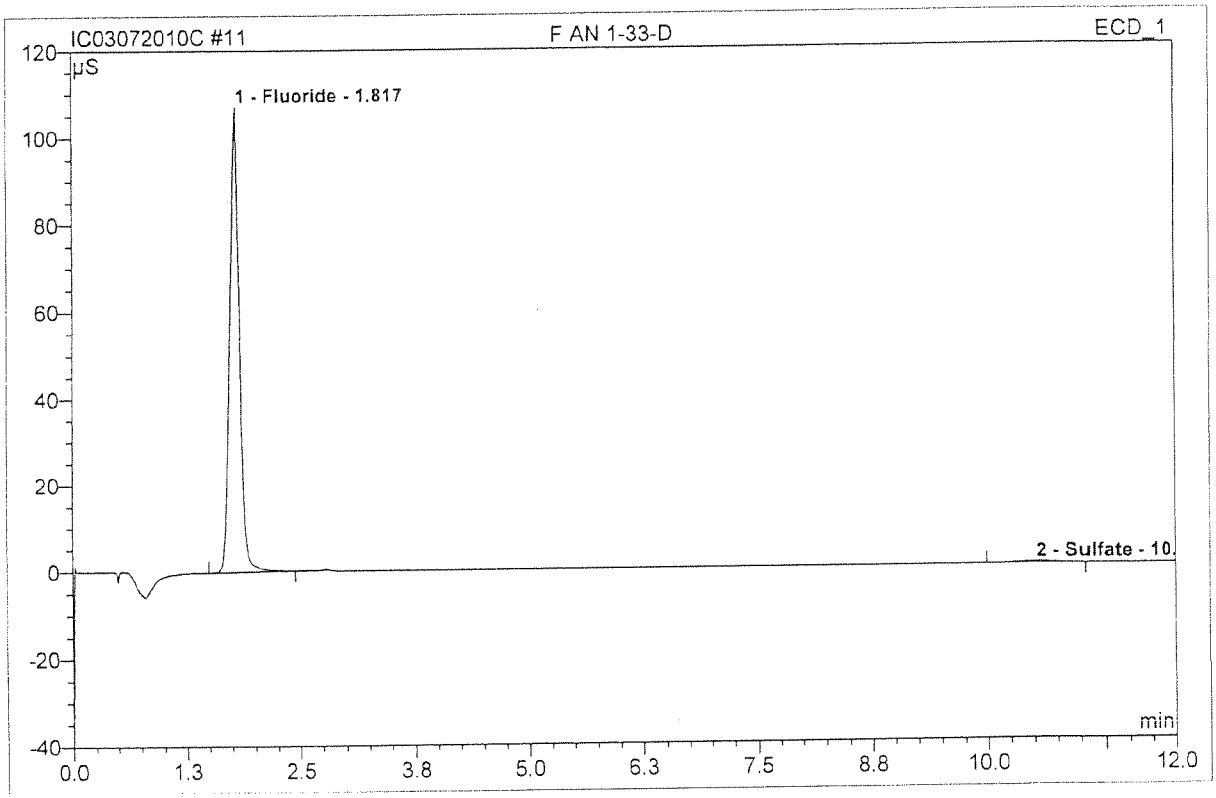
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.82	Chloride	64.536	7.515	60.92	4.842	BMB
2	10.47	Sulfate	13.372	4.820	39.08	4.848	BMB
Total:			77.908	12.335	100.00	9.689	

nb 7.20.10

11 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/20/2010 15:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.82	Fluoride	107.266	13.275	99.10	14.216	BMB
2	10.53	Sulfate	0.331	0.121	0.90	0.243	BMB
Total:			107.597	13.396	100.00	14.459	

nb 7.20.10

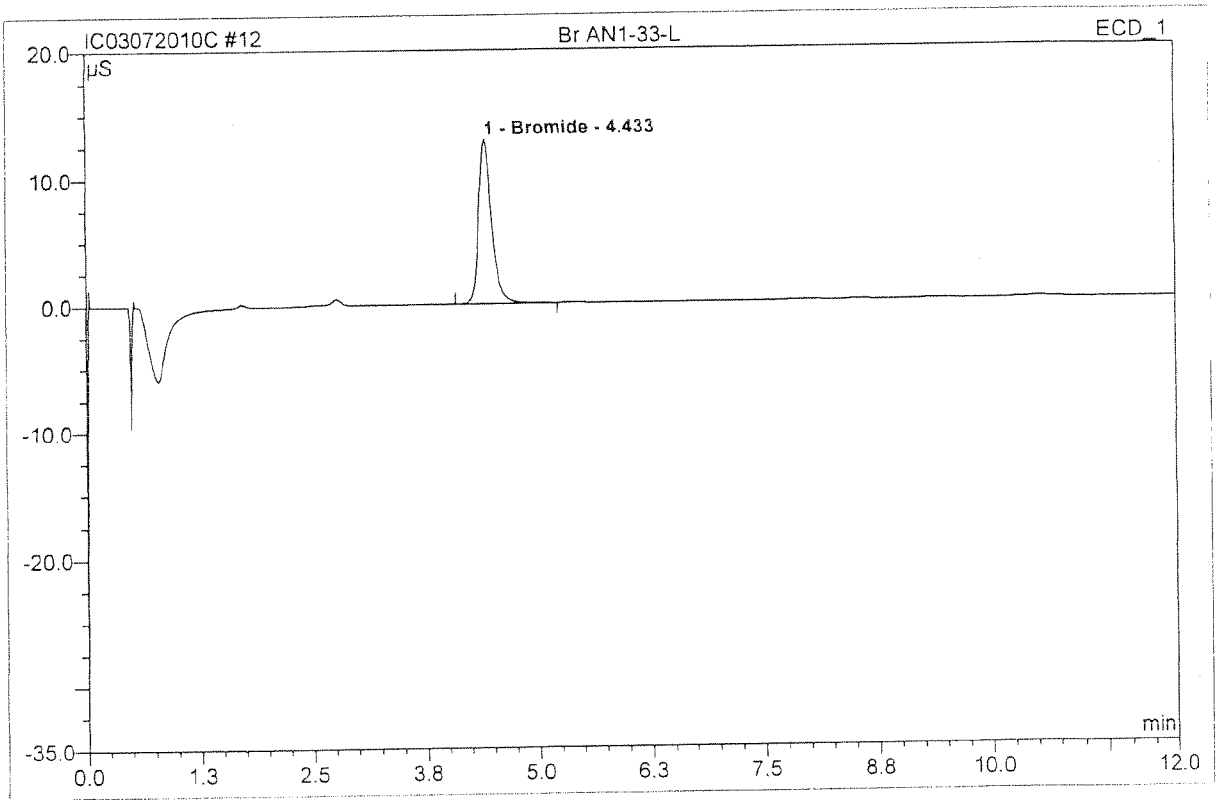
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

12 Br AN1-33-L

Br

Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**

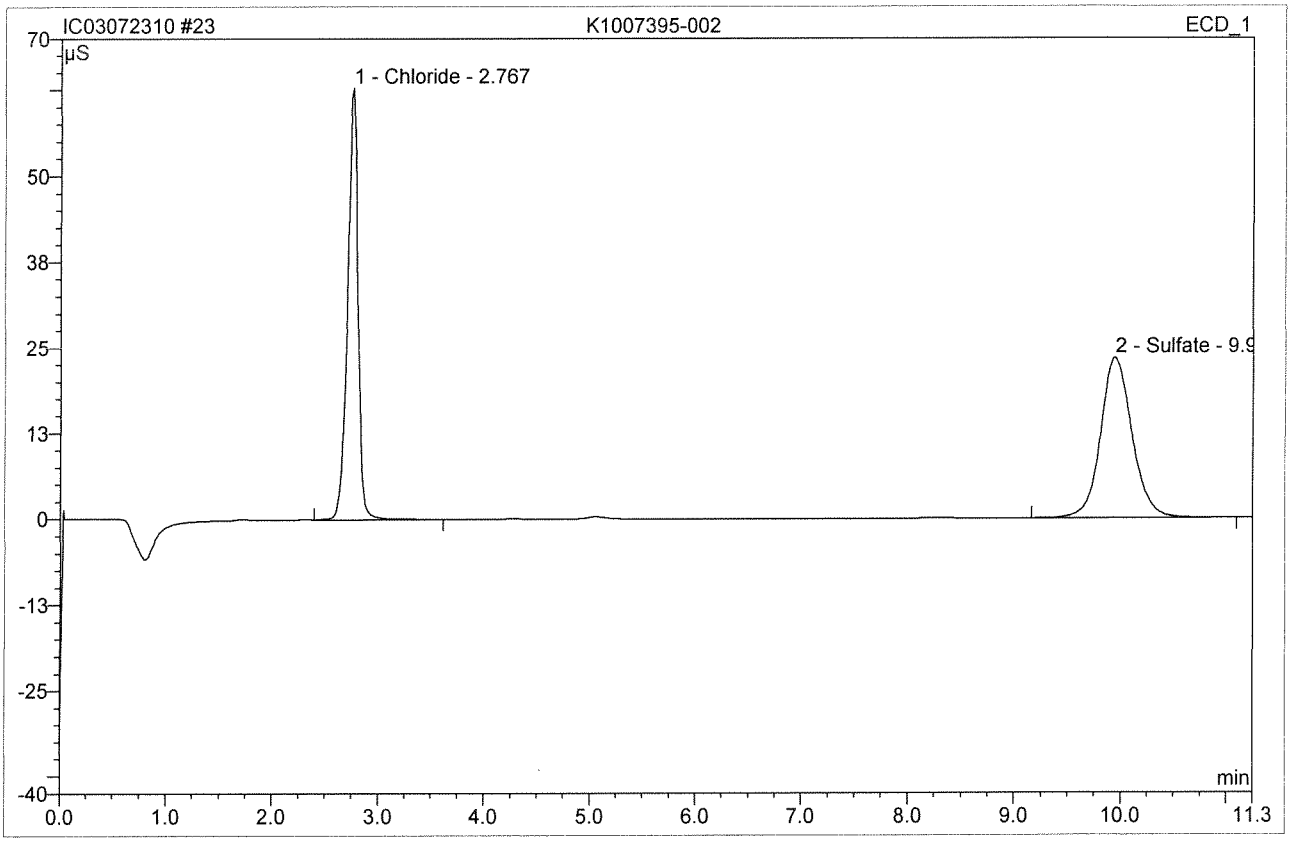


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.43	Bromide	13.016	2.174	100.00	4.103	BMB
Total:			13.016	2.174	100.00	4.103	

nb 7/20/10

23 K1007395-002

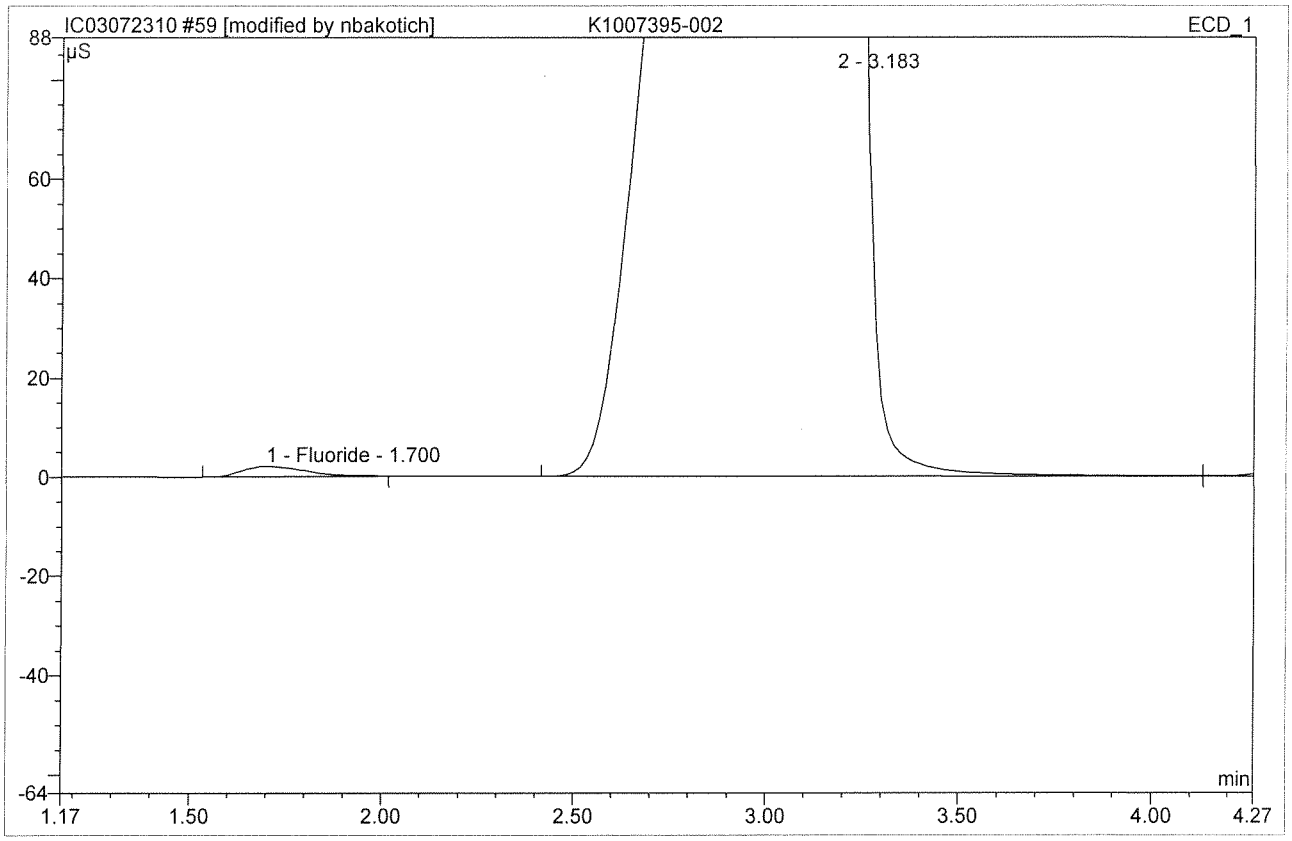
Sample Name:	**K1007395-002**	*Injection Volume:*	**200.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/23/2010 11:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.77	Chloride	62.902	7.276	47.68	234.348	BMB
2	9.95	Sulfate	23.408	7.982	52.32	401.381	BMB
Total:			86.311	15.258	100.00	635.729	

59 K1007395-002

Sample Name:	**K1007395-002**	*Injection Volume:*	**200.0**
Vial Number:	**58**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 19:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	2.097	0.402	0.09	0.431	BMB*
2	3.18	n.a.	537.301	203.998	45.75	n.a.	BM *
3	4.33	Bromide	0.848	0.141	0.03	0.532	M *
4	5.07	Nitrate	8.885	1.714	0.38	0.918	MB*
5	9.15	n.a.	377.165	239.685	53.75	n.a.	BMB
Total:			926.295	445.940	100.00	1.881	

After Initials nb

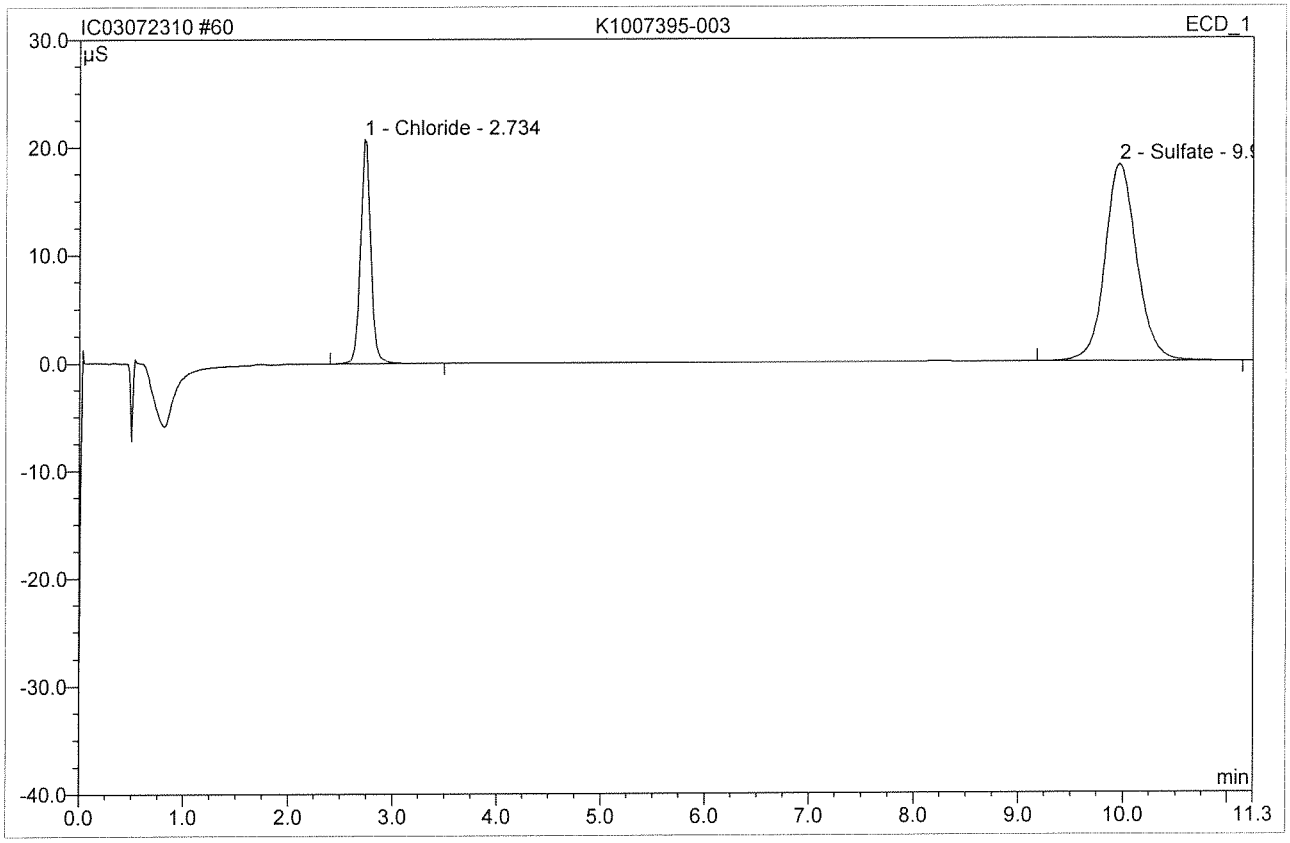
JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other 192

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

60 K1007395-003

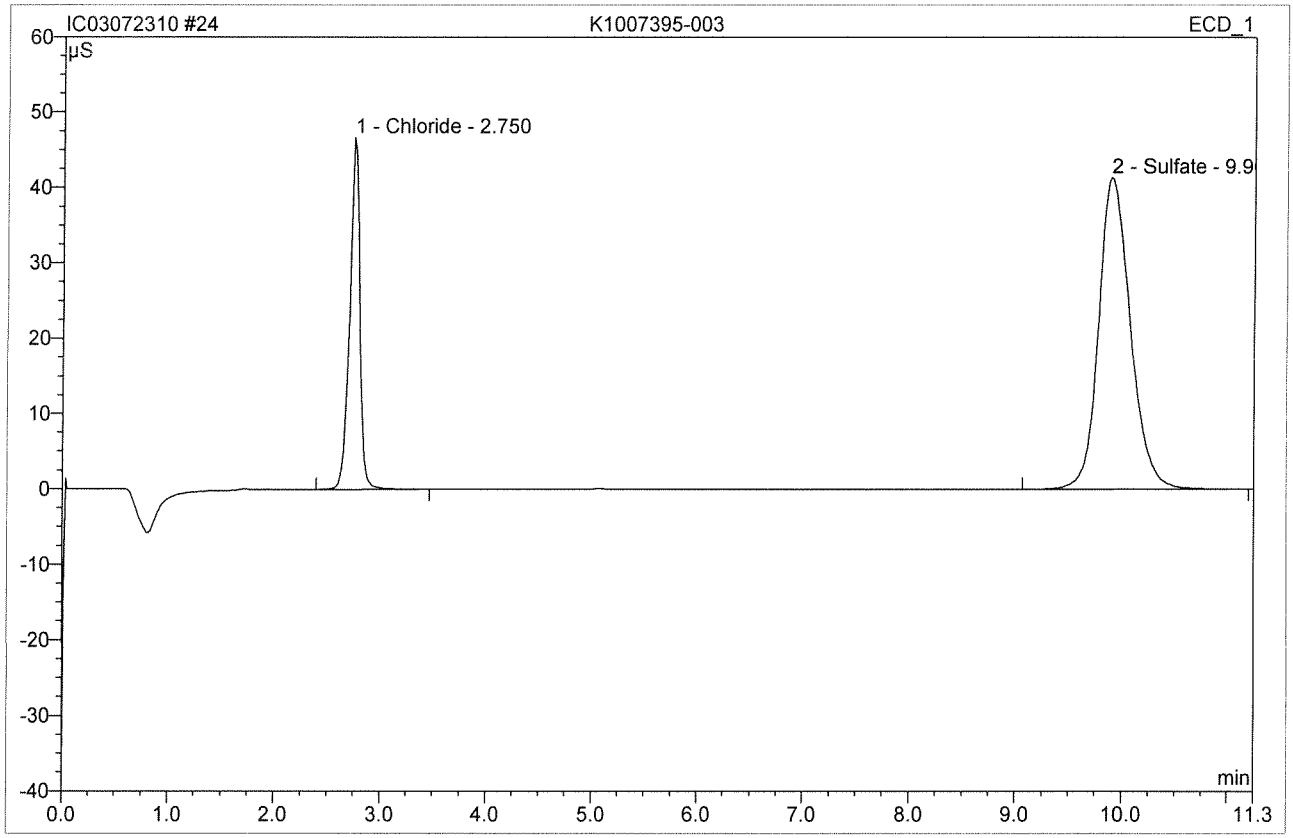
Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**59**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/23/2010 19:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	20.776	2.376	27.44	153.048	BMB
2	9.97	Sulfate	18.252	6.283	72.56	631.894	BMB
Total:			39.028	8.659	100.00	784.942	

24 K1007395-003

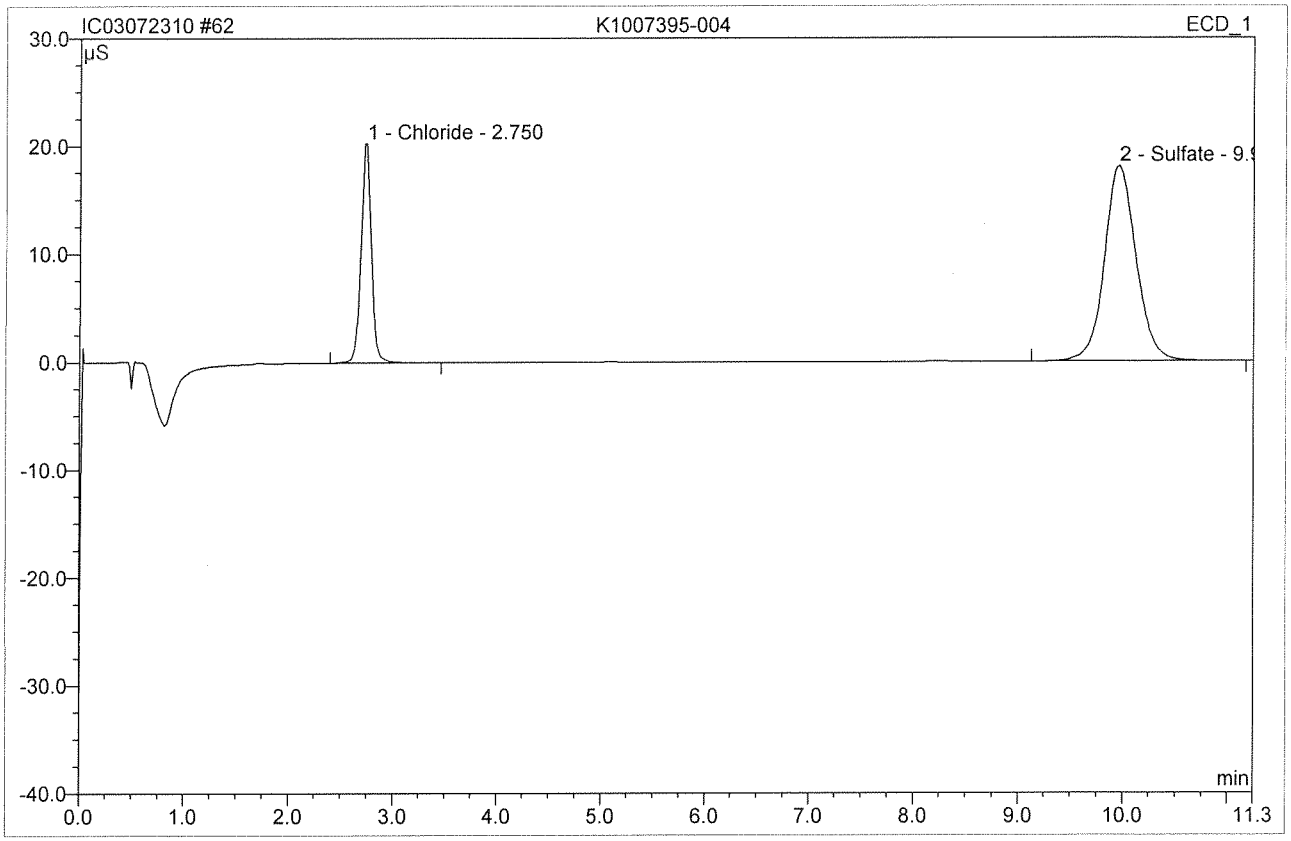
Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/23/2010 11:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.75	Chloride	46.657	5.236	26.94	168.662	BMB
2	9.90	Sulfate	41.282	14.200	73.06	714.049	BMB
Total:			87.939	19.436	100.00	882.710	

62 K1007395-004

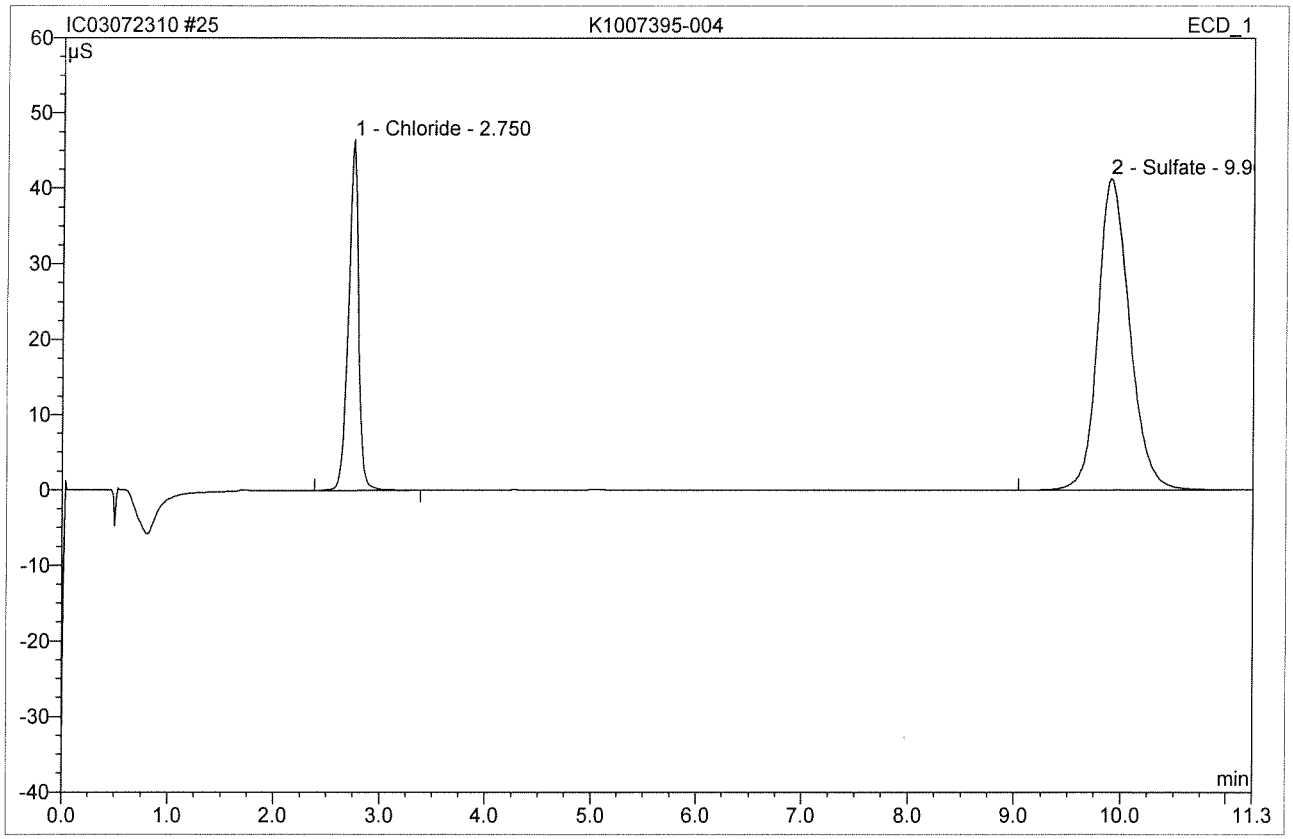
Sample Name:	**K1007395-004**	*Injection Volume:*	**200.0**
Vial Number:	**61**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/23/2010 20:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.75	Chloride	20.310	2.331	27.21	150.170	BMB
2	9.97	Sulfate	18.065	6.237	72.79	627.251	BMB
Total:			38.375	8.568	100.00	777.421	

25 K1007395-004

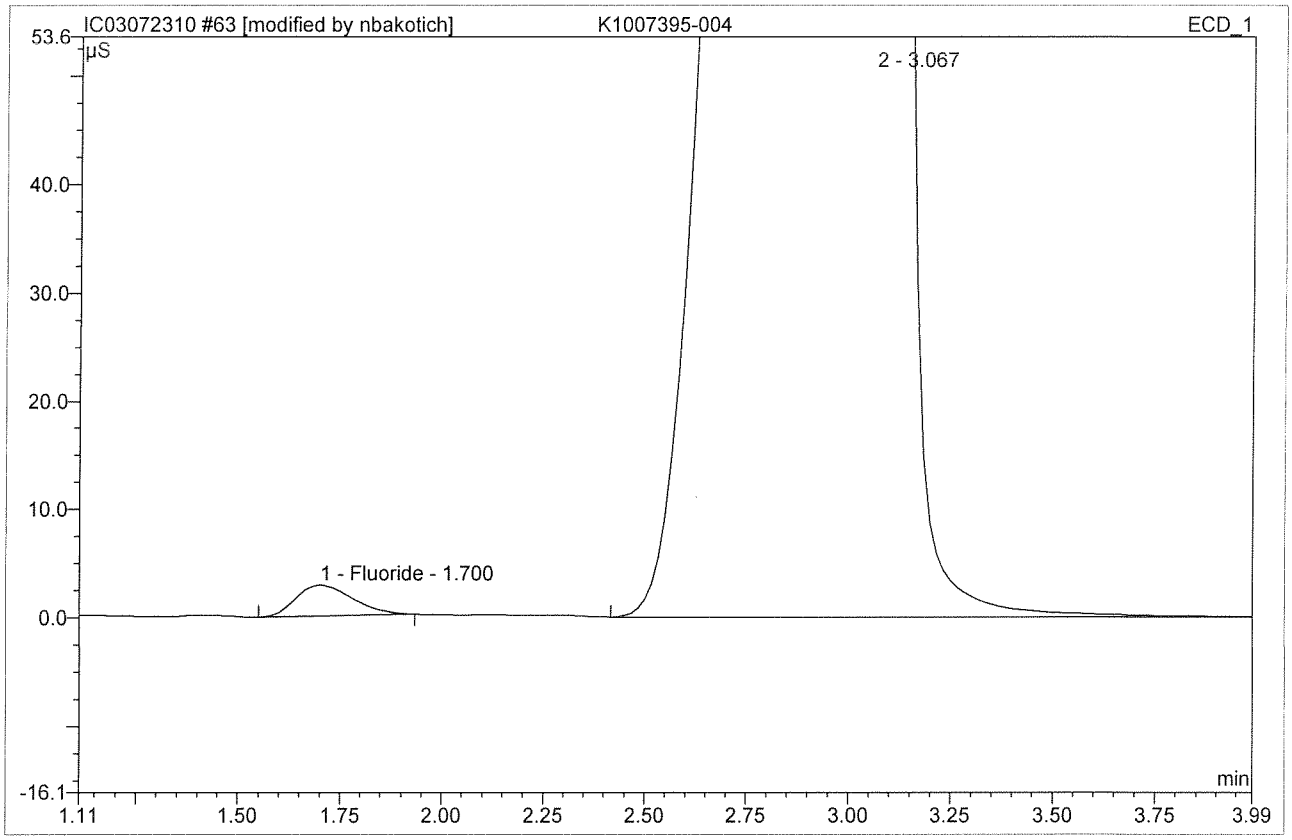
Sample Name:	**K1007395-004**	*Injection Volume:*	**200.0**
Vial Number:	**24**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/23/2010 11:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.75	Chloride	46.527	5.177	26.70	166.766	BMB
2	9.90	Sulfate	41.252	14.212	73.30	714.653	BMB
Total:			87.779	19.389	100.00	881.418	

63 K1007395-004

Sample Name:	**K1007395-004**	*Injection Volume:*	**200.0**
Vial Number:	**62**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 20:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	2.839	0.458	0.08	0.491	BMB*
2	3.07	n.a.	470.255	150.732	27.61	n.a.	BM *
3	4.28	Bromide	1.155	0.203	0.04	0.764	MB
4	5.05	Nitrate	1.598	0.331	0.06	0.178	BMB
5	8.85	n.a.	507.684	394.255	72.21	n.a.	BMB
Total:			983.532	545.979	100.00	1.432	

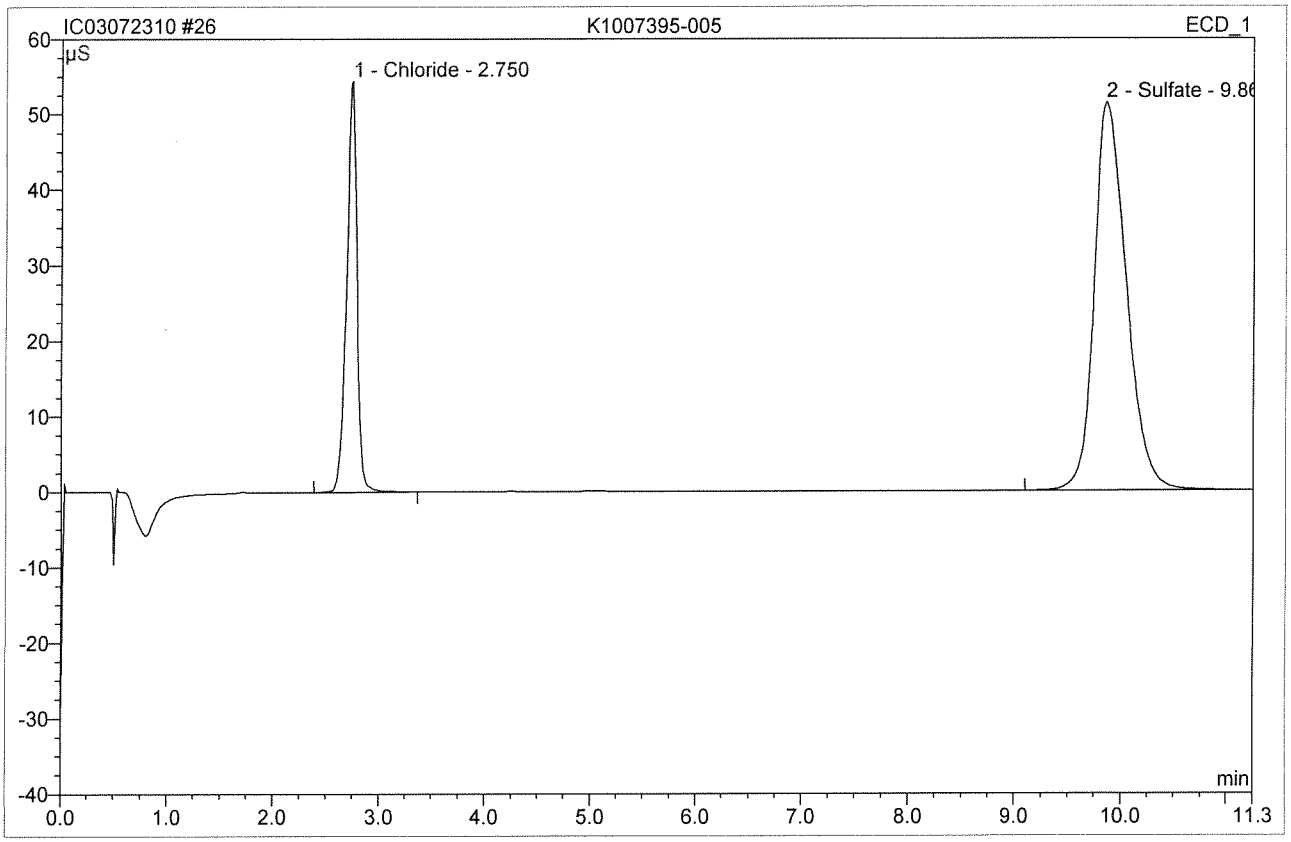
After Initials nb

JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

26 K1007395-005

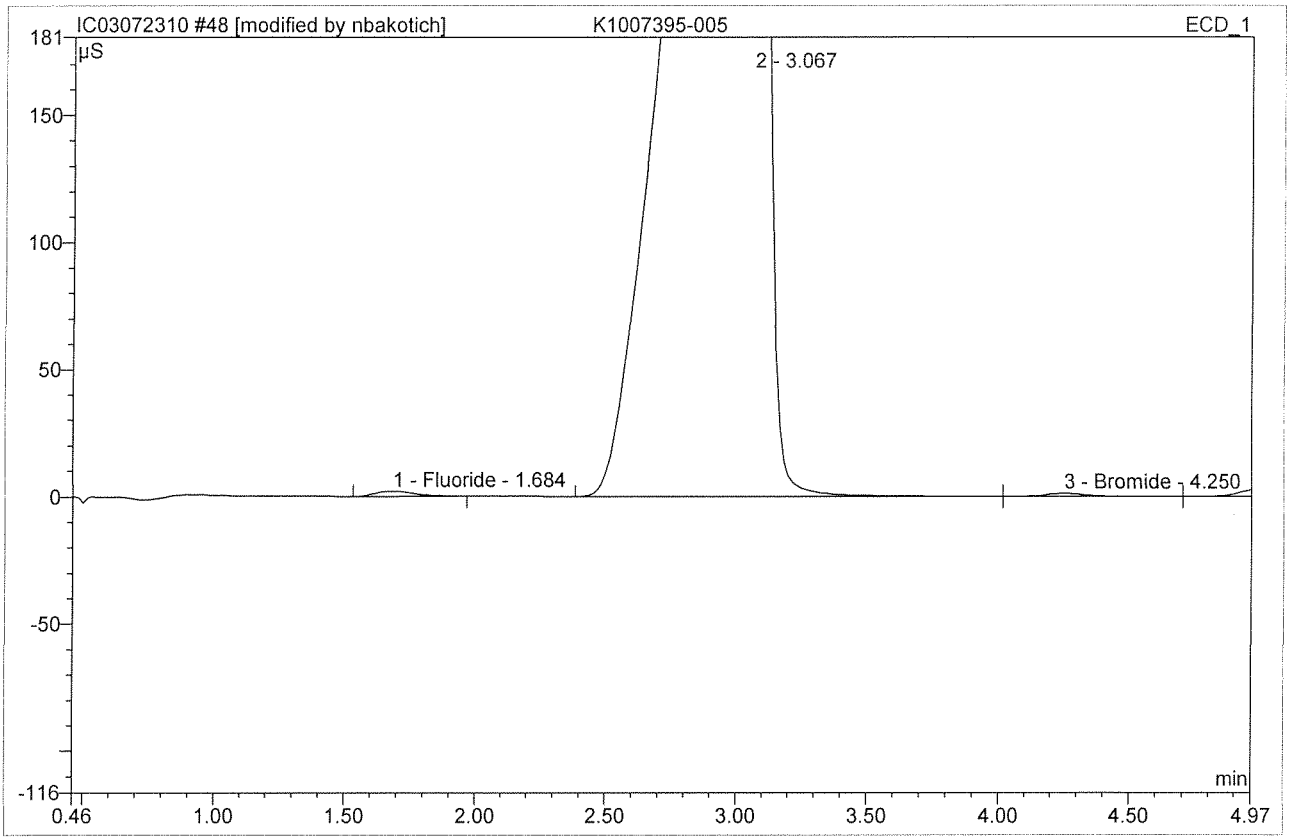
Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**25**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/23/2010 12:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.75	Chloride	54.455	6.196	25.74	199.568	BMB
2	9.87	Sulfate	51.446	17.871	74.26	898.665	BMB
Total:			105.901	24.067	100.00	1098.233	

48 K1007395-005

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride $\bar{x}$=0.39 RPD=<1	2.039	0.365	0.06	0.391	BMB*
2	3.07	n.a.	504.261	175.651	26.69	n.a.	BM *
3	4.25	Bromide $\bar{x}$=0.93 RPD=6	1.304	0.254	0.04	0.957	M
4	5.00	Nitrate $\bar{x}$=0.35 RPD=3	3.060	0.655	0.10	0.351	MB
5	8.68	n.a.	568.753	481.131	73.11	n.a.	BMB
Total:			1079.417	658.055	100.00	1.699	

After
Initials _____

JUL 26 2010

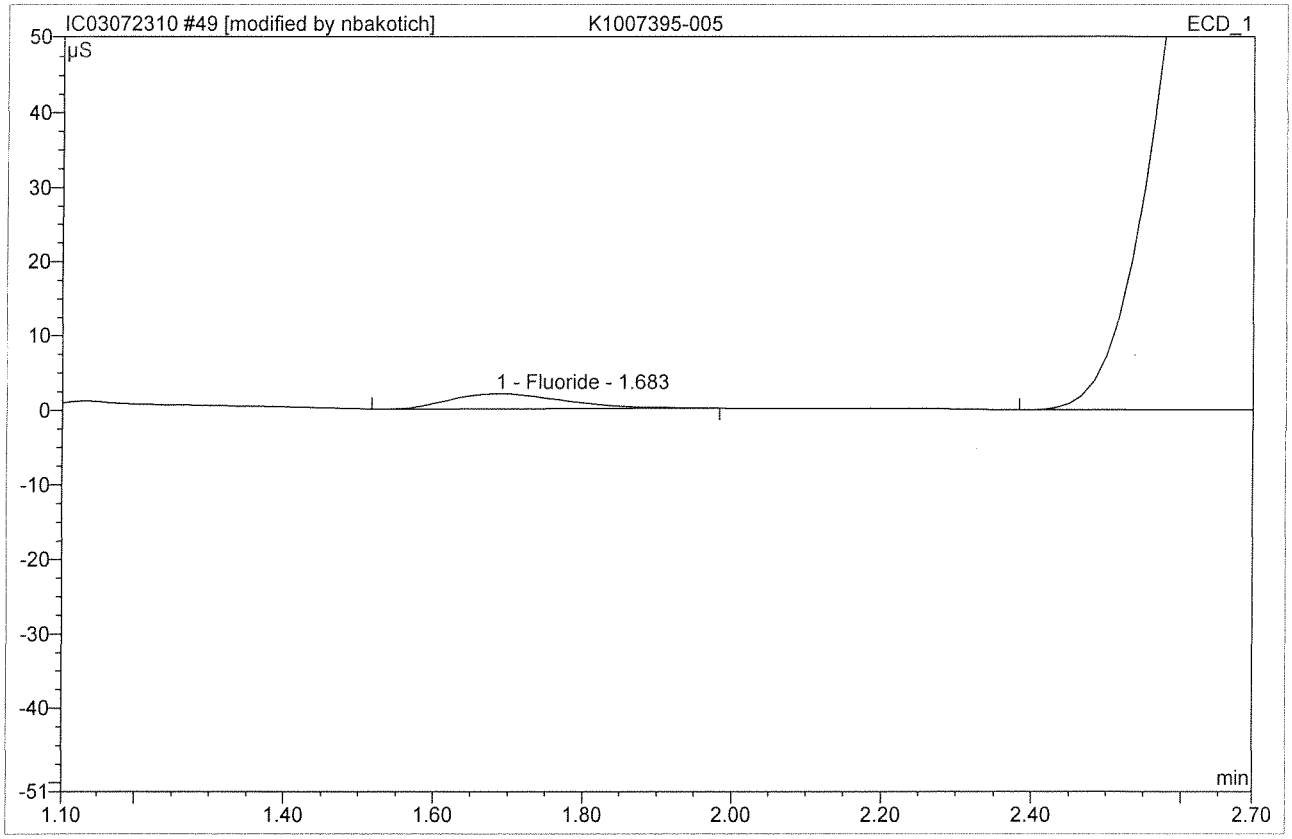
☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other _____

default/Integration

49 K1007395-005

D

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**48**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	2.020	0.362	0.05	0.387	BMB*
2	3.07	n.a.	503.209	175.743	26.69	n.a.	BM *
3	4.27	Bromide	1.276	0.237	0.04	0.896	Mb
4	5.02	Nitrate	3.029	0.635	0.10	0.340	bMB
5	8.70	n.a.	568.382	481.370	73.12	n.a.	BMB
Total:			1077.916	658.346	100.00	1.623	

After Initials nb

JUL 26 2010

Wrong Peak/Peak not Found
Baseline/shoulder Incorrect
Other

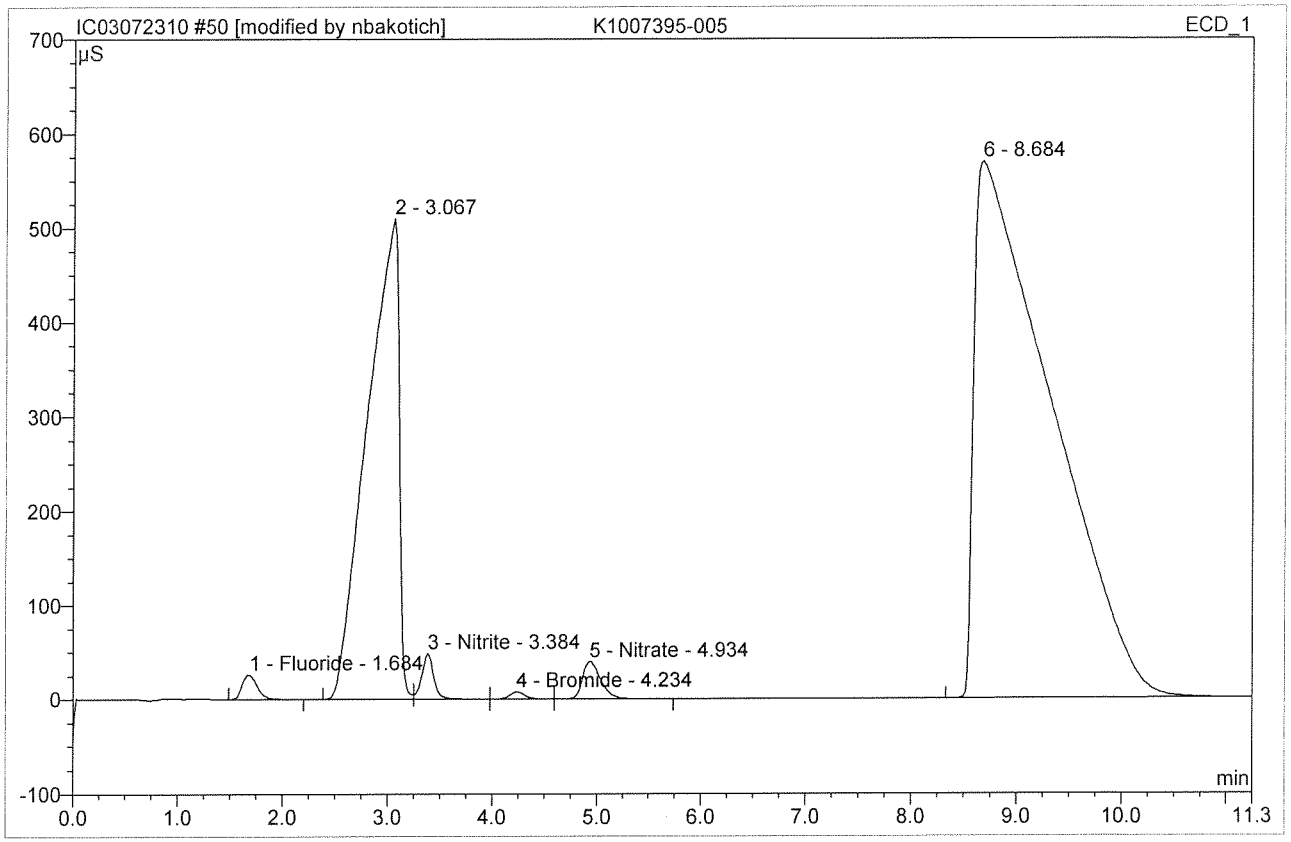
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

50 K1007395-005

MS

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride Rec = 110	26.335	4.450	0.65	4.766	BMB*
2	3.07	n.a.	510.204	178.481	26.23	n.a.	BM
3	3.38	Nitrite Rec = 102 ✓	48.655	6.457	0.95	4.055	Mb
4	4.23	Bromide Rec = 99 ✓	7.673	1.300	0.19	4.907	bMb
5	4.93	Nitrate Rec = 99 ✓	40.060	8.043	1.18	4.309	bMB
6	8.68	n.a.	569.274	481.831	70.80	n.a.	BMB
Total:			1202.202	680.563	100.00	18.037	

Spk lvl = 1

After Initials nk

JUL 26 2010

☐ Wrong Peak/Peak not Found
☒ Baseline/shoulder Incorrect
☐ Other

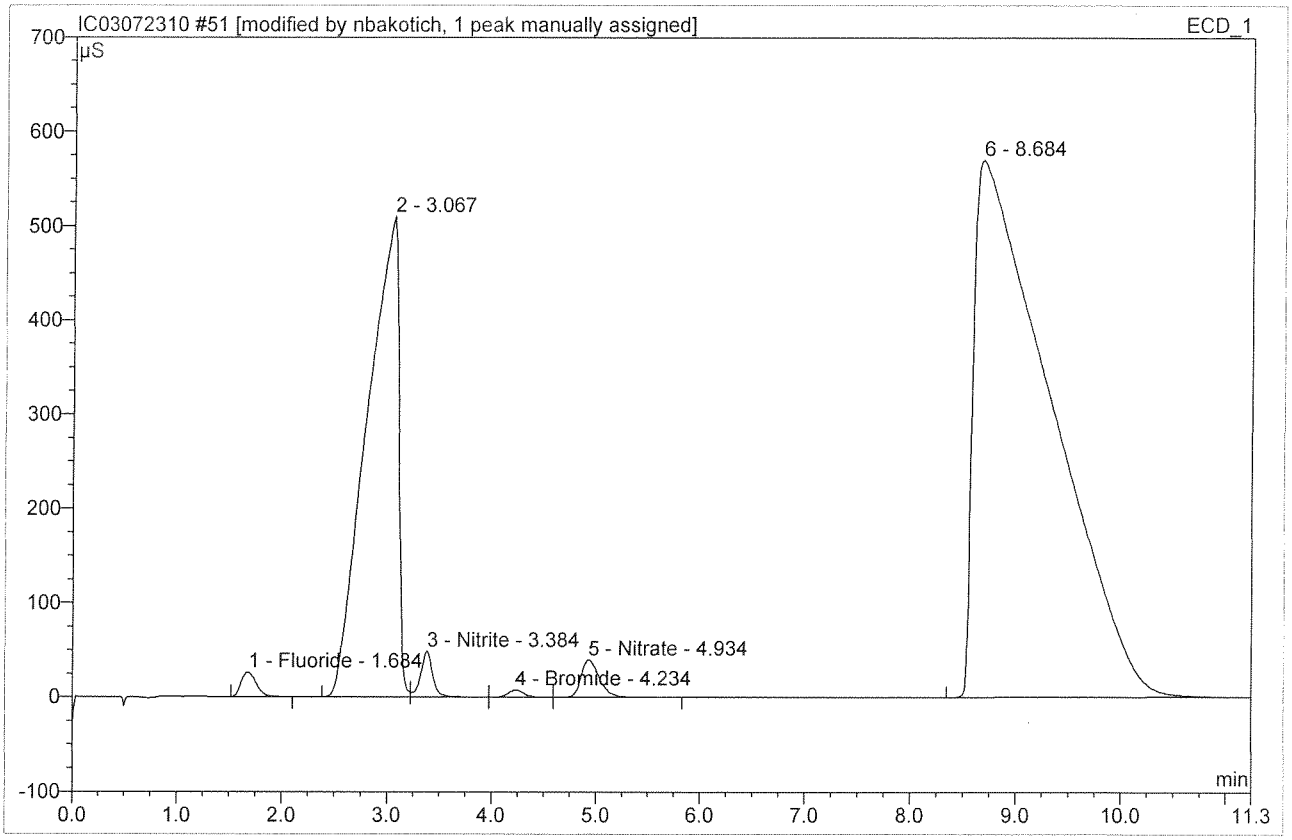
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

51 K1007395-005

MSD

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**50**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride REC=107	26.206	4.367	0.64	4.676	BMB*
2	3.07	n.a.	510.208	178.421	26.16	n.a.	BM *
3	3.38	Nitrite REC=102	48.594	6.518	0.96	4.094	Mb*
4	4.23	Bromide REC=98	7.672	1.292	0.19	4.877	bMb*^
5	4.93	Nitrate REC=100	39.962	8.076	1.18	4.327	bMB*
6	8.68	n.a.	569.847	483.244	70.87	n.a.	BMB
Total:			1202.489	681.918	100.00	17.974	

Spk W1=4

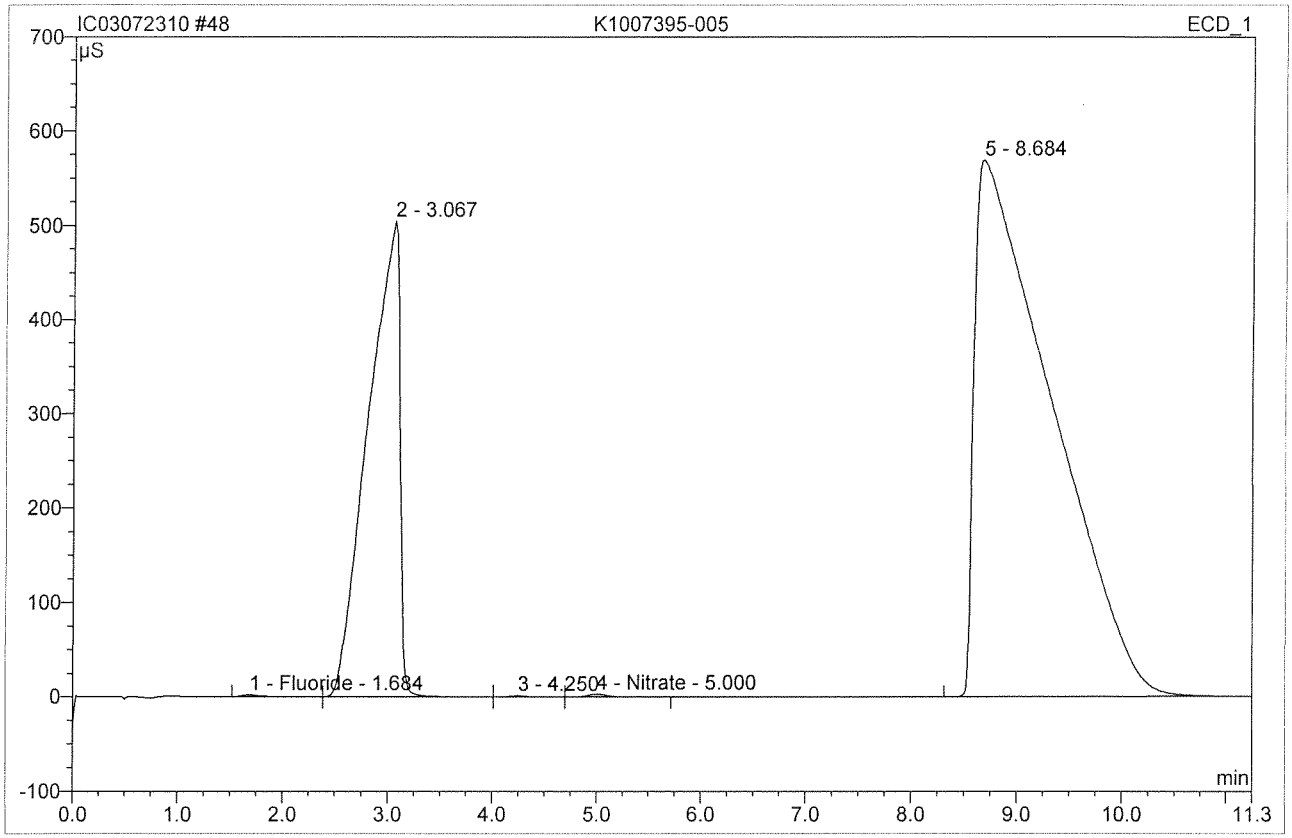
After Initials nb

JUL 26 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

48 K1007395-005

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**47**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	2.125	0.480	0.07	0.514	BMb
2	3.07	n.a.	504.261	175.651	26.69	n.a.	bM
3	4.25	n.a.	1.304	0.254	0.04	n.a.	M
4	5.00	Nitrate	3.060	0.655	0.10	0.351	MB
5	8.68	n.a.	568.753	481.131	73.10	n.a.	BMB
Total:			1079.503	658.171	100.00	0.865	

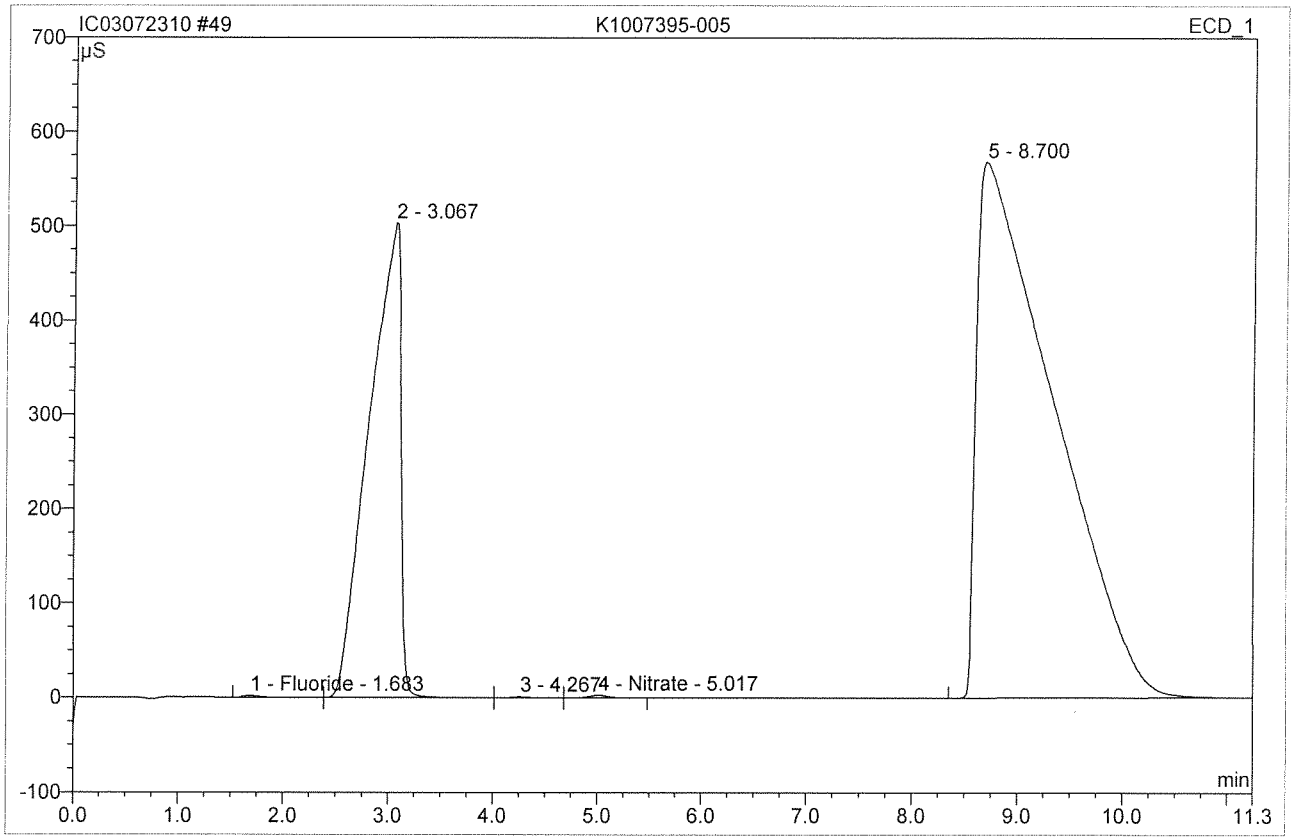
Before

JUL 2 6 2010

49 K1007395-005

D

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**48**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	2.088	0.467	0.07	0.500	BMb
2	3.07	n.a.	503.209	175.743	26.69	n.a.	bM
3	4.27	n.a.	1.276	0.237	0.04	n.a.	Mb
4	5.02	Nitrate	3.029	0.635	0.10	0.340	bMB
5	8.70	n.a.	568.382	481.370	73.11	n.a.	BMB
Total:			1077.985	658.452	100.00	0.840	

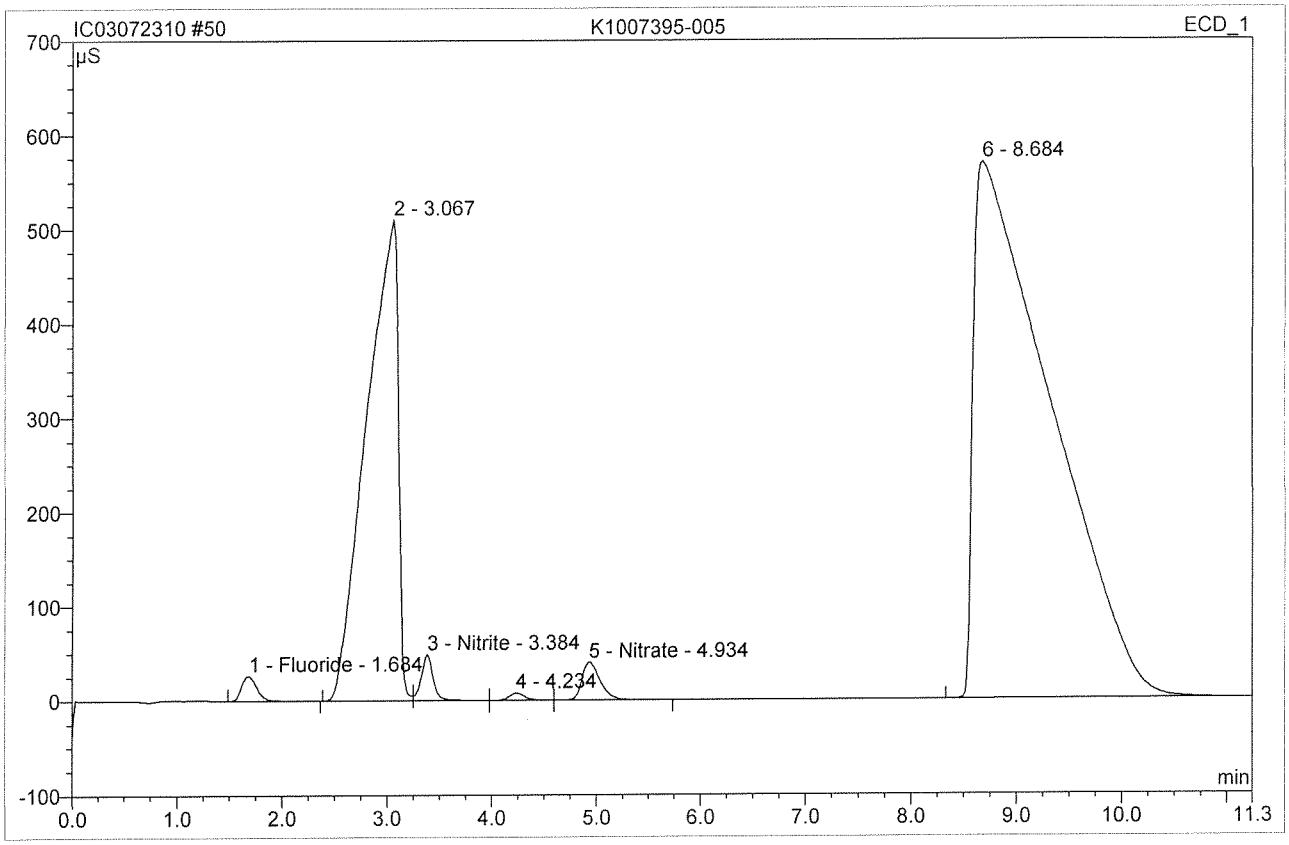
Before

JUL 2 6 2010

50 K1007395-005

MS

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**49**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	26.393	4.546	0.67	4.868	BMB
2	3.07	n.a.	510.204	178.481	26.22	n.a.	BM
3	3.38	Nitrite	48.655	6.457	0.95	4.055	Mb
4	4.23	n.a.	7.673	1.300	0.19	n.a.	bMb
5	4.93	Nitrate	40.060	8.043	1.18	4.309	bMB
6	8.68	n.a.	569.274	481.831	70.79	n.a.	BMB
Total:			1202.259	680.659	100.00	13.233	

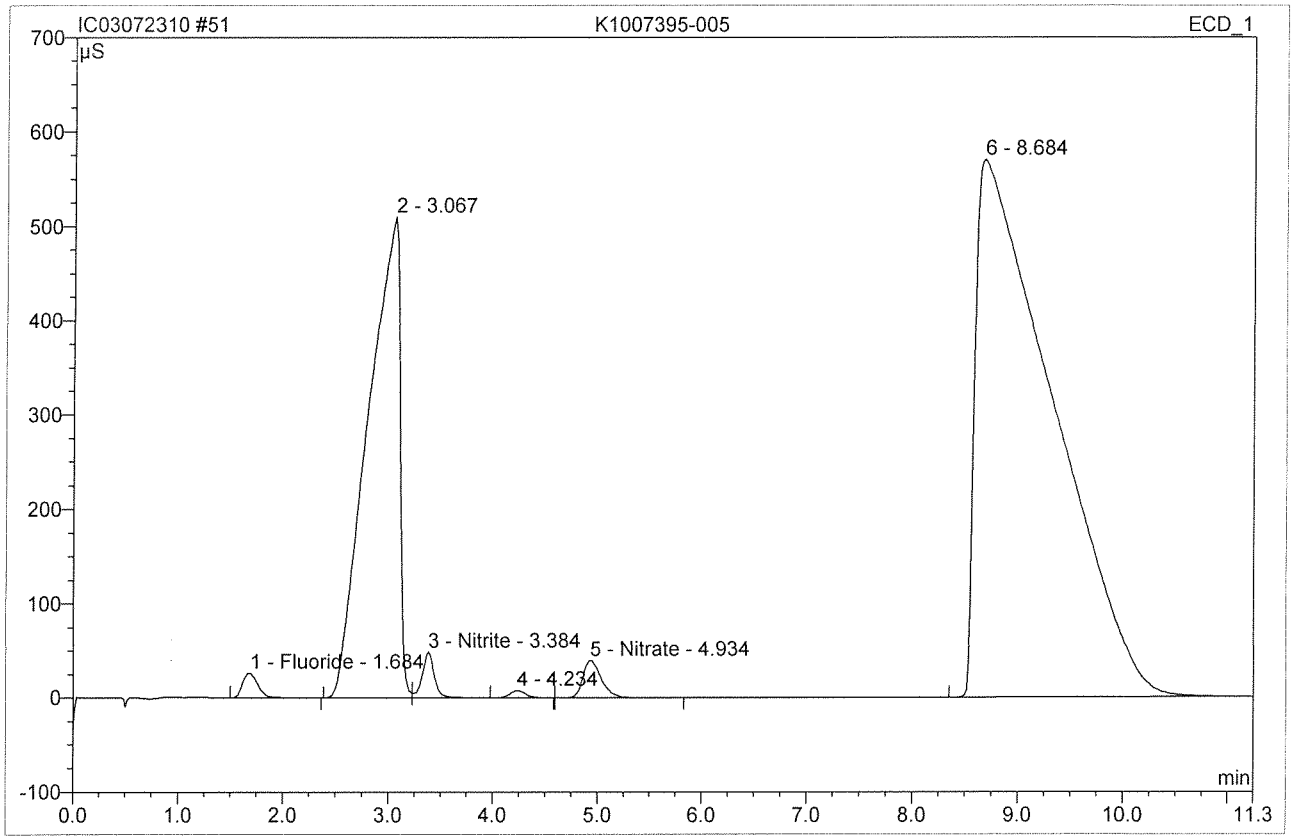
Before

JUL 2 6 2010

51 K1007395-005

MSD

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**50**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 17:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



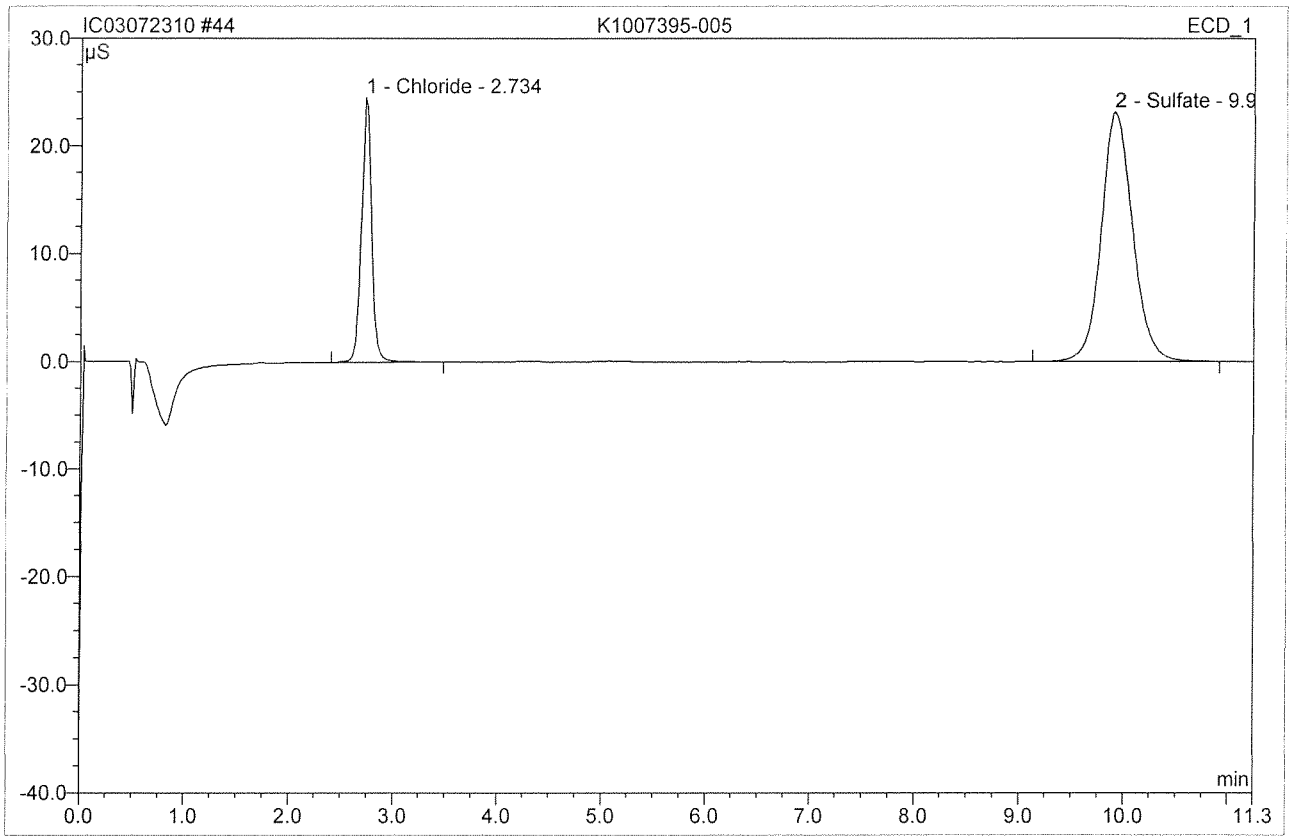
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	26.345	4.520	0.66	4.841	BMB
2	3.07	n.a.	510.294	178.467	26.15	n.a.	BM
3	3.38	Nitrite	48.721	6.721	0.98	4.221	M
4	4.23	n.a.	7.673	1.293	0.19	n.a.	Rd
5	4.93	Nitrate	40.020	8.125	1.19	4.353	MB
6	8.68	n.a.	569.847	483.244	70.82	n.a.	BMB
Total:			1202.900	682.369	100.00	13.415	

Before

2 6 2010

44 K1007395-005

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**43**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/23/2010 16:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

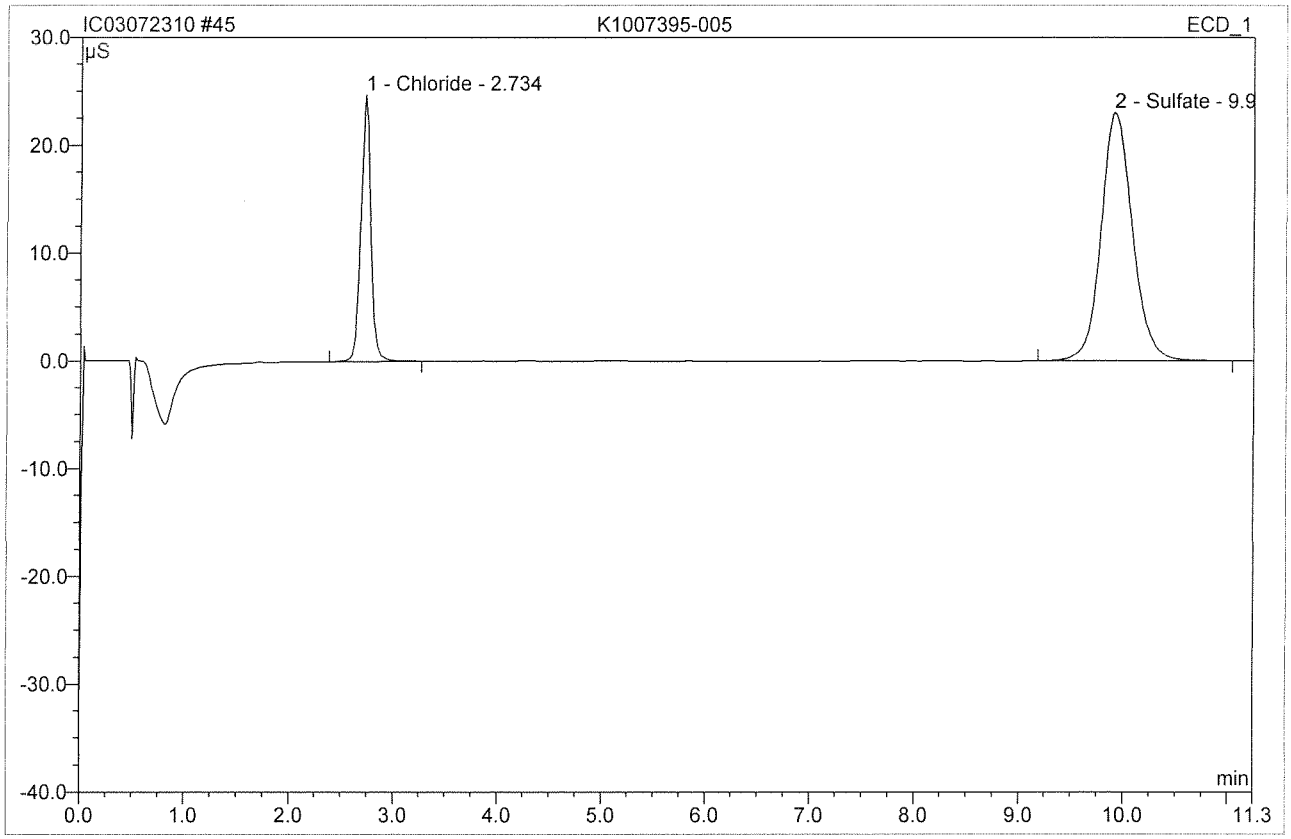


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	24.515	2.764	25.88	178.053	BMB
2	9.92	Sulfate	23.114	7.917	74.12	796.175	BMB
Total:			47.628	10.681	100.00	974.228	

45 K1007395-005

D

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**44**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/23/2010 16:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

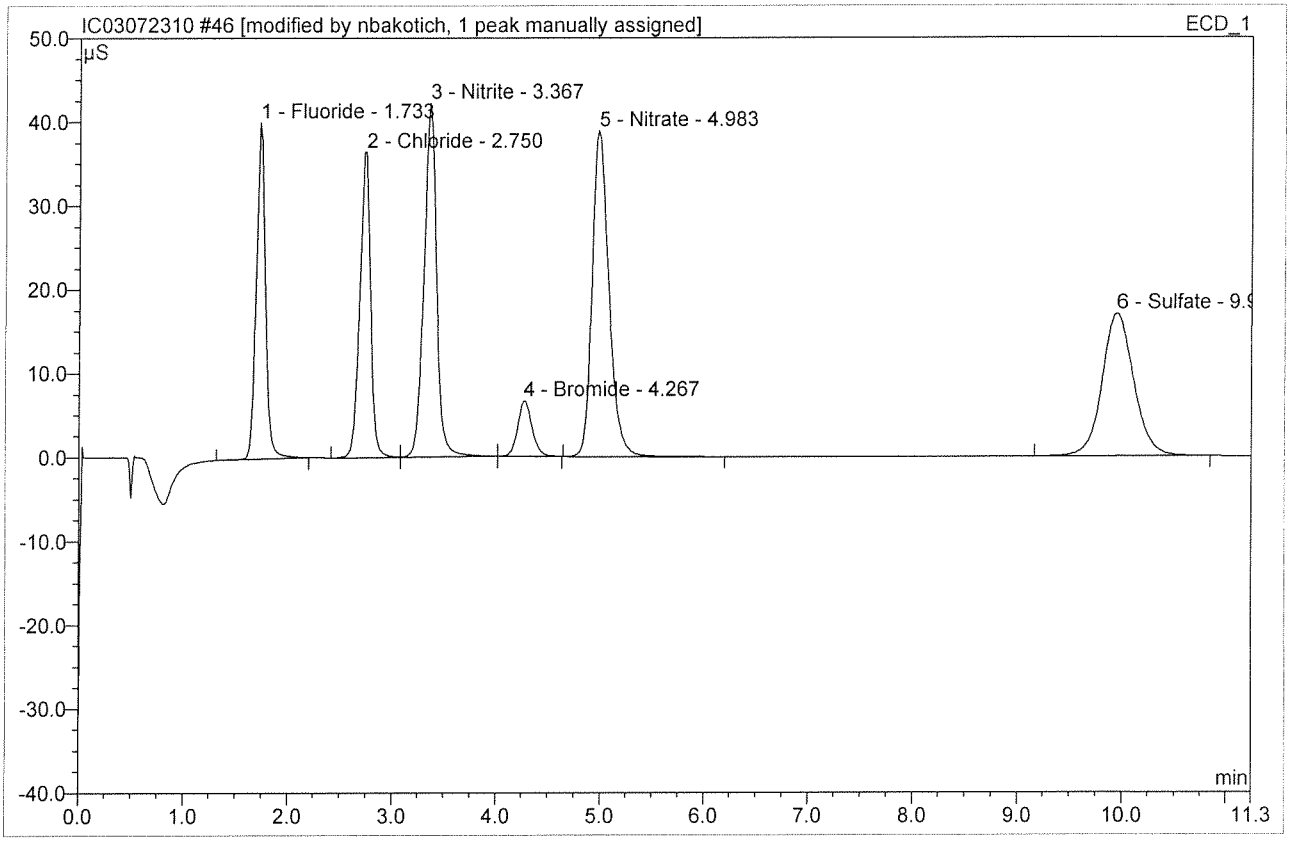


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	24.703	2.757	25.89	177.578	BMB
2	9.92	Sulfate	23.018	7.891	74.11	793.548	BMB
Total:			47.721	10.647	100.00	971.126	

46 K1007395-005

MS

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**45**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/23/2010 16:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride REC=107	40.155	4.055	14.20	434.196	BMB*
2	2.75	Chloride REC=96	36.490	4.355	15.26	561.144	BM *
3	3.37	Nitrite REC=94	42.248	5.979	20.95	375.549	Mb*
4	4.27	Bromide REC=100	6.553	1.053	3.69	397.558	bMB*^
5	4.98	Nitrate REC=98	38.907	7.274	25.48	389.696	BMB*
6	9.95	Sulfate REC=94	16.993	5.829	20.42	1172.375	BMB
Total:			181.346	28.545	100.00	3330.518	

spk lvl 100

After Initials nb

JUL 26 2010

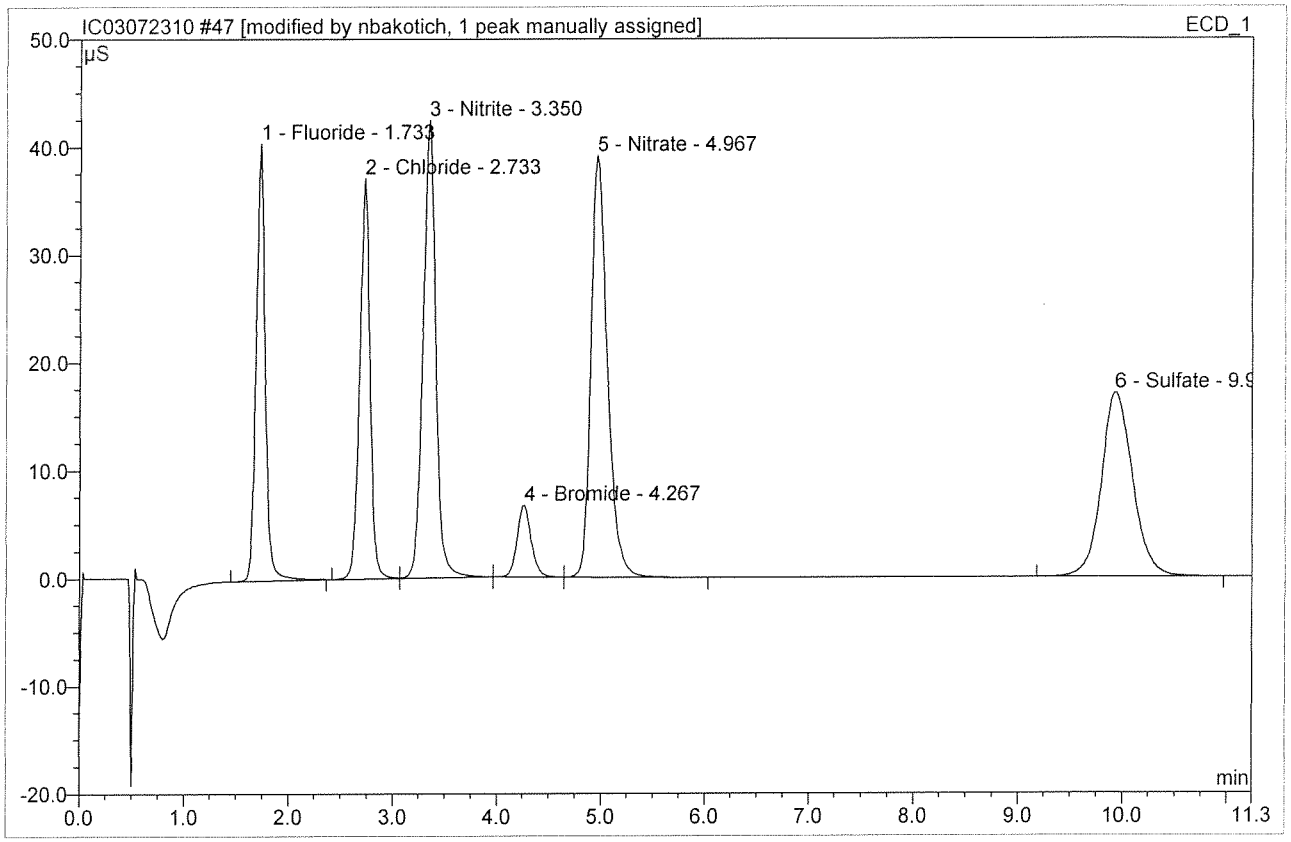
☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect

default/Integration

47 K1007395-005

MSD

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/23/2010 16:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride REC=110	40.530	4.103	14.34	439.311	BMB*
2	2.73	Chloride REC=94	37.170	4.303	15.04	554.347	BM *
3	3.35	Nitrite REC=95	42.433	6.019	21.04	378.043	Mb*
4	4.27	Bromide REC=103	6.615	1.059	3.70	399.873	bMb*^
5	4.97	Nitrate REC=97	39.127	7.241	25.31	387.931	bMB*
6	9.93	Sulfate REC=97%	17.040	5.878	20.55	1182.349	BMB
Total:			182.915	28.602	100.00	3341.855	

Spk lvl-4

After Initials _____

JUL 26 2010

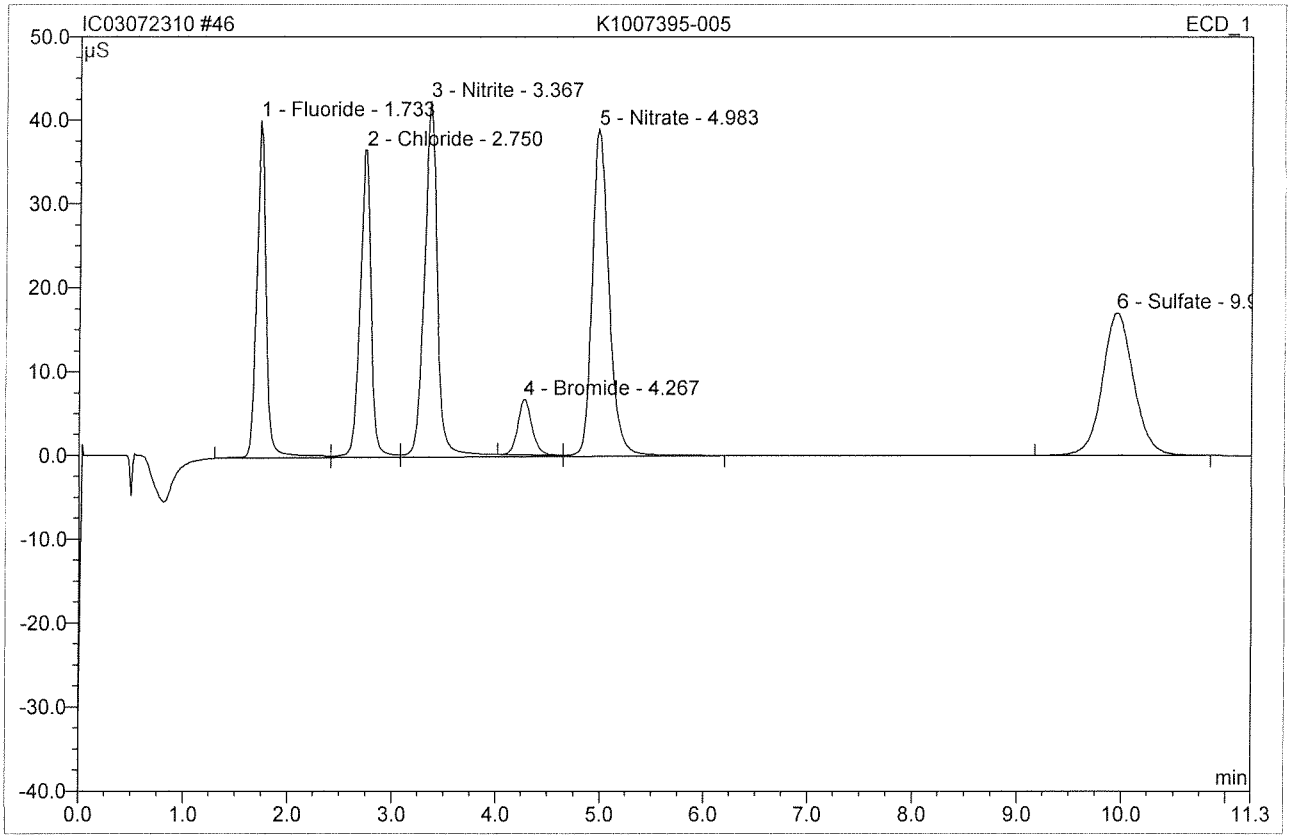
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other _____

default/Integration

46 K1007395-005

MS

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**45**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/23/2010 16:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride	40.293	4.234	14.42	453.416	BM
2	2.75	Chloride	36.678	4.481	15.26	577.304	M
3	3.37	Nitrite	42.481	6.352	21.64	398.936	M
4	4.27	Bromide	6.553	1.053	3.59	397.559	Rd
5	4.98	Nitrate	39.043	7.408	25.23	396.890	MB
6	9.95	Sulfate	16.993	5.829	19.85	1172.375	BMB
Total:			182.040	29.356	100.00	3396.481	

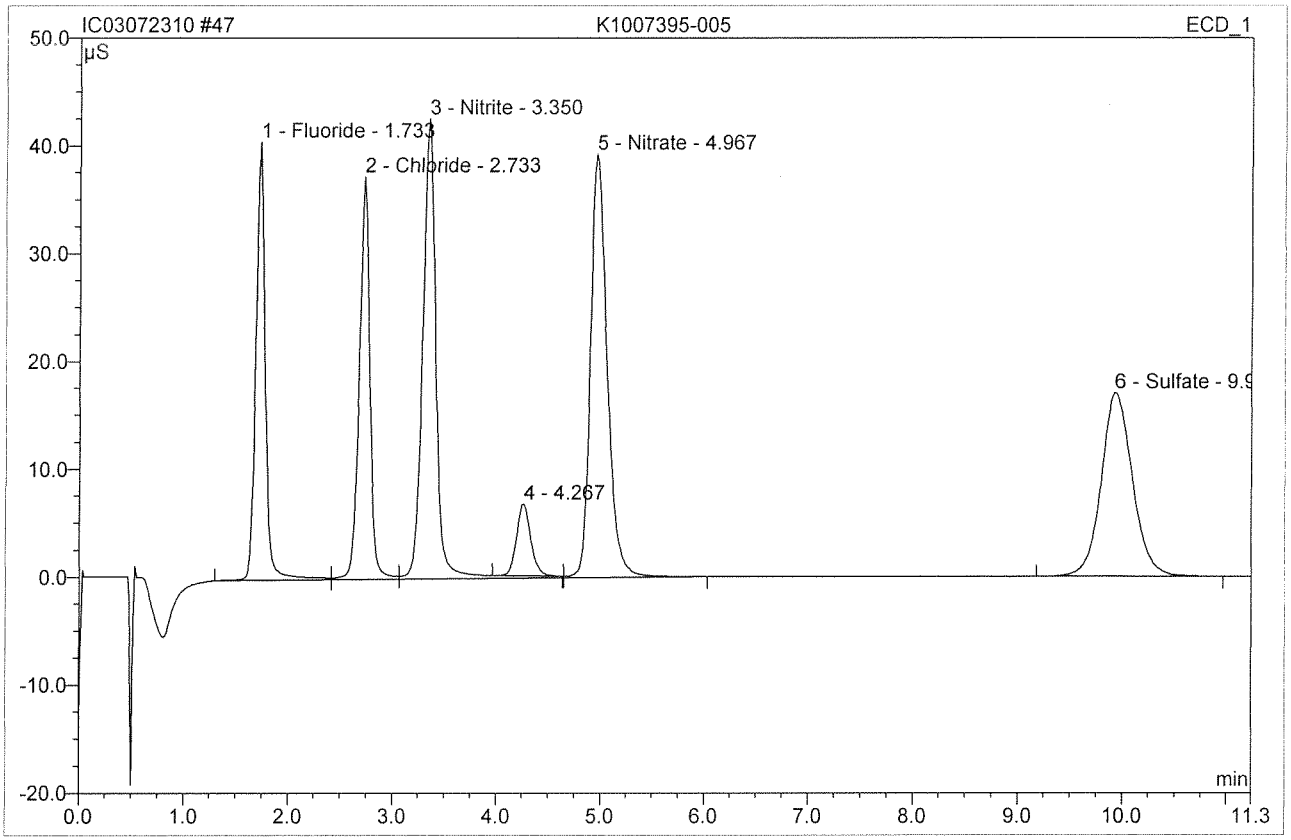
lore

JUL 2 6 2010

47 K1007395-005

MSD

Sample Name:	**K1007395-005**	*Injection Volume:*	**200.0**
Vial Number:	**46**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**200.0000**
Recording Time:	**7/23/2010 16:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



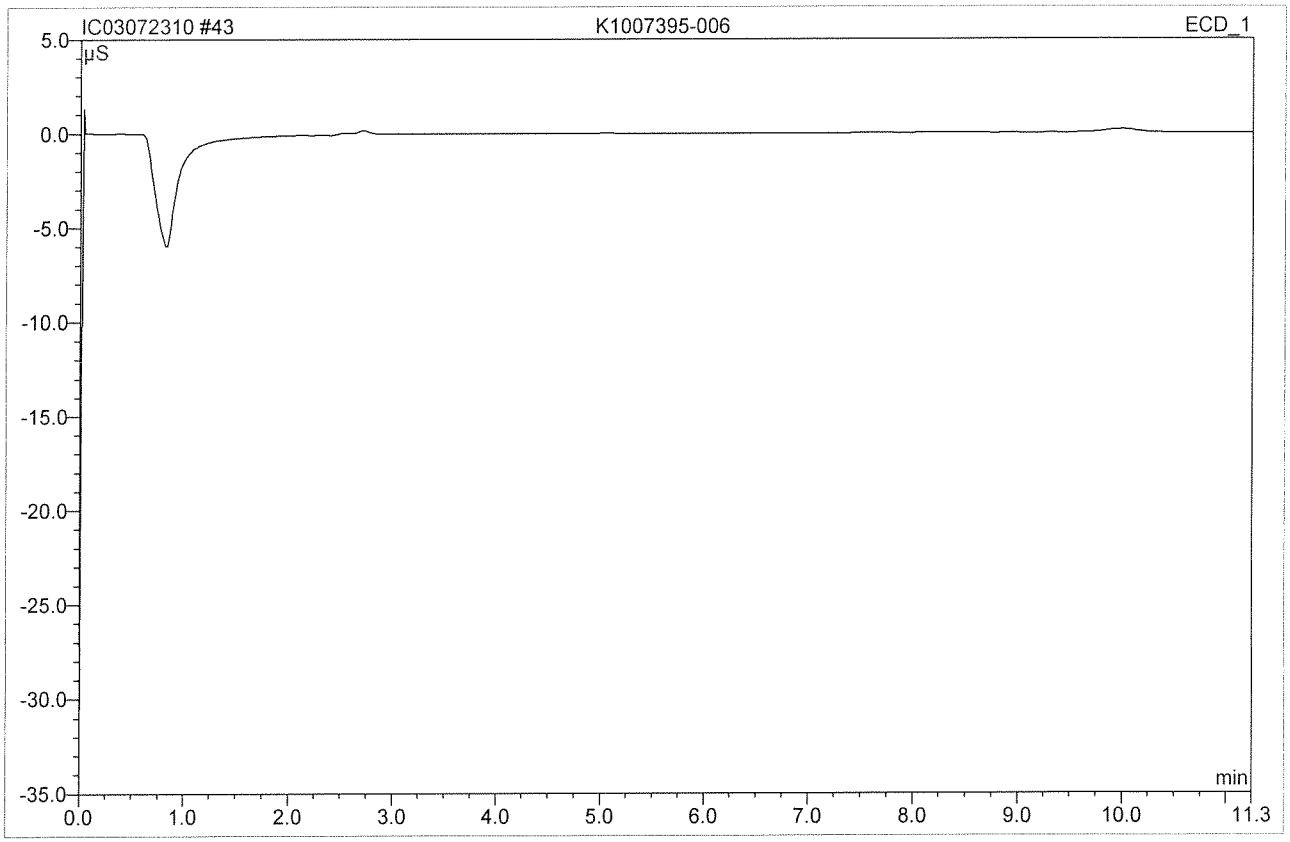
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride	40.648	4.246	14.46	454.714	BM
2	2.73	Chloride	37.355	4.423	15.07	569.907	M
3	3.35	Nitrite	42.666	6.393	21.78	401.524	M
4	4.27	n.a.	6.615	1.060	3.61	n.a.	Rd
5	4.97	Nitrate	39.256	7.357	25.06	394.146	MB
6	9.93	Sulfate	17.040	5.878	20.02	1182.349	BMB
Total:			183.580	29.357	100.00	3002.641	

Before

JUL 2 6 2010

43 K1007395-006

Sample Name:	**K1007395-006**	*Injection Volume:*	**200.0**
Vial Number:	**42**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 15:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

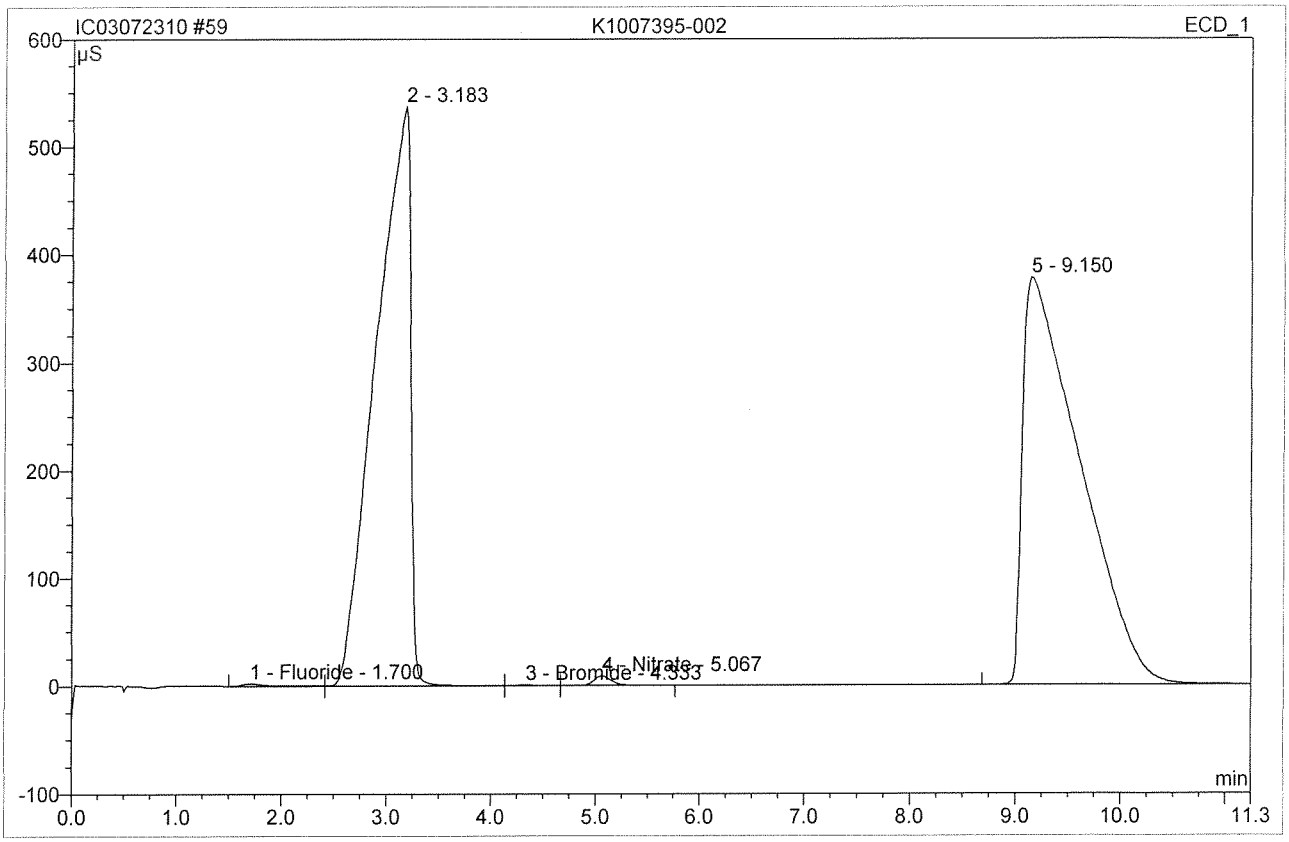


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

F^- <0.20
Cl^- <0.20
SO_4^{2-} <0.20

59 K1007395-002

Sample Name:	**K1007395-002**	*Injection Volume:*	**200.0**
Vial Number:	**58**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 19:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



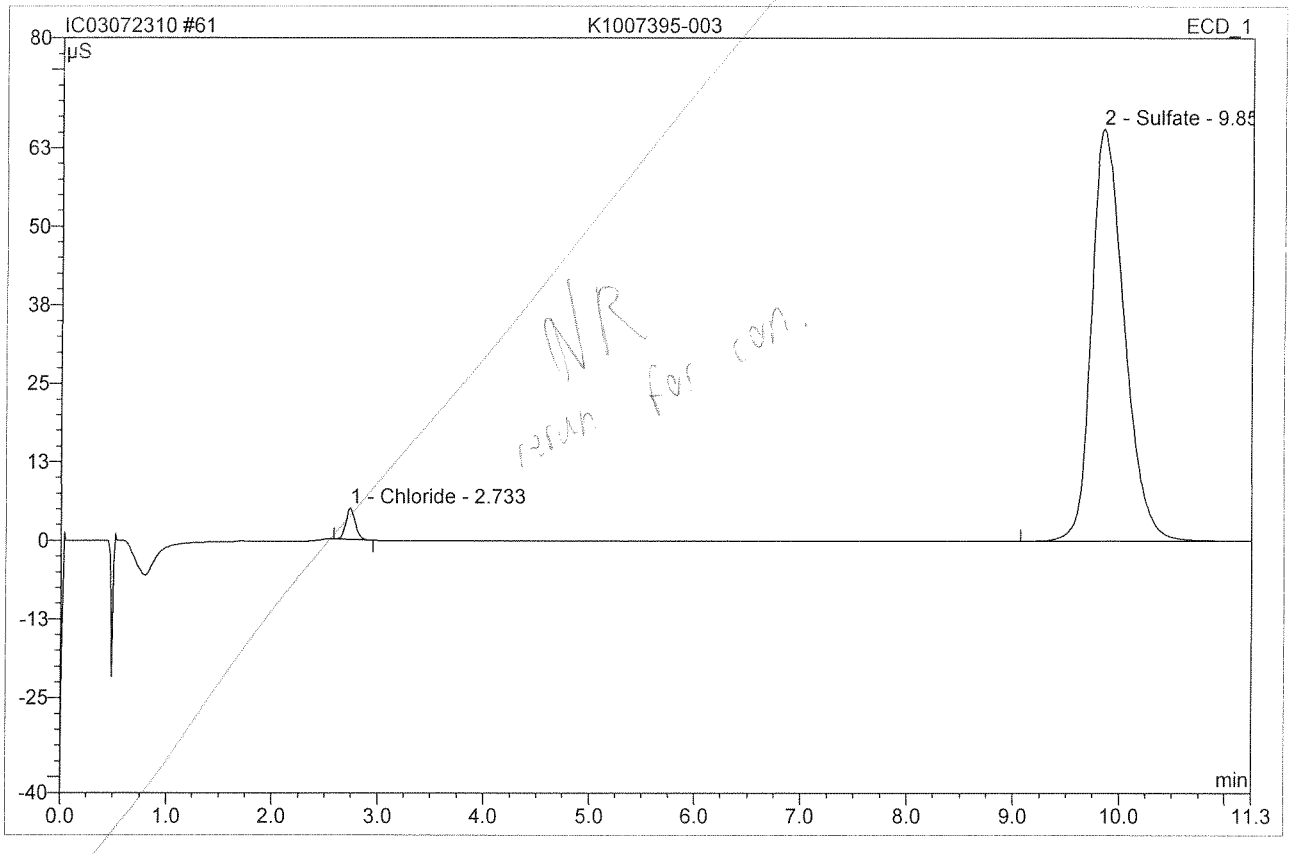
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	2.221	0.574	0.13	0.615	BM
2	3.18	n.a.	537.432	204.215	45.75	n.a.	M
3	4.33	Bromide	0.921	0.178	0.04	0.672	M
4	5.07	Nitrate	8.921	1.745	0.39	0.935	MB
5	9.15	n.a.	377.165	239.685	53.69	n.a.	BMB
Total:			926.659	446.397	100.00	2.221	

Before

JUL 2 6 2010

61 K1007395-003

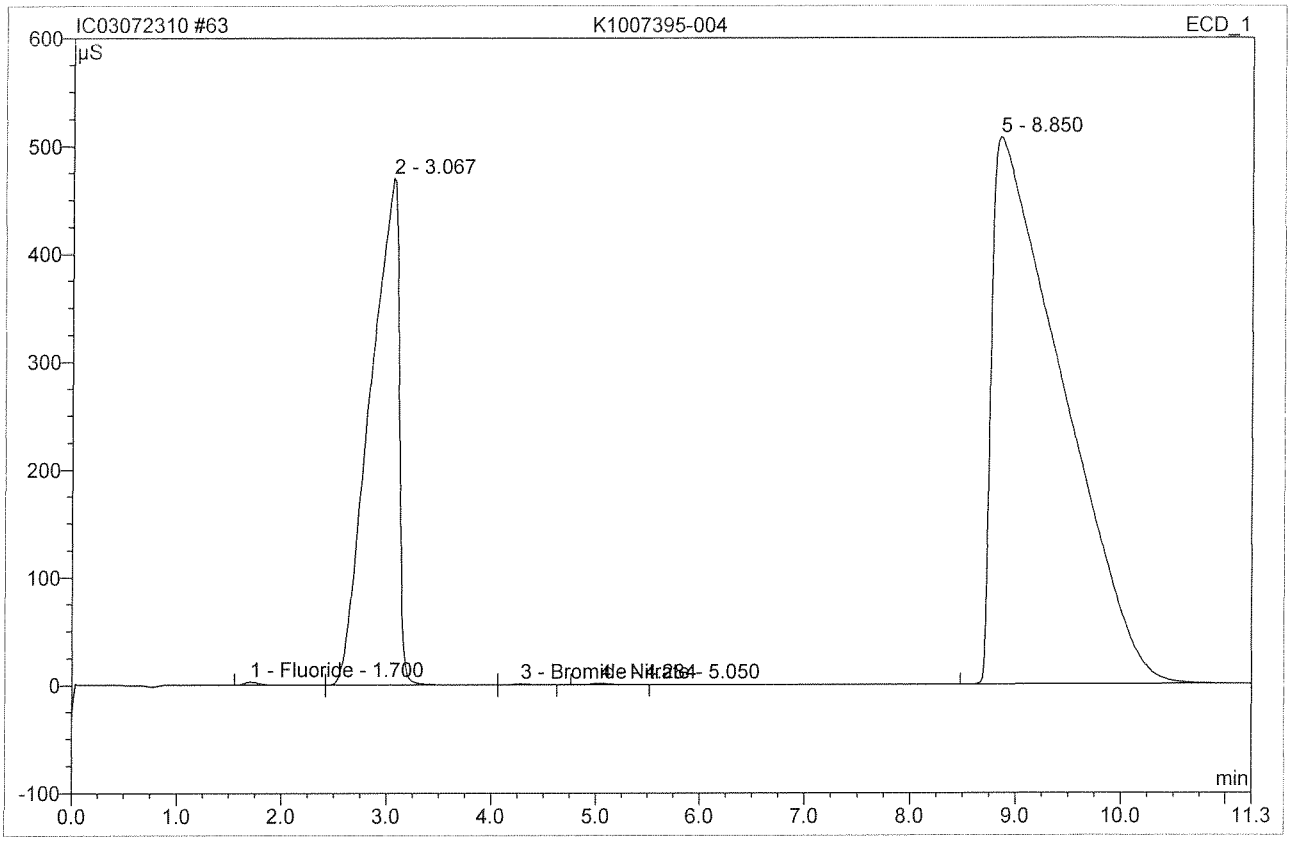
Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**60**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 20:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	5.074	0.524	2.18	0.675	BMB
2	9.85	Sulfate	65.528	23.539	97.82	47.347	BMB
Total:			70.602	24.063	100.00	48.022	

63 K1007395-004

Sample Name:	**K1007395-004**	*Injection Volume:*	**200.0**
Vial Number:	**62**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 20:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

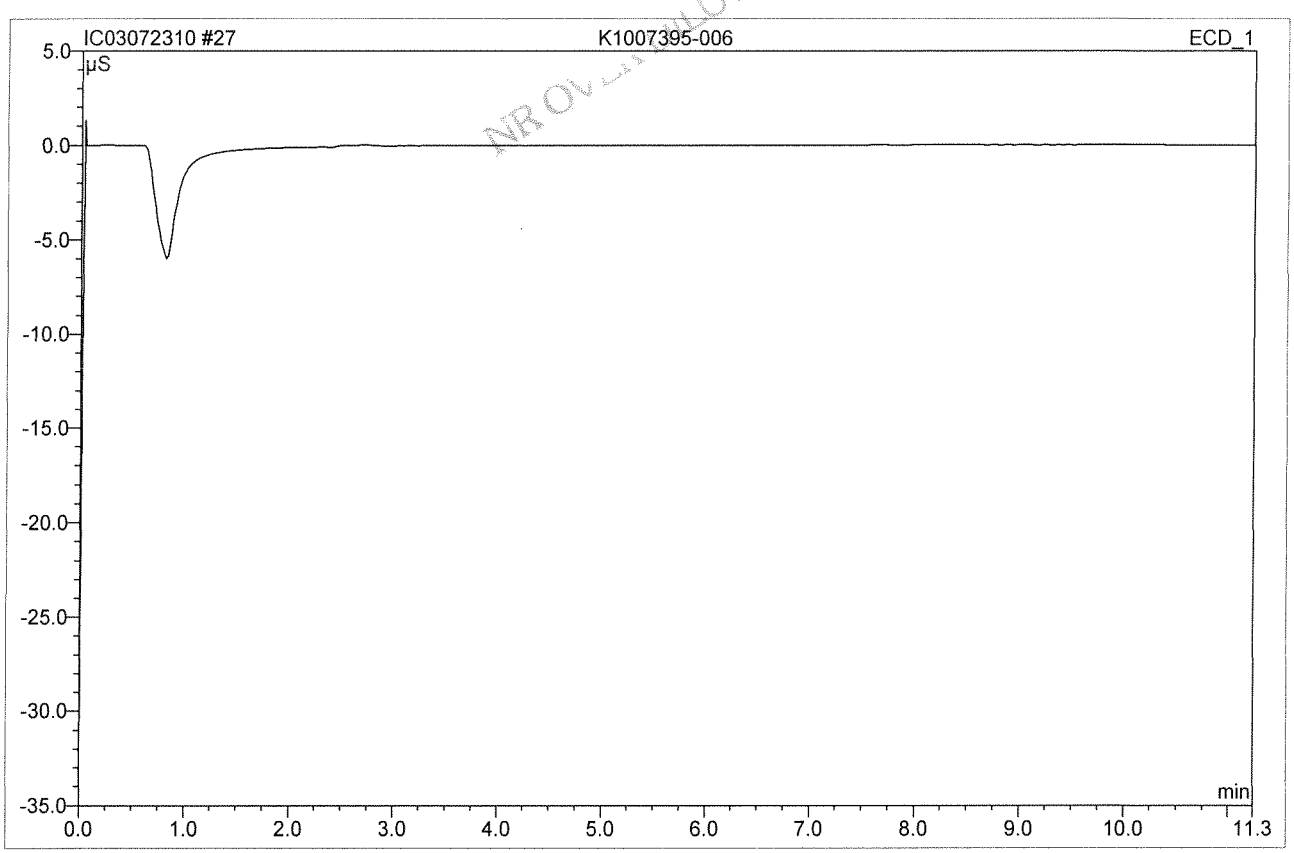


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	2.944	0.587	0.11	0.628	BMB
2	3.07	n.a.	470.255	150.732	27.60	n.a.	bM
3	4.28	Bromide	1.155	0.203	0.04	0.764	MB
4	5.05	Nitrate	1.598	0.331	0.06	0.178	BMB
5	8.85	n.a.	507.684	394.255	72.19	n.a.	BMB
Total:			983.638	546.107	100.00	1.570	

Before
JUL 26 2010

27 K1007395-006

Sample Name:	**K1007395-006**	*Injection Volume:*	**200.0**
Vial Number:	**26**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/23/2010 12:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

Sequence # IC073072310 | Ion Chromatography Data Quality Report Inorganics | Run # 2095901

1. Holding times met for all samples analyzed? yes/no/NA
2. Are dilutions within upper limits of the curve? yes/no/NA
3. Are analysis/extraction stickers included on report? yes/no/NA
4. Are detection limits reported correctly? yes/no/NA
5. Are all quality control criteria met? yes/no/NA
   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? yes/no/NA
   b. Are CCV's and CCB's all within acceptance limits? yes/no/NA
   c. Are results for Method Blanks all ND? yes/no/NA
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) yes/no/NA
   e. Are all exceptions explained? yes/no/NA
6. Are all samples labelled correctly? yes/no/NA

CAS Standard Identification Codes and Abbreviated Footnotes for Chromatograms

G1 Sample was analyzed past the end of recommended holding time. See Nonconformity sheet.
G2 Sample was reanalyzed past holding time. Initial analysis was performed within recommended holding time.
G4 Sample was received past the end of recommended holding time.
R1 High RPD is because the duplicate sample results are less than three times the method reporting limit.
i MRL is elevated because of matrix interferences and the sample required diluting.
F Sample filtered primary to analysis.

LCS

Fluoride	True Value = 13.5 ppm	CAS ID # = AN1-33-T	Expires: 12.22.10
Chloride	True Value = 5.0ppm	CAS ID # = ERA#0107-10-02	Expires: 8.10
Nitrite	True Value = 100 ppm	CAS ID # = AN1-29-M	Expires: 7.23.10
Bromide	True Value = 4.0 ppm	CAS ID # = AN1-33-L	Expires: 10.8.10
Nitrate	True Value = 21.0 ppm	CAS ID # = AN1-33-V	Expires: 1.22.11
Sulfate	True Value = 5.0 ppm	CAS ID # = ERA#0107-10-02	Expires: 8.10

CCV — CAS ID # = AN1-80-29 — Expires 7.23.10

Fluoride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-M	Expires: 10.28.10
Chloride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-F	Expires: 8.5.10
Nitrite	True Value = 2.0 ppm	10K CAS ID # = AN1-33-N	Expires: 10.28.10
Bromide	True Value = 2.0 ppm	10K CAS ID # = AN1-33-U	Expires: 12.22.10
Nitrate	True Value = 2.0 ppm	10K CAS ID # = AN1-33-I	Expires: 8.9.10
Sulfate	True Value = 5.0 ppm	10K CAS ID # = AN1-33-G	Expires: 8.5.10

Spike — 2.0ppm X dilution factor — CAS ID# = AN1-71-B — Expires 7.23.10

Fluoride	10K CAS ID # = AN1-33-M	Expires: see CCV
Chloride	10K CAS ID # = AN1-33-F	Expires:
Nitrite	10K CAS ID # = AN1-33-N	Expires:
Bromide	10K CAS ID # = AN1-33-U	Expires:
Nitrate	10K CAS ID # = AN1-33-I	Expires:
Sulfate	10K CAS ID # = AN1-33-G	Expires: V

Analyst: nb Date: 7.23.10

First Review: nb Date: 7.26.10

Final Review: [signature] Date: 7/27/10

t:\wet\ic\icdqs.xls

Sequence: IC03072310
Operator: nbakotich
Printed: 7/26/2010 11:19:29 AM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 67
Created: 7/23/2010 7:18:38 AM by ACQWET10
Last Update: 7/26/2010 11:03:03 AM by nbakotich

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	std2/lvl2	Standard	1	200.0	epa300	epa300	Finished	7/20/2010 1:14:08 PM
2	std3/lvl3	Standard	2	200.0	epa300	epa300	Finished	7/20/2010 1:30:36 PM
3	std4/lvl4	Standard	3	200.0	epa300	epa300	Finished	7/20/2010 1:45:33 PM
4	std5/lvl5	Standard	4	200.0	epa300	epa300	Finished	7/20/2010 2:00:31 PM
5	std6/lvl6	Standard	5	200.0	epa300	epa300	Finished	7/20/2010 2:14:58 PM
6	std7/lvl7	Standard	6	200.0	epa300	epa300	Finished	7/20/2010 2:29:26 PM
7	std1/lvl1	Standard	7	200.0	epa300	epa300	Finished	7/20/2010 2:43:54 PM
8	CCV1 AN11-80-AA	Unknown	8	200.0	epa300	epa300	Finished	7/23/2010 7:54:10 AM
9	CCB2	Unknown	9	200.0	epa300	epa300	Finished	7/23/2010 8:07:53 AM
10	NO2 AN11-29-M	Unknown	10	200.0	epa300	epa300	Finished	7/23/2010 8:21:36 AM
11	MB	Unknown	11	200.0	epa300	epa300	Finished	7/23/2010 8:35:18 AM
12	NO3 AN1-33-v	Unknown	11	200.0	epa300	epa300	Finished	7/23/2010 8:49:00 AM
13	CLSO4 ERA#0107-10-02	Unknown	12	200.0	epa300	epa300	Finished	7/23/2010 9:02:42 AM
14	F AN 1-33-D	Unknown	13	200.0	epa300	epa300	Finished	7/23/2010 9:16:25 AM
15	Br AN1-33-L	Unknown	14	200.0	epa300	epa300	Finished	7/23/2010 9:30:08 AM
16	SPKchk AN11-71-B	Unknown	15	200.0	epa300	epa300	Finished	7/23/2010 9:43:50 AM
17	CCV2	Unknown	16	200.0	epa300	epa300	Finished	7/23/2010 9:57:33 AM
18	CCB2	Unknown	17	200.0	epa300	epa300	Finished	7/23/2010 10:11:16 AM
19	K1007635-001	Unknown	18	200.0	epa300	epa300	Finished	7/23/2010 10:24:58 AM
20	K1007635-002	Unknown	19	200.0	epa300	epa300	Finished	7/23/2010 10:38:41 AM
21	K1007635-003	Unknown	20	200.0	epa300	epa300	Finished	7/23/2010 10:52:24 AM
22	K1007635-004	Unknown	21	200.0	epa300	epa300	Finished	7/23/2010 11:06:07 AM
23	K1007395-002	Unknown	22	200.0	epa300	epa300	Finished	7/23/2010 11:19:50 AM
24	K1007395-003	Unknown	23	200.0	epa300	epa300	Finished	7/23/2010 11:33:32 AM
25	K1007395-004	Unknown	24	200.0	epa300	epa300	Finished	7/23/2010 11:47:15 AM
26	K1007395-005	Unknown	25	200.0	epa300	epa300	Finished	7/23/2010 12:00:57 PM
27	K1007395-006	Unknown	26	200.0	epa300	epa300	Finished	7/23/2010 12:14:40 PM
28	RB	Unknown	27	200.0	epa300	epa300	Finished	7/23/2010 12:28:22 PM
29	CCV3	Unknown	28	200.0	epa300	epa300	Finished	7/23/2010 12:42:05 PM
30	CCB3	Unknown	29	200.0	epa300	epa300	Finished	7/23/2010 12:55:47 PM
31	K1007612-011	Unknown	30	200.0	epa300	epa300	Finished	7/23/2010 1:09:30 PM
32	K1007612-017	Unknown	31	200.0	epa300	epa300	Finished	7/23/2010 1:23:12 PM
33	K1007612-017	Unknown	32	200.0	epa300	epa300	Finished	7/23/2010 1:36:56 PM
34	K1007612-019	Unknown	33	200.0	epa300	epa300	Finished	7/23/2010 1:50:38 PM
35	K1007612-019	Unknown	34	200.0	epa300	epa300	Finished	7/23/2010 2:04:21 PM
36	7341-2TSF	Unknown	35	200.0	epa300	epa300	Finished	7/23/2010 2:18:03 PM
37	K1007612-018	Unknown	36	200.0	epa300	epa300	Finished	7/23/2010 2:31:46 PM
38	RB	Unknown	37	200.0	epa300	epa300	Finished	7/23/2010 2:45:28 PM
39	K1007197-001	Unknown	38	200.0	epa300	epa300	Finished	7/23/2010 2:59:12 PM
40	RB	Unknown	39	200.0	epa300	epa300	Finished	7/23/2010 3:12:55 PM
41	CCV4	Unknown	40	200.0	epa300	epa300	Finished	7/23/2010 3:26:37 PM
42	CCB4	Unknown	41	200.0	epa300	epa300	Finished	7/23/2010 3:40:20 PM

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 67
Created: 7/23/2010 7:18:38 AM by ACQWET10
Last Update: 7/26/2010 11:03:03 AM by nbakotich

No.	Name	Dil. Factor	Comment
1	std2/lvl2	1.0000	
2	std3/lvl3	1.0000	
3	std4/lvl4	1.0000	
4	std5/lvl5	1.0000	
5	std6/lvl6	1.0000	
6	std7/lvl7	1.0000	
7	std1/lvl1	1.0000	
8	CCV1 AN11-80-AA	1.0000	
9	CCB2	1.0000	
10	NO2 AN11-29-M	25.0000	NO2
11	MB	1.0000	MB
12	NO3 AN1-33-v	20.0000	NO3
13	CLSO4 ERA#0107-10-02	1.0000	CLSO4
14	F AN 1-33-D	2.0000	F
15	Br AN1-33-L	1.0000	Br
16	SPKchk AN11-71-B	1.0000	
17	CCV2	1.0000	CCV2
18	CCB2	1.0000	CCB2
19	K1007635-001	2.0000	
20	K1007635-002	2.0000	
21	K1007635-003	2.0000	
22	K1007635-004	2.0000	
23	K1007395-002	50.0000	
24	K1007395-003	50.0000	
25	K1007395-004	50.0000	
26	K1007395-005	50.0000	
27	K1007395-006	50.0000	
28	RB	1.0000	
29	CCV3	1.0000	CCV3
30	CCB3	1.0000	CCB3
31	K1007612-011	10.0000	
32	K1007612-017	10.0000	F
33	K1007612-017	2.0000	F
34	K1007612-019	500.0000	F
35	K1007612-019	5.0000	F
36	7341-2TSF	500.0000	F
37	K1007612-018	500.0000	F
38	RB	1.0000	
39	K1007197-001	2.0000	
40	RB	1.0000	
41	CCV4	1.0000	CCV4
42	CCB4	1.0000	CCB4

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 67
Created: 7/23/2010 7:18:38 AM by ACQWET10
Last Update: 7/26/2010 11:03:03 AM by nbakotich

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
43	K1007395-006	Unknown	42	200.0	epa300	epa300	Finished	7/23/2010 3:54:03 PM
44	K1007395-005	Unknown	43	200.0	epa300	epa300	Finished	7/23/2010 4:07:46 PM
45	K1007395-005	Unknown	44	200.0	epa300	epa300	Finished	7/23/2010 4:21:29 PM
46	K1007395-005	Unknown	45	200.0	epa300	epa300	Finished	7/23/2010 4:35:12 PM
47	K1007395-005	Unknown	46	200.0	epa300	epa300	Finished	7/23/2010 4:48:55 PM
48	K1007395-005	Unknown	47	200.0	epa300	epa300	Finished	7/23/2010 5:02:37 PM
49	K1007395-005	Unknown	48	200.0	epa300	epa300	Finished	7/23/2010 5:16:20 PM
50	K1007395-005	Unknown	49	200.0	epa300	epa300	Finished	7/23/2010 5:30:03 PM
51	K1007395-005	Unknown	50	200.0	epa300	epa300	Finished	7/23/2010 5:43:45 PM
52	RB	Unknown	51	200.0	epa300	epa300	Finished	7/23/2010 5:57:28 PM
53	CCV5	Unknown	52	200.0	epa300	epa300	Finished	7/23/2010 6:11:11 PM
54	CCB5	Unknown	53	200.0	epa300	epa300	Finished	7/23/2010 6:24:54 PM
55	K1007635-001	Unknown	54	200.0	epa300	epa300	Finished	7/23/2010 6:38:37 PM
56	K1007635-002	Unknown	55	200.0	epa300	epa300	Finished	7/23/2010 6:52:20 PM
57	K1007635-003	Unknown	56	200.0	epa300	epa300	Finished	7/23/2010 7:06:03 PM
58	K1007635-004	Unknown	57	200.0	epa300	epa300	Finished	7/23/2010 7:19:46 PM
59	K1007395-002	Unknown	58	200.0	epa300	epa300	Finished	7/23/2010 7:33:29 PM
60	K1007395-003	Unknown	59	200.0	epa300	epa300	Finished	7/23/2010 7:47:12 PM
61	K1007395-003	Unknown	60	200.0	epa300	epa300	Finished	7/23/2010 8:00:55 PM
62	K1007395-004	Unknown	61	200.0	epa300	epa300	Finished	7/23/2010 8:14:39 PM
63	K1007395-004	Unknown	62	200.0	epa300	epa300	Finished	7/23/2010 8:28:22 PM
64	RB	Unknown	63	200.0	epa300	epa300	Finished	7/23/2010 8:42:05 PM
65	CCV6	Unknown	64	200.0	epa300	epa300	Finished	7/23/2010 8:55:47 PM
66	CCB6	Unknown	65	200.0	epa300	epa300	Finished	7/23/2010 9:09:30 PM
67	STOP	Unknown	66	200.0	shutdown 120	epa300	Finished	7/23/2010 9:23:13 PM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120 Created: 7/23/2010 7:18:38 AM by ACQWET10
#Samples: 67 Last Update: 7/26/2010 11:03:03 AM by nbakotich

No.	Name	Dil. Factor	Comment
43	K1007395-006	2.0000	
44	K1007395-005	100.0000	
45	K1007395-005	100.0000	D
46	K1007395-005	200.0000	MS
47	K1007395-005	200.0000	MSD
48	K1007395-005	2.0000	
49	K1007395-005	2.0000	D
50	K1007395-005	2.0000	MS
51	K1007395-005	2.0000	MSD
52	RB	1.0000	
53	CCV5	1.0000	CCV5
54	CCB5	1.0000	CCB5
55	K1007635-001	50.0000	
56	K1007635-002	50.0000	
57	K1007635-003	10.0000	
58	K1007635-004	50.0000	
59	K1007395-002	2.0000	
60	K1007395-003	100.0000	
61	K1007395-003	2.0000	
62	K1007395-004	100.0000	
63	K1007395-004	2.0000	
64	RB	1.0000	
65	CCV6	1.0000	CCV6
66	CCB6	1.0000	CCB6
67	STOP	1.0000	CCB6

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Service Request	Tier	QC	Hold Time	Due Date	Anion	Initial	Final	QC DILUTION	Done?
7625-1					F				
					CL	2.5/5			✓
					NO2				
					Br				
					NO3				
					SO4		0.1/5.0		✓
-2					F				
					CL				✓
					NO2				
					Br				
					NO3				
					SO4		0.1/5.0		✓
-3					F				
					CL				✓
					NO2				
					Br				
					NO3				
					SO4		0.5/5		✓
-4					F				
					CL				✓
					NO2				
					Br				
					NO3				
					SO4	✓	0.1/5		✓
7626-1					F	0.1/5	2.5/5		✓
					CL				✓
					NO2				
					Br				
					NO3				
					SO4				✓
-3					F		2.5/5		
					CL				✓
					NO2				
					Br				
					NO3				
					SO4		1/100		✓
-4					F		2.5/5		✓
					CL				✓
					NO2				
					Br				
					NO3				
					SO4		1/100		✓
-5		x			F		2.5/5		✓
					CL		diluted		✓
					NO2				
					Br				
					NO3				
					SO4		1/100		✓
-6					F		2.5/5		✓
					CL				✓
					NO2				
					Br				
					NO3				
					SO4		✓		✓
-7					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				

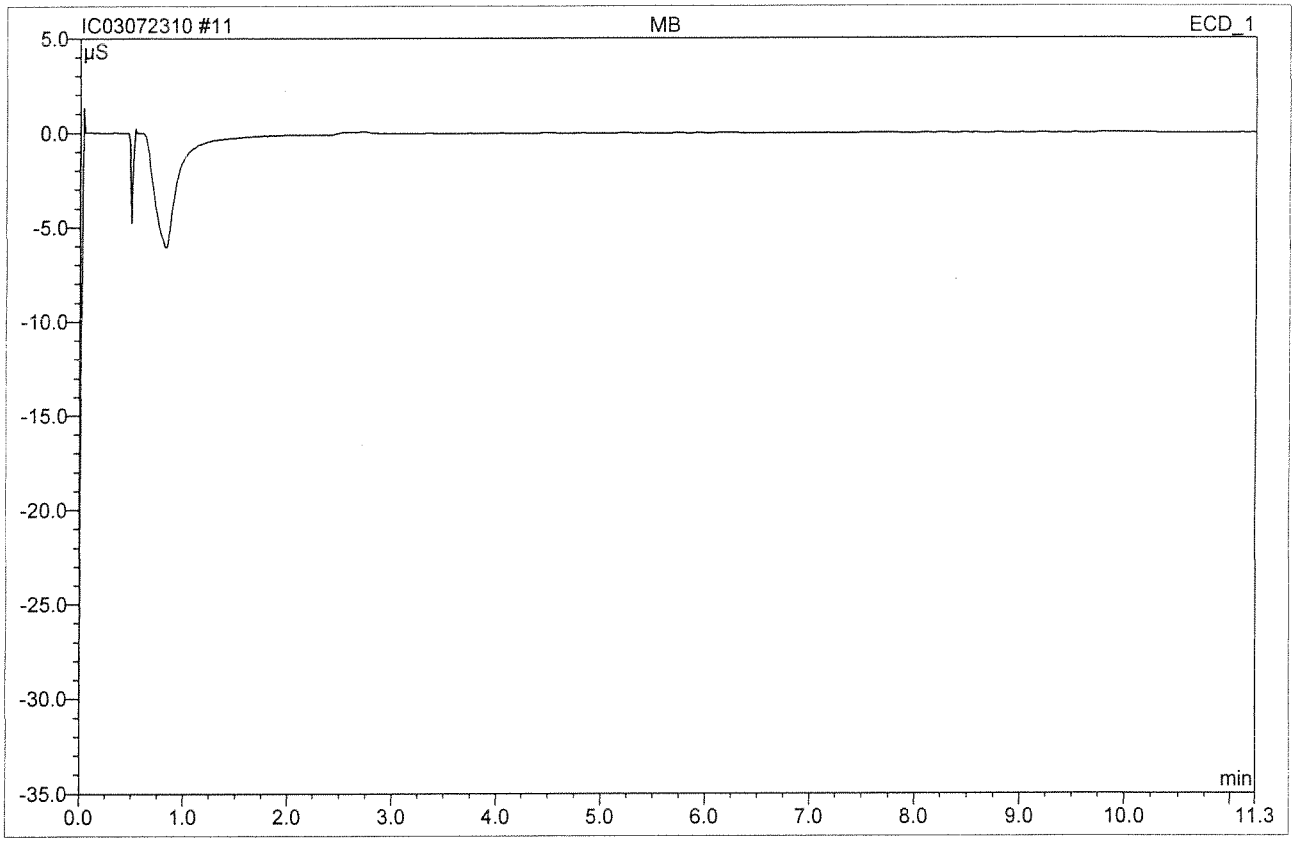
Service Request	Tier	QC	Hold Time	Due Date	Anion	Initial	Final	QC DILUTION	Done?
7187-1		✓			F				
					CL	2.515			✓
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4224				

Service Request	Tier	QC	Hold Time	Due Date	Anion	Initial	Final	QC DILUTION	Done?
7612-11					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4	0.5/5			✓
7612-12					F				
					CL	0.5/5			✓
					NO2	0.5/5			✓
					Br				
					NO3				✓
					SO4	✓			✓
7612-13					F				
					CL	1/100→1/5			✓
					NO2				
					Br				
					NO3	1/5			✓
					SO4				
7612-13 TS					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4	1/100→0.5/5			✓
7612-13 R					F				
					CL	1/100→1/5			✓
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4				
					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4	225			

11 MB

MB

Sample Name:	**MB**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 8:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

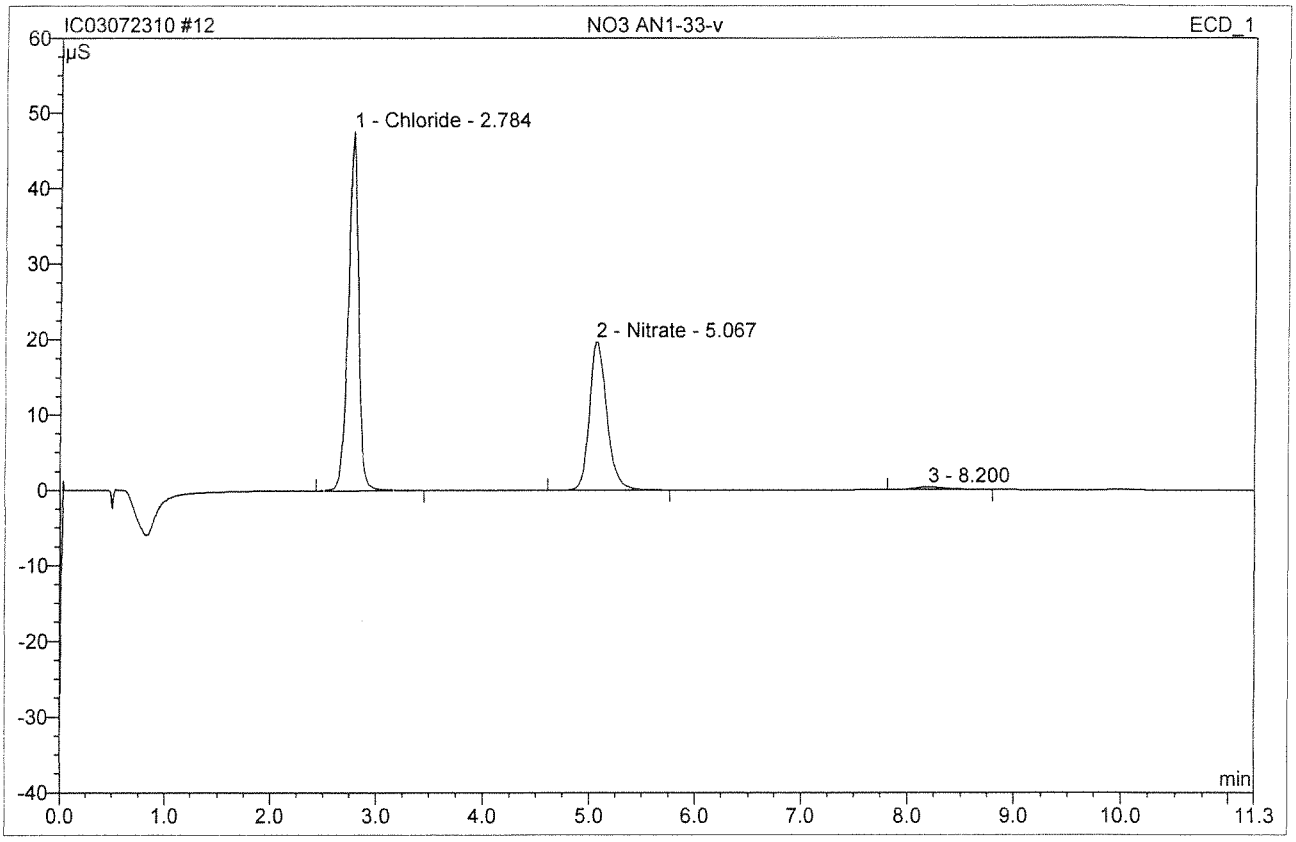


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 NO3 AN1-33-v

NO3

Sample Name:	**NO3 AN1-33-v**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/23/2010 8:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

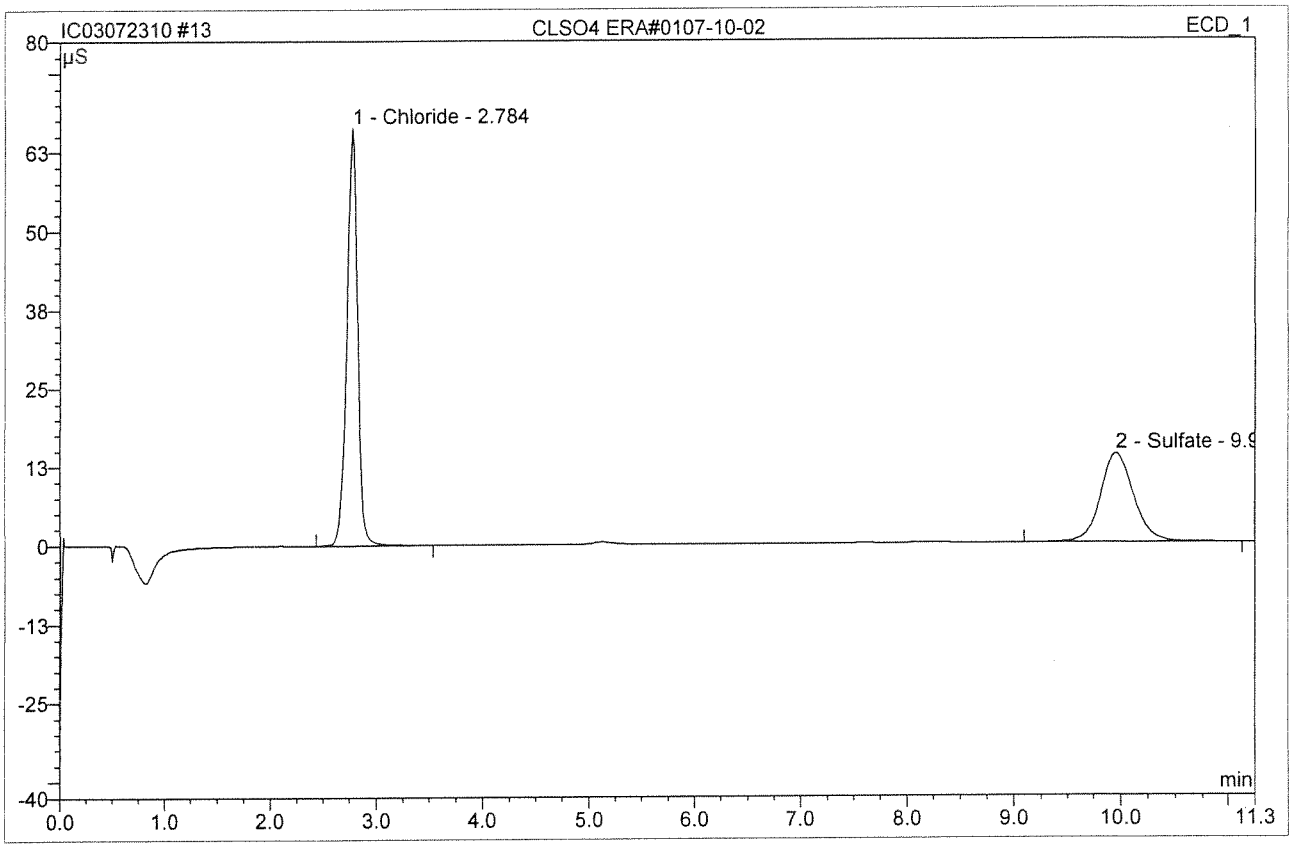


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.78	Chloride	47.602	5.425	58.15	69.892	BMB
2	5.07	Nitrate	19.648	3.766	40.37	20.178	BMB
3	8.20	n.a.	0.377	0.138	1.48	n.a.	BMB
Total:			67.627	9.329	100.00	90.071	

13 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	**CLSO4 ERA#0107-10-02**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 9:02**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

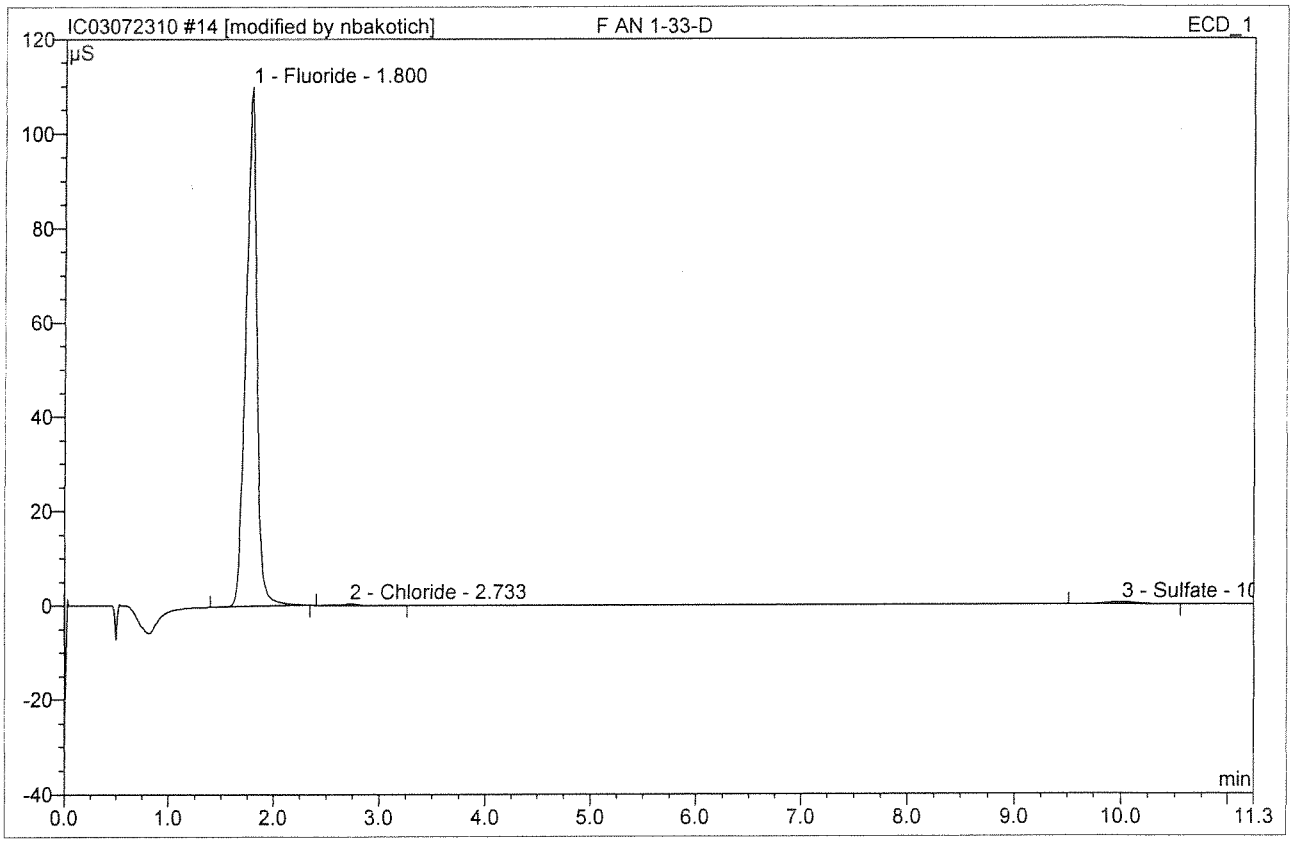


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.78	Chloride	66.346	7.903	61.59	5.091	BMB
2	9.97	Sulfate	14.134	4.928	38.41	4.956	BMB
Total:			80.481	12.831	100.00	10.047	

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 9:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.80	Fluoride	109.882	13.450	98.34	14.403	BMB*
2	2.73	Chloride	0.440	0.061	0.45	0.079	BMB*
3	10.02	Sulfate	0.459	0.166	1.21	0.334	BMB
Total:			110.780	13.677	100.00	14.816	

After Initials _____

JUL 23 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other _____

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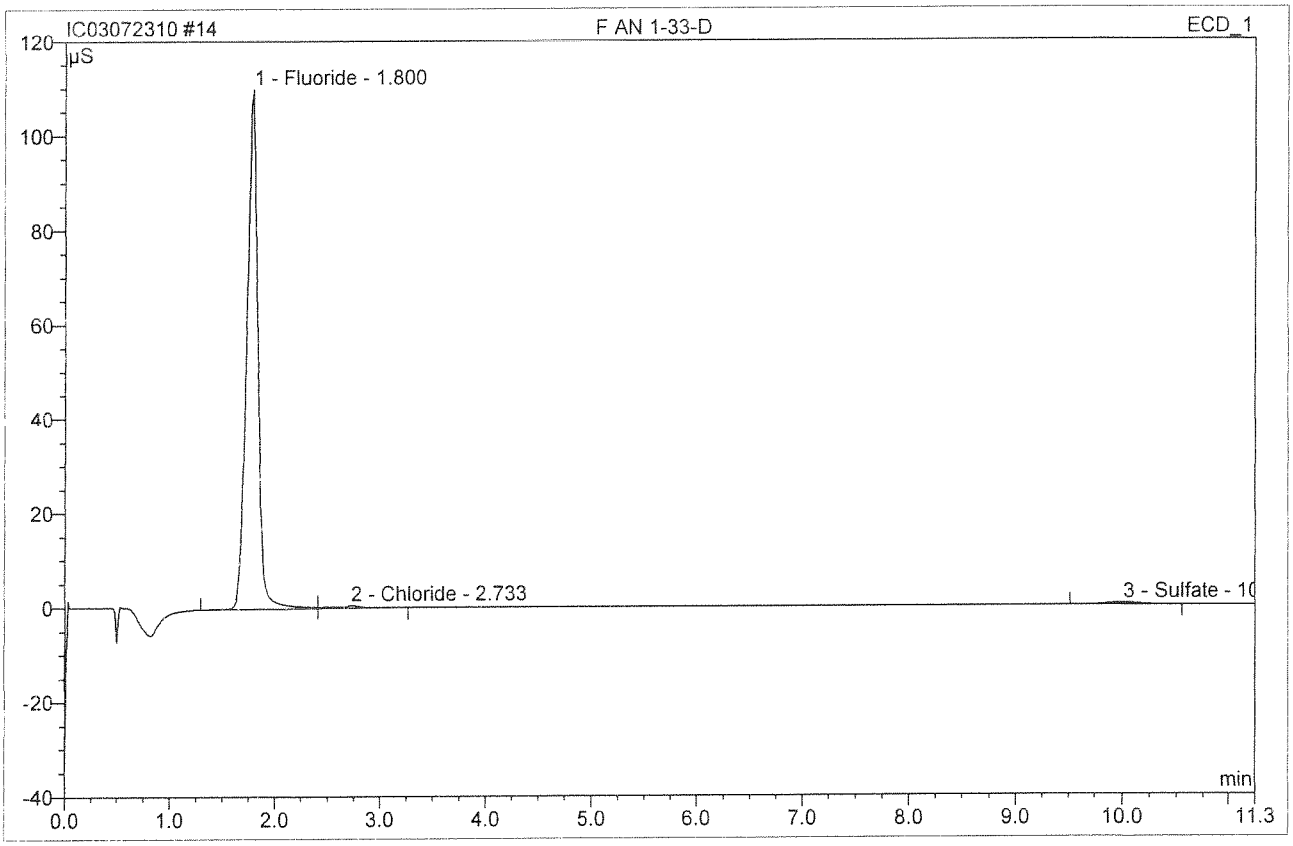
Version 6.80 SP1 Build 2238

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/23/2010 9:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.80	Fluoride	110.050	13.652	97.62	14.619	BM
2	2.73	Chloride	0.595	0.167	1.19	0.215	MB
3	10.02	Sulfate	0.459	0.166	1.19	0.334	BMB
Total:			111.104	13.984	100.00	15.167	

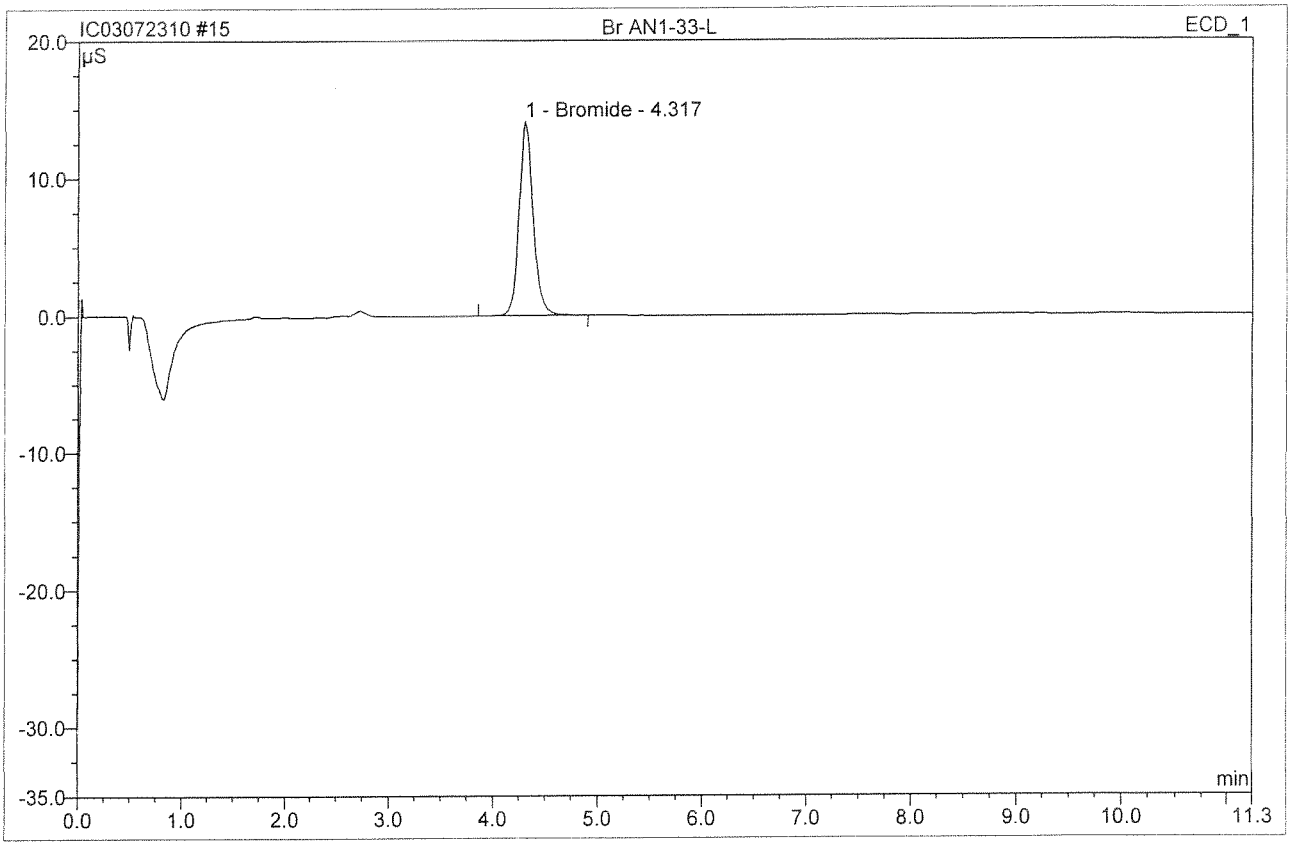
Beaver

JUL 2 3 2010

15 Br AN1-33-L

Br

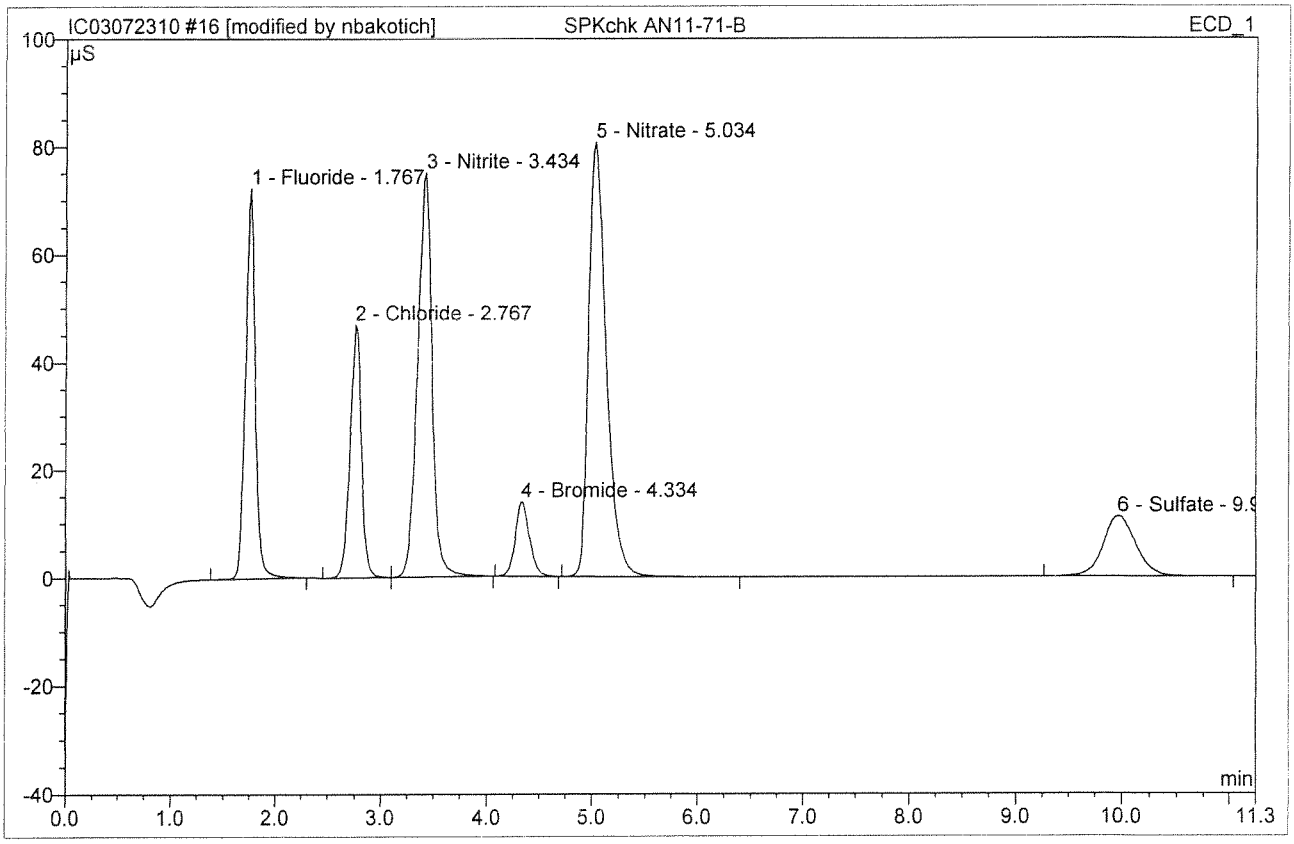
Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 9:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.32	Bromide	14.080	2.248	100.00	4.243	BMB
Total:			14.080	2.248	100.00	4.243	

16 SPKchk AN11-71-B

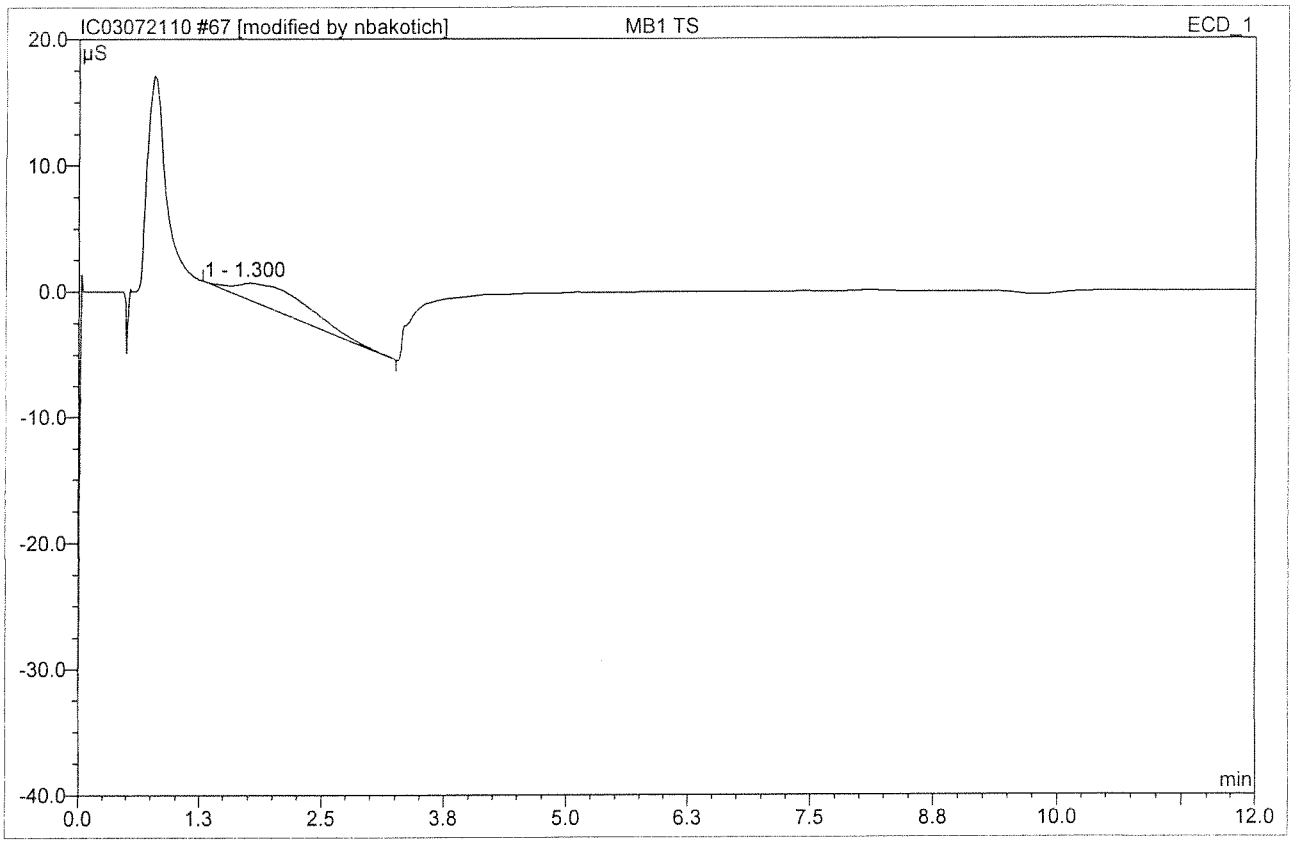
Sample Name:	**SPKchk AN11-71-B**	*Injection Volume:*	**200.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 9:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	72.408	8.121	16.97	4.348	BMB*
2	2.77	Chloride	46.928	5.895	12.32	3.798	BM *
3	3.43	Nitrite	74.999	11.945	24.96	3.751	MB*
4	4.33	Bromide	13.841	2.217	4.63	4.184	BMB*
5	5.03	Nitrate	80.603	15.769	32.95	4.224	BMB*
6	9.97	Sulfate	11.199	3.903	8.16	3.926	BMB
Total:			299.978	47.852	100.00	24.232	

67 MB1 TS

Sample Name:	**MB1 TS**	*Injection Volume:*	**200.0**
Vial Number:	**66**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 0:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.30	n.a.	0.013	1.603	100.00	n.a.	BMB
Total:			0.013	1.603	100.00	0.000	

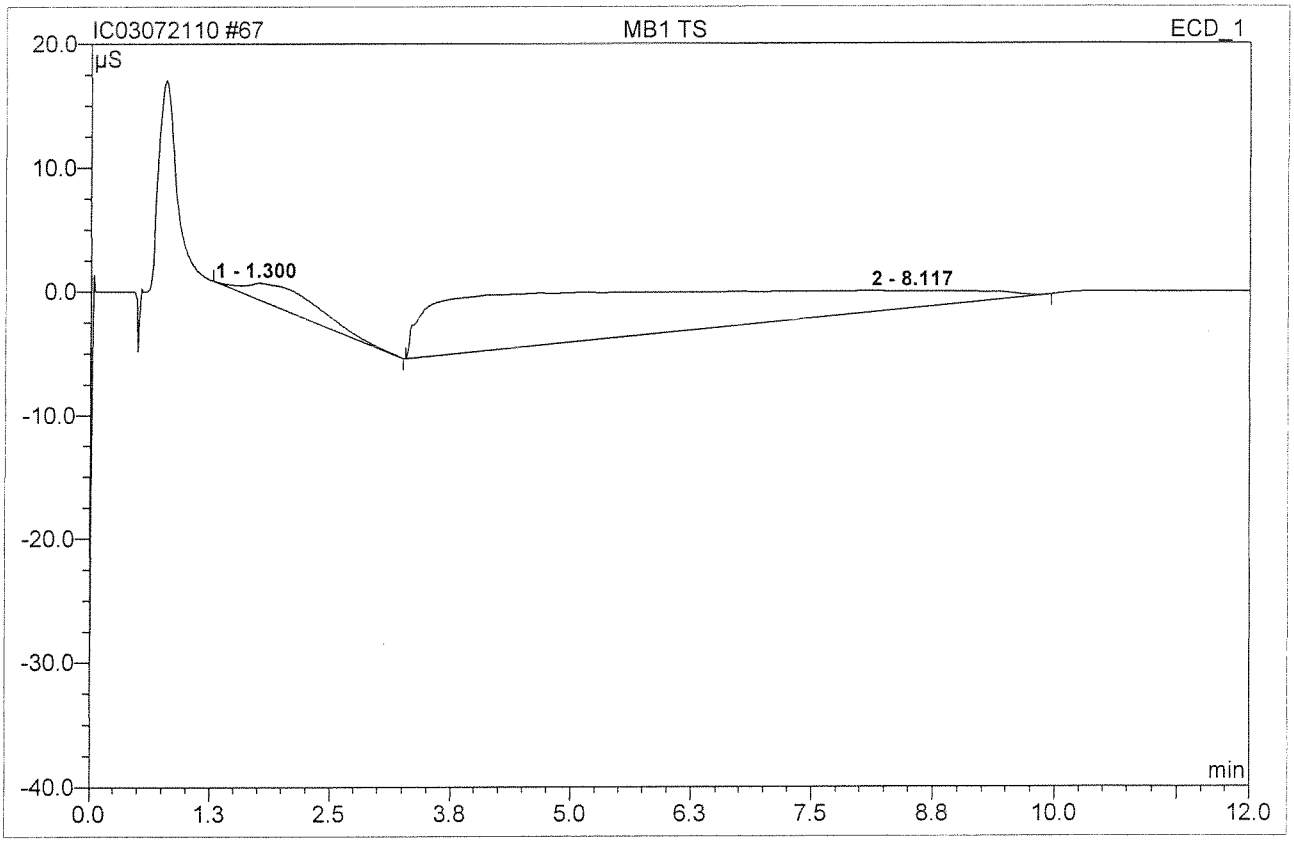
After
Initials _____

JUL 22 2010

☑ Wrong Peak/Peak not Found
☐ Baseline/Shoulder Incorrect

67 MB1 TS

Sample Name:	**MB1 TS**	*Injection Volume:*	**200.0**
Vial Number:	**66**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 0:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



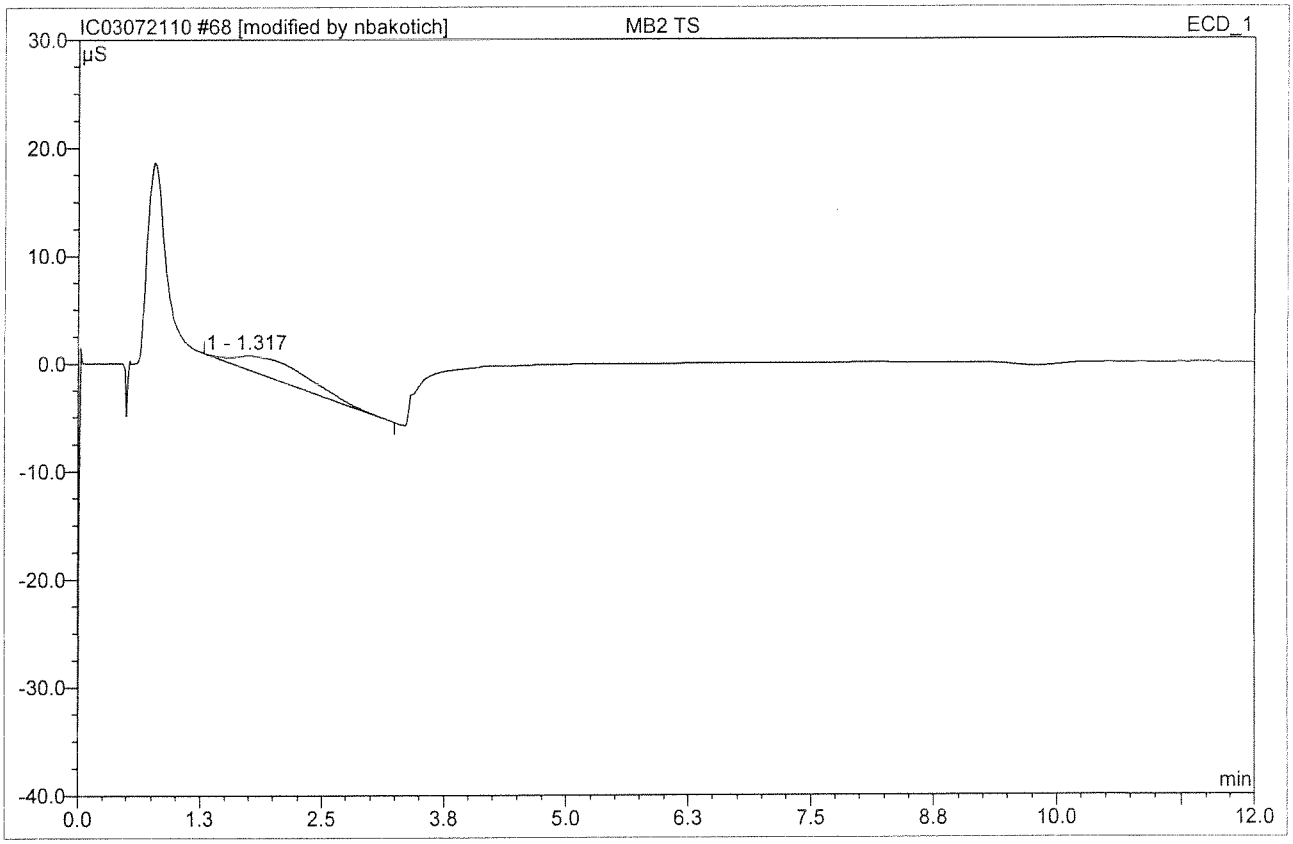
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.30	n.a.	0.013	1.603	8.33	n.a.	BMB
2	8.12	n.a.	1.741	17.634	91.67	n.a.	BMB
Total:			1.754	19.236	100.00	0.000	

Denied

JUL 2 2 2010

68 MB2 TS

Sample Name:	**MB2 TS**	*Injection Volume:*	**200.0**
Vial Number:	**67**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 0:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.32	n.a.	0.014	1.521	100.00	n.a.	BMB
Total:			0.014	1.521	100.00	0.000	

SO_4^{2-} < 0.20

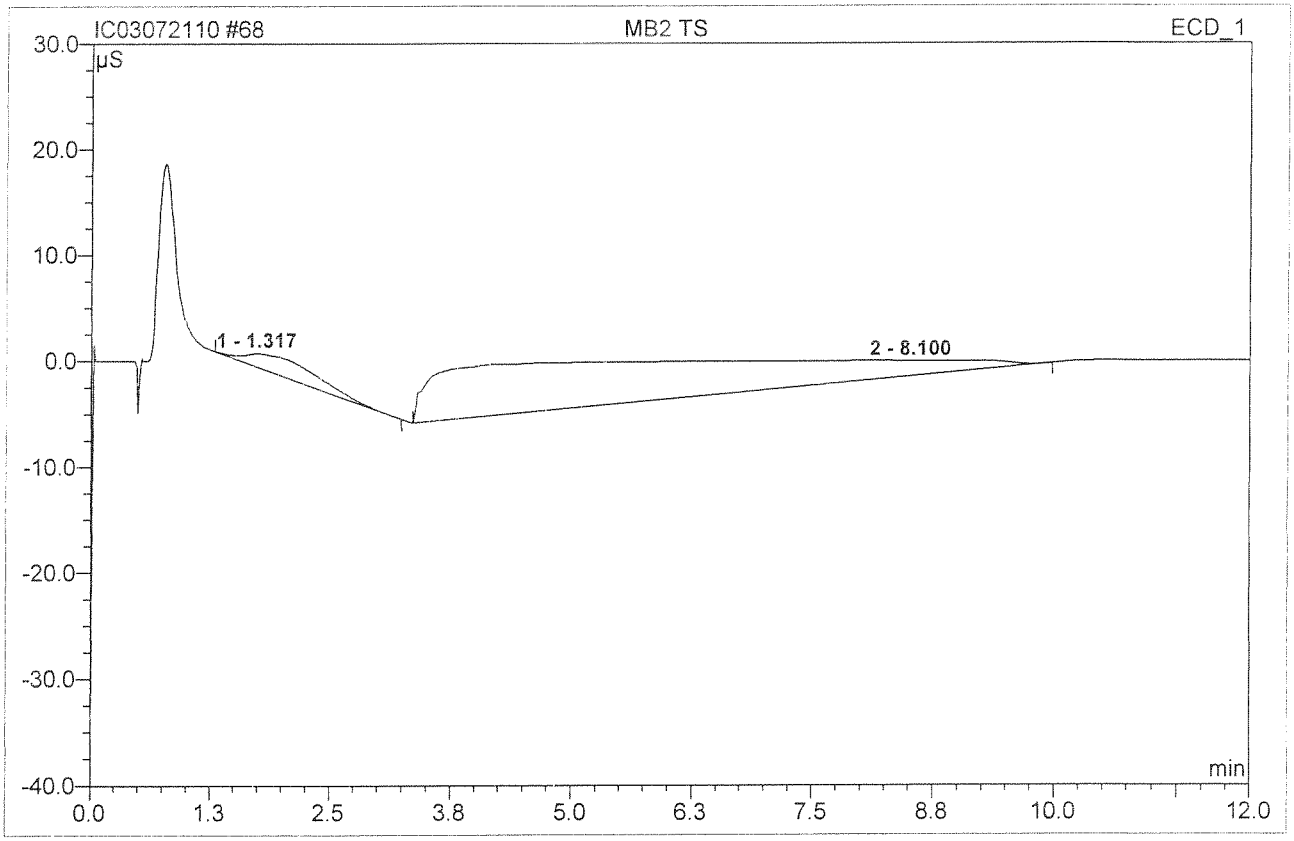
After Initials nb

JUL 22 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

68 MB2 TS

Sample Name:	**MB2 TS**	*Injection Volume:*	**200.0**
Vial Number:	**67**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 0:59**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



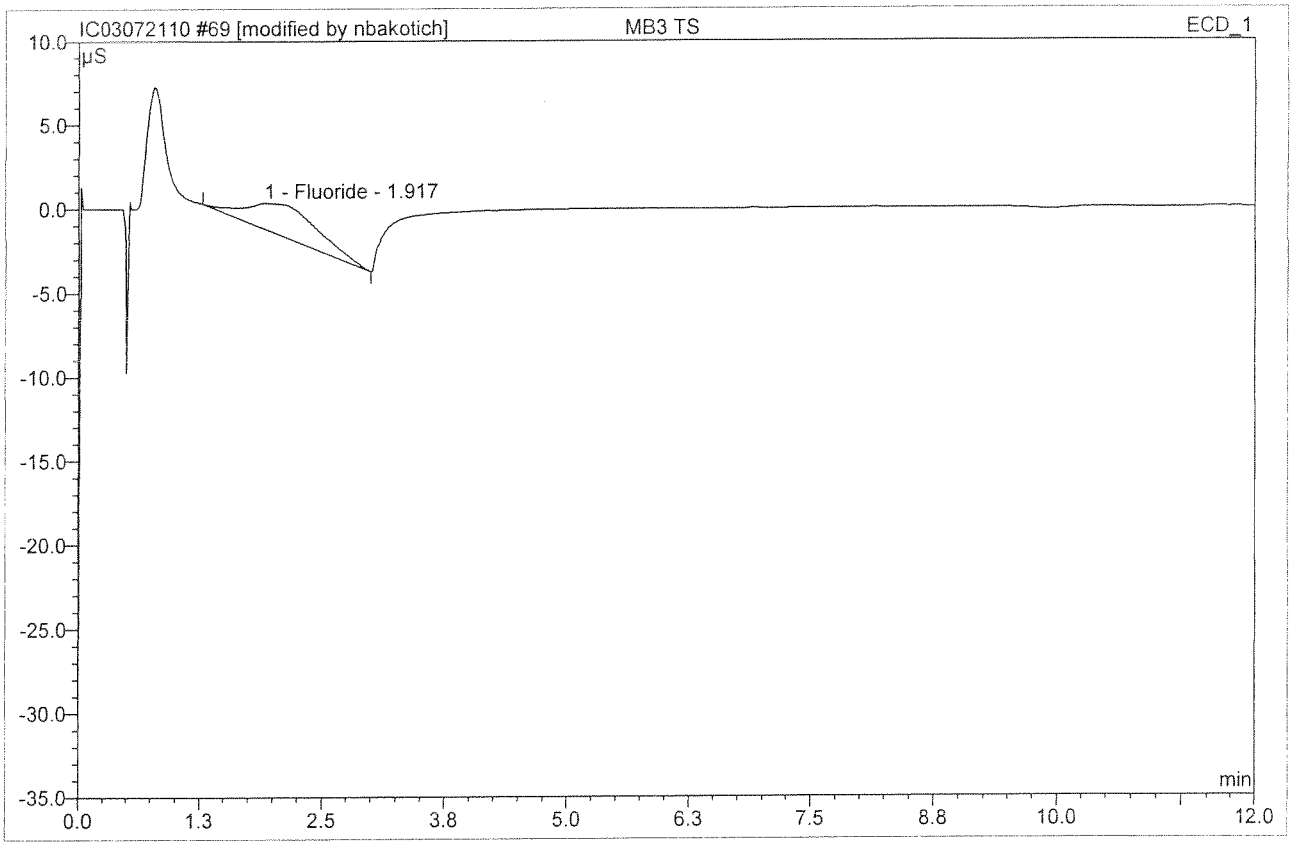
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.32	n.a.	0.014	1.521	7.61	n.a.	BMB
2	8.10	n.a.	1.865	18.468	92.39	n.a.	BMB
Total:			1.879	19.989	100.00	0.000	

Before

JUL 2 2 2010

69 MB3 TS

Sample Name:	**MB3 TS**	*Injection Volume:*	**200.0**
Vial Number:	**68**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 1:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.92	Fluoride	1.533	1.607	100.00	1.721	BMB*
Total:			1.533	1.607	100.00	1.721	

SO_4^{2-} < 0.20

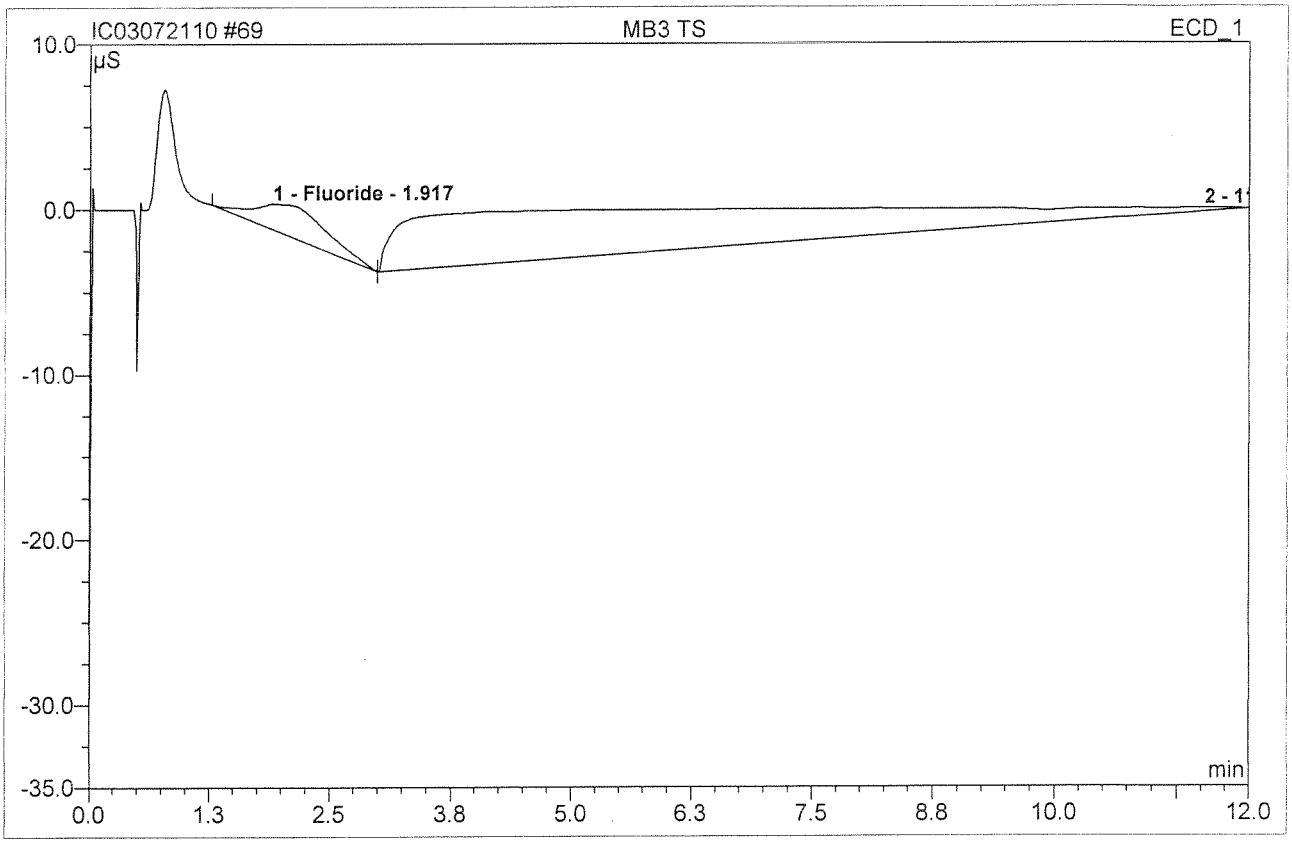
After Initials _____

JUL 22 2010

☑ Wrong Peak/Peak not Found
☐ Baseline/shoulder incorrect
☐ Other_____

69 MB3 TS

Sample Name:	**MB3 TS**	*Injection Volume:*	**200.0**
Vial Number:	**68**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 1:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



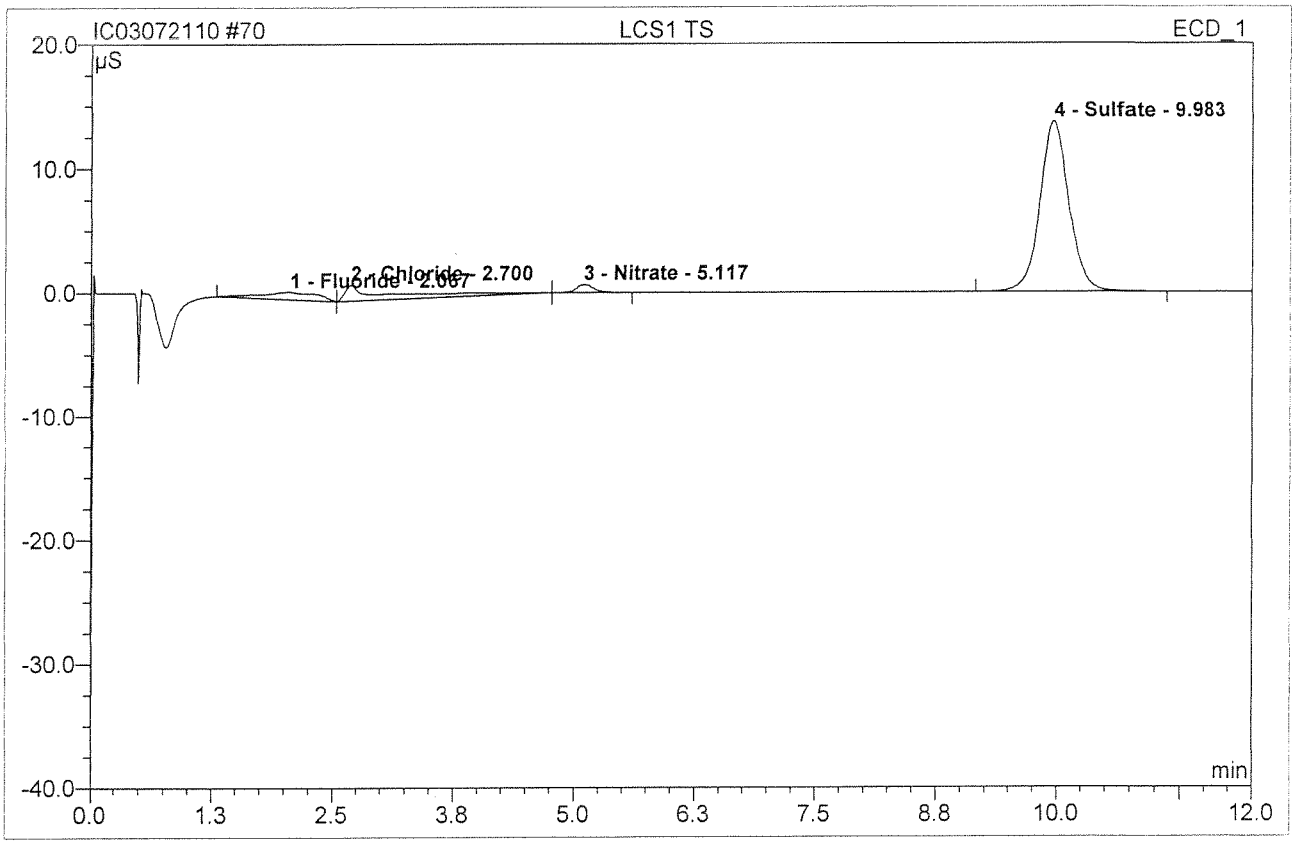
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.92	Fluoride	1.533	1.607	9.19	1.721	BMb
2	11.53	n.a.	0.213	15.876	90.81	n.a.	bMB
Total:			1.747	17.483	100.00	1.721	

Before

JUL 2 2 2010

70 LCS1 TS

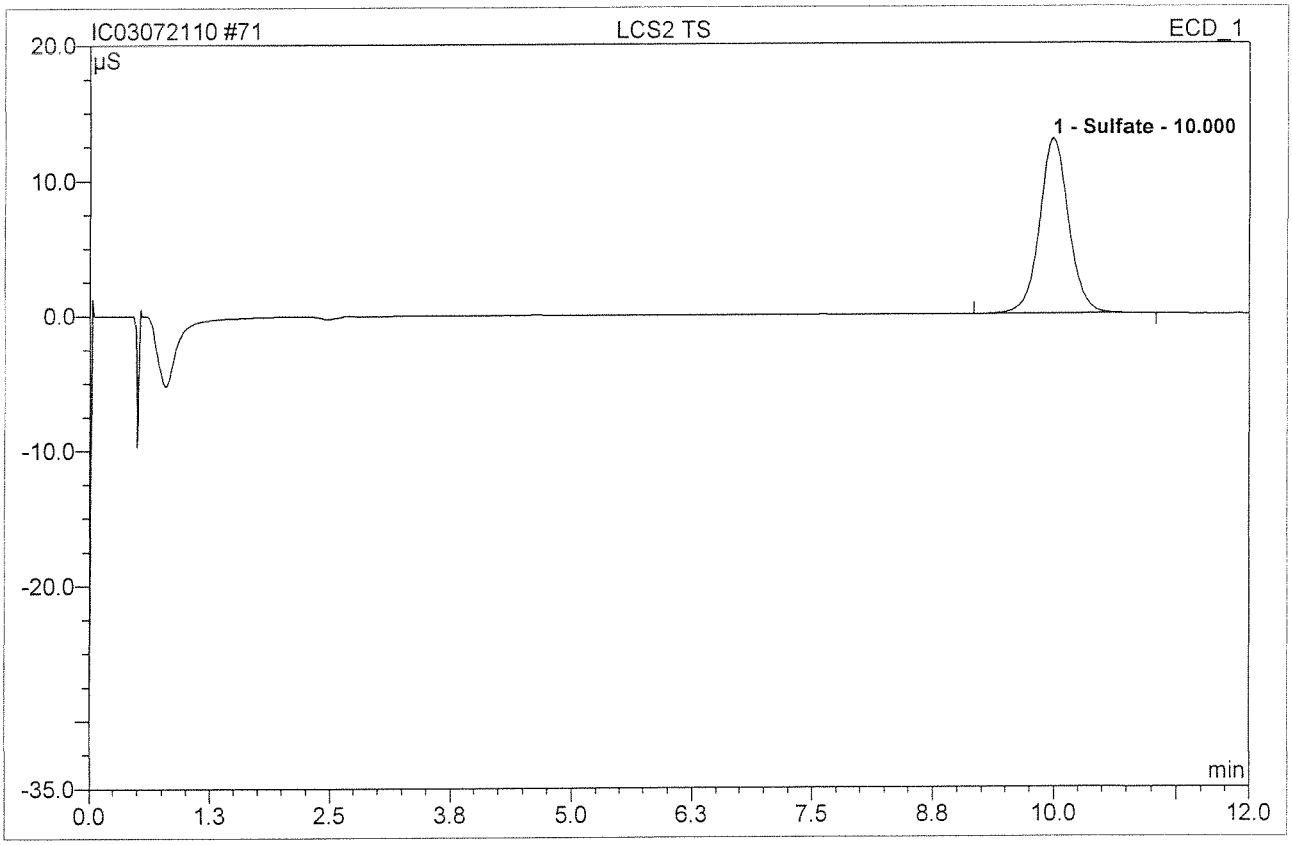
Sample Name:	**LCS1 TS**	*Injection Volume:*	**200.0**
Vial Number:	**69**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**500.0000**
Recording Time:	**7/22/2010 1:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.07	Fluoride	0.600	0.410	6.76	109.841	BMb
2	2.70	Chloride	1.277	0.715	11.78	230.378	bMB
3	5.12	Nitrate	0.650	0.139	2.30	18.683	bMB
4	9.98	Sulfate	13.695	4.804	79.16	2415.866	BMB
Total:			16.222	6.069	100.00	2774.768	

71 LCS2 TS

Sample Name:	**LCS2 TS**	*Injection Volume:*	**200.0**
Vial Number:	**70**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1000.0000**
Recording Time:	**7/22/2010 1:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**

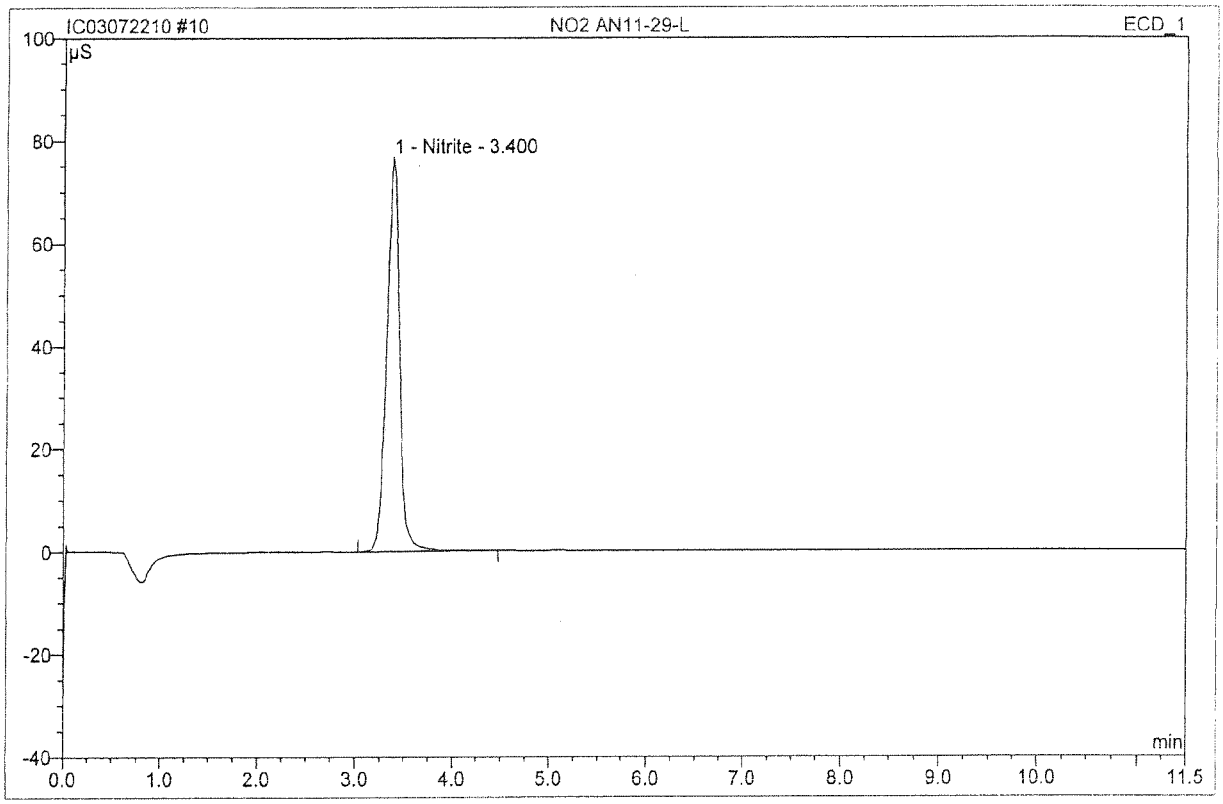


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	10.00	Sulfate	12.966	4.527	100.00	4553.235	BMB
Total:			12.966	4.527	100.00	4553.235	

10 NO2 AN11-29-L

NO2

Sample Name:	**NO2 AN11-29-L**	*Injection Volume:*	**200.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/22/2010 9:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**

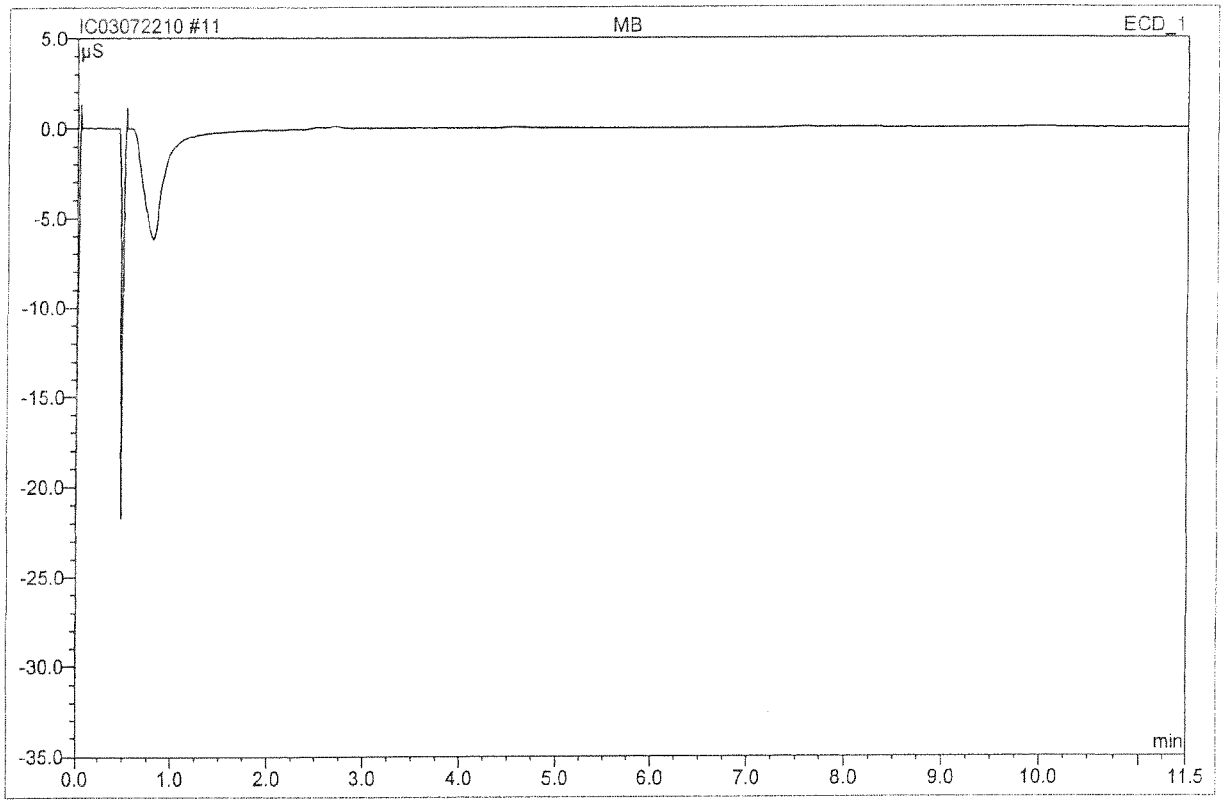


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.40	Nitrite	76.736	11.990	100.00	94.152	BMB
Total:			76.736	11.990	100.00	94.152	

11 MB

MB

Sample Name:	**MB**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/22/2010 10:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**

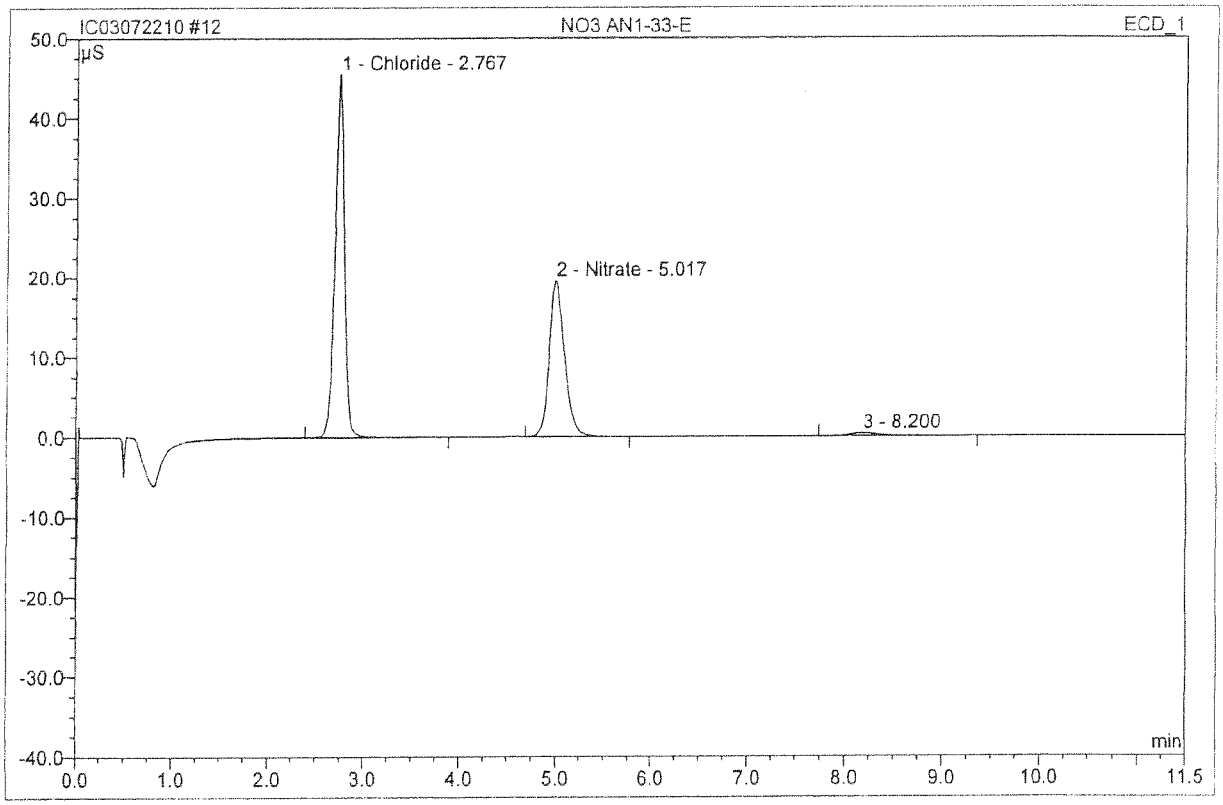


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 NO3 AN1-33-E

NO3

Sample Name:	**NO3 AN1-33-E**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/22/2010 10:23**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**

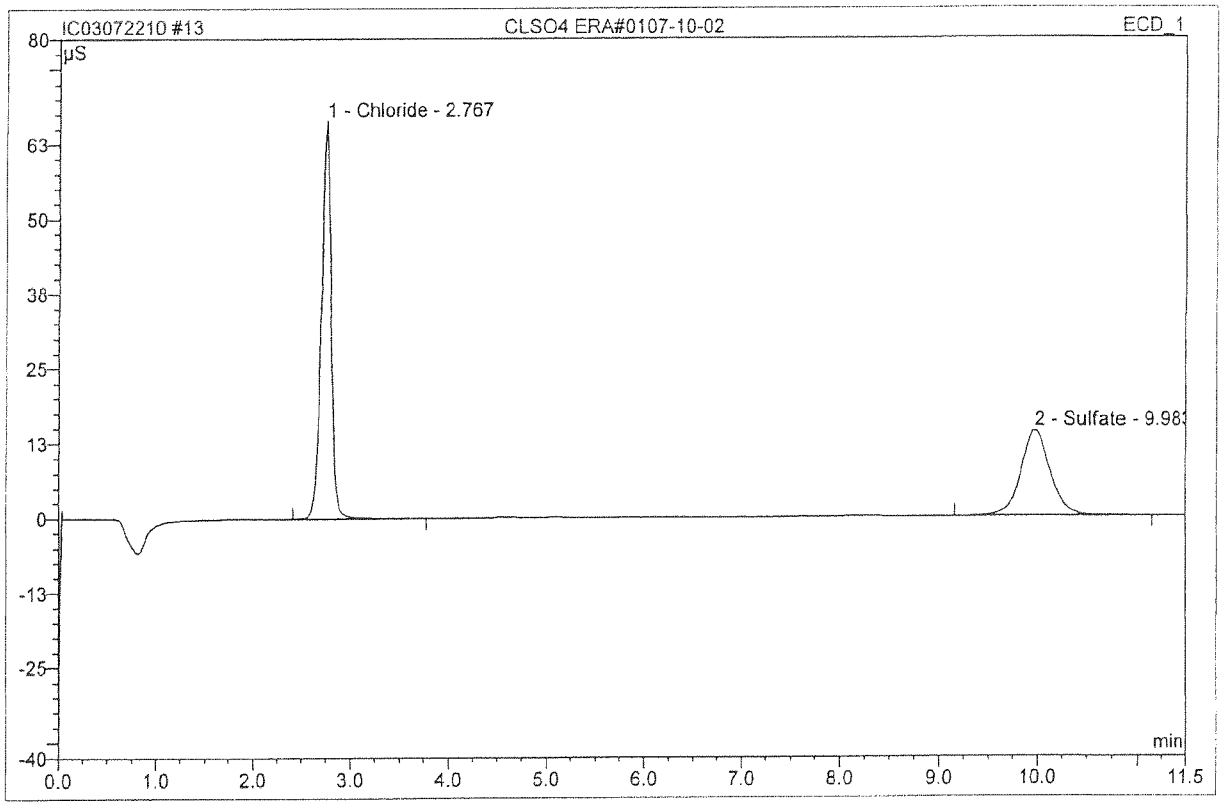


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.77	Chloride	45.601	5.183	57.61	66.785	BMB
2	5.02	Nitrate	19.557	3.651	40.58	19.561	BMB
3	8.20	n.a.	0.398	0.163	1.81	n.a.	BMB
Total:			65.555	8.997	100.00	86.346	

13 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	**CLSO4 ERA#0107-10-02**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/22/2010 10:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**

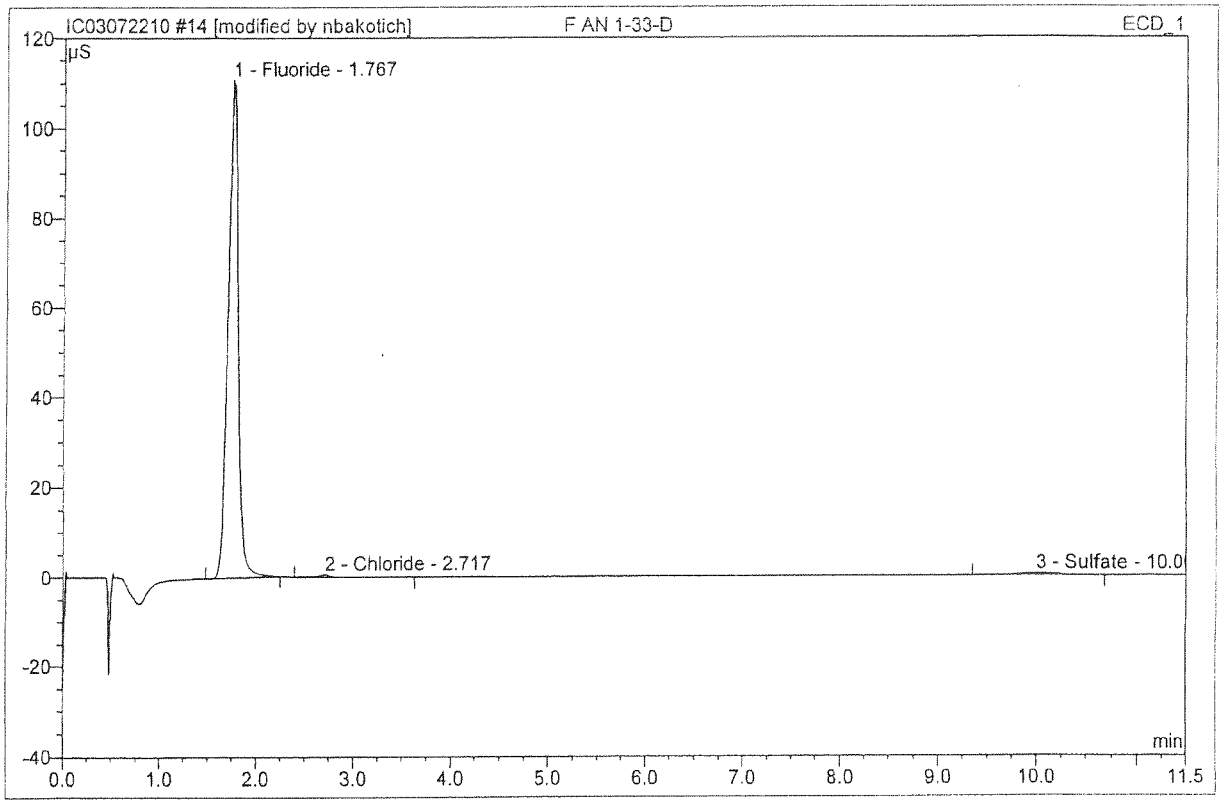


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.77	Chloride	66.464	7.732	60.96	4.982	BMB
2	9.98	Sulfate	14.266	4.951	39.04	4.980	BMB
Total:			80.731	12.684	100.00	9.961	

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 10:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	110.755	13.626	98.45	14.592	BMB*
2	2.72	Chloride	0.538	0.051	0.37	0.066	BMB*
3	10.00	Sulfate	0.450	0.163	1.18	0.327	BMB
Total:			111.742	13.840	100.00	14.986	

After Initials nb

JUL 22 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

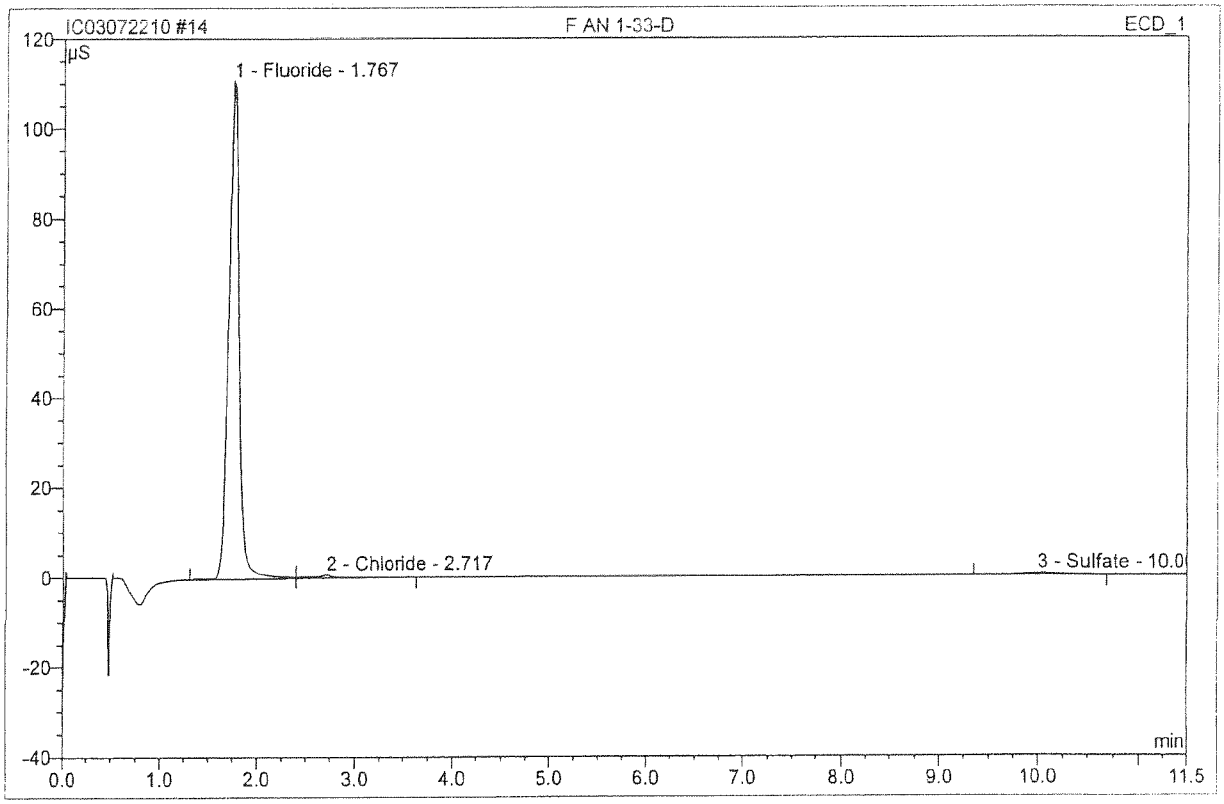
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/22/2010 10:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	110.949	13.865	97.36	14.848	BM
2	2.72	Chloride	0.733	0.213	1.50	0.274	MB
3	10.00	Sulfate	0.450	0.163	1.14	0.327	BMB
Total:			112.131	14.241	100.00	15.450	

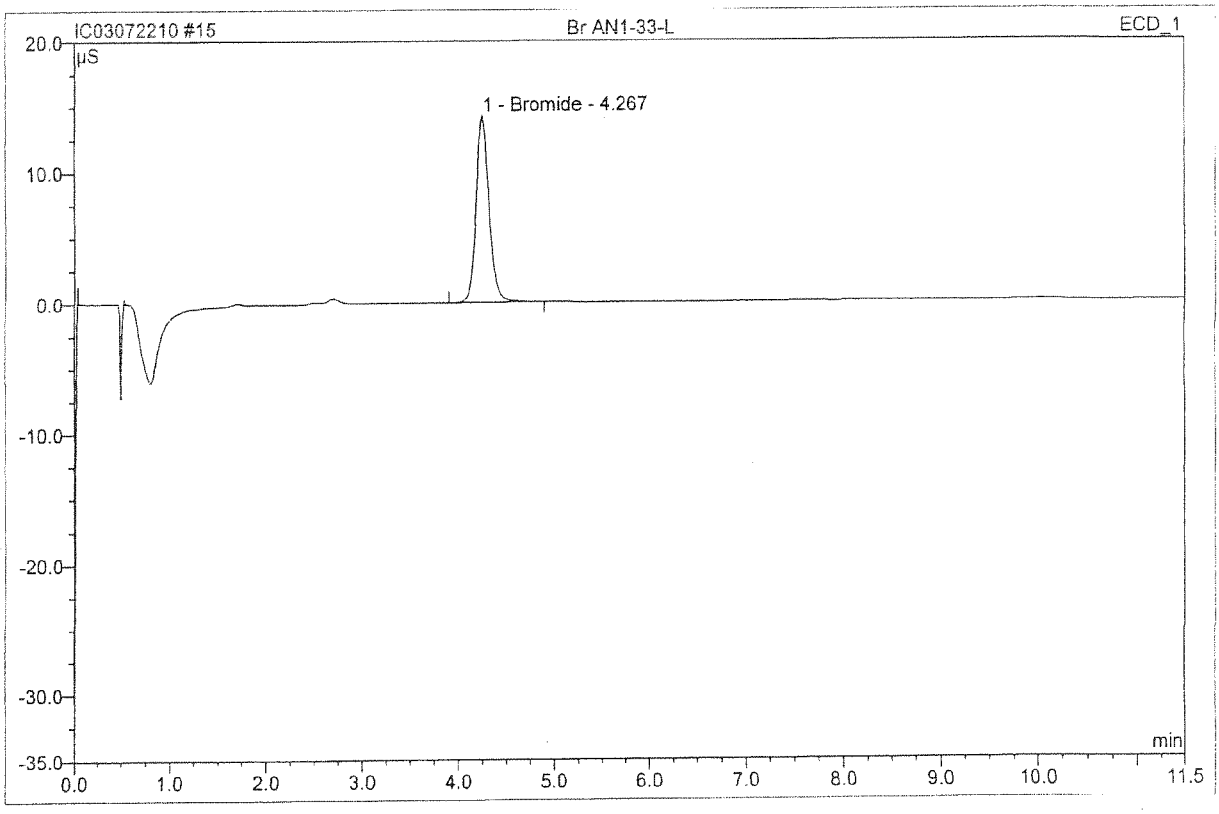
before

JUL 2 2 2010

15 Br AN1-33-L

Br

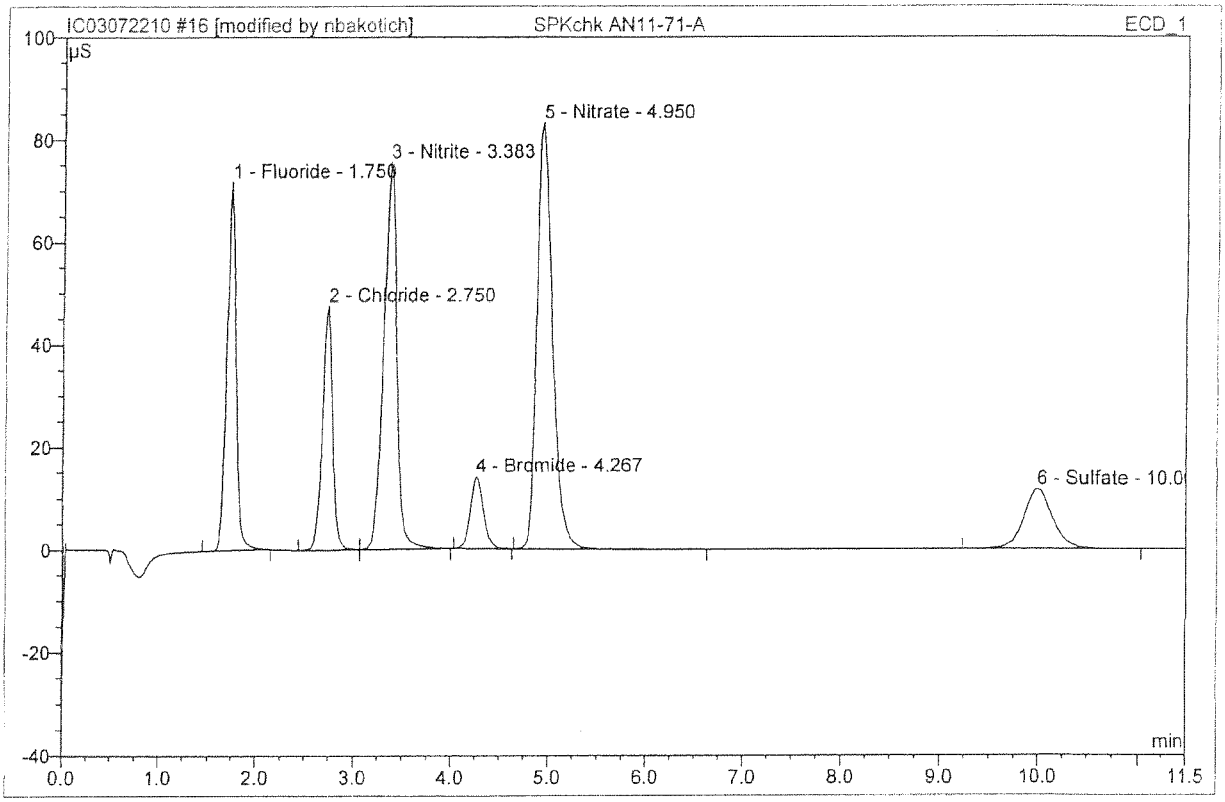
Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/22/2010 11:05**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.27	Bromide	14.292	2.258	100.00	4.261	BMB
Total:			14.292	2.258	100.00	4.261	

16 SPKchk AN11-71-A

Sample Name:	**SPKchk AN11-71-A**	*Injection Volume:*	**200.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/22/2010 11:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**

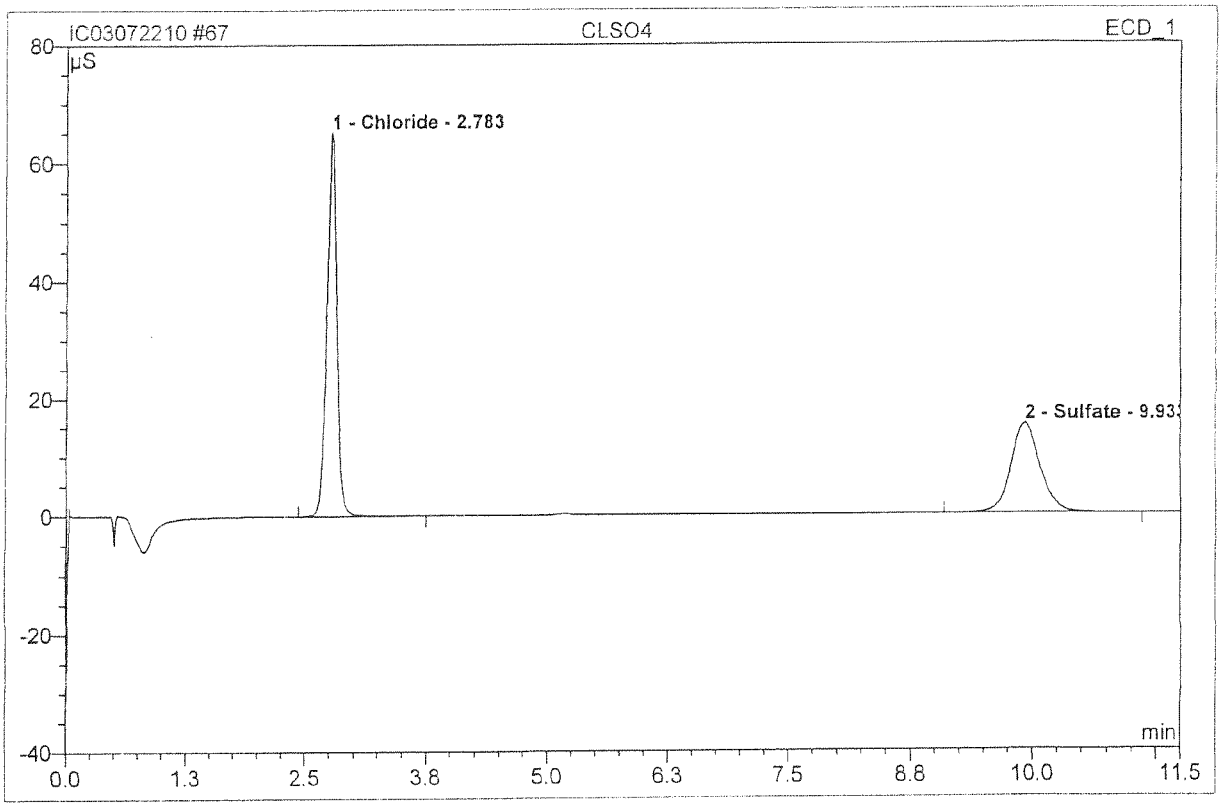


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	71.865	7.873	16.70	4.215	BMB*
2	2.75	Chloride	47.498	5.824	12.36	3.752	BM *
3	3.38	Nitrite	75.466	11.736	24.90	3.686	MB*
4	4.27	Bromide	14.054	2.177	4.62	4.108	BMB*
5	4.95	Nitrate	83.108	15.488	32.86	4.149	BMB*
6	10.00	Sulfate	11.679	4.033	8.56	4.056	BMB
Total:			303.670	47.130	100.00	23.967	

67 CLSO4

CCB6

Sample Name:	**CLSO4**	*Injection Volume:*	**200.0**
Vial Number:	**66**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 0:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**

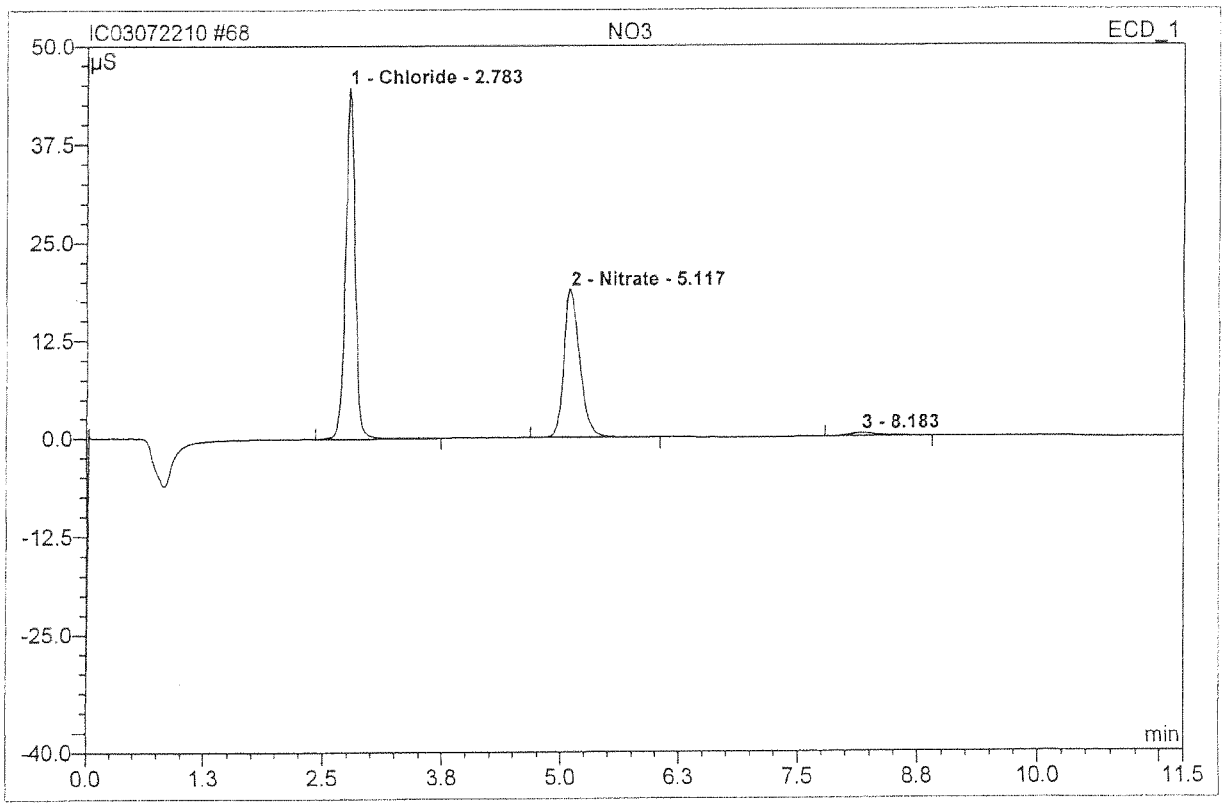


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.78	Chloride	65.257	7.924	59.82	5.105	BMB
2	9.93	Sulfate	15.226	5.321	40.18	5.351	BMB
Total:			80.484	13.245	100.00	10.456	

68 NO3

CCB6

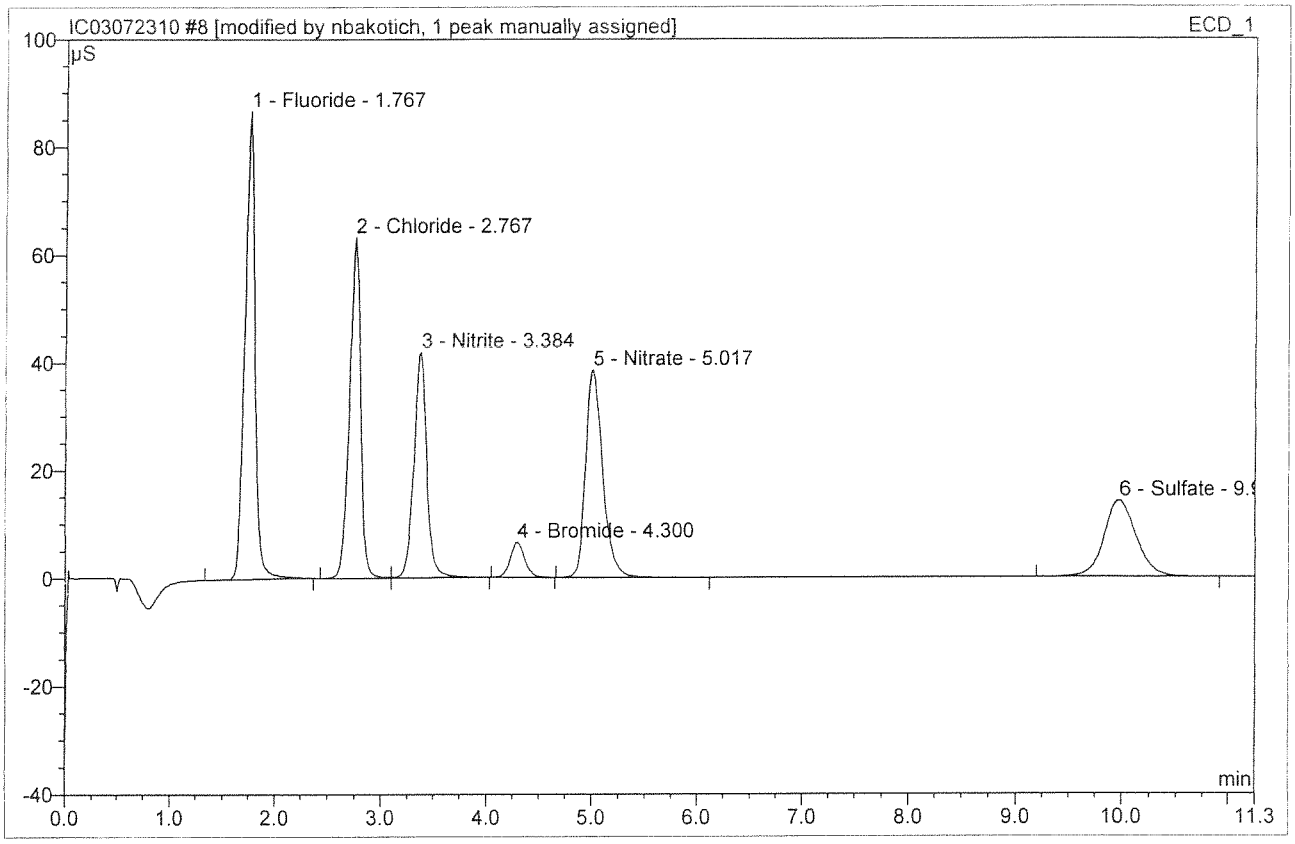
Sample Name:	**NO3**	*Injection Volume:*	**200.0**
Vial Number:	**67**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/23/2010 0:15**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.78	Chloride	44.735	5.211	57.53	67.151	BMB
2	5.12	Nitrate	18.886	3.684	40.67	19.738	BMB
3	8.18	n.a.	0.417	0.163	1.80	n.a.	BMB
Total:			64.037	9.059	100.00	86.889	

8 CCV1 AN11-80-AA

Sample Name:	**CCV1 AN11-80-AA**	*Injection Volume:*	**200.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 7:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	86.743	9.846	26.84	5.272	BMB*
2	2.77	Chloride	63.305	7.657	20.87	4.933	BM *
3	3.38	Nitrite	41.869	6.018	16.41	1.890	MB*
4	4.30	Bromide	6.562	1.046	2.85	1.973	BMB*
5	5.02	Nitrate	38.576	7.230	19.71	1.937	BMB*
6	9.98	Sulfate	14.178	4.885	13.32	4.913	BMB^
Total:			251.234	36.681	100.00	20.917	

After Initials _____

JUL 23 2010

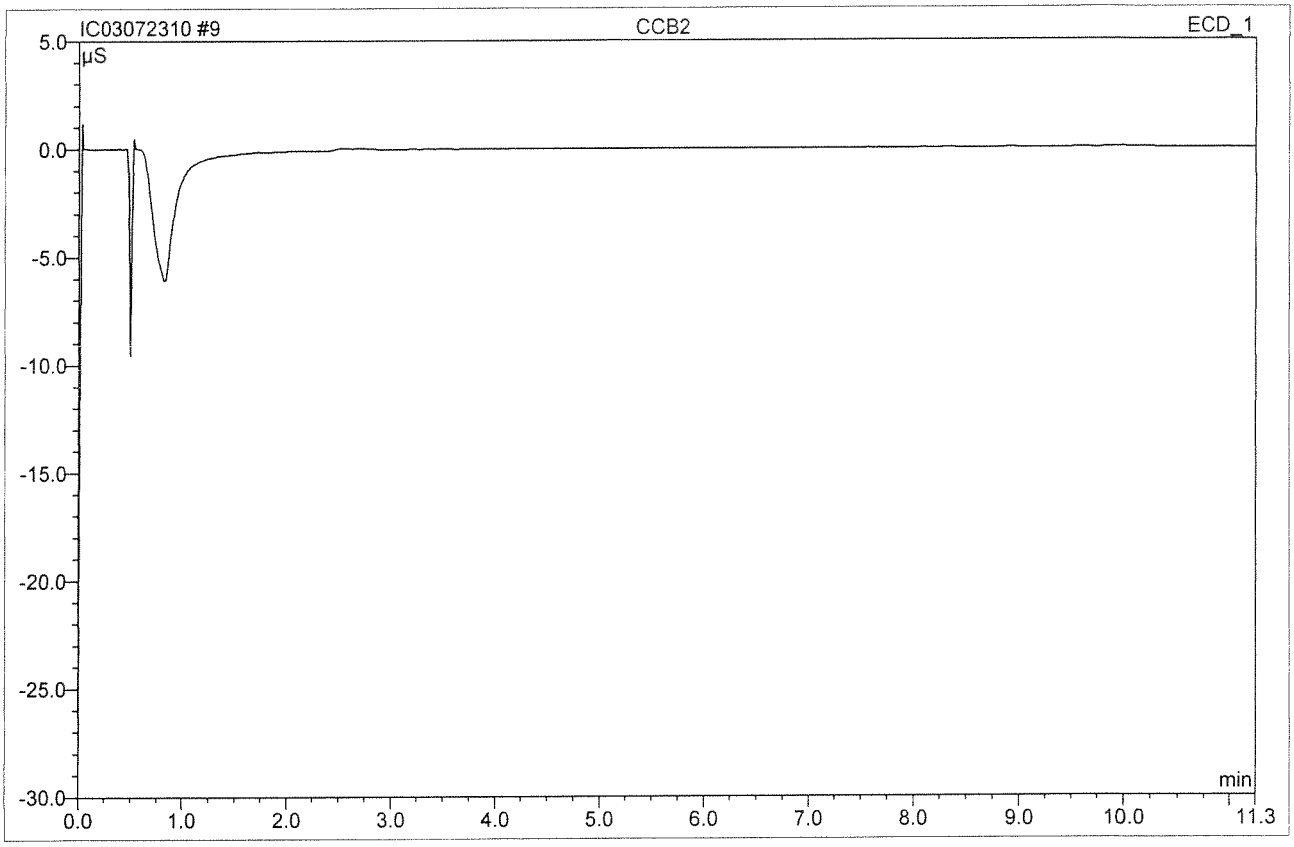
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 CCB2

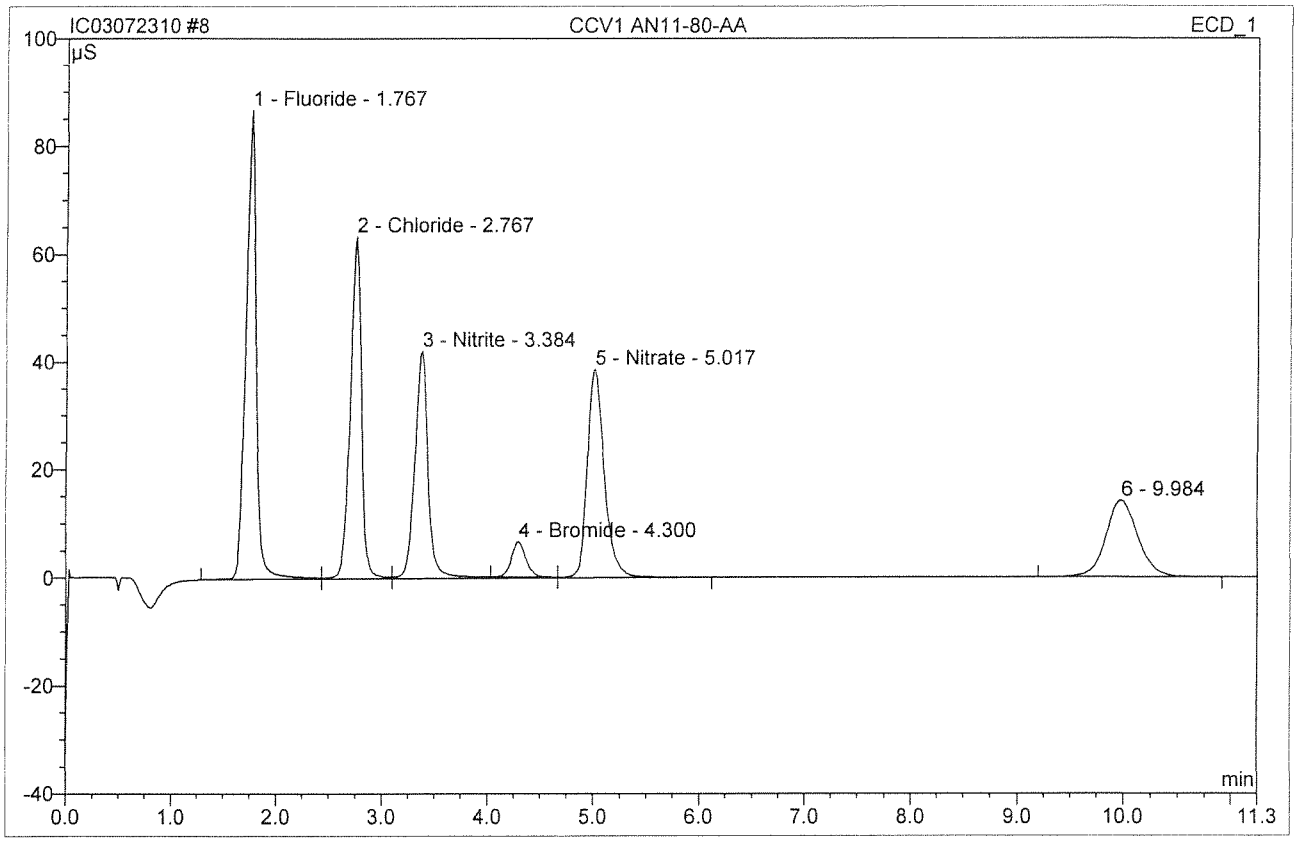
Sample Name:	**CCB2**	*Injection Volume:*	**200.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 8:07**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

8 CCV1 AN11-80-AA

Sample Name:	**CCV1 AN11-80-AA**	*Injection Volume:*	**200.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 7:54**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



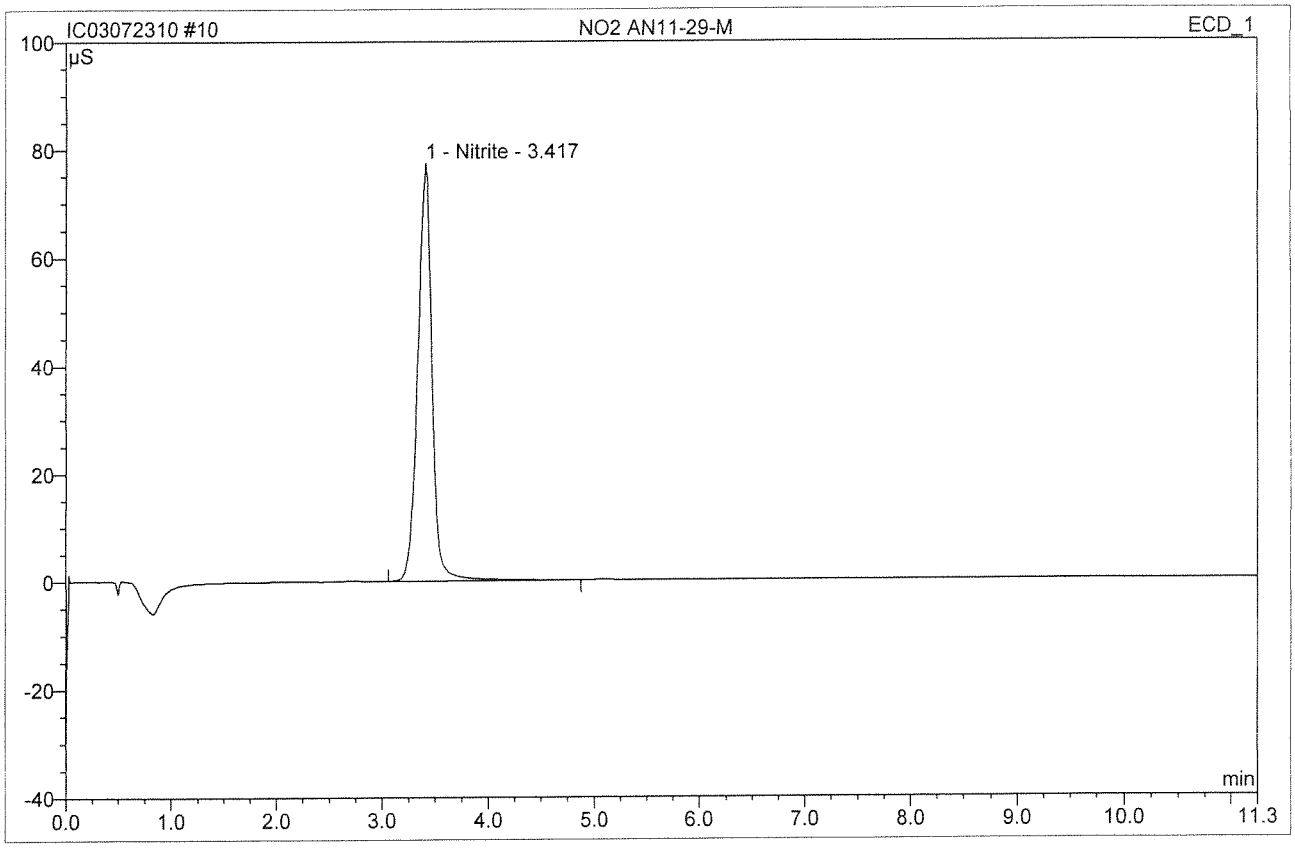
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	86.885	10.032	26.74	5.371	BM
2	2.77	Chloride	63.533	7.809	20.82	5.031	M
3	3.38	Nitrite	42.118	6.392	17.04	2.007	M
4	4.30	Bromide	6.564	1.047	2.79	1.976	Rd
5	5.02	Nitrate	38.698	7.347	19.59	1.968	MB
6	9.98	n.a.	14.178	4.885	13.02	n.a.	BMB
Total:			251.976	37.511	100.00	16.353	

Before
JUL 23 2010

10 NO2 AN11-29-M

NO2

Sample Name:	**NO2 AN11-29-M**	*Injection Volume:*	**200.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/23/2010 8:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

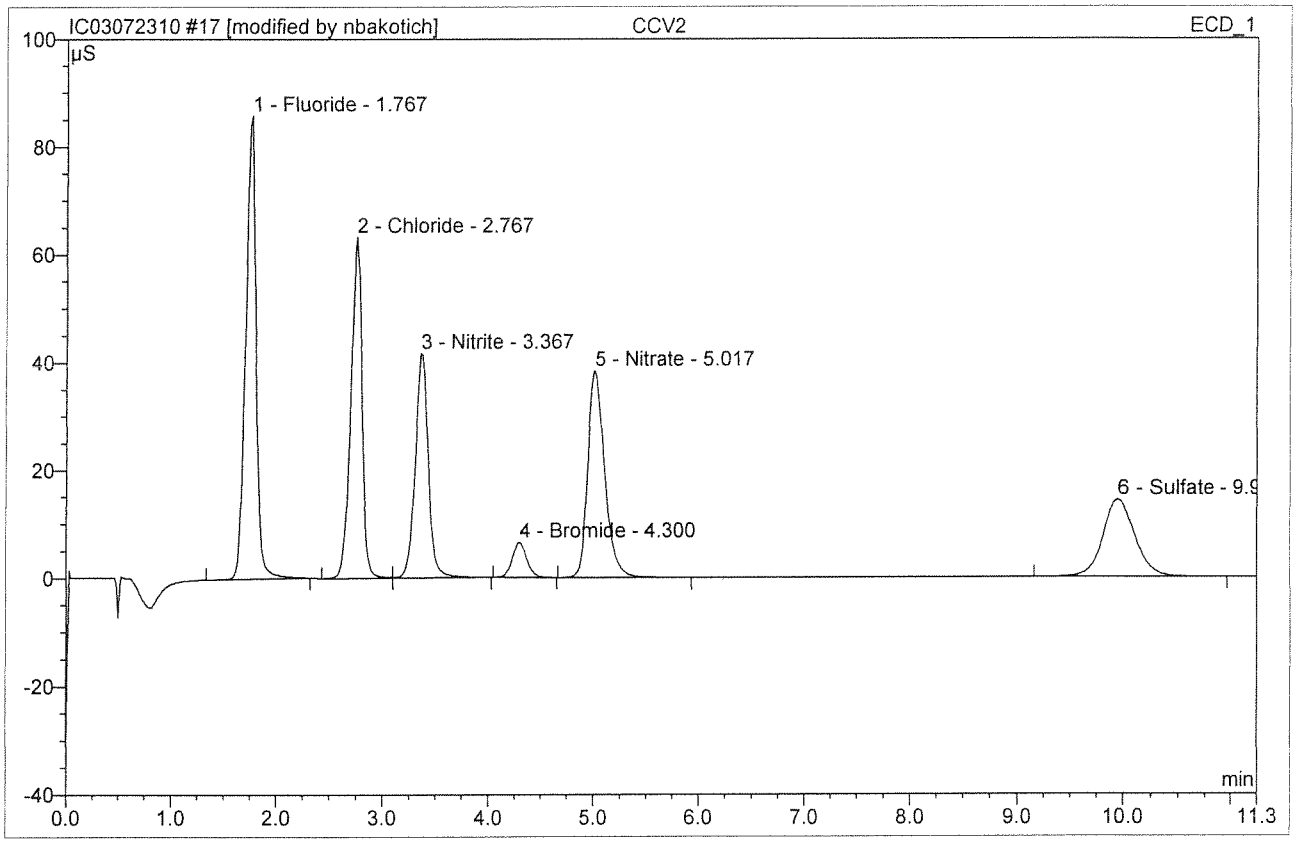


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.42	Nitrite	77.431	12.208	100.00	95.847	BMB
Total:			77.431	12.208	100.00	95.847	

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**200.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 9:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	85.962	9.944	27.02	5.324	BMB*
2	2.77	Chloride	63.303	7.714	20.96	4.970	BM *
3	3.37	Nitrite	41.608	5.990	16.27	1.881	MB*
4	4.30	Bromide	6.541	1.044	2.84	1.970	BMB*
5	5.02	Nitrate	38.449	7.192	19.54	1.927	BMB*
6	9.95	Sulfate	14.335	4.920	13.37	4.948	BMB
Total:			250.197	36.805	100.00	21.020	

After Initials _____

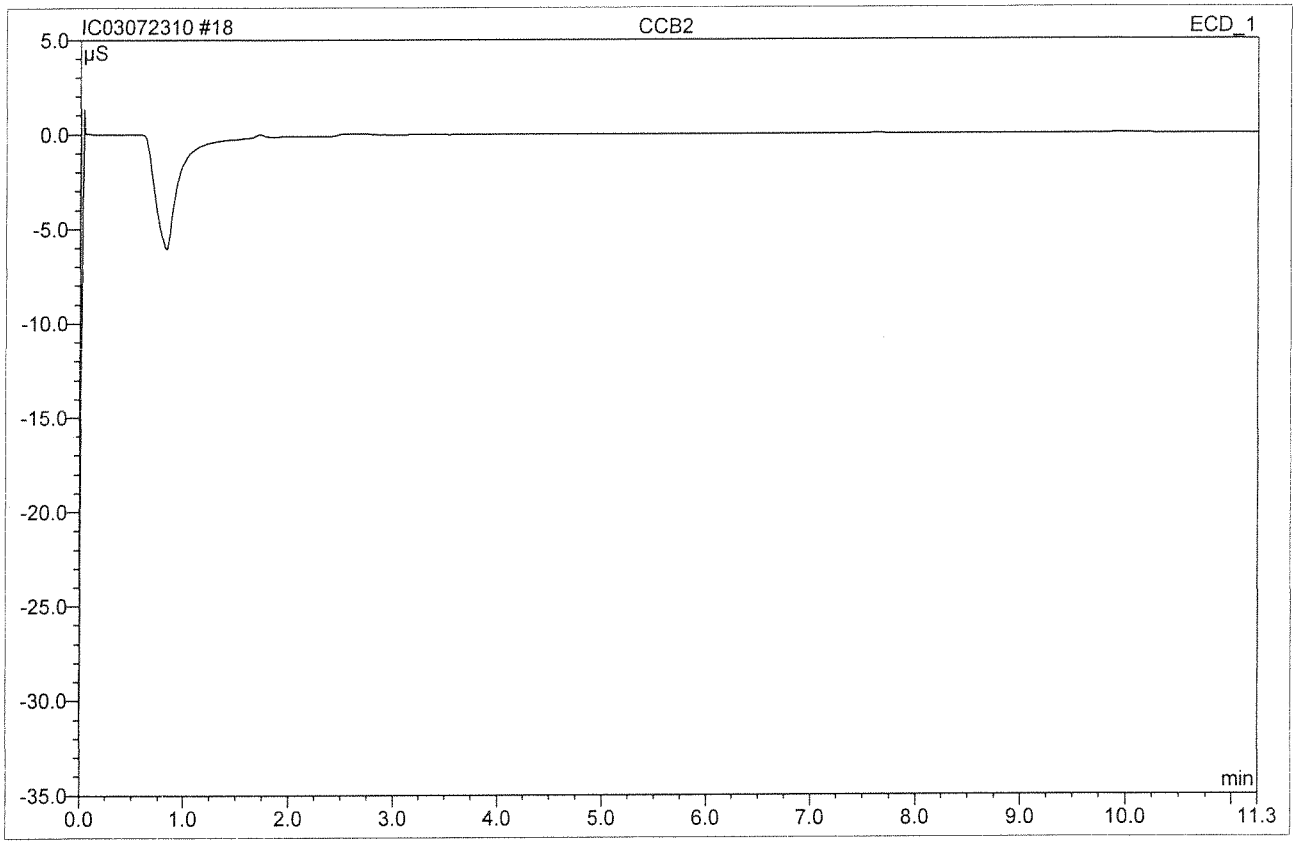
JUL 26 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other_____

18 CCB2

CCB2

Sample Name:	**CCB2**	*Injection Volume:*	**200.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 10:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

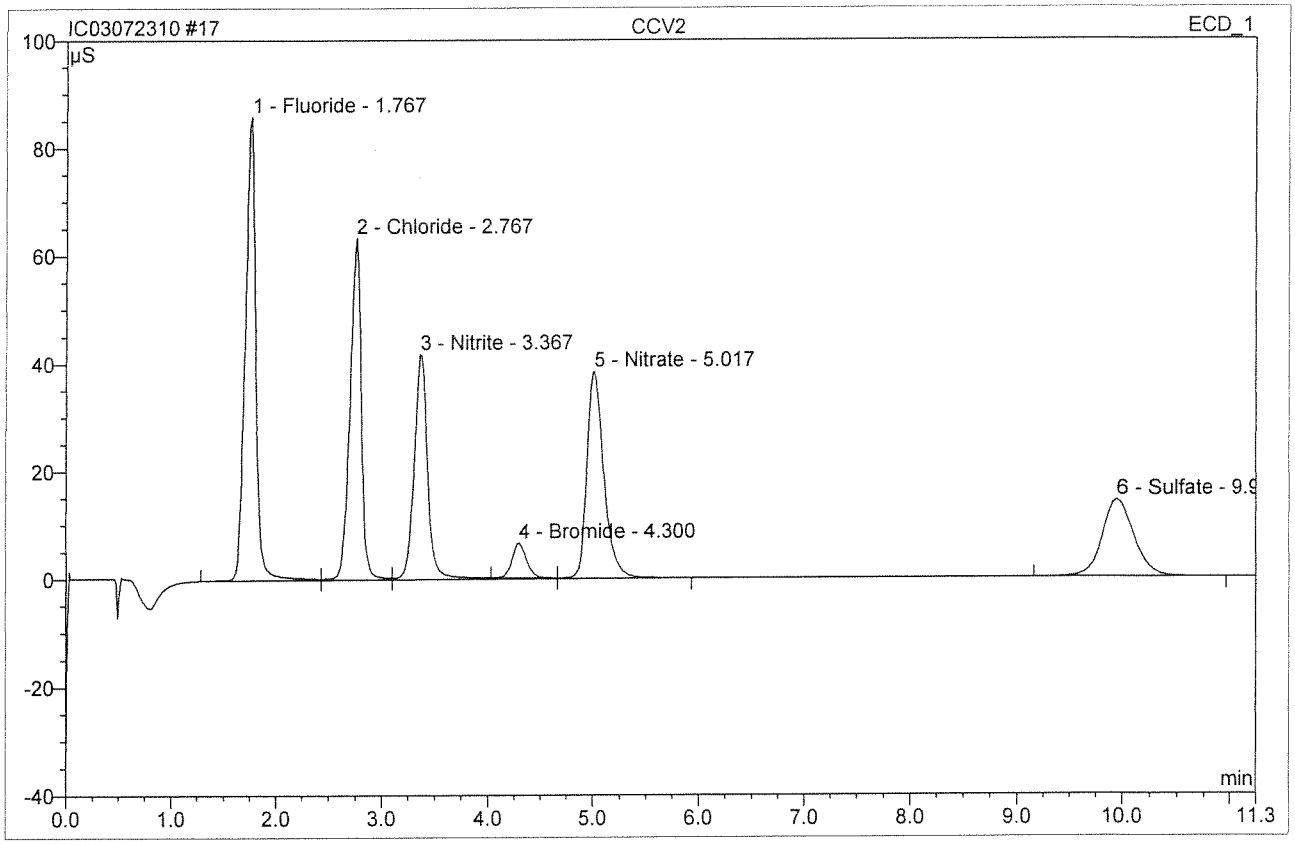


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**200.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 9:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	86.128	10.160	27.00	5.440	BM
2	2.77	Chloride	63.530	7.865	20.91	5.067	M
3	3.37	Nitrite	41.846	6.344	16.86	1.992	M
4	4.30	Bromide	6.543	1.045	2.78	1.972	Rd
5	5.02	Nitrate	38.561	7.290	19.38	1.953	MB
6	9.95	Sulfate	14.335	4.920	13.08	4.948	BMB
Total:			250.943	37.624	100.00	21.373	

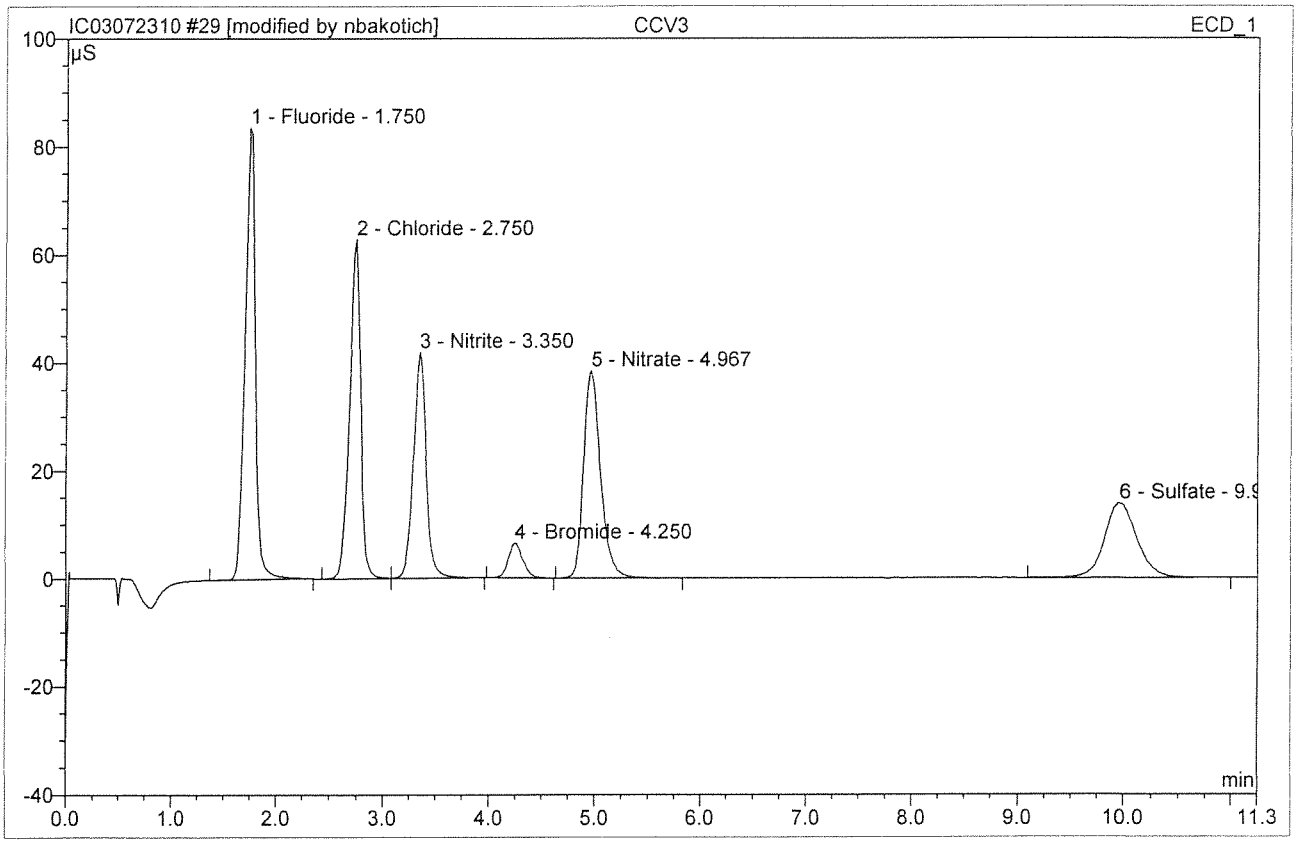
Dionex

JUL 2 3 2010

29 CCV3

CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**200.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 12:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	83.761	9.677	26.73	5.181	BMB*
2	2.75	Chloride	62.834	7.623	21.06	4.911	BM *
3	3.35	Nitrite	41.742	5.946	16.43	1.867	MB*
4	4.25	Bromide	6.468	1.029	2.84	1.942	BMB*
5	4.97	Nitrate	38.303	7.142	19.73	1.913	BMB*
6	9.97	Sulfate	13.886	4.783	13.21	4.810	BMB
Total:			246.994	36.201	100.00	20.625	

Initials

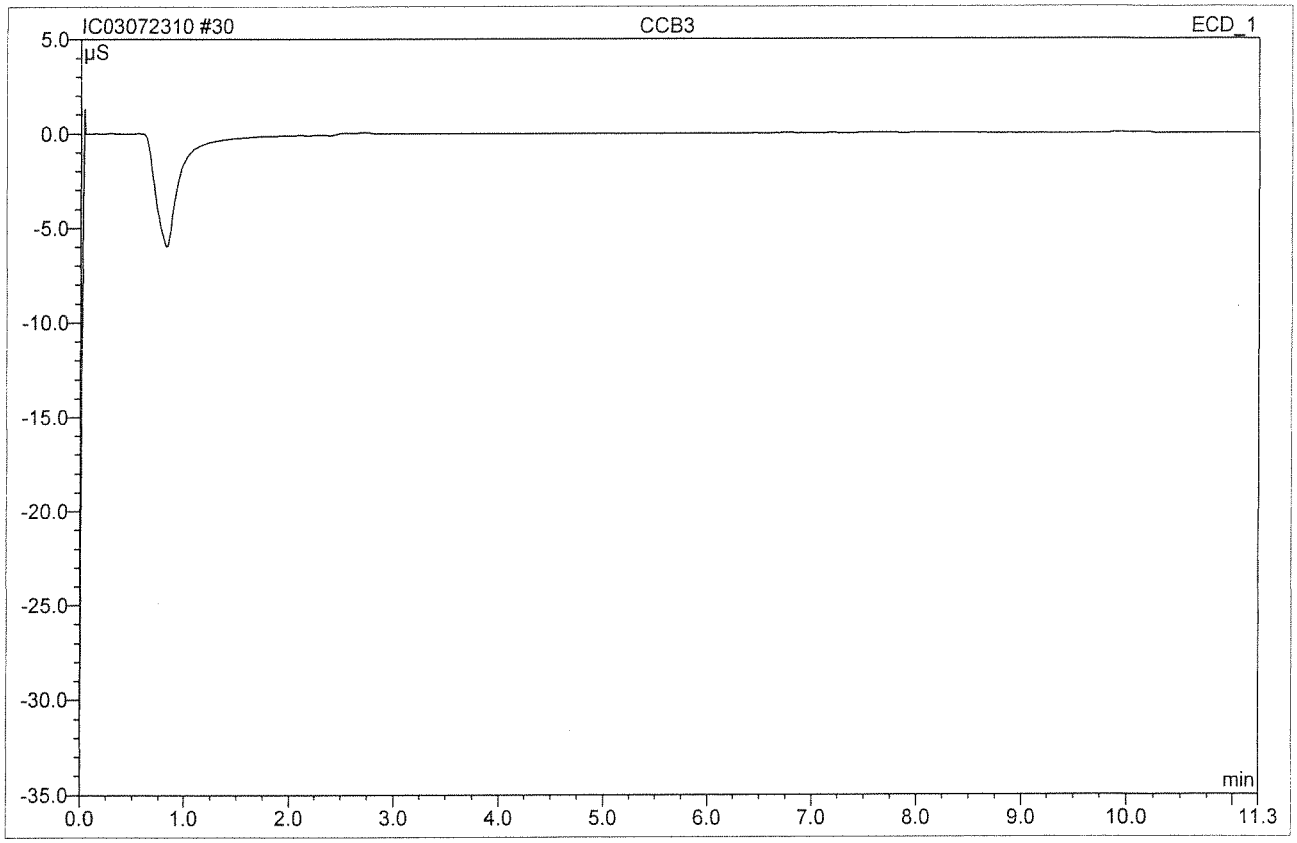
JUL 23 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

30 CCB3

CCB3

Sample Name:	**CCB3**	*Injection Volume:*	**200.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 12:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

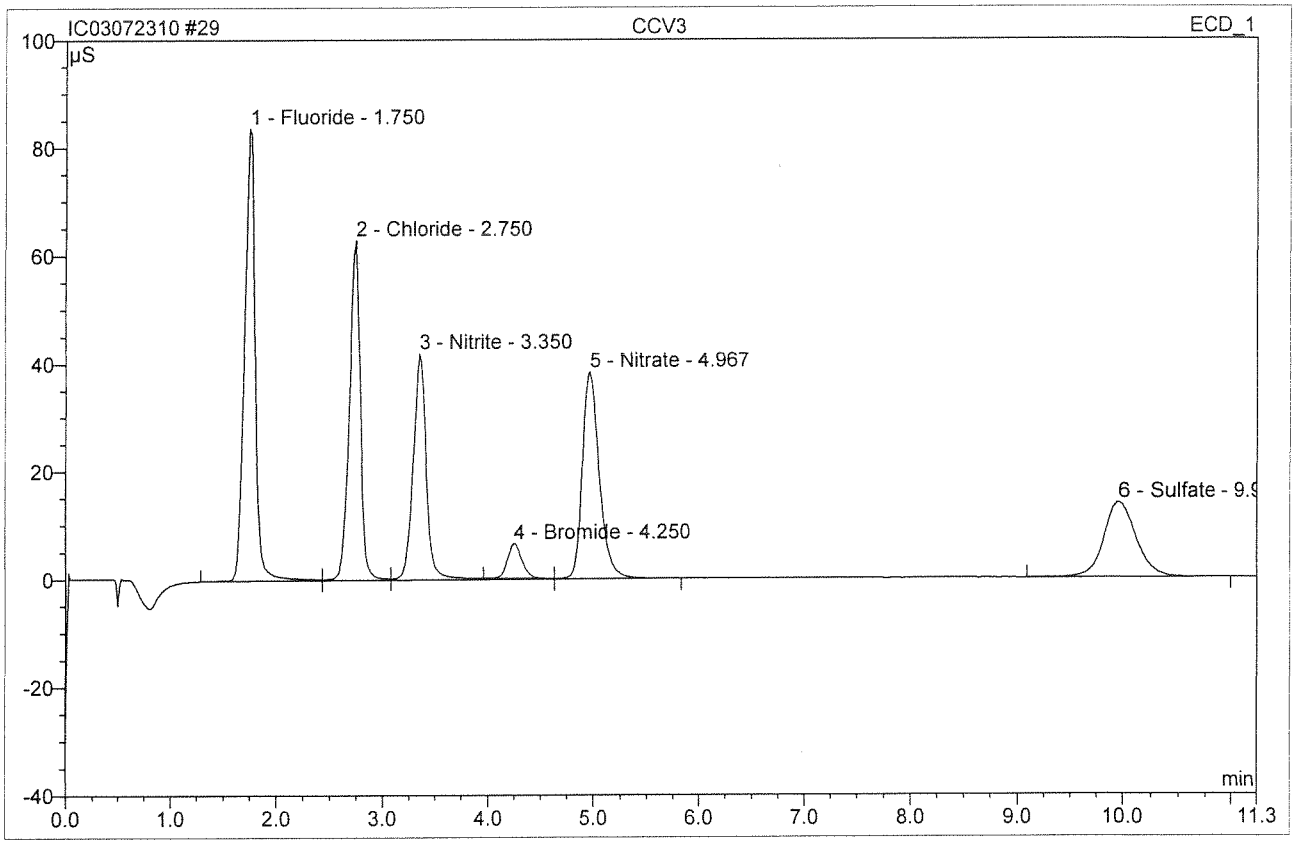


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

29 CCV3

CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**200.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 12:42**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	83.898	9.859	26.69	5.279	BM
2	2.75	Chloride	63.041	7.757	21.00	4.997	M
3	3.35	Nitrite	41.972	6.285	17.01	1.974	M
4	4.25	Bromide	6.471	1.031	2.79	1.946	Rd
5	4.97	Nitrate	38.403	7.225	19.56	1.936	MB
6	9.97	Sulfate	13.886	4.783	12.95	4.810	BMB
Total:			247.671	36.941	100.00	20.942	

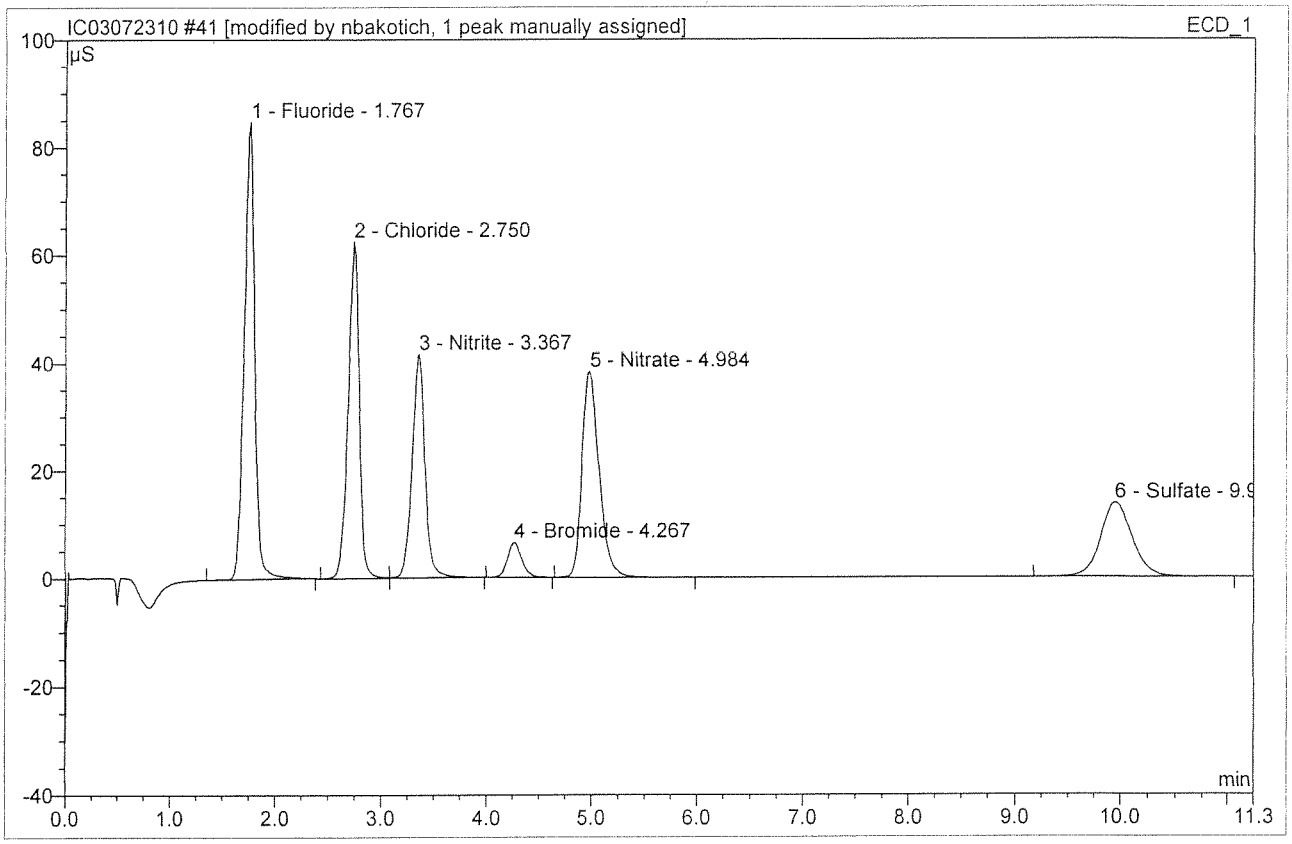
Before

JUL 2 3 2010

41 CCV4

CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**200.0**
Vial Number:	**40**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 15:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	84.945	9.791	26.96	5.242	BMB*
2	2.75	Chloride	62.423	7.553	20.79	4.866	BM *
3	3.37	Nitrite	41.543	5.978	16.46	1.877	MB*
4	4.27	Bromide	6.485	1.037	2.85	1.956	BMB*^
5	4.98	Nitrate	38.321	7.183	19.78	1.924	BMB*
6	9.95	Sulfate	13.866	4.782	13.16	4.809	BMB
Total:			247.584	36.324	100.00	20.675	

After
Initials MB

JUL 26 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

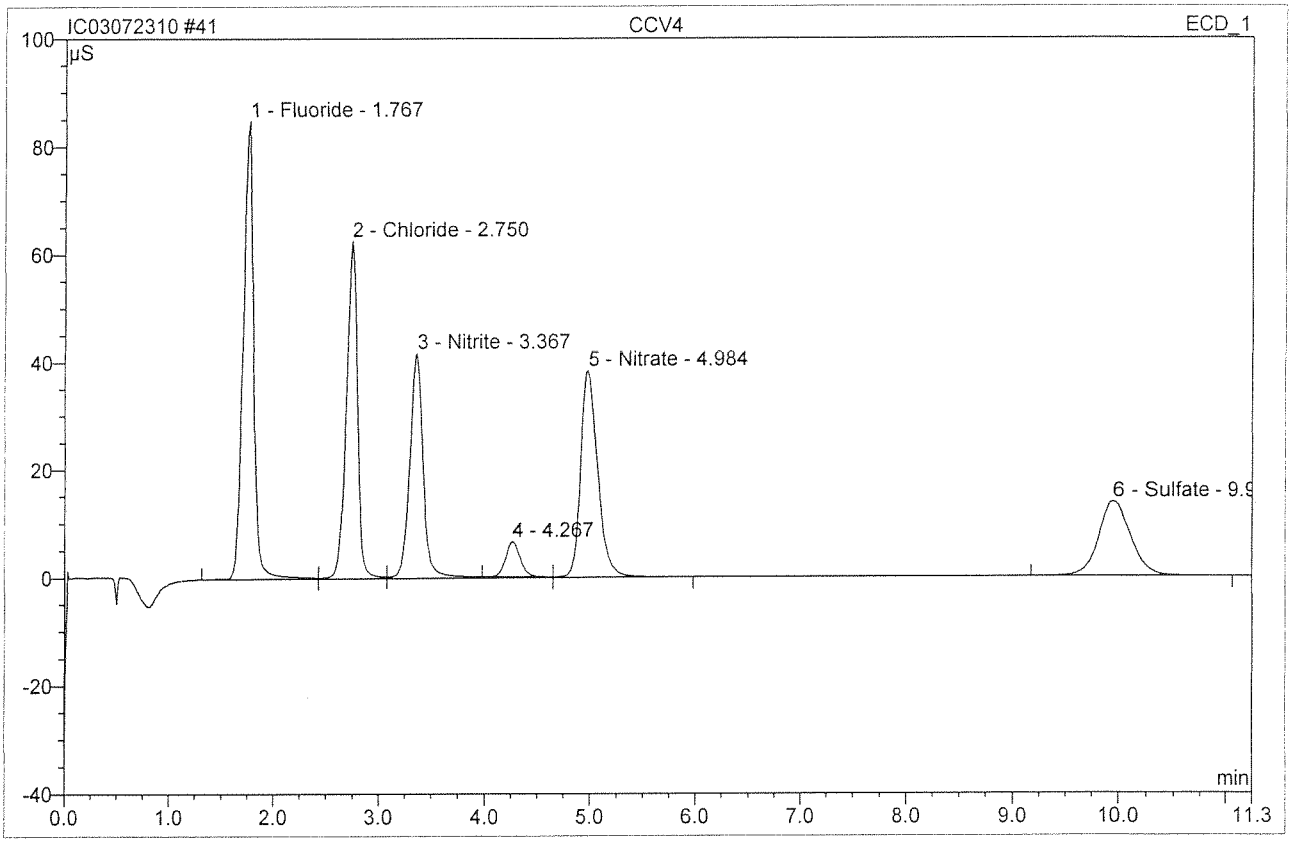
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

41 CCV4

CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**200.0**
Vial Number:	**40**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 15:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	85.058	9.940	26.82	5.322	BM
2	2.75	Chloride	62.625	7.684	20.74	4.950	M
3	3.37	Nitrite	41.773	6.329	17.08	1.988	M
4	4.27	n.a.	6.487	1.038	2.80	n.a.	Rd
5	4.98	Nitrate	38.434	7.284	19.66	1.951	MB
6	9.95	Sulfate	13.866	4.782	12.90	4.809	BMB
Total:			248.243	37.057	100.00	19.020	

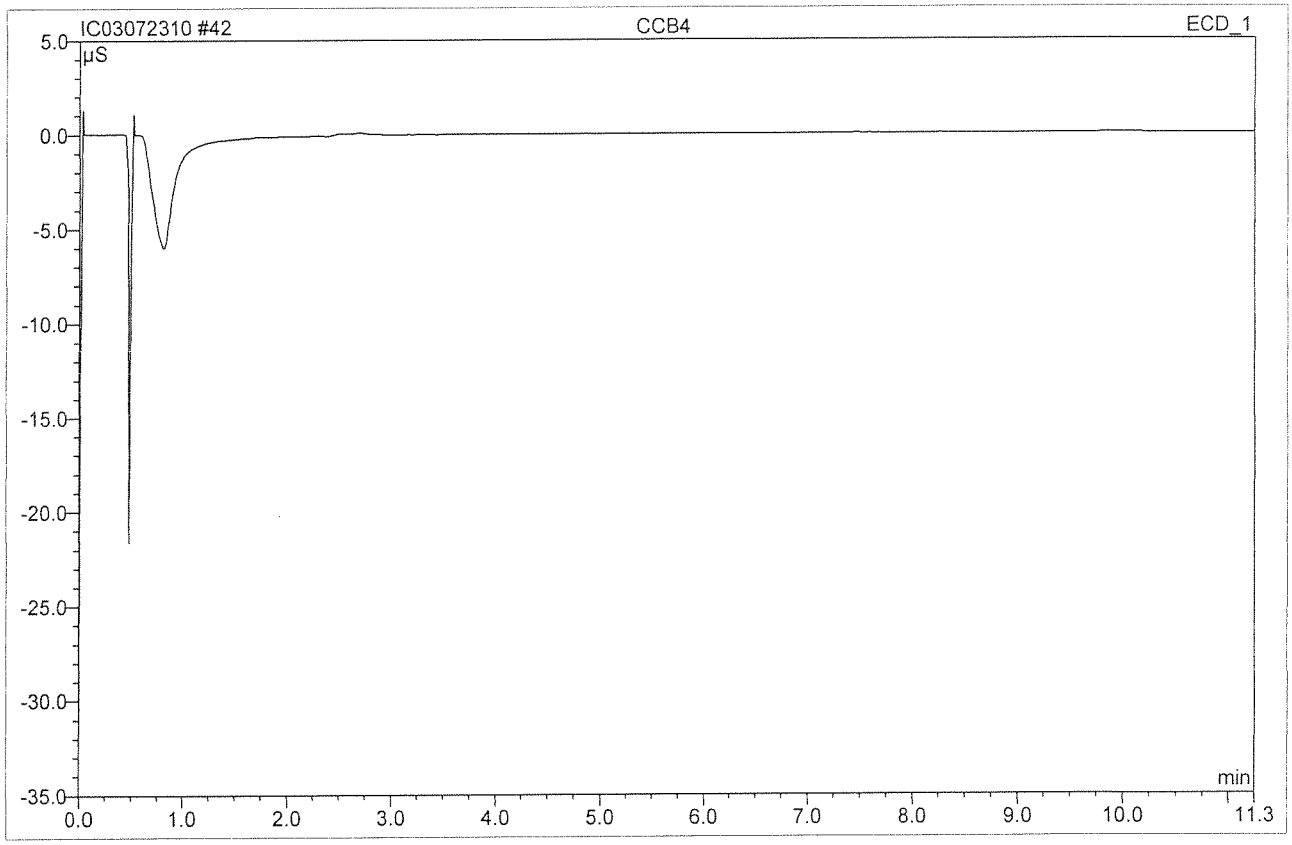
Before

JUL 2 6 2010

42 CCB4

CCB4

Sample Name:	**CCB4**	*Injection Volume:*	**200.0**
Vial Number:	**41**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 15:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

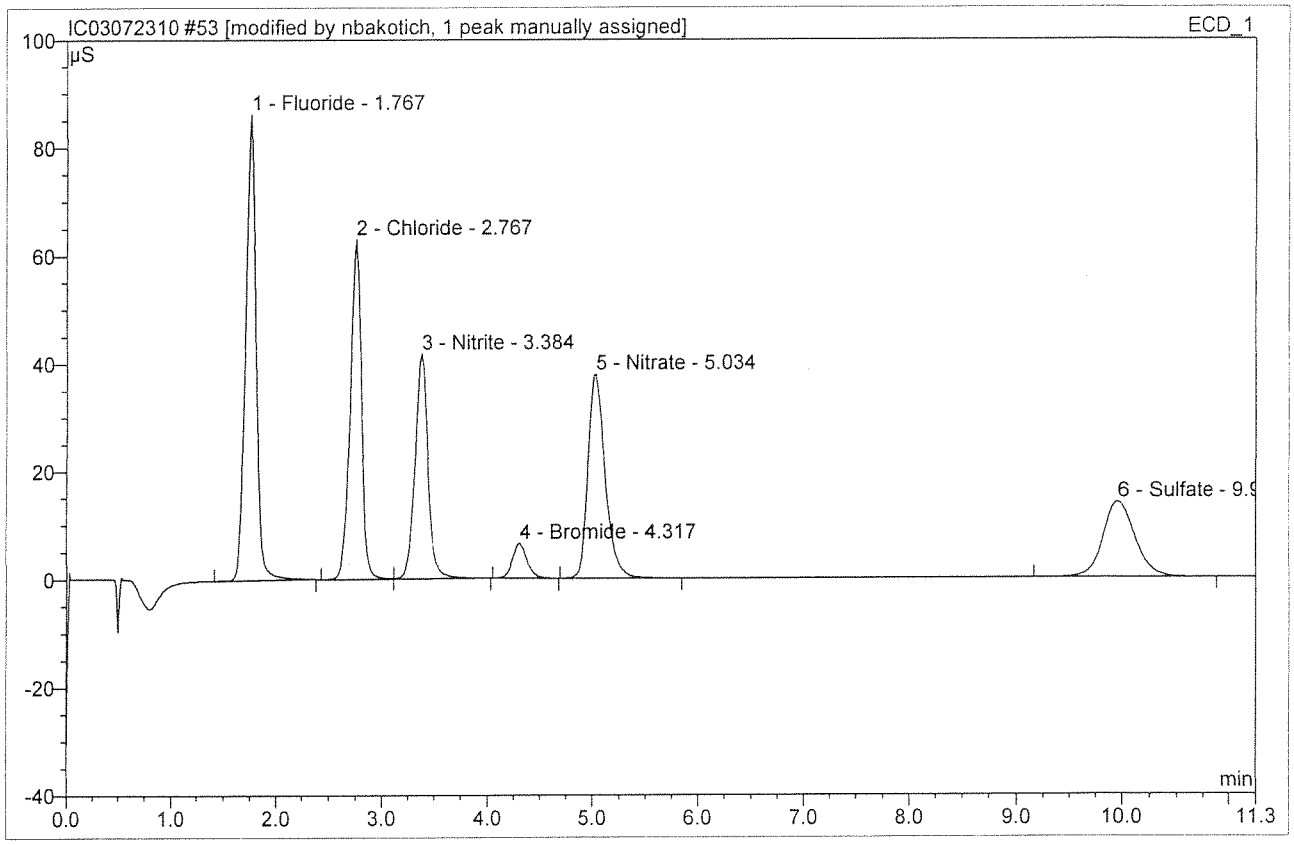


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

53 CCV5

CCV5

Sample Name:	**CCV5**	*Injection Volume:*	**200.0**
Vial Number:	**52**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	86.383	9.907	27.02	5.304	BMB*
2	2.77	Chloride	63.031	7.725	21.07	4.976	BM *
3	3.38	Nitrite	41.718	6.014	16.40	1.888	MB*
4	4.32	Bromide	6.410	1.045	2.85	1.971	BMB*^
5	5.03	Nitrate	37.794	7.160	19.53	1.918	BMB*
6	9.97	Sulfate	13.958	4.810	13.12	4.837	BMB
Total:			249.294	36.660	100.00	20.896	

After
Initials AB

JUL 26 2010

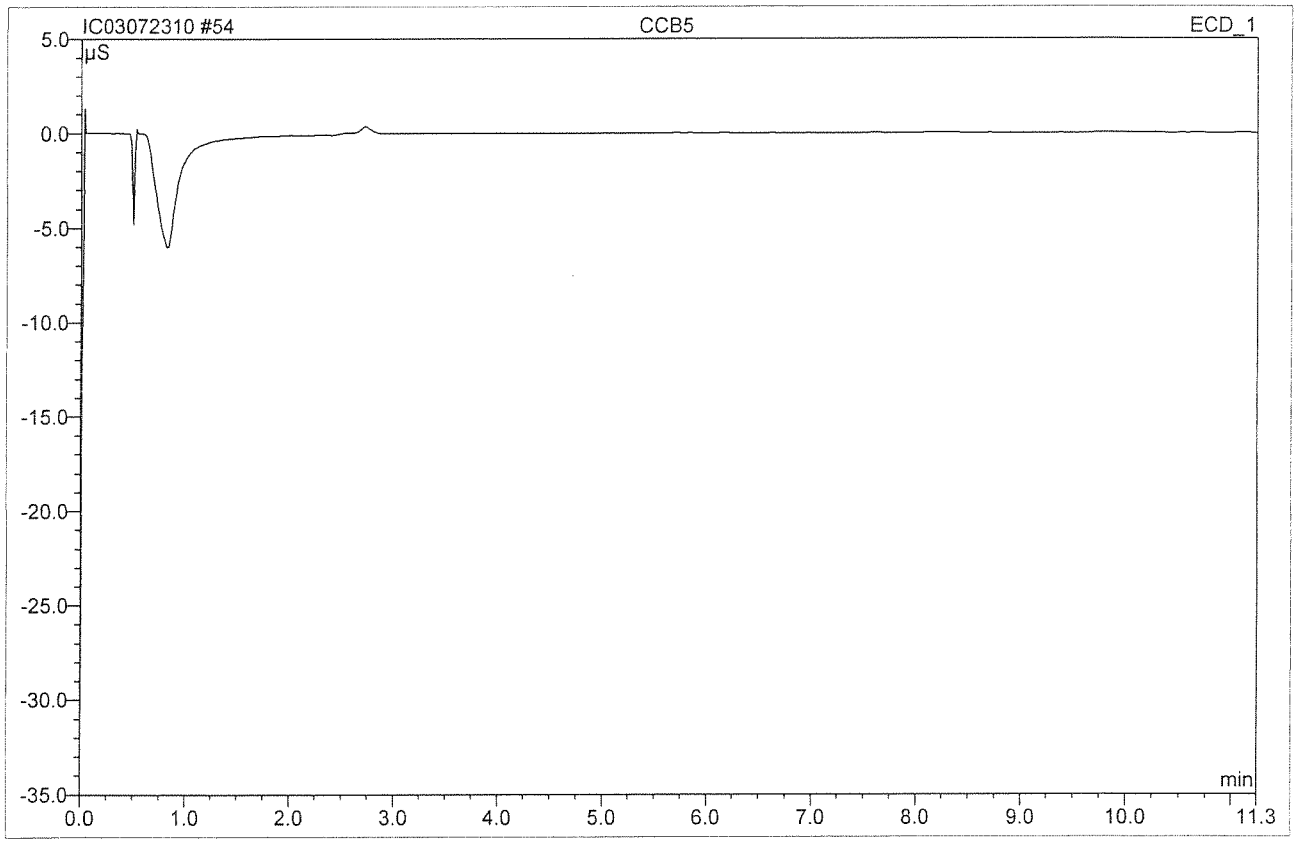
☑ Wrong Peak/Peak not Found
☐ Int/shoulder Incorrect
☐ Other

default/Integration

54 CCB5

CCB5

Sample Name:	**CCB5**	*Injection Volume:*	**200.0**
Vial Number:	**53**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 18:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

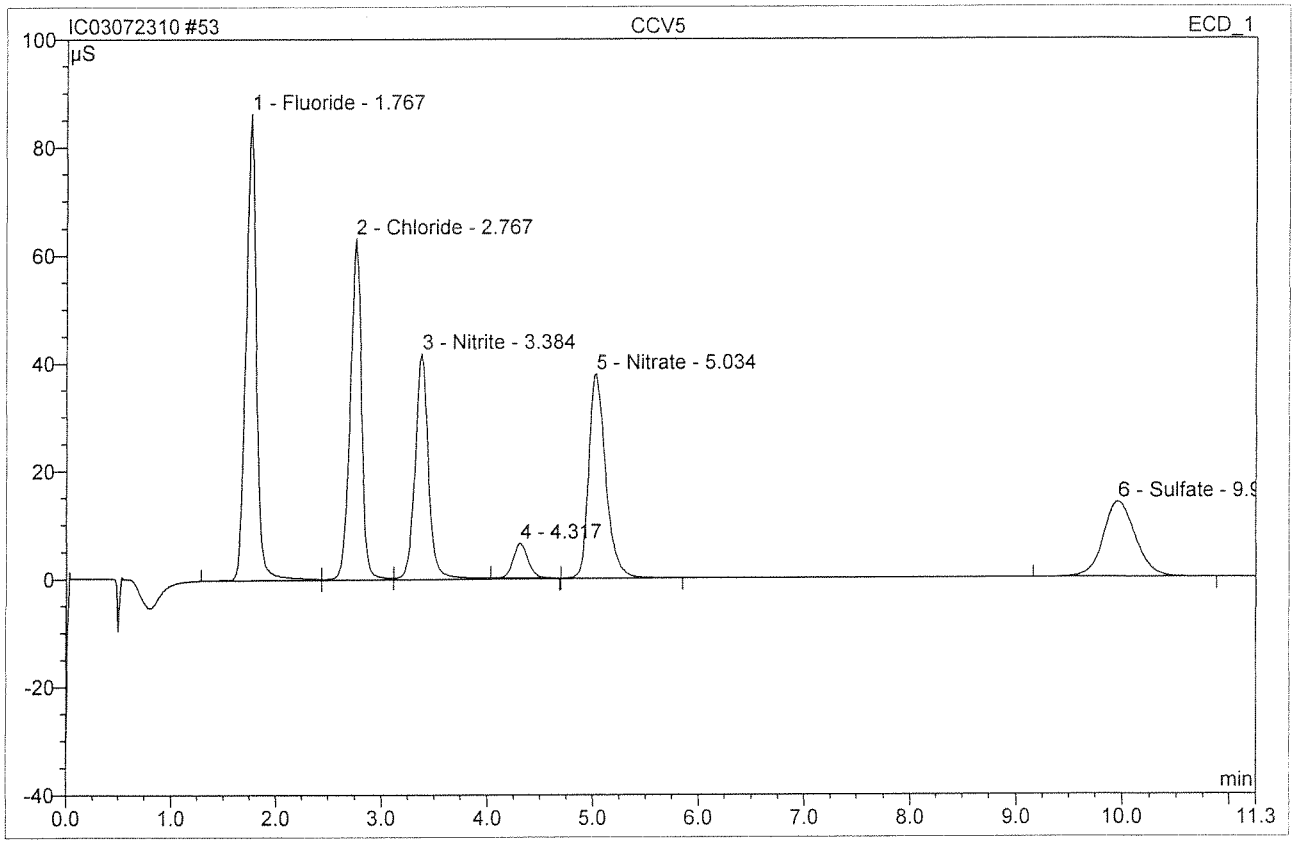


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

53 CCV5

CCV5

Sample Name:	**CCV5**	*Injection Volume:*	**200.0**
Vial Number:	**52**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 18:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	86.529	10.089	26.99	5.402	BM
2	2.77	Chloride	63.236	7.865	21.04	5.067	M
3	3.38	Nitrite	41.936	6.338	16.95	1.990	M
4	4.32	n.a.	6.411	1.045	2.80	n.a.	Rd
5	5.03	Nitrate	37.886	7.235	19.35	1.938	MB
6	9.97	Sulfate	13.958	4.810	12.87	4.837	BMB
Total:			249.957	37.382	100.00	19.235	

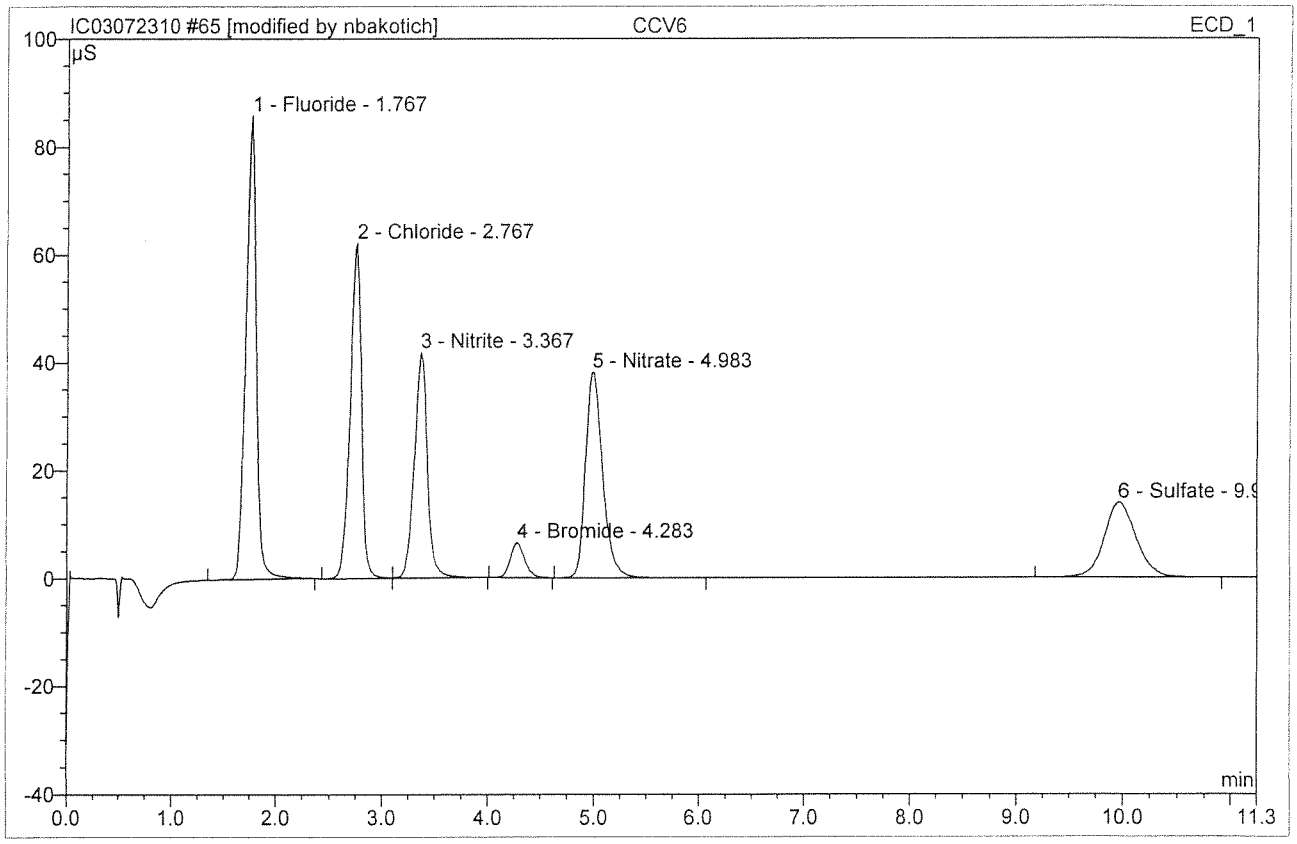
Before

JL 2 6 2010

65 CCV6

CCV6

Sample Name:	**CCV6**	*Injection Volume:*	**200.0**
Vial Number:	**64**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 20:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	85.955	9.878	27.05	5.289	BMB*
2	2.77	Chloride	62.181	7.610	20.84	4.903	BM *
3	3.37	Nitrite	41.852	5.990	16.41	1.881	MB*
4	4.28	Bromide	6.485	1.039	2.85	1.961	BMB*
5	4.98	Nitrate	38.029	7.190	19.69	1.926	BMB*
6	9.97	Sulfate	13.901	4.805	13.16	4.832	BMB
Total:			248.405	36.513	100.00	20.792	

After
Initials _____

JUL 26 2010

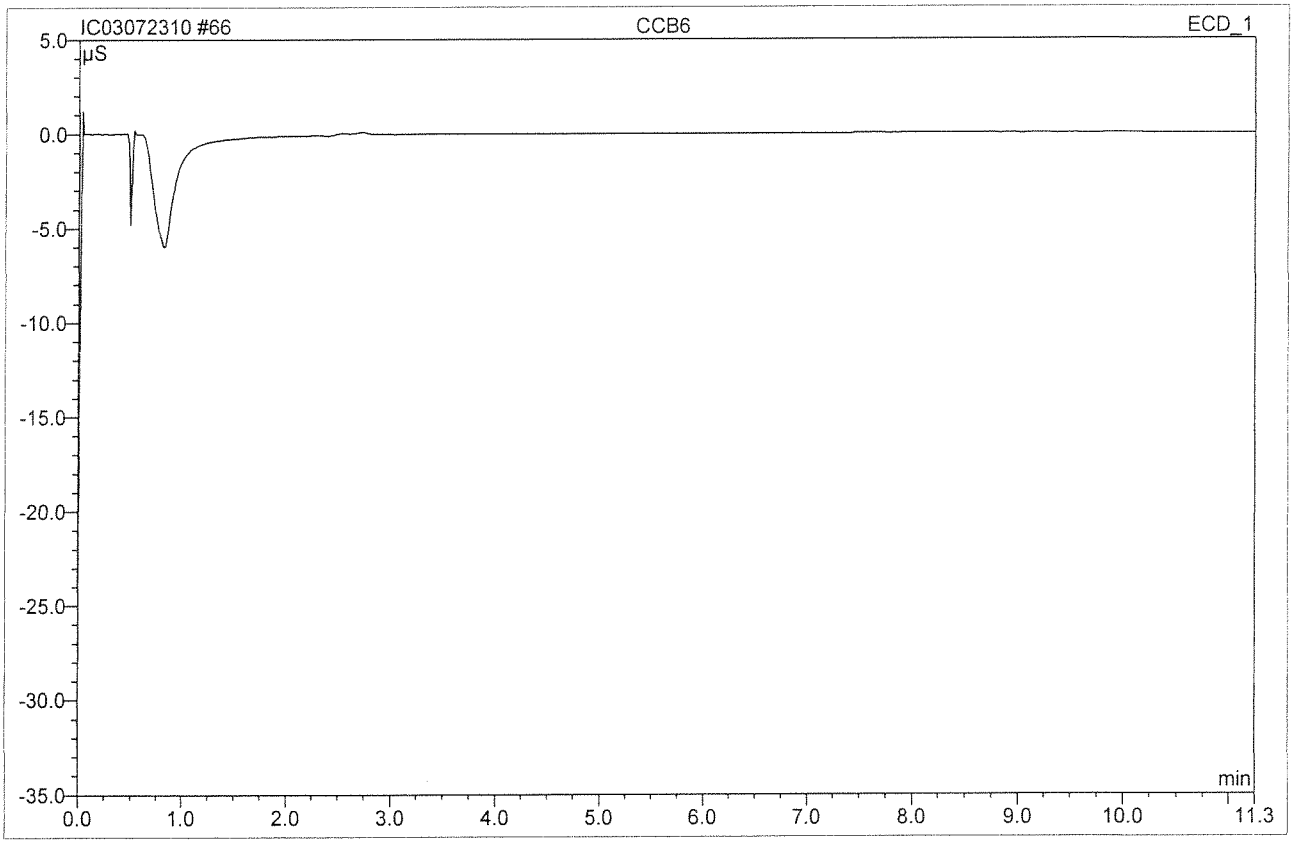
☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other _____

default/Integration

66 CCB6

CCB6

Sample Name:	**CCB6**	*Injection Volume:*	**200.0**
Vial Number:	**65**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 21:09**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

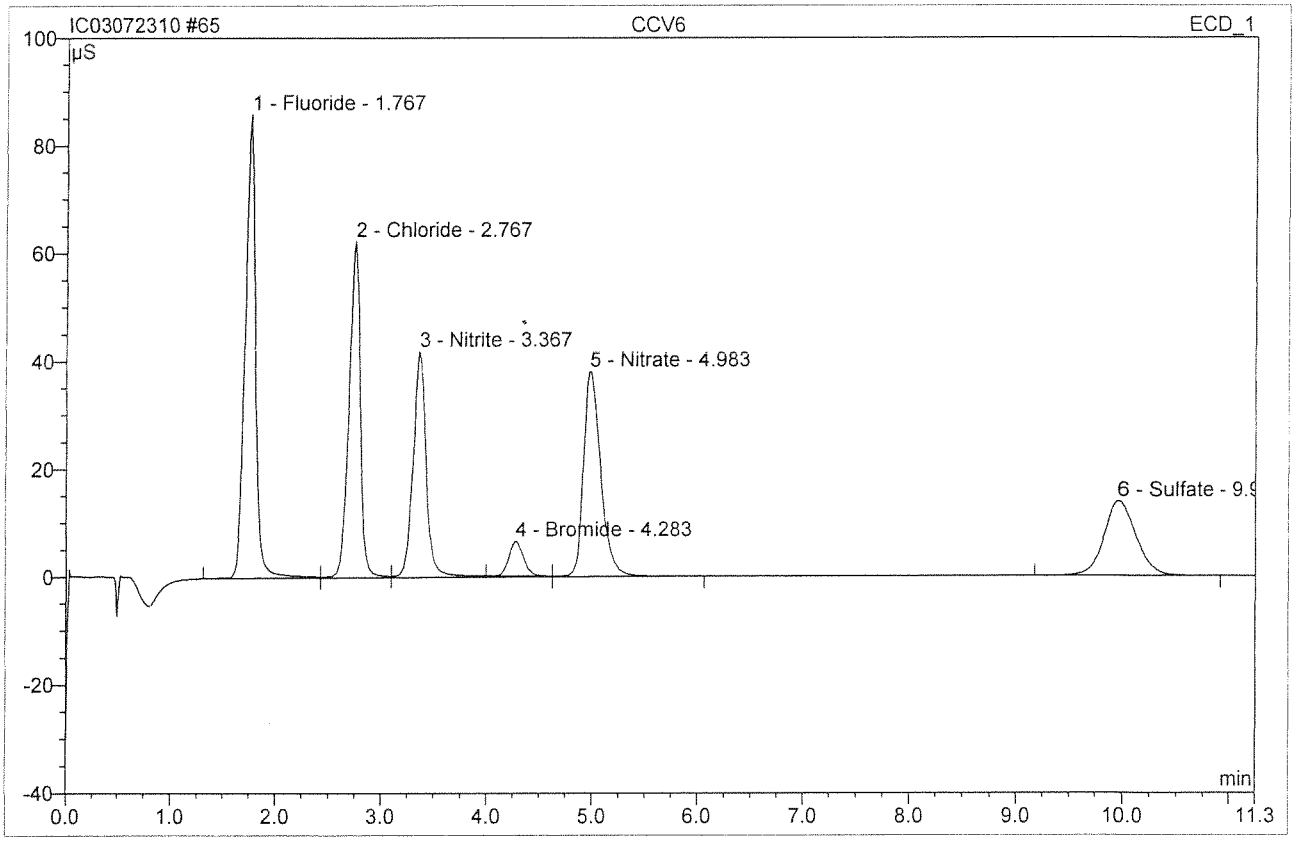


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

65 CCV6

CCV6

Sample Name:	**CCV6**	*Injection Volume:*	**200.0**
Vial Number:	**64**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/23/2010 20:55**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

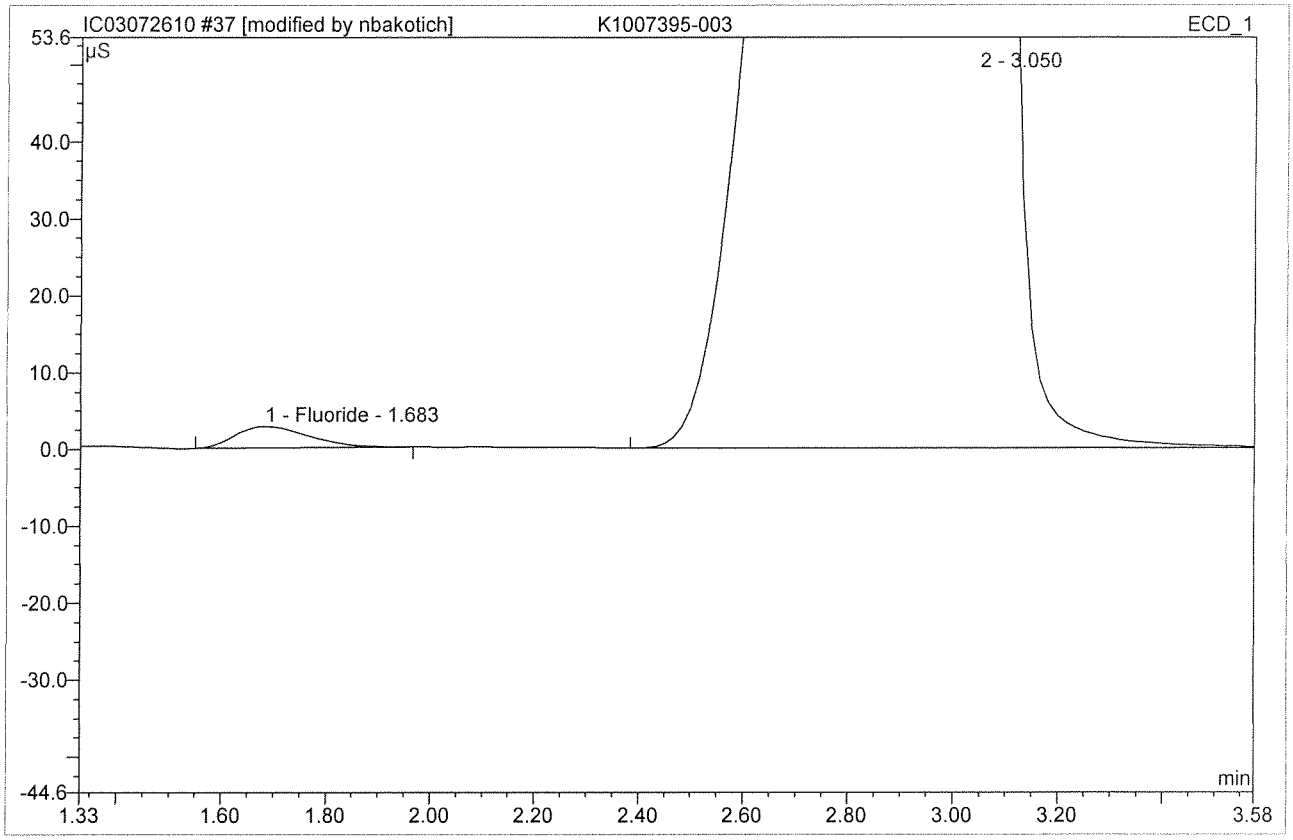


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	86.077	10.041	26.94	5.376	BM
2	2.77	Chloride	62.381	7.744	20.78	4.989	M
3	3.37	Nitrite	42.079	6.334	16.99	1.989	M
4	4.28	Bromide	6.488	1.041	2.79	1.964	Rd
5	4.98	Nitrate	38.152	7.306	19.60	1.957	MB
6	9.97	Sulfate	13.901	4.805	12.89	4.832	BMB
Total:			249.079	37.269	100.00	21.107	

Before
Before
JUL 26 2010

37 K1007395-003

Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 16:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	2.825	0.460	0.08	0.493	BMB*
2	3.05	n.a.	468.773	149.664	27.60	n.a.	BMb*
3	4.22	Bromide	1.132	0.189	0.03	0.713	bMB
4	4.97	Nitrate	1.637	0.332	0.06	0.178	BMB
5	8.75	n.a.	507.240	391.626	72.22	n.a.	BMB
Total:			981.608	542.271	100.00	1.384	

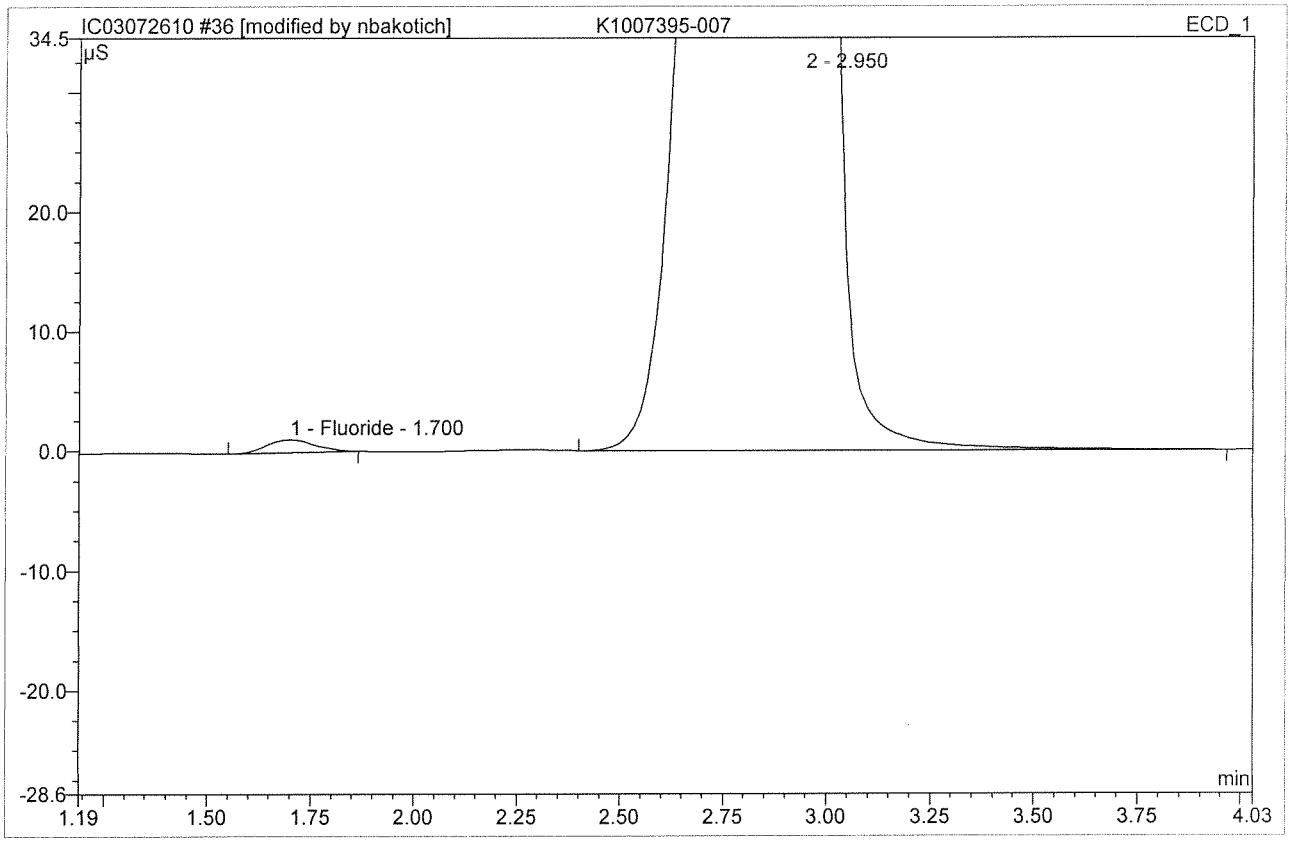
After Initials nb

JUL 26 2010

☐ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other

36 K1007395-007

Sample Name:	**K1007395-007**	*Injection Volume:*	**200.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/26/2010 16:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	1.101	0.147	0.07	<1.0 0.393	BMB*
2	2.95	n.a.	347.610	81.827	36.99	n.a.	BMB
3	5.00	Nitrate	0.805	0.170	0.08	0.227	BMB
4	8.12	n.a.	0.259	0.103	0.05	n.a.	BMb
5	9.30	n.a.	267.147	138.948	62.82	n.a.	bMB
Total:			616.922	221.195	100.00	0.620	

After Initials nb

elevated due to high Cl^- and SO_4^{2-}

JUL 26 2010

Working Peak/Peak not Found
Peak/shoulder Incorrect

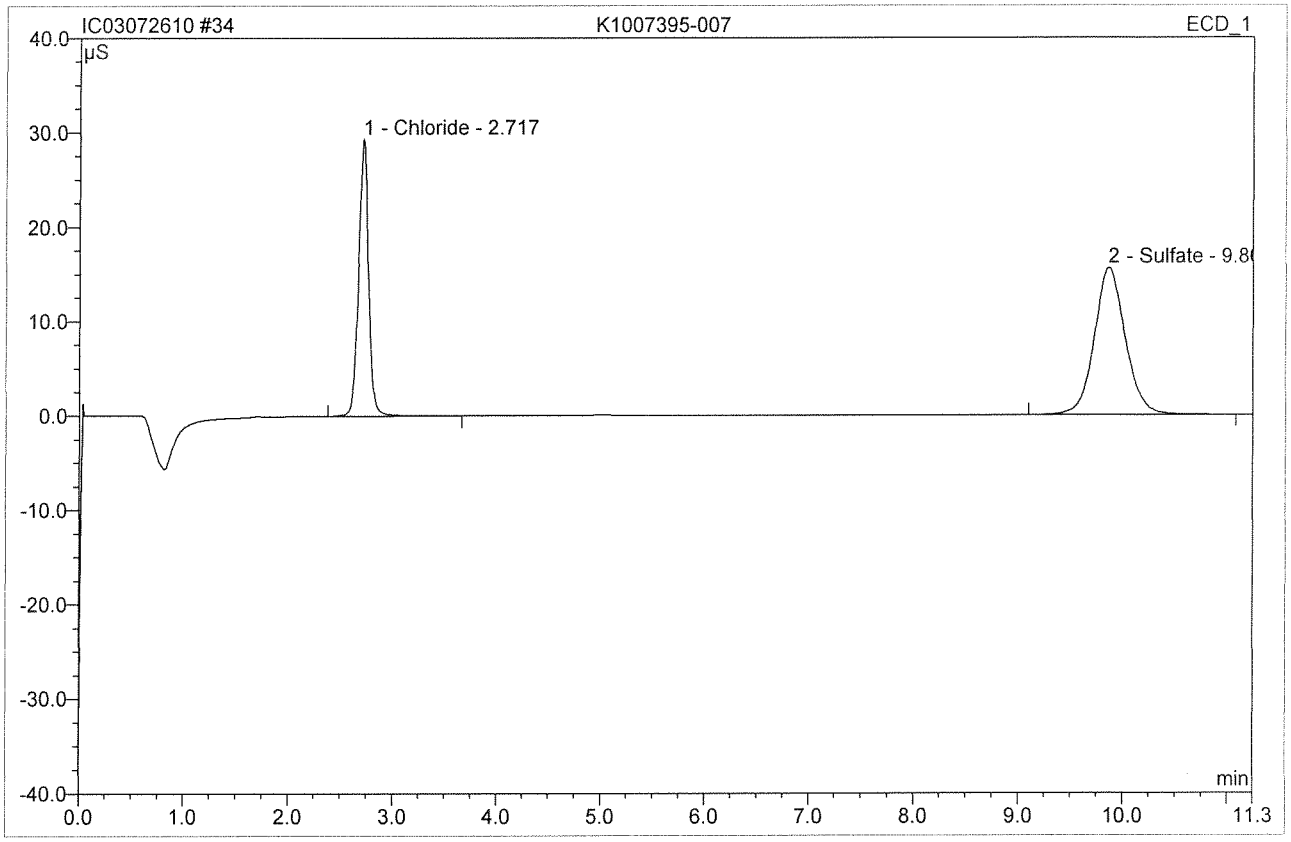
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

271

34 K1007395-007

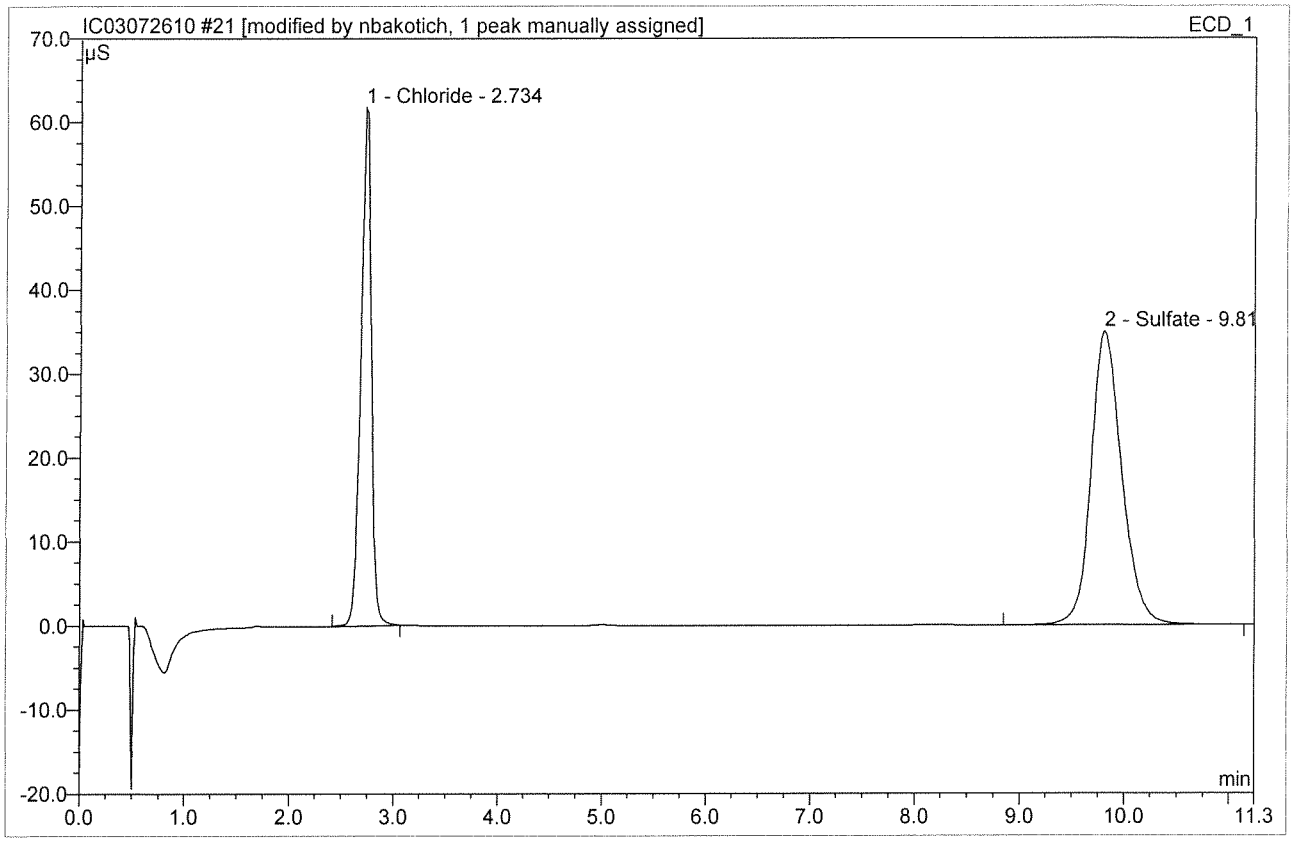
Sample Name:	**K1007395-007**	*Injection Volume:*	**200.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/26/2010 15:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.72	Chloride	29.363	3.305	38.22	212.883	BMB
2	9.87	Sulfate	15.600	5.341	61.78	537.126	BMB
Total:			44.963	8.645	100.00	750.009	

21 K1007395-007

Sample Name:	**K1007395-007**	*Injection Volume:*	**200.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/26/2010 12:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	61.826	7.167	37.53	230.838	BMB*
2	9.82	Sulfate	34.973	11.931	62.47	599.965	BMB^
Total:			96.799	19.098	100.00	830.804	

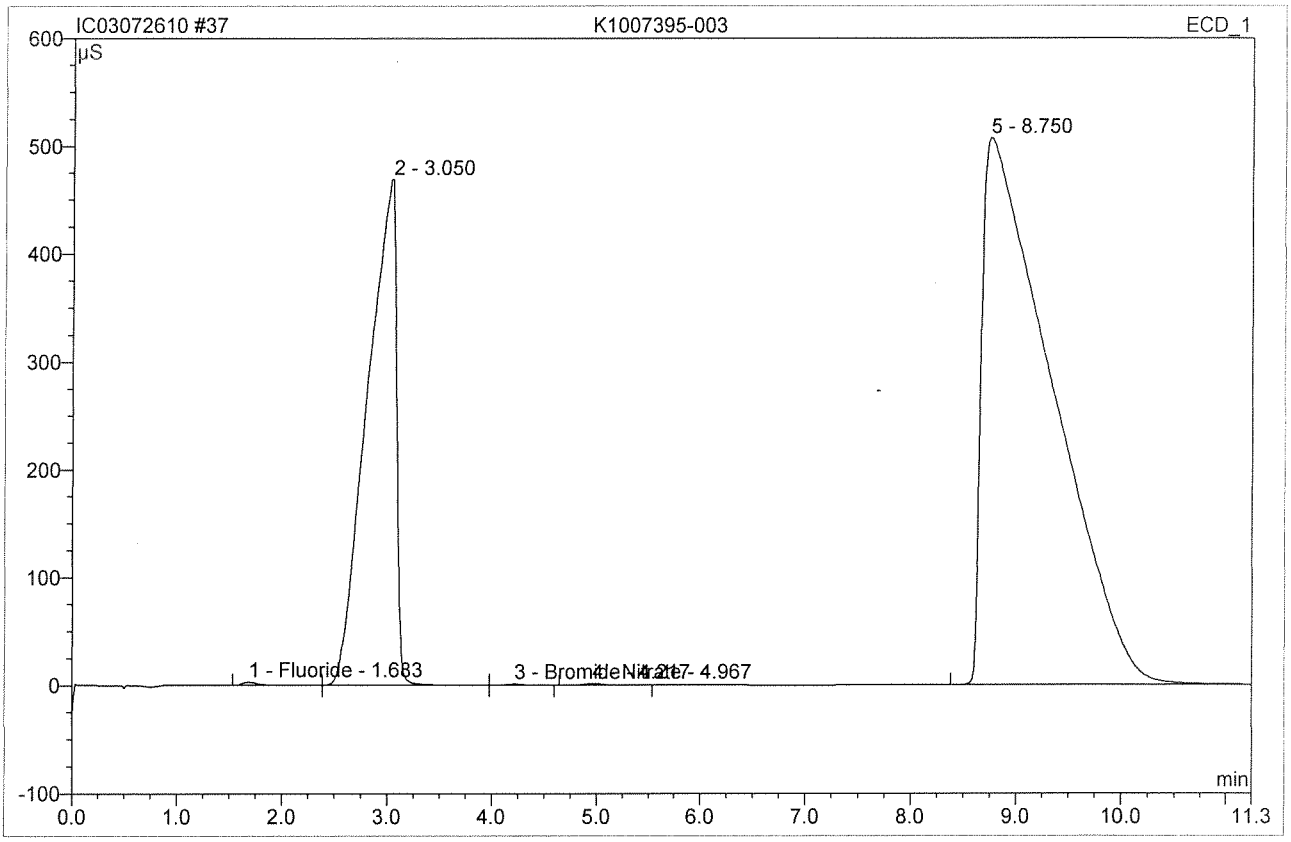
After Initials nb

JUL 26 2010

☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

37 K1007395-003

Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 16:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



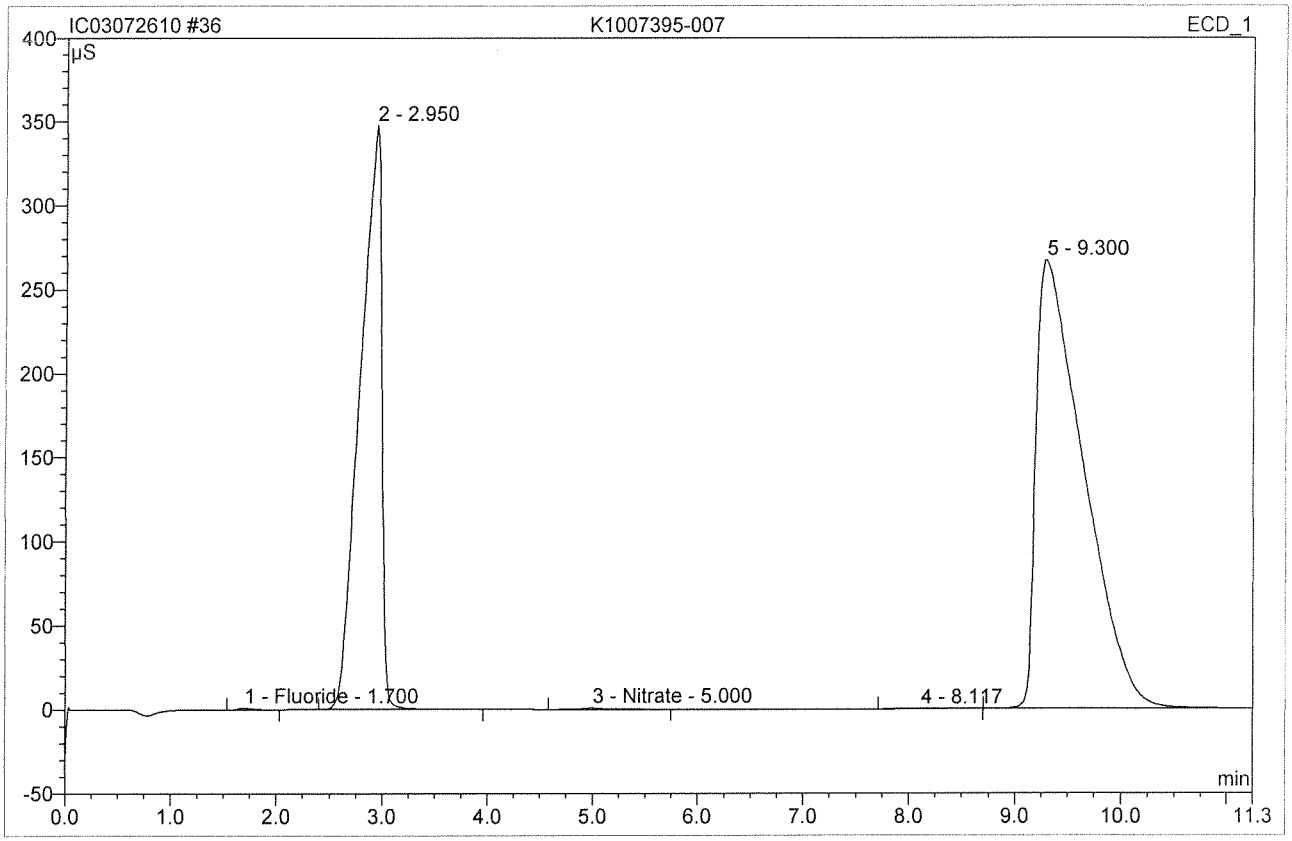
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.68	Fluoride	2.908	0.561	0.10	0.601	BMB
2	3.05	n.a.	468.773	149.664	27.59	n.a.	bMb
3	4.22	Bromide	1.132	0.189	0.03	0.713	bMB
4	4.97	Nitrate	1.637	0.332	0.06	0.178	BMB
5	8.75	n.a.	507.240	391.626	72.21	n.a.	BMB
Total:			981.691	542.372	100.00	1.492	

Before

JUL 27 2010

36 K1007395-007

Sample Name:	**K1007395-007**	*Injection Volume:*	**200.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/26/2010 16:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	1.156	0.172	0.08	0.460	BMB
2	2.95	n.a.	347.610	81.827	36.99	n.a.	BMB
3	5.00	Nitrate	0.805	0.170	0.08	0.227	BMB
4	8.12	n.a.	0.259	0.103	0.05	n.a.	BMb
5	9.30	n.a.	267.147	138.948	62.81	n.a.	bMB
Total:			616.977	221.220	100.00	0.687	

Before

JUL 27 2010

After
Initials

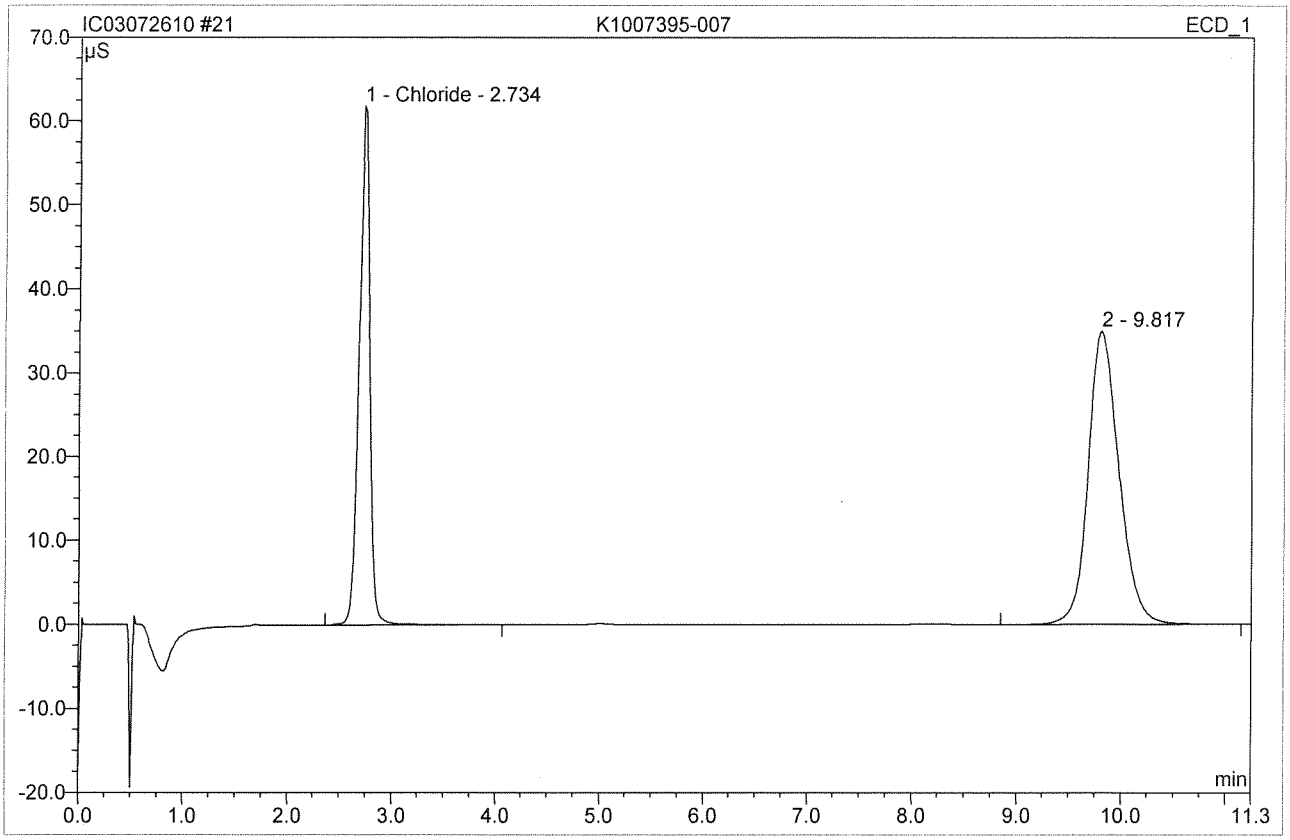
JUL 26 2010

Onb 7.27.10

☐ ~~Wrong Peak/Peak not Found~~
☐ ~~Baseline/shoulder Incorrect~~
☐ Other

21 K1007395-007

Sample Name:	**K1007395-007**	*Injection Volume:*	**200.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/26/2010 12:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



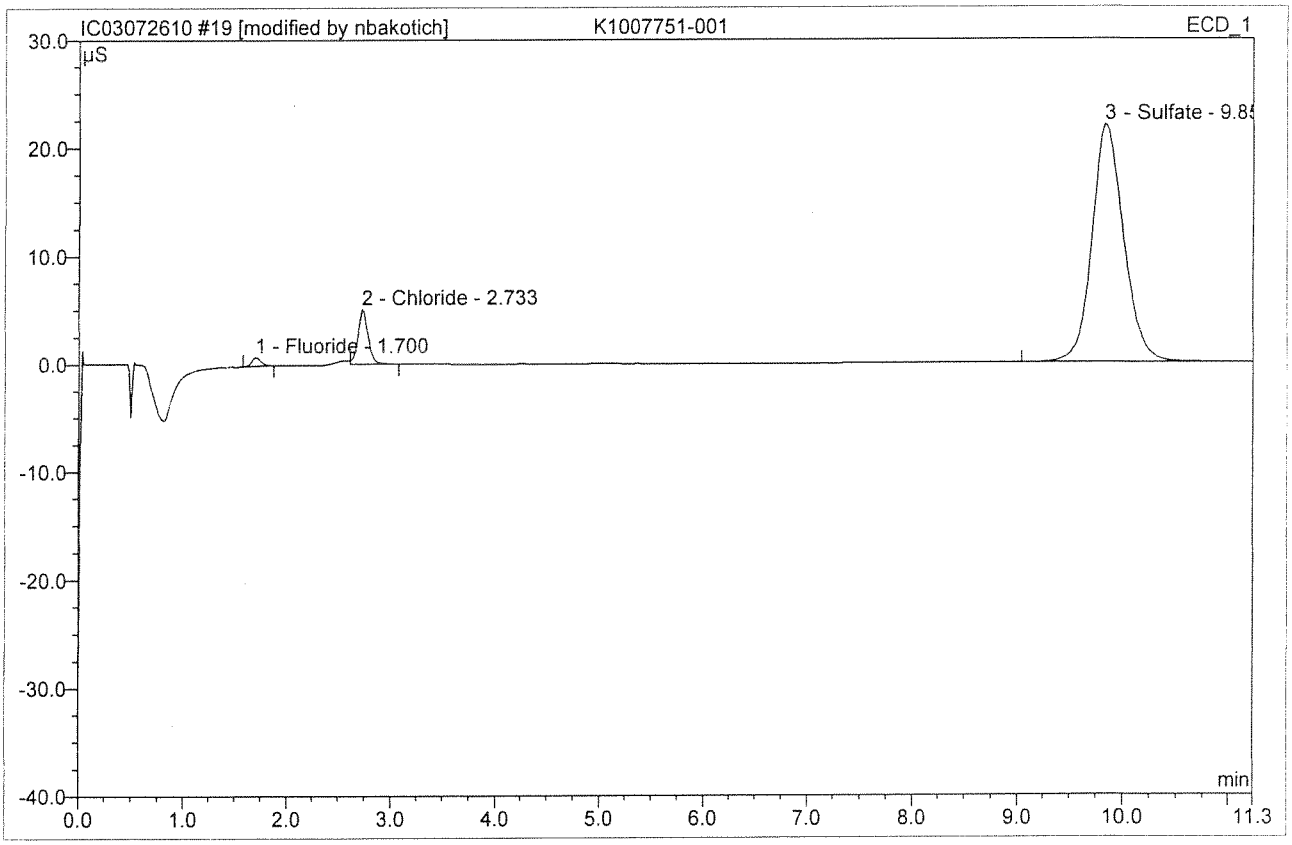
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	61.921	7.275	37.88	234.328	BMB
2	9.82	n.a.	34.973	11.931	62.12	n.a.	BMB
Total:			96.894	19.206	100.00	234.328	

Before

JUL 2 6 2010

19 K1007751-001

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 12:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride $\bar{x}$ = ~~0.76~~ NR RPD = ~~4~~ ND	0.801	0.084	1.03	<0.70 0.090	BMB*
2	2.73	Chloride $\bar{x}$ = 0.76 RPD = 4	5.024	0.571	7.00	0.736	MB*
3	9.85	Sulfate $\bar{x}$ = 15.0 RPD = 1	21.971	7.502	91.96	15.089	BMB
Total:			27.796	8.157	100.00	15.916	

ter
...tials

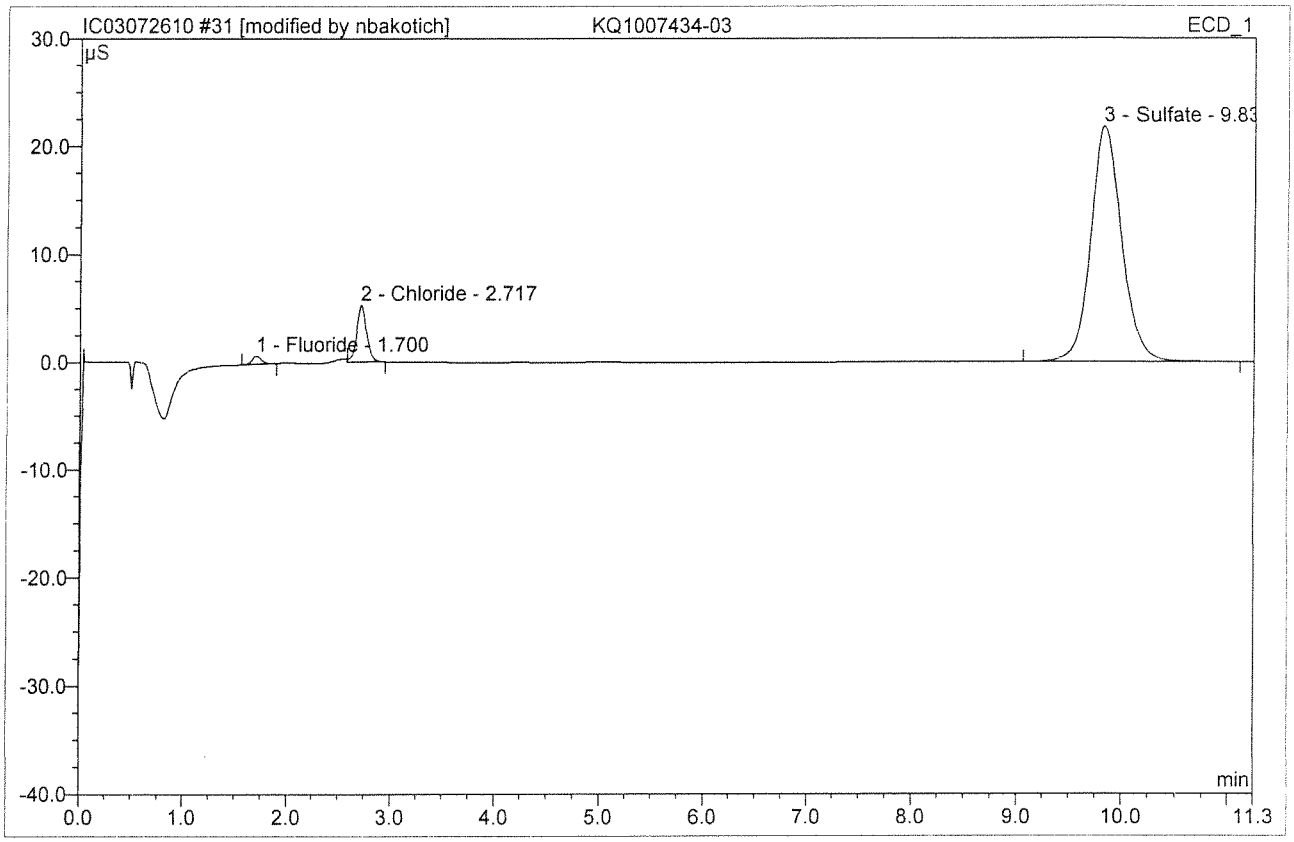
JUL 27 2010

Wrong Peak/Peak not Found
...eline/shoulder Incorrect
Other

31 ~~KQ1007434-03~~ nb 7.28
7751-1d

D

Sample Name:	~~KQ1007434-03~~ nb 7.28 7751-1d	*Injection Volume:*	**200.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 15:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	0.754	0.078	0.97	<0.20 0.084	BMB*
2	2.72	Chloride	5.269	0.599	7.41	0.772	MB*
3	9.83	Sulfate	21.769	7.412	91.63	14.908	BMB
Total:			27.792	8.089	100.00	15.763	

After Initials nb

JUL 27 2010

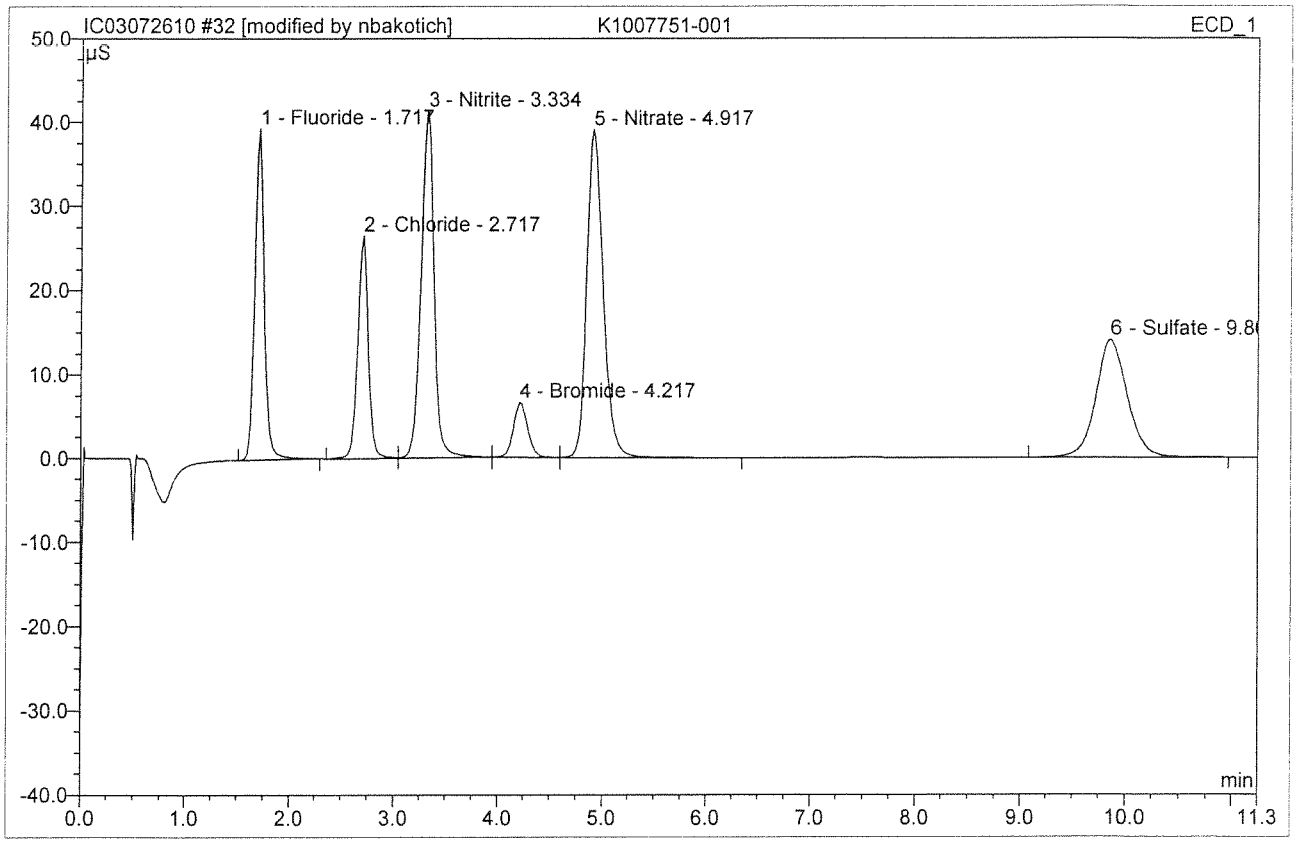
☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other_____

default/Integration

32 K1007751-001

MS

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**31**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/26/2010 15:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.72	Fluoride REC=[illegible]	39.460	4.034	15.48	10.801	BMB*
2	2.72	Chloride REC=[illegible]	26.463	3.077	11.80	9.910	BM *
3	3.33	Nitrite REC=94	41.295	5.956	22.85	9.353	Mb*
4	4.22	Bromide REC=98	6.580	1.042	4.00	9.833	bMb*
5	4.92	Nitrate REC=96	39.017	7.164	27.49	9.596	bMB*
6	9.87	Sulfate REC=90	14.031	4.789	18.37	24.081	BMB
Total:			166.845	26.063	100.00	73.572	

spk lvl 10

After Initials _____

JUL 26 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other

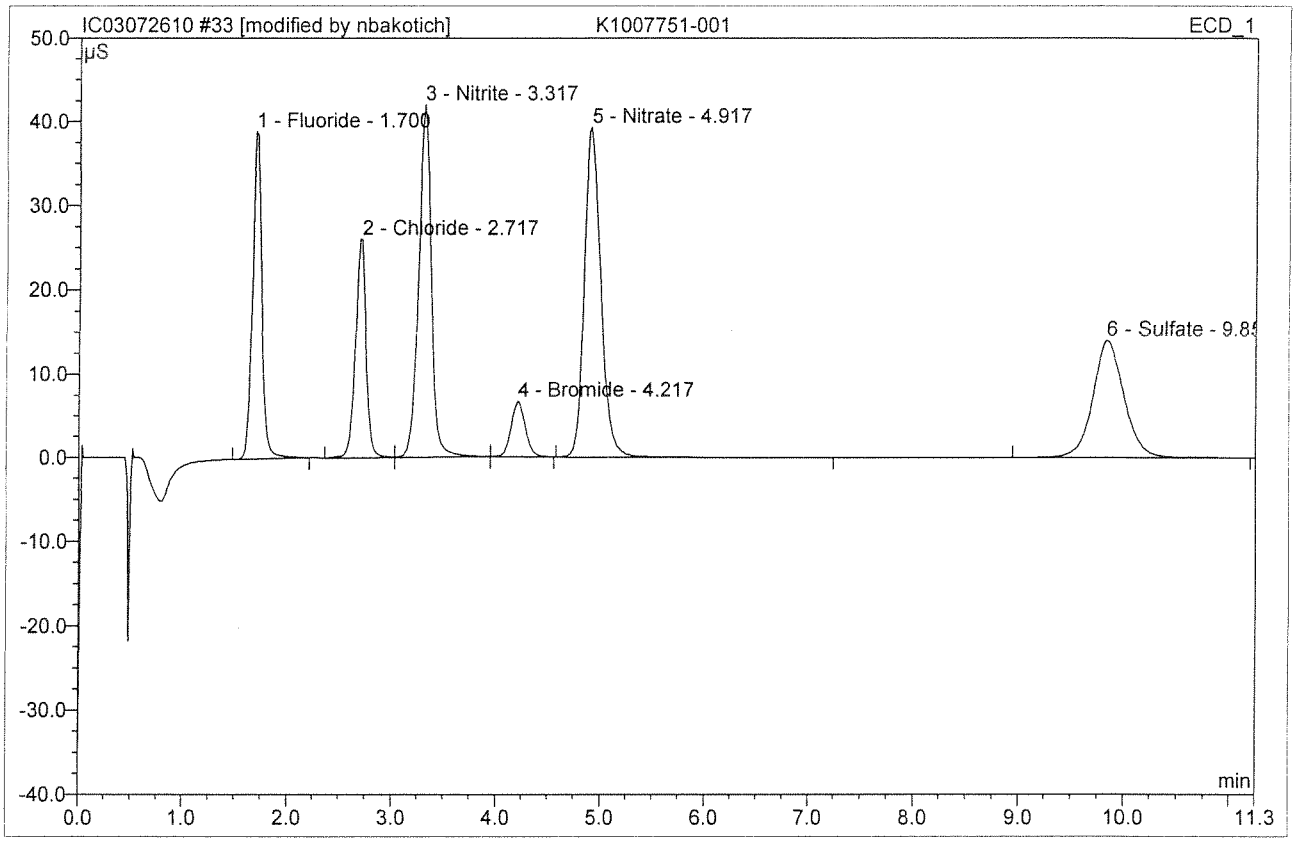
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

33 K1007751-001

MSD

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/26/2010 15:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride REC = ~~109~~ 108	38.939	4.070	15.53	10.896	BMB*
2	2.72	Chloride REC = 92	26.043	3.087	11.78	9.945	BM *
3	3.32	Nitrite REC = 94	41.946	5.994	22.87	9.412	Mb*
4	4.22	Bromide REC = 99	6.629	1.047	4.00	9.881	bMB*
5	4.92	Nitrate REC = 97	39.240	7.211	27.52	9.658	BMB*
6	9.85	Sulfate REC = 90	13.990	4.795	18.30	24.112	BMB
Total:			166.787	26.205	100.00	73.904	

Spk lvl =

After
Initials ab

JUL 26 2010

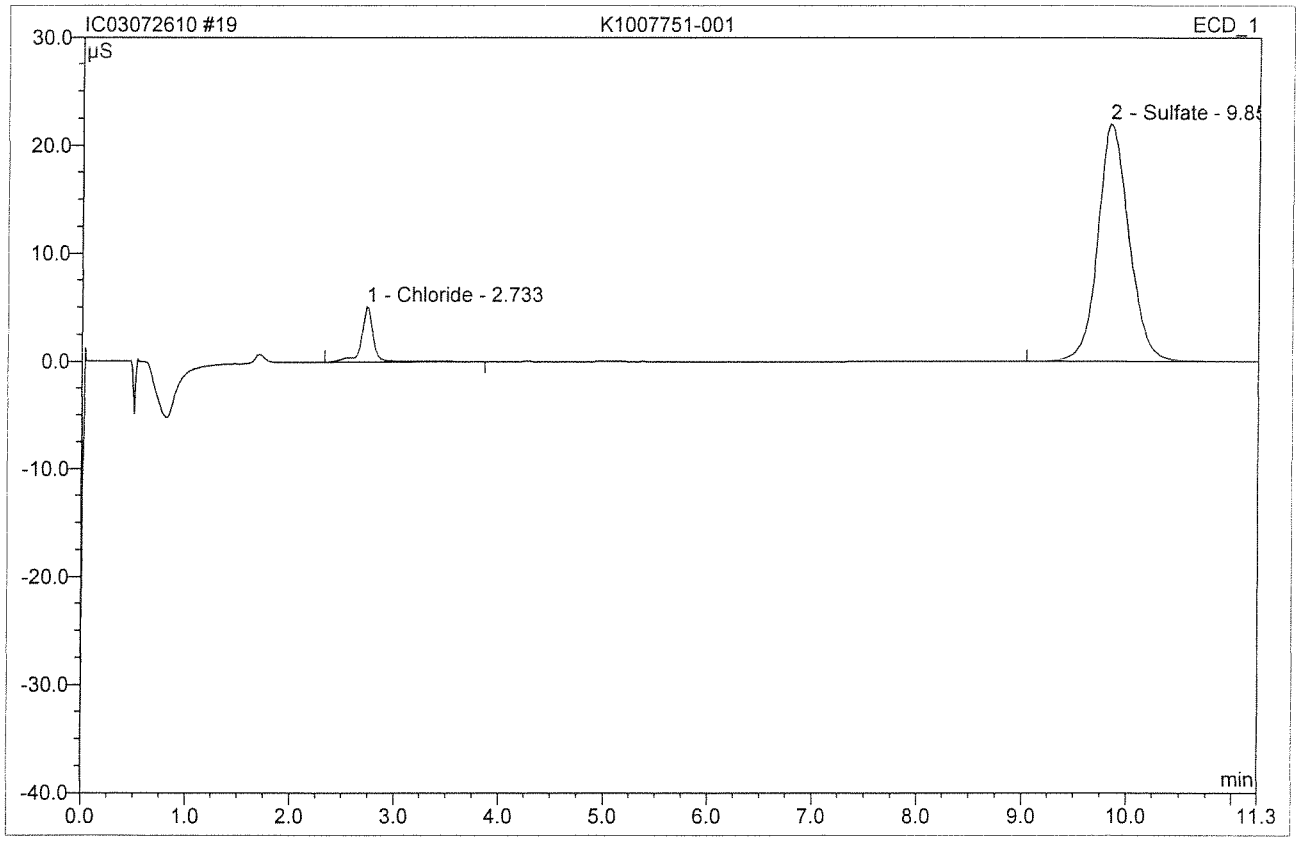
☐ Wrong Peak/Peak not Found
☒ Baseline/shoulder Incorrect
☐ Other

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

19 K1007751-001

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 12:26**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	5.101	0.688	8.40	0.886	BMB
2	9.85	Sulfate	21.971	7.502	91.60	15.089	BMB
Total:			27.072	8.190	100.00	15.975	

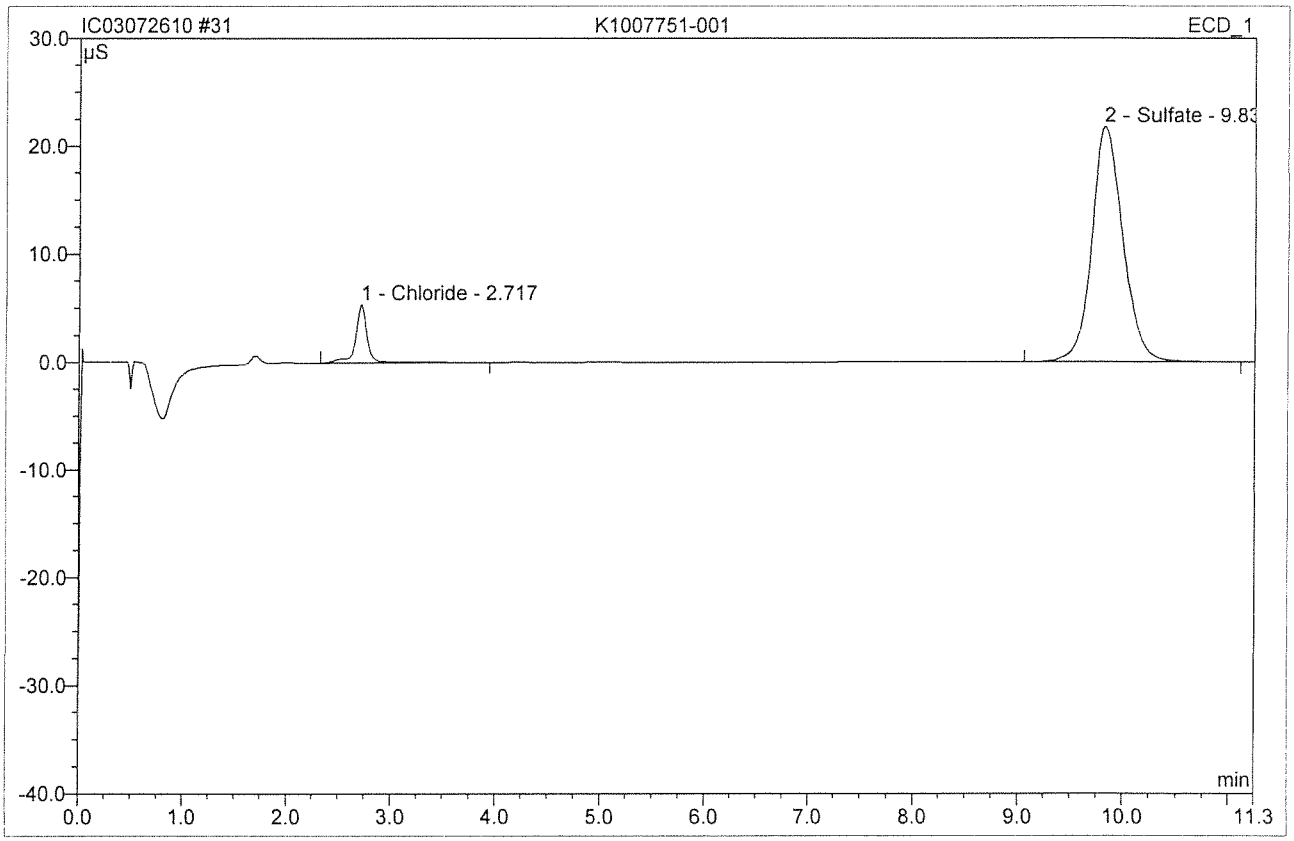
Before

JUL 26 2010

31 K1007751-001

D

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 15:11**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



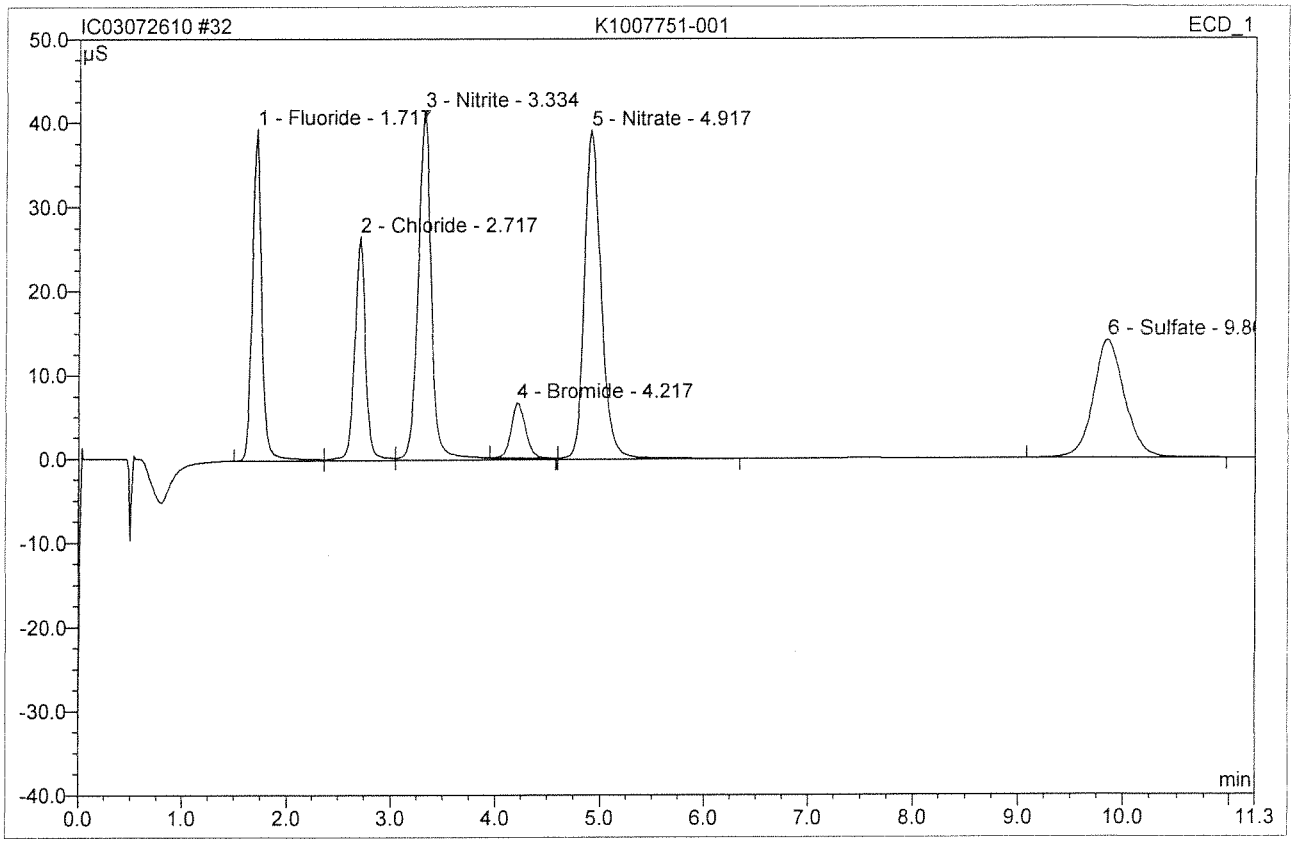
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.72	Chloride	5.346	0.712	8.77	0.918	BMB
2	9.83	Sulfate	21.769	7.412	91.23	14.908	BMB
Total:			27.115	8.124	100.00	15.825	

Before
JUL 2 6 201

32 K1007751-001

MS

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**31**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/26/2010 15:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.72	Fluoride	39.505	4.112	15.39	11.009	BM
2	2.72	Chloride	26.625	3.187	11.93	10.265	M
3	3.33	Nitrite	41.505	6.291	23.54	9.877	M
4	4.22	Bromide	6.580	1.042	3.90	9.835	Rd
5	4.92	Nitrate	39.143	7.299	27.32	9.777	MB
6	9.87	Sulfate	14.031	4.789	17.92	24.081	BMB
Total:			167.389	26.720	100.00	74.845	

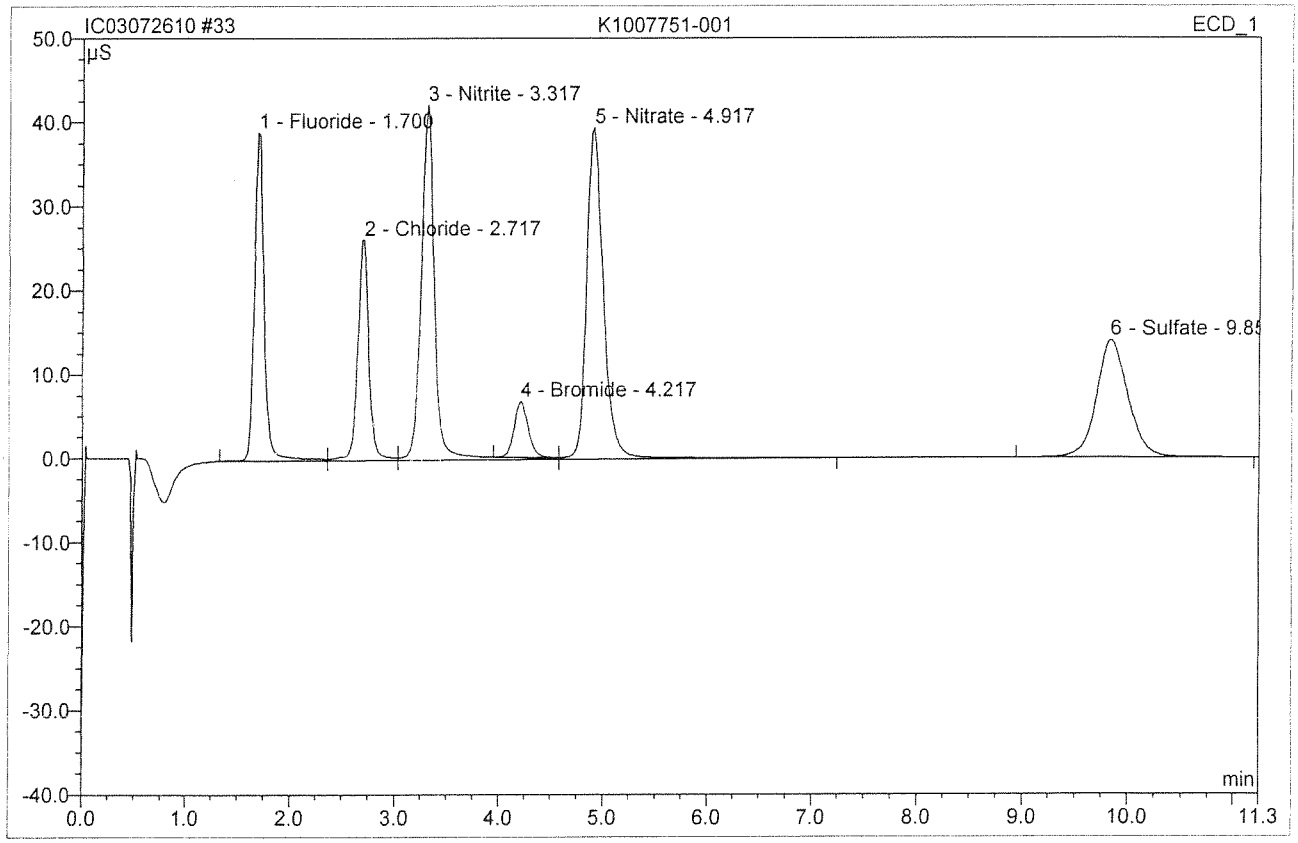
Before

JUL 2 6 2010

33 K1007751-001

MSD

Sample Name:	**K1007751-001**	*Injection Volume:*	**200.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**5.0000**
Recording Time:	**7/26/2010 15:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.70	Fluoride	39.052	4.221	15.52	11.301	BM
2	2.72	Chloride	26.262	3.232	11.88	10.412	M
3	3.32	Nitrite	42.210	6.414	23.58	10.071	M
4	4.22	Bromide	6.629	1.047	3.85	9.883	Rd
5	4.92	Nitrate	39.426	7.493	27.55	10.037	MB
6	9.85	Sulfate	13.990	4.795	17.63	24.112	BMB
Total:			167.568	27.204	100.00	75.816	

Sequence # IC03072610 | Ion Chromatography Data Quality Report Inorganics | Run # 210084

1. Holding times met for all samples analyzed? yes/no/NA
2. Are dilutions within upper limits of the curve? yes/no/NA
3. Are analysis/extraction stickers included on report? yes/no/NA
4. Are detection limits reported correctly? yes/no/NA
5. Are all quality control criteria met? yes/no/NA
   a. Method Blanks, CCV's, CCB's, LCS's, Dups, and Spikes analyzed at the proper frequency? yes/no/NA
   b. Are CCV's and CCB's all within acceptance limits? yes/no/NA
   c. Are results for Method Blanks all ND? yes/no/NA
   d. Are all QC samples within acceptance criteria? (LCS% rec, MS% rec, Duplicate RPD's, etc.) yes/no/NA
   e. Are all exceptions explained? yes/no/NA
6. Are all samples labelled correctly? yes/no/NA

CAS Standard Identification Codes and Abbreviated Footnotes for Chromatograms

G1 Sample was analyzed past the end of recommended holding time. See Nonconformity sheet.
G2 Sample was reanalyzed past holding time. Initial analysis was performed within recommended holding time.
G4 Sample was received past the end of recommended holding time.
R1 High RPD is because the duplicate sample results are less than three times the method reporting limit.
i MRL is elevated because of matrix interferences and the sample required diluting.
F Sample filtered primary to analysis.

LCS

Fluoride	True Value = 13.5 ppm	CAS ID # = AN1-33-T	Expires: 12.22.10
Chloride	True Value = 5.0ppm	CAS ID # = ERA#0107-10-02	Expires: 8.5
Nitrite	True Value = 100 ppm	CAS ID # = AN11-29-0	Expires: 7.26.10
Bromide	True Value = 4.0 ppm	CAS ID # = AN1-33-L	Expires: 10.8.10
Nitrate	True Value = 21.0 ppm	CAS ID # = AN1-33-V	Expires: 1.22.11
Sulfate	True Value = 5.0 ppm	CAS ID # = ERA#0107-10-02	Expires: 8.5

CCV CAS ID # = AN11-80-CC Expires 7.26.10

Fluoride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-M	Expires: 10.28.10
Chloride	True Value = 5.0 ppm	10K CAS ID # = AN1-33-F	Expires: 8.5.10
Nitrite	True Value = 2.0 ppm	10K CAS ID # = AN1-33-N	Expires: 10.28.10
Bromide	True Value = 2.0 ppm	10K CAS ID # = AN1-33-U	Expires: 12.22.10
Nitrate	True Value = 2.0 ppm	10K CAS ID # = AN1-33-I	Expires: 9.5.10
Sulfate	True Value = 5.0 ppm	10K CAS ID # = AN1-33-G	Expires: 8.5.10

Spike
2.0ppm X dilution factor CAS ID# = AN11-71-D Expires 7.26.10

Fluoride	10K CAS ID # = AN1-33-M	Expires: CCV
Chloride	10K CAS ID # = AN1-33-F	Expires:
Nitrite	10K CAS ID # = AN1-33-N	Expires:
Bromide	10K CAS ID # = AN1-33-U	Expires:
Nitrate	10K CAS ID # = AN1-33-I	Expires:
Sulfate	10K CAS ID # = AN1-33-G	Expires:

Analyst: nb Date: 7.26.10

First Review: Date: 7.27.10

Final Review: EC Date: 7/27/10

t:\wet\ic\icdqs.xls

Sequence: IC03072610
Operator: nbakotich
Printed: 7/27/2010 11:35:27 AM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 41

Created: 7/26/2010 8:53:52 AM by ACQWET10
Last Update: 7/26/2010 5:23:31 PM by ACQWET10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	std2/lvl2	Standard	1	200.0	epa300	epa300	Finished	7/20/2010 1:14:08 PM
2	std3/lvl3	Standard	2	200.0	epa300	epa300	Finished	7/20/2010 1:30:36 PM
3	std4/lvl4	Standard	3	200.0	epa300	epa300	Finished	7/20/2010 1:45:33 PM
4	std5/lvl5	Standard	4	200.0	epa300	epa300	Finished	7/20/2010 2:00:31 PM
5	std6/lvl6	Standard	5	200.0	epa300	epa300	Finished	7/20/2010 2:14:58 PM
6	std7/lvl7	Standard	6	200.0	epa300	epa300	Finished	7/20/2010 2:29:26 PM
7	std1/lvl1	Standard	7	200.0	epa300	epa300	Finished	7/20/2010 2:43:54 PM
8	CCV1 AN11-80-CC	Unknown	8	200.0	epa300	epa300	Finished	7/26/2010 8:56:54 AM
9	CCB1	Unknown	9	200.0	epa300	epa300	Finished	7/26/2010 9:10:37 AM
10	NO2 AN11-29-O	Unknown	10	200.0	epa300	epa300	Finished	7/26/2010 9:24:19 AM
11	MB	Unknown	11	200.0	epa300	epa300	Finished	7/26/2010 9:38:01 AM
12	NO3 AN1-33-V	Unknown	11	200.0	epa300	epa300	Finished	7/26/2010 9:51:44 AM
13	CLSO4 ERA#0524-10-04	Unknown	12	200.0	epa300	epa300	Finished	7/26/2010 10:05:27 AM
14	F AN 1-33-D	Unknown	13	200.0	epa300	epa300	Finished	7/26/2010 10:19:10 AM
15	Br AN1-33-L	Unknown	14	200.0	epa300	epa300	Finished	7/26/2010 10:32:52 AM
16	SPKCHK AN11-71-D	Unknown	15	200.0	epa300	epa300	Finished	7/26/2010 10:46:35 AM
17	CCV2	Unknown	16	200.0	epa300	epa300	Finished	7/26/2010 11:00:18 AM
18	CCB2	Unknown	17	200.0	epa300	epa300	Finished	7/26/2010 11:14:01 AM
19	K1007751-001	Unknown	18	200.0	epa300	epa300	Finished	7/26/2010 12:26:32 PM
20	K1007751-002	Unknown	19	200.0	epa300	epa300	Finished	7/26/2010 12:40:14 PM
21	K1007395-007	Unknown	20	200.0	epa300	epa300	Finished	7/26/2010 12:53:57 PM
22	K1007574-001	Unknown	21	200.0	epa300	epa300	Finished	7/26/2010 1:07:40 PM
23	K1007713-001	Unknown	22	200.0	epa300	epa300	Finished	7/26/2010 1:21:23 PM
24	K1007713-002	Unknown	23	200.0	epa300	epa300	Finished	7/26/2010 1:35:06 PM
25	K1007703-001	Unknown	24	200.0	epa300	epa300	Finished	7/26/2010 1:48:49 PM
26	K1007715-011	Unknown	25	200.0	epa300	epa300	Finished	7/26/2010 2:02:32 PM
27	K1007715-013	Unknown	26	200.0	epa300	epa300	Finished	7/26/2010 2:16:15 PM
28	RB	Unknown	27	200.0	epa300	epa300	Finished	7/26/2010 2:29:58 PM
29	CCV3	Unknown	28	200.0	epa300	epa300	Finished	7/26/2010 2:43:41 PM
30	CCB3	Unknown	29	200.0	epa300	epa300	Finished	7/26/2010 2:57:24 PM
31	K1007751-001	Unknown	30	200.0	epa300	epa300	Finished	7/26/2010 3:11:07 PM
32	K1007751-001	Unknown	31	200.0	epa300	epa300	Finished	7/26/2010 3:24:50 PM
33	K1007751-001	Unknown	32	200.0	epa300	epa300	Finished	7/26/2010 3:38:33 PM
34	K1007395-007	Unknown	33	200.0	epa300	epa300	Finished	7/26/2010 3:52:16 PM
35	K1007751-002	Unknown	34	200.0	epa300	epa300	Finished	7/26/2010 4:05:58 PM
36	K1007395-007	Unknown	35	200.0	epa300	epa300	Finished	7/26/2010 4:19:41 PM
37	K1007395-003	Unknown	36	200.0	epa300	epa300	Finished	7/26/2010 4:33:23 PM
38	RB	Unknown	37	200.0	epa300	epa300	Finished	7/26/2010 5:23:10 PM
39	CCV4	Unknown	38	200.0	epa300	epa300	Finished	7/26/2010 5:36:53 PM
40	CCB4	Unknown	39	200.0	epa300	epa300	Finished	7/26/2010 5:50:36 PM
41	STOP	Unknown	40	200.0	shutdown 120	epa300	Finished	7/26/2010 6:04:19 PM

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Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 41
Created: 7/26/2010 8:53:52 AM by ACQWET10
Last Update: 7/26/2010 5:23:31 PM by ACQWET10

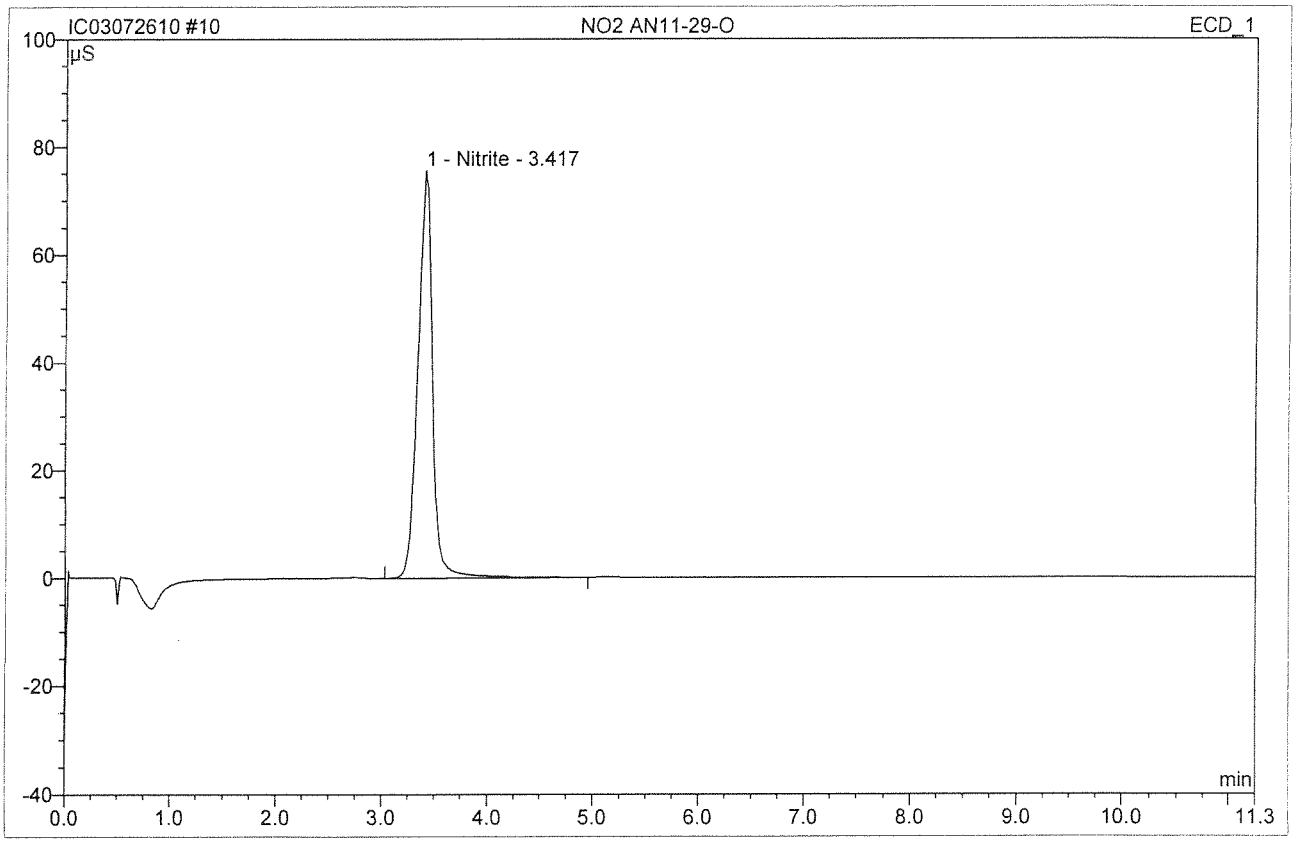
No.	Name	Dil. Factor	Comment
1	std2/lvl2	1.0000	
2	std3/lvl3	1.0000	
3	std4/lvl4	1.0000	
4	std5/lvl5	1.0000	
5	std6/lvl6	1.0000	
6	std7/lvl7	1.0000	
7	std1/lvl1	1.0000	
8	CCV1 AN11-80-CC	1.0000	
9	CCB1	1.0000	
10	NO2 AN11-29-O	25.0000	NO2
11	MB	1.0000	MB
12	NO3 AN1-33-V	20.0000	NO3
13	CLSO4 ERA#0524-10-04	1.0000	CLSO4
14	F AN 1-33-D	2.0000	F
15	Br AN1-33-L	1.0000	Br
16	SPKCHK AN11-71-D	1.0000	
17	CCV2	1.0000	CCV2
18	CCB2	1.0000	CCB2
19	K1007751-001	2.0000	
20	K1007751-002	2.0000	F
21	K1007395-007	50.0000	
22	K1007574-001	2.0000	
23	K1007713-001	2.0000	
24	K1007713-002	2.0000	
25	K1007703-001	2.0000	
26	K1007715-011	5.0000	F
27	K1007715-013	5.0000	
28	RB	1.0000	
29	CCV3	1.0000	CCV3
30	CCB3	1.0000	CCB3
31	K1007751-001	2.0000	D
32	K1007751-001	5.0000	MS
33	K1007751-001	5.0000	MSD
34	K1007395-007	100.0000	
35	K1007751-002	100.0000	F
36	K1007395-007	5.0000	
37	K1007395-003	2.0000	
38	RB	1.0000	
39	CCV4	1.0000	CCV4
40	CCB4	1.0000	CCB4
41	STOP	1.0000	CCB4

Service Request	Tier	QC	Hold Time	Due Date	Anion	Initial	Final	QC DILUTION	Done?
7795-7					F	~~2.515~~ 2.515	1/5		✓
					CL				✓
					NO2				
					Br				
					NO3				
					SO4	↓	1/100		✓
7795-3					F	2.515			✓
					CL				
					NO2				
					Br				
					NO3				
					SO4				
7751-1		X			F			1/5 (DILUTED)	✓
					CL				✓
					NO2				
					Br				
					NO3				
					SO4			1/5	✓
↓ -2 F					F				✓
					CL				✓
					NO2				
					Br				
					NO3				
					SO4	↓	1/100		✓
7574-1					F				
					CL				✓
					NO2				
					Br				
					NO3				
					SO4	↓			✓
7713-1					F				
					CL				✓
					NO2				
					Br				
					NO3				
					SO4				
-2					F				
					CL				✓
					NO2				
					Br				
					NO3				
					SO4	↓			
7703-1					F	↓			✓
					CL				
					NO2				
					Br				
					NO3				
					SO4				
7715-11		X			F				
					CL				
					NO2				
					Br				
					NO3				
					SO4	1/5			✓
↓ -13					F				
					CL				
					NO2				
					Br				
					NO3				
					SO4	↓			✓

10 NO2 AN11-29-O

NO2

Sample Name:	**NO2 AN11-29-O**	*Injection Volume:*	**200.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/26/2010 9:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

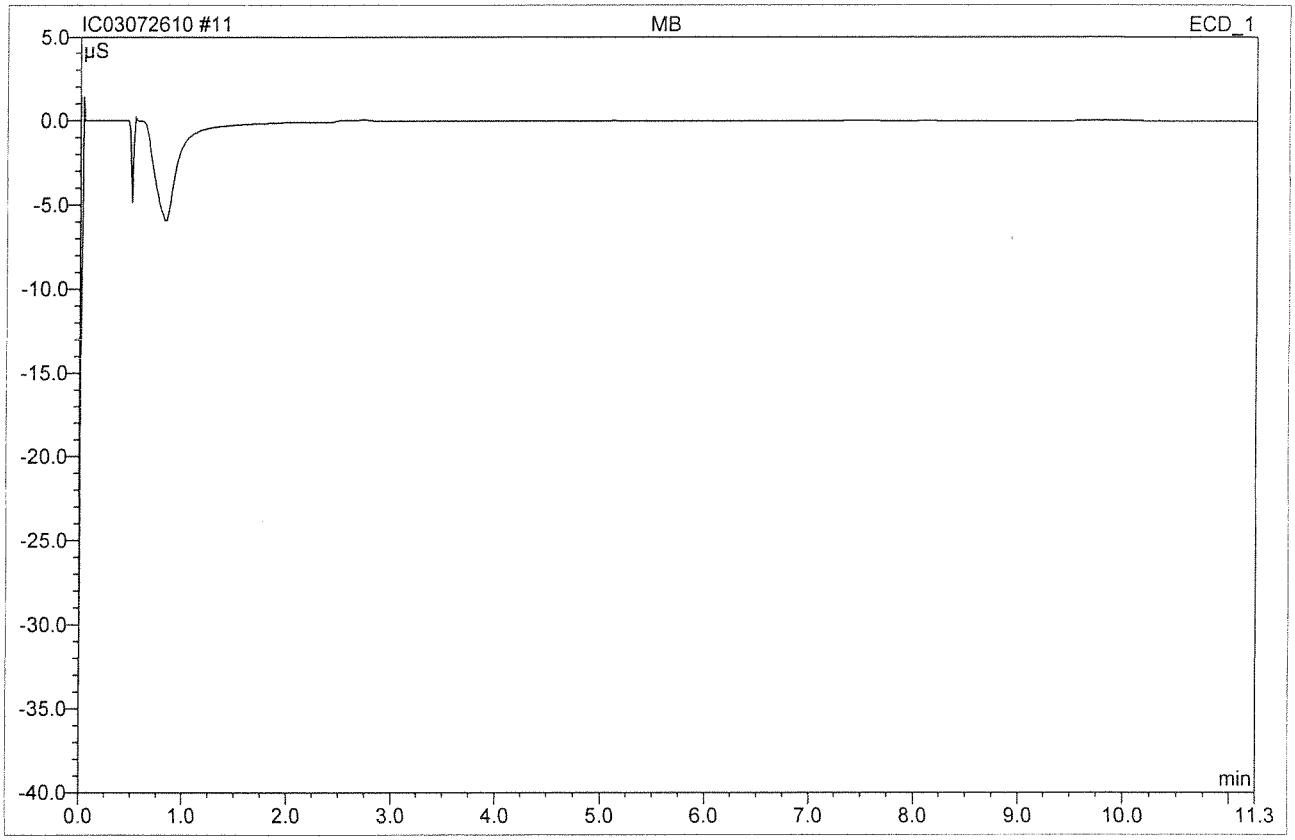


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.42	Nitrite	75.576	12.195	100.00	95.742	BMB
Total:			75.576	12.195	100.00	95.742	

11 MB

MB

Sample Name:	**MB**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 9:38**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

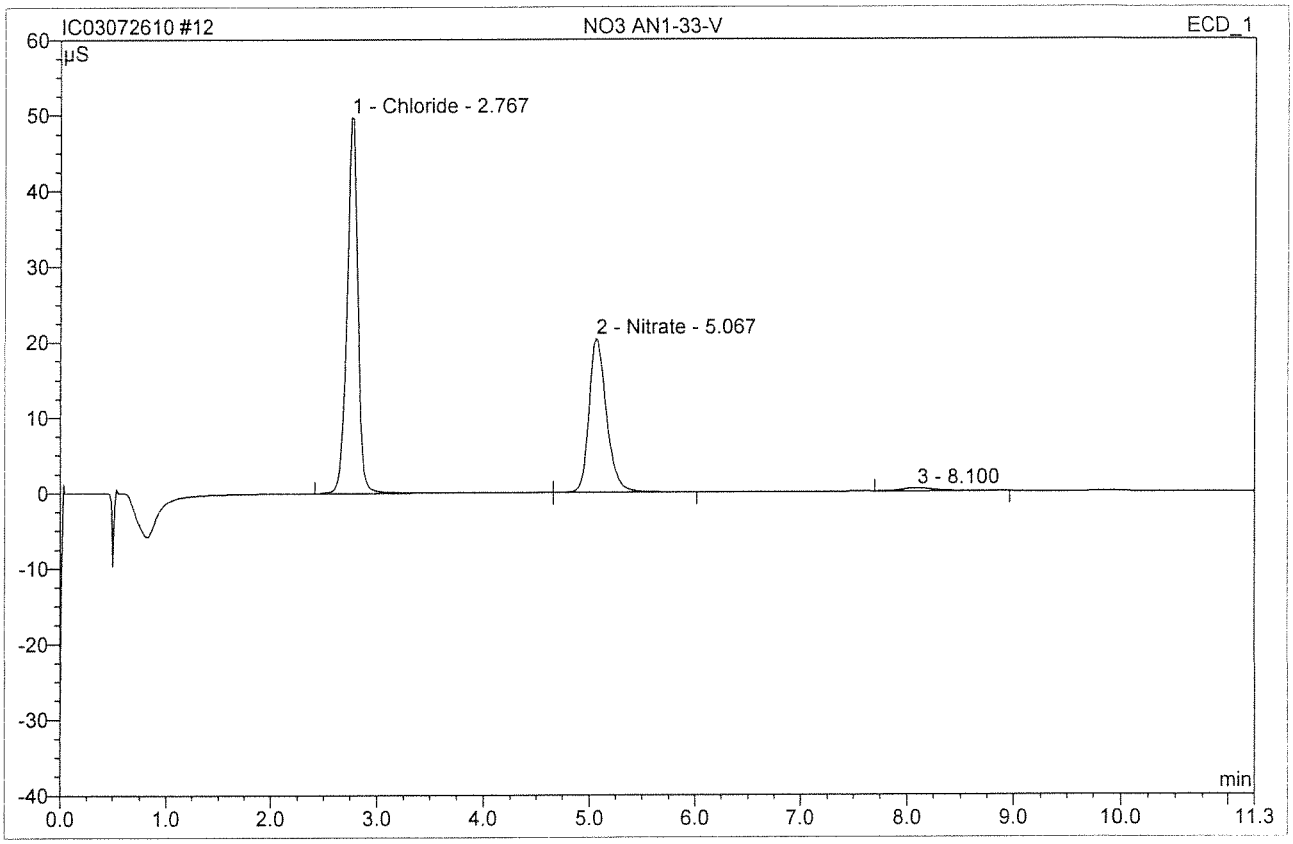


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

12 NO3 AN1-33-V

NO3

Sample Name:	**NO3 AN1-33-V**	*Injection Volume:*	**200.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**20.0000**
Recording Time:	**7/26/2010 9:51**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

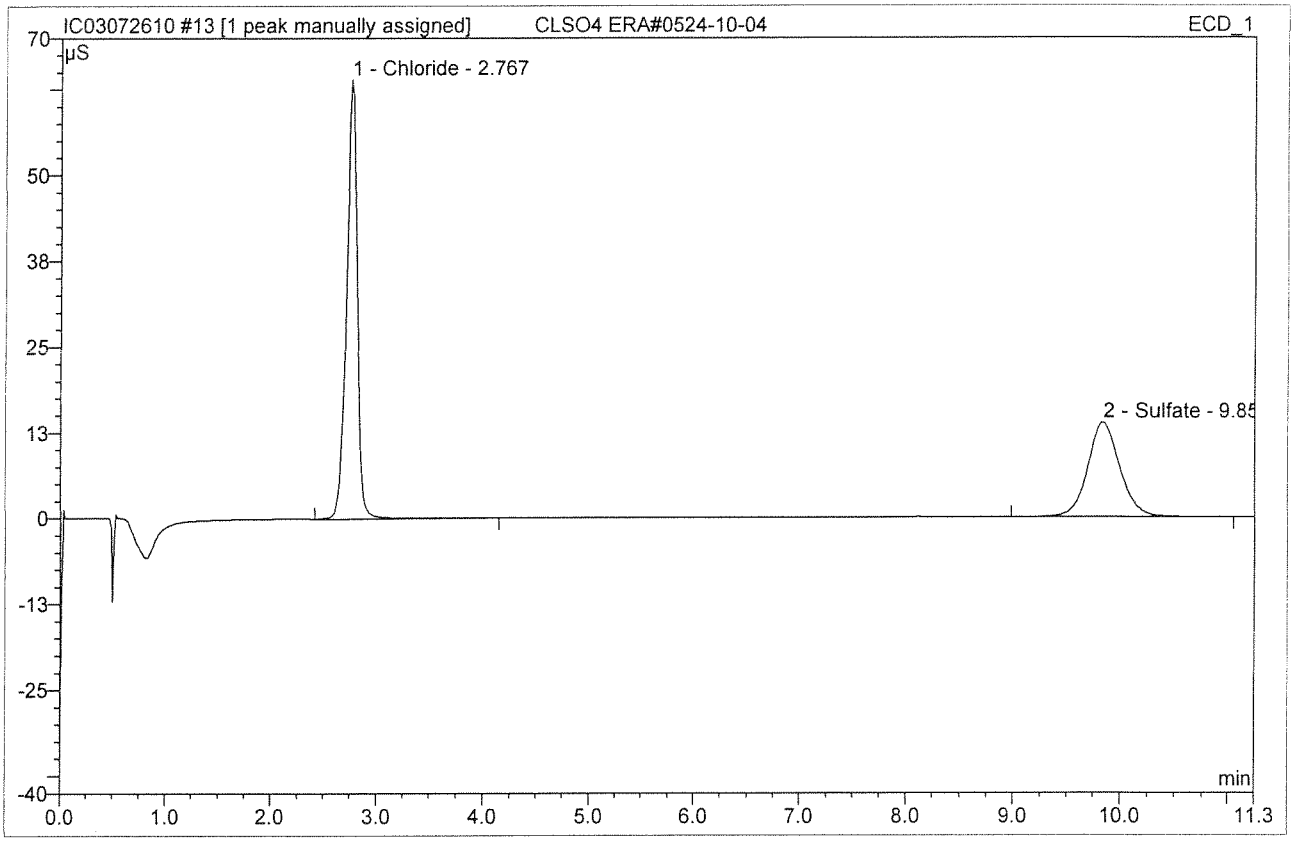


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.77	Chloride	49.828	5.907	59.11	76.109	BMB
2	5.07	Nitrate	20.367	3.920	39.22	21.002	bMB
3	8.10	n.a.	0.418	0.167	1.67	n.a.	BMB
Total:			70.613	9.994	100.00	97.112	

13 CLSO4 ERA#0524-10-04

CLSO4

Sample Name:	**CLSO4 ERA#0524-10-04**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 10:05**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.77	Chloride	64.028	7.642	61.20	4.923	BMB
2	9.85	Sulfate	13.858	4.844	38.80	4.872	BMB^
Total:			77.887	12.486	100.00	9.795	

After Initials _____

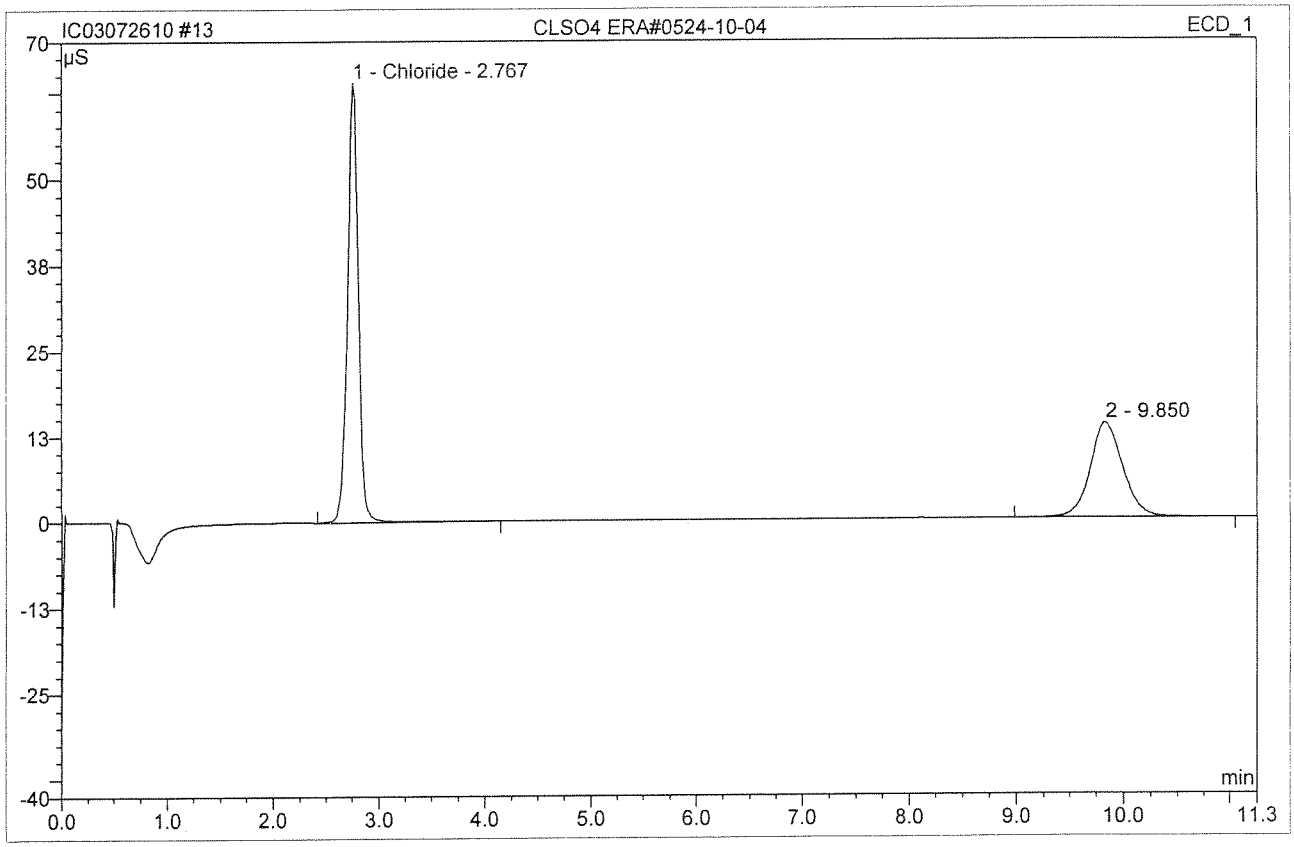
JUL 26 2010

☑ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other_____

13 CLSO4 ERA#0524-10-04

CLSO4

Sample Name:	**CLSO4 ERA#0524-10-04**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 10:05**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.77	Chloride	64.028	7.642	61.20	4.923	BMB
2	9.85	n.a.	13.858	4.844	38.80	n.a.	BMB
Total:			77.887	12.486	100.00	4.923	

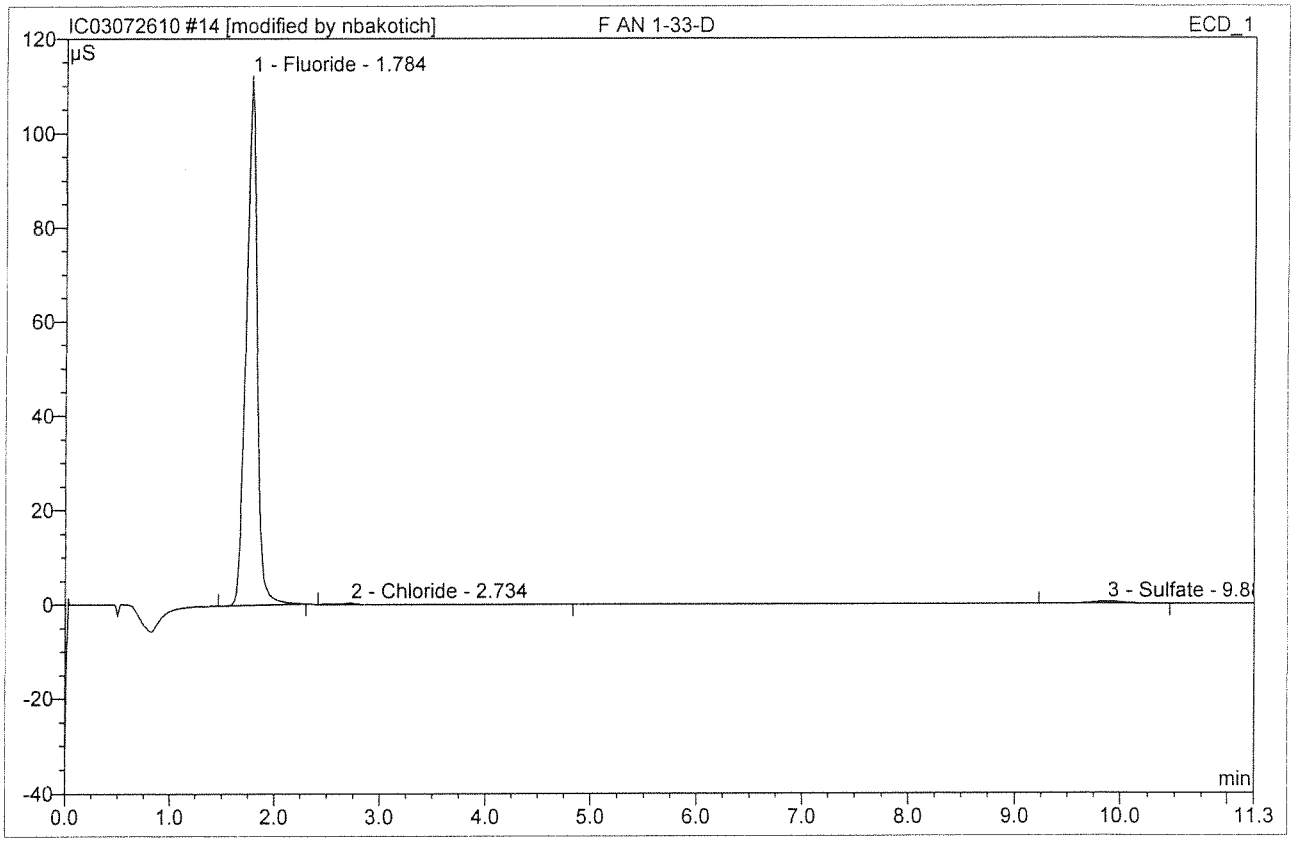
Before

JUL 26 2010

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 10:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	112.255	13.707	98.53	14.678	BMB*
2	2.73	Chloride	0.314	0.037	0.26	0.047	BMB*
3	9.88	Sulfate	0.469	0.169	1.21	0.339	BMB
Total:			113.038	13.912	100.00	15.064	

After
Initials nb

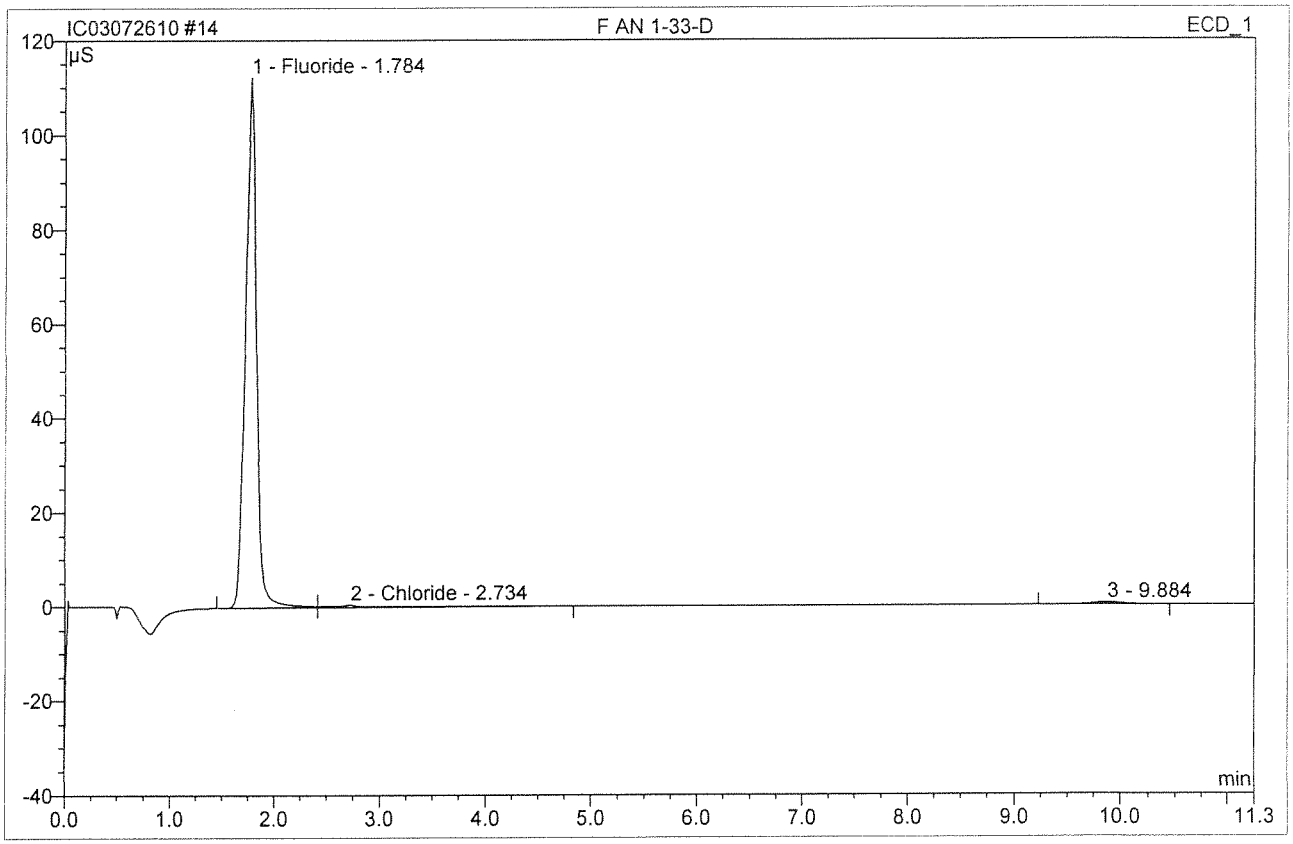
JUL 26 2010

Wrong Peak/Peak not Found
Baseline/shoulder Incorrect

14 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/26/2010 10:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	112.408	13.911	96.74	14.896	BM
2	2.73	Chloride	0.556	0.300	2.09	0.387	MB
3	9.88	n.a.	0.469	0.169	1.17	n.a.	BMB
Total:			113.433	14.380	100.00	15.283	

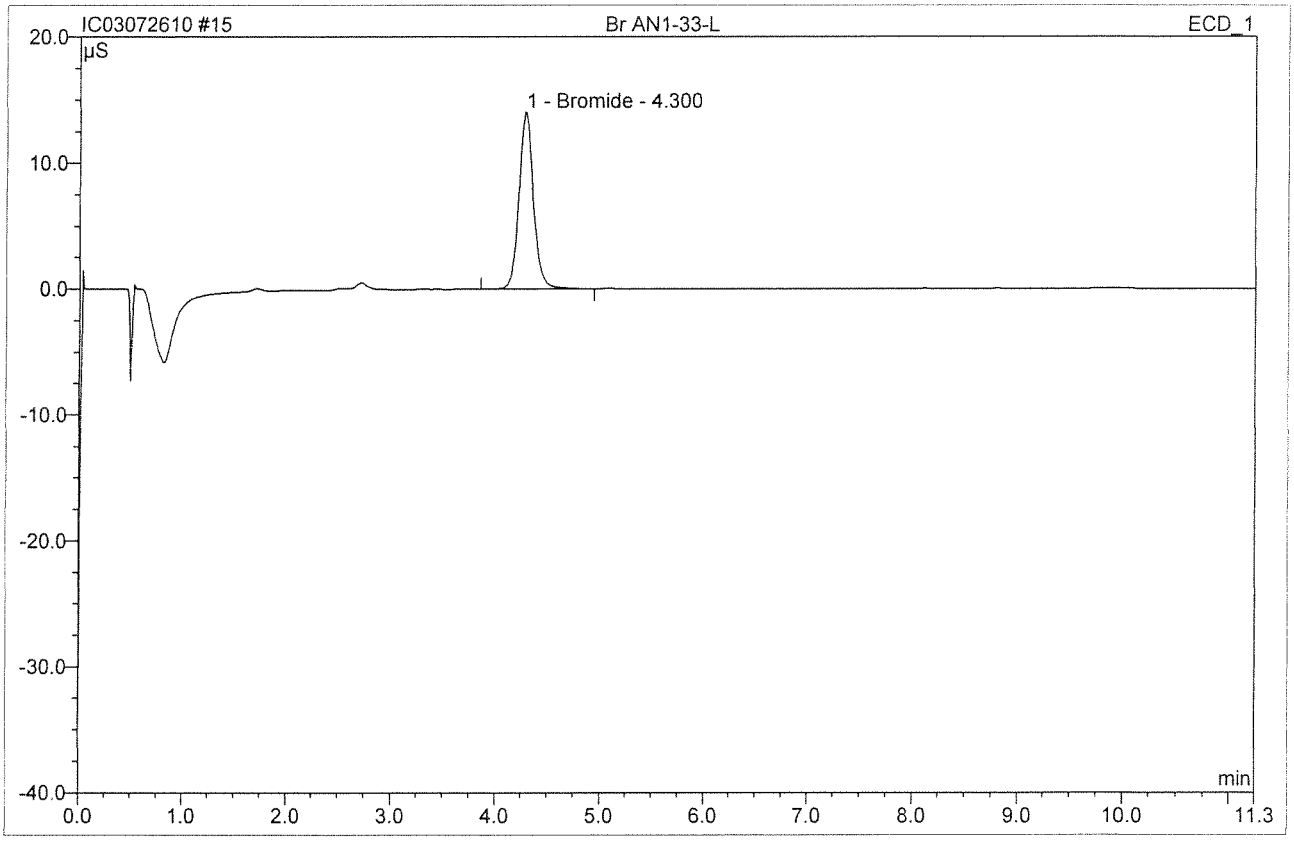
Before

JUL 2 6 2010

15 Br AN1-33-L

Br

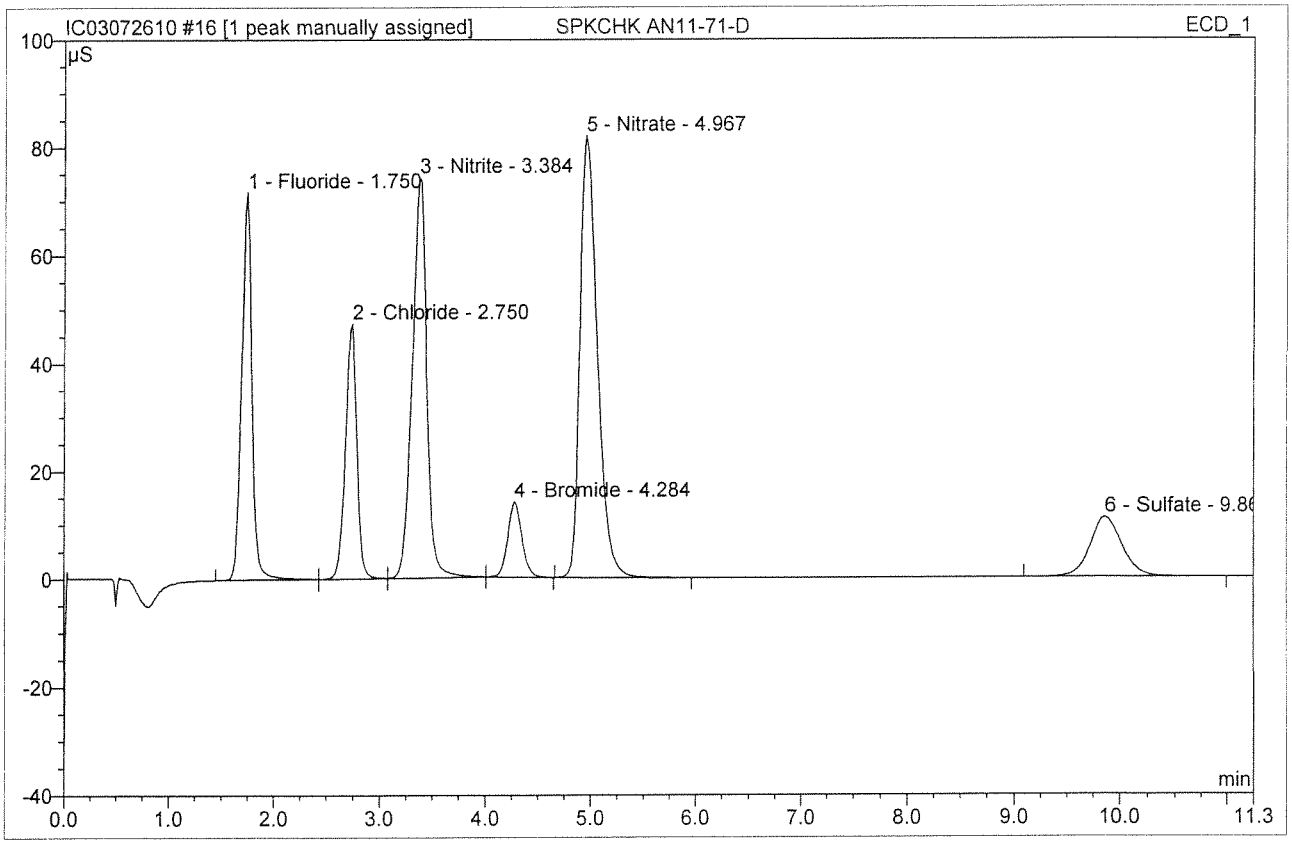
Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 10:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.30	Bromide	14.031	2.270	100.00	4.283	BMB
Total:			14.031	2.270	100.00	4.283	

16 SPKCHK AN11-71-D

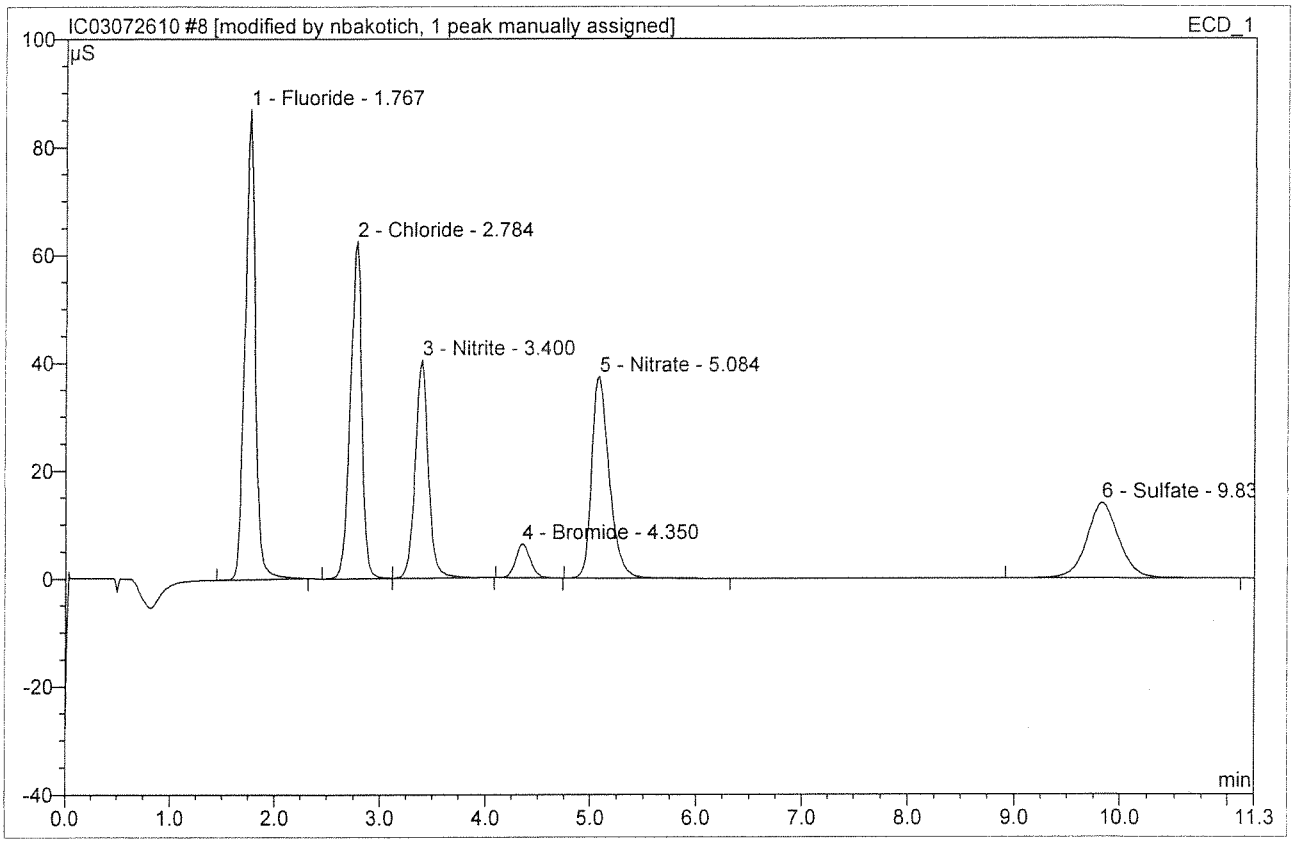
Sample Name:	**SPKCHK AN11-71-D**	*Injection Volume:*	**200.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 10:46**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	71.828	8.142	17.04	4.360	BMb
2	2.75	Chloride	47.381	5.954	12.46	3.836	bMB
3	3.38	Nitrite	74.215	11.866	24.84	3.726	bMb
4	4.28	Bromide	14.064	2.206	4.62	4.164	bMB
5	4.97	Nitrate	81.956	15.740	32.95	4.216	BMB
6	9.87	Sulfate	11.154	3.865	8.09	3.887	BMB^
Total:			300.597	47.773	100.00	24.189	

8 CCV1 AN11-80-CC

Sample Name:	**CCV1 AN11-80-CC**	*Injection Volume:*	**200.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 8:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	87.159	9.990	27.10	5.349	BMB*
2	2.78	Chloride	62.606	7.728	20.96	4.978	BM *
3	3.40	Nitrite	40.472	5.896	15.99	1.851	MB*
4	4.35	Bromide	6.322	1.041	2.83	1.965	BMB*
5	5.08	Nitrate	37.405	7.301	19.81	1.956	BMB*
6	9.83	Sulfate	13.946	4.907	13.31	4.935	BMB^
Total:			247.911	36.863	100.00	21.035	

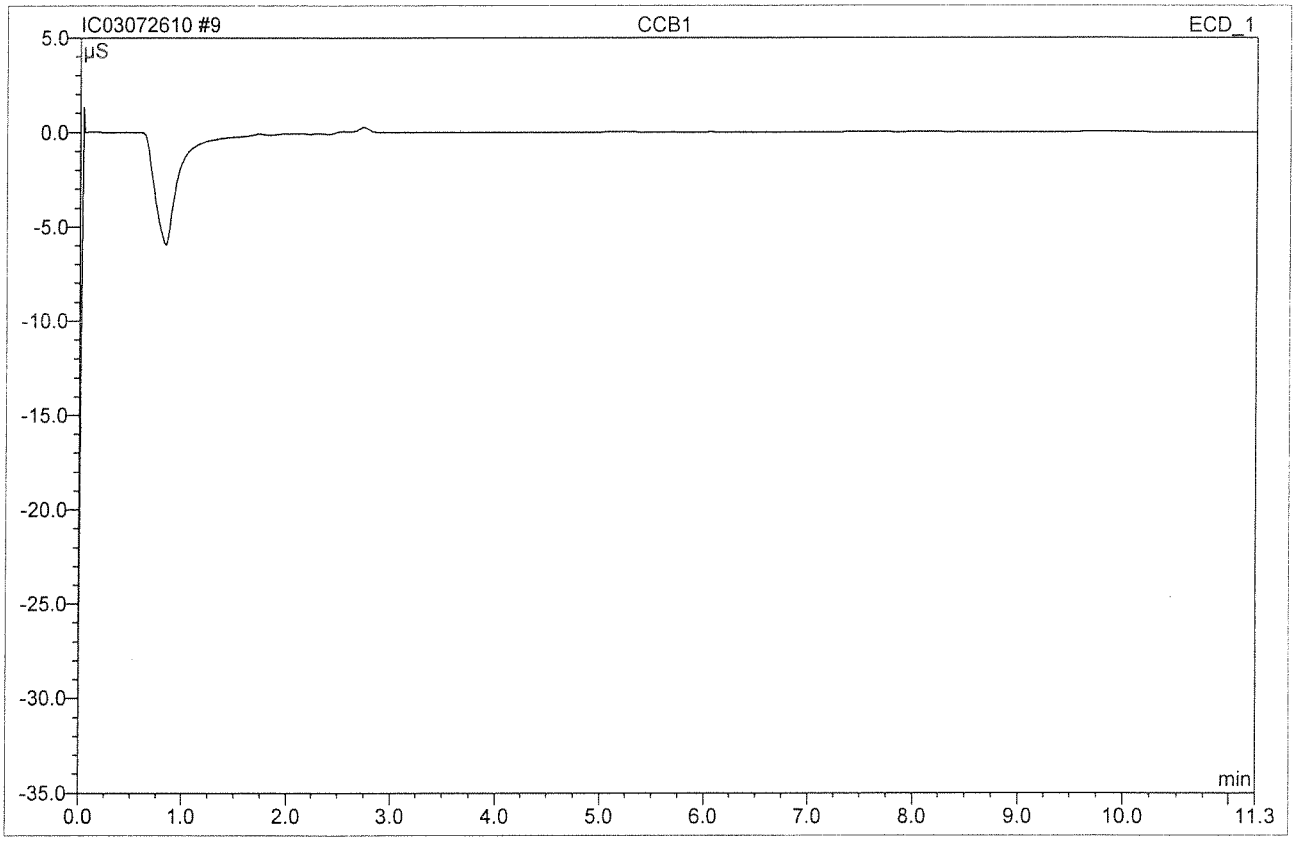
After Initials _____

JUL 26 2010

☑ Wrong Peak Peak not Found
☑ Baseline/Shoulder Incorrect
☐ Other _____

9 CCB1

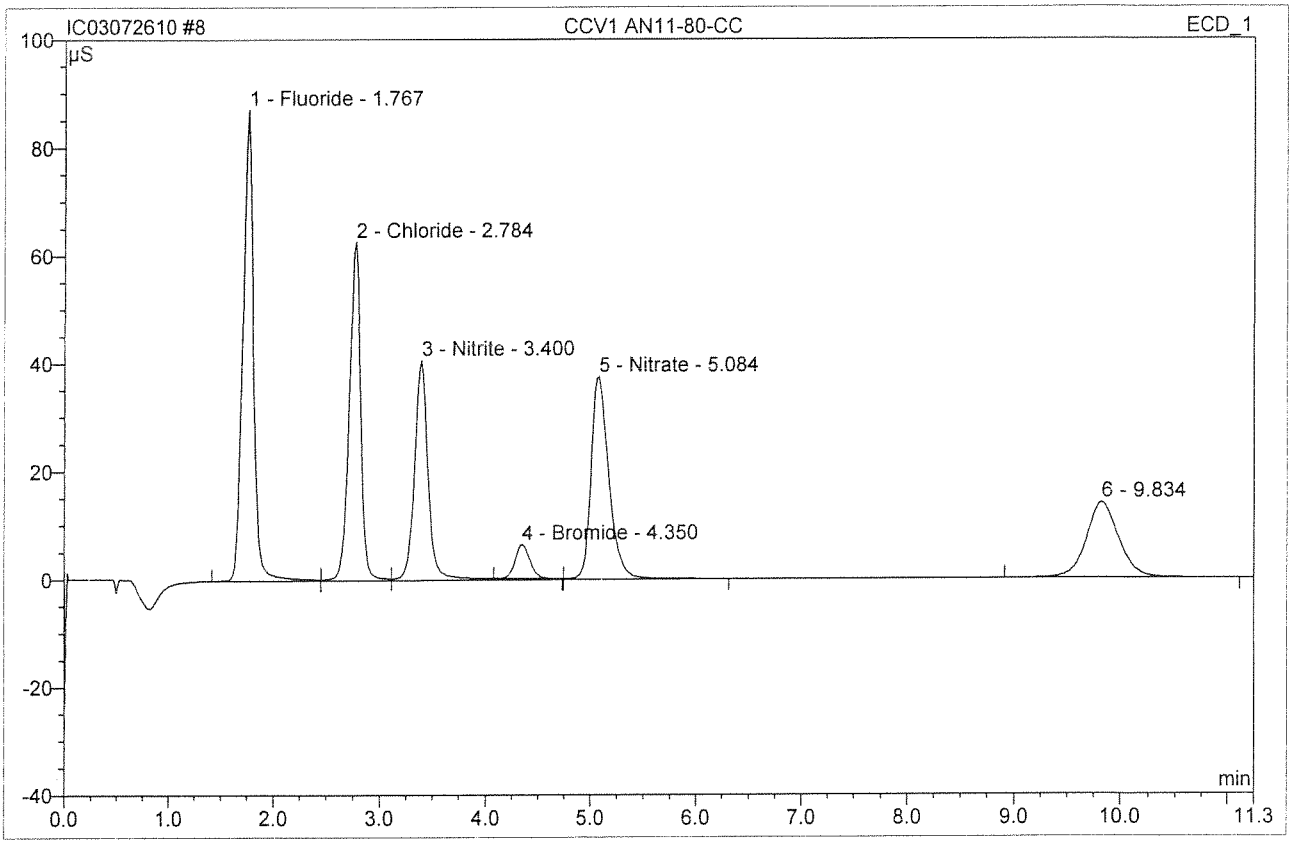
Sample Name:	**CCB1**	*Injection Volume:*	**200.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 9:10**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

8 CCV1 AN11-80-CC

Sample Name:	**CCV1 AN11-80-CC**	*Injection Volume:*	**200.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 8:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.77	Fluoride	87.280	10.160	26.99	5.440	BM
2	2.78	Chloride	62.798	7.855	20.87	5.060	M
3	3.40	Nitrite	40.696	6.259	16.63	1.966	M
4	4.35	Bromide	6.325	1.043	2.77	1.968	Rd
5	5.08	Nitrate	37.527	7.422	19.72	1.988	MB
6	9.83	n.a.	13.946	4.907	13.03	n.a.	BMB
Total:			248.571	37.647	100.00	16.423	

Beto

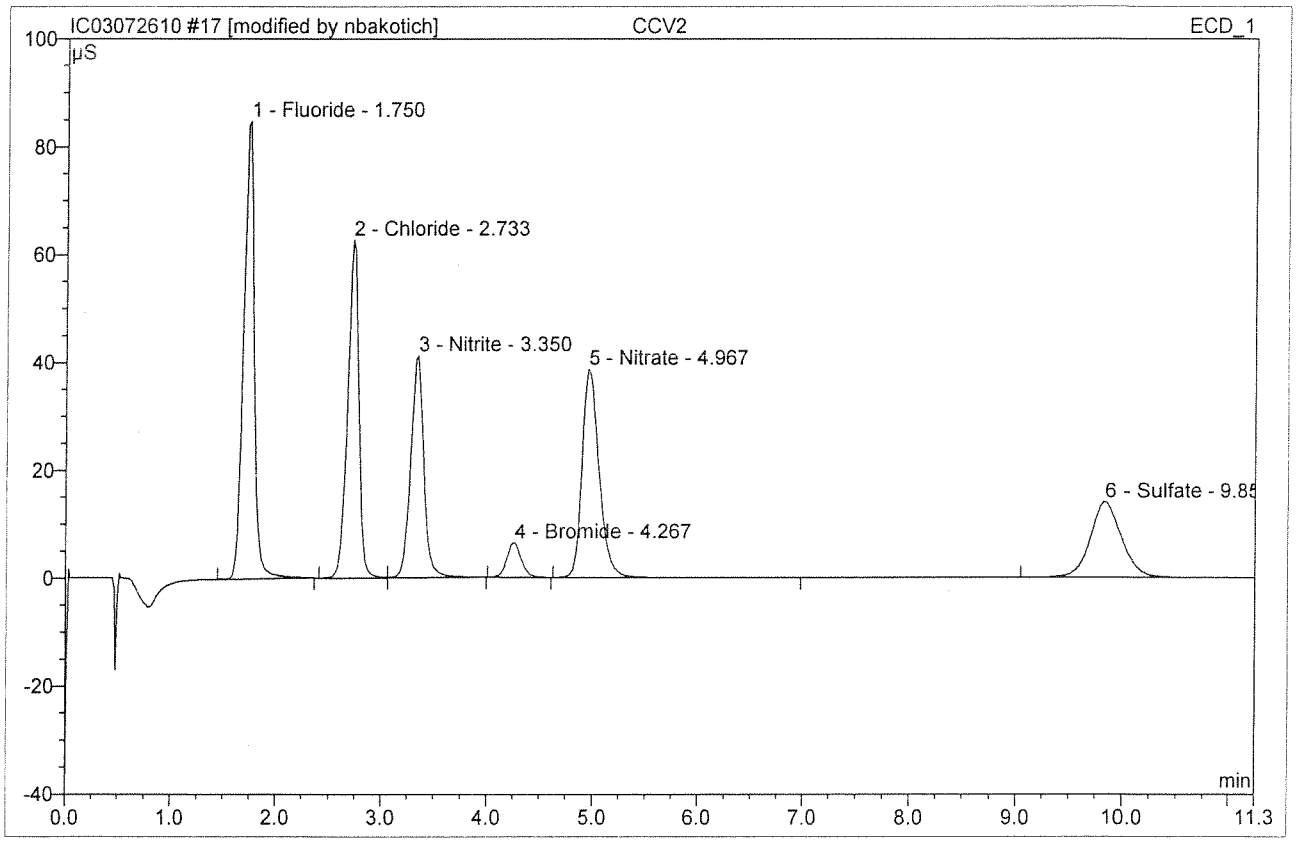
JUL 28

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**200.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 11:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	84.931	9.955	27.12	5.330	BMB*
2	2.73	Chloride	62.684	7.681	20.92	4.948	BM *
3	3.35	Nitrite	41.162	5.955	16.22	1.870	MB*
4	4.27	Bromide	6.427	1.034	2.82	1.951	BMB*
5	4.97	Nitrate	38.727	7.265	19.79	1.946	BMB*
6	9.85	Sulfate	14.087	4.820	13.13	4.847	BMB
Total:			248.018	36.710	100.00	20.892	

After Initials

JUL 26 2010

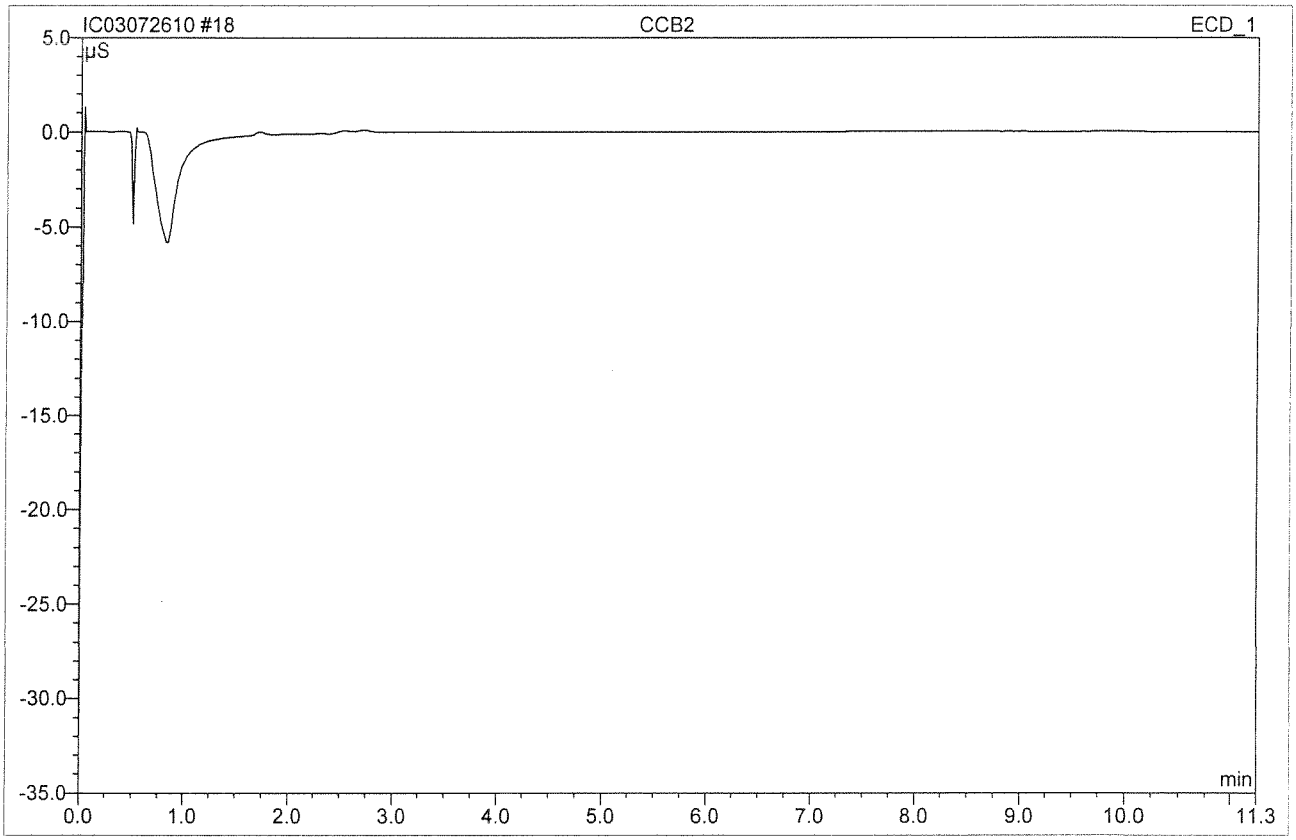
☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder incorrect
☐ Other

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

18 CCB2

CCB2

Sample Name:	**CCB2**	*Injection Volume:*	**200.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 11:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

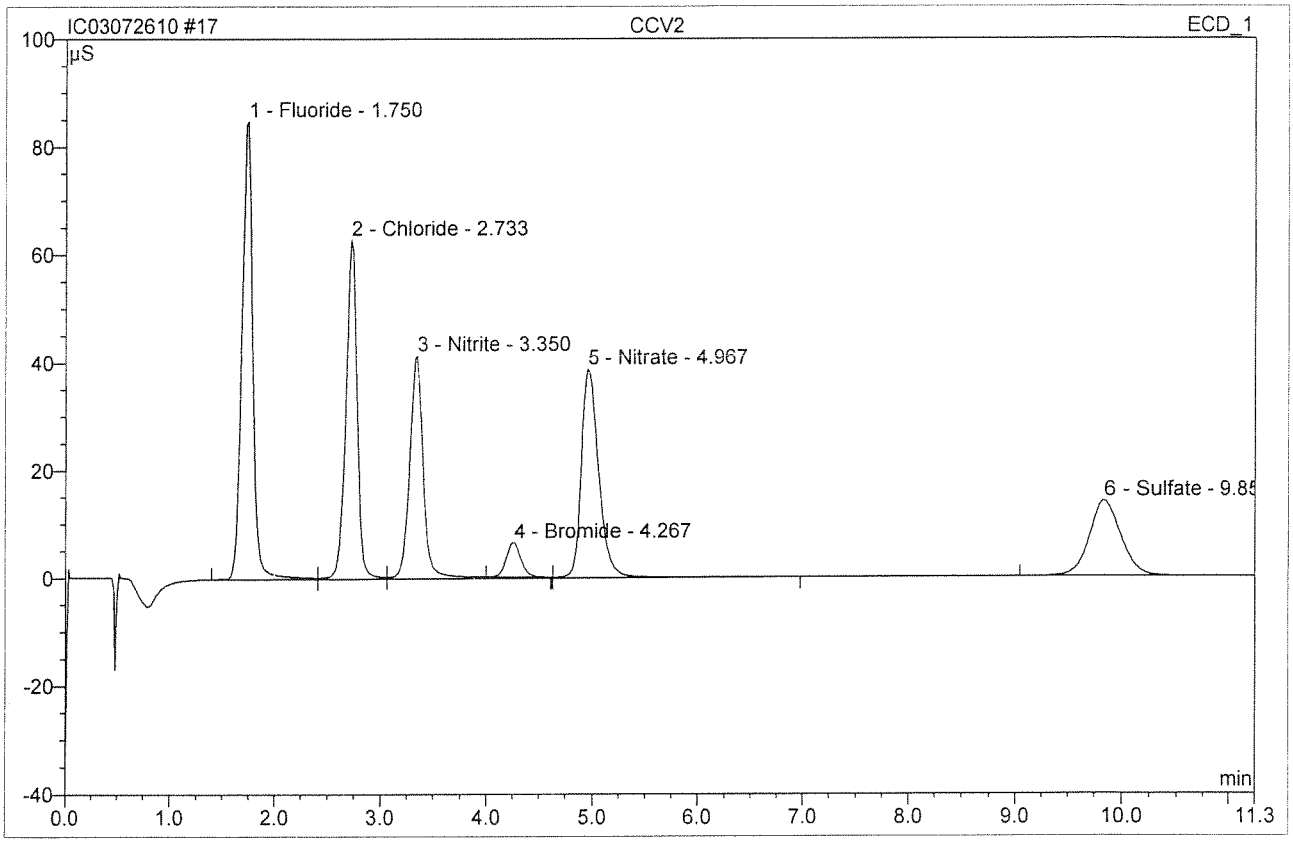


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

17 CCV2

CCV2

Sample Name:	**CCV2**	*Injection Volume:*	**200.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 11:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



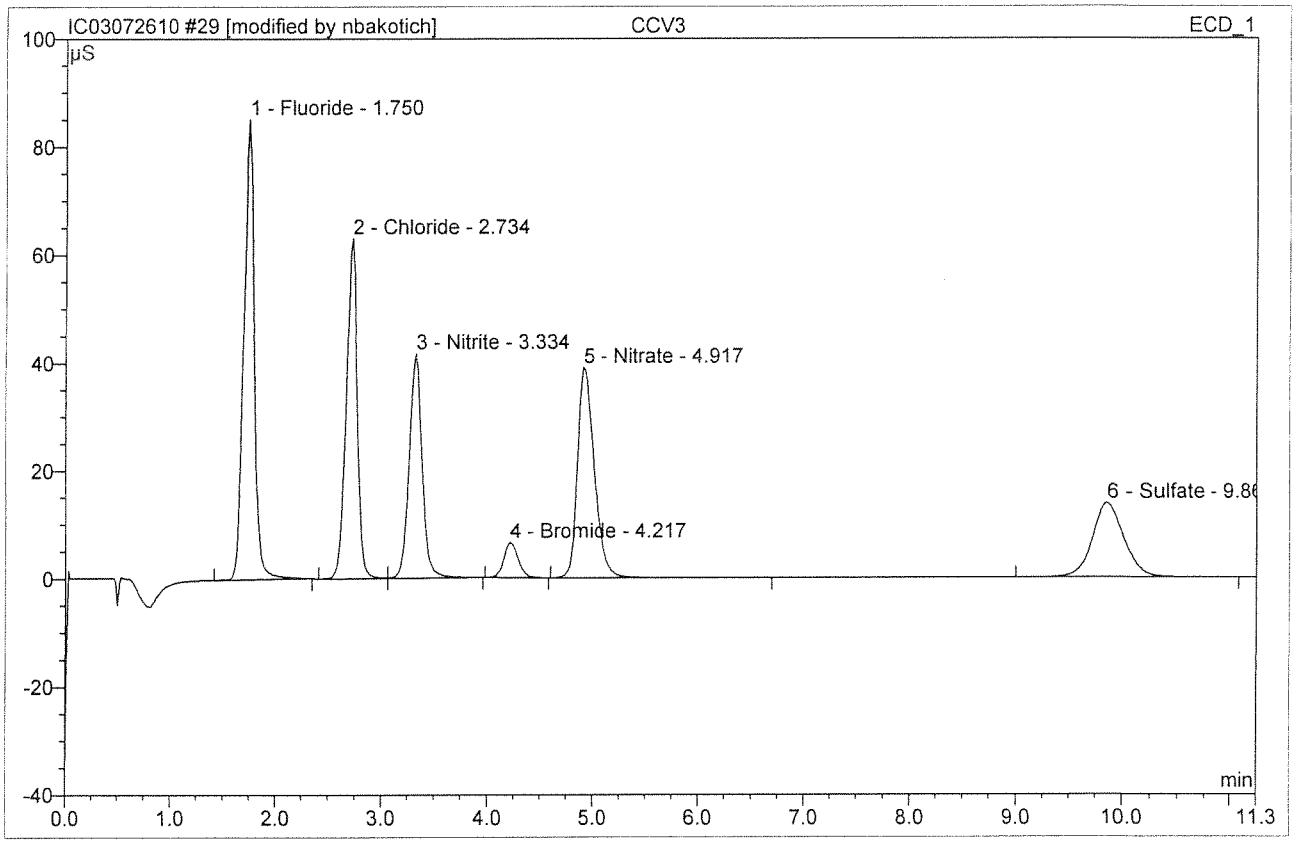
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	85.015	10.073	26.82	5.393	BM
2	2.73	Chloride	62.882	7.810	20.79	5.031	M
3	3.35	Nitrite	41.398	6.334	16.87	1.989	M
4	4.27	Bromide	6.431	1.035	2.76	1.954	Rd
5	4.97	Nitrate	38.887	7.485	19.93	2.005	MB
6	9.85	Sulfate	14.087	4.820	12.83	4.847	BMB
Total:			248.701	37.557	100.00	21.220	

fore
2010

29 CCV3

CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**200.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 14:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	85.243	9.751	26.97	5.221	BMB*
2	2.73	Chloride	63.023	7.578	20.96	4.882	BM *
3	3.33	Nitrite	41.631	5.884	16.27	1.848	MB*
4	4.22	Bromide	6.473	1.020	2.82	1.926	BMB*
5	4.92	Nitrate	38.973	7.184	19.87	1.925	BMB*
6	9.87	Sulfate	13.809	4.741	13.11	4.768	BMB
Total:			249.150	36.158	100.00	20.568	

After Initials _____

JUL 26 2010

default/Integration

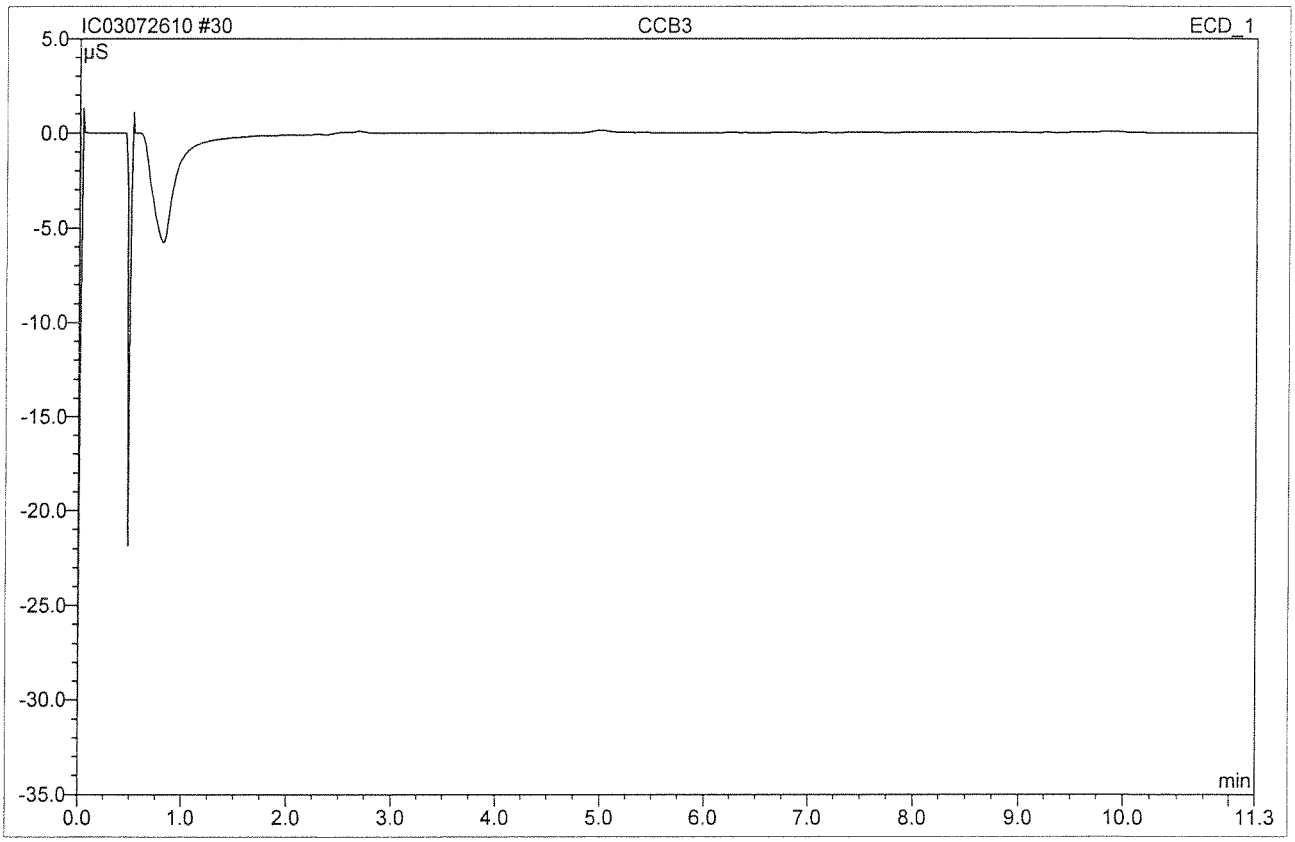
☐ Wrong Peak/Peak not Found
☑ Baseline/shoulder Incorrect
☐ Other _____

304

30 CCB3

CCB3

Sample Name:	**CCB3**	*Injection Volume:*	**200.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 14:57**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

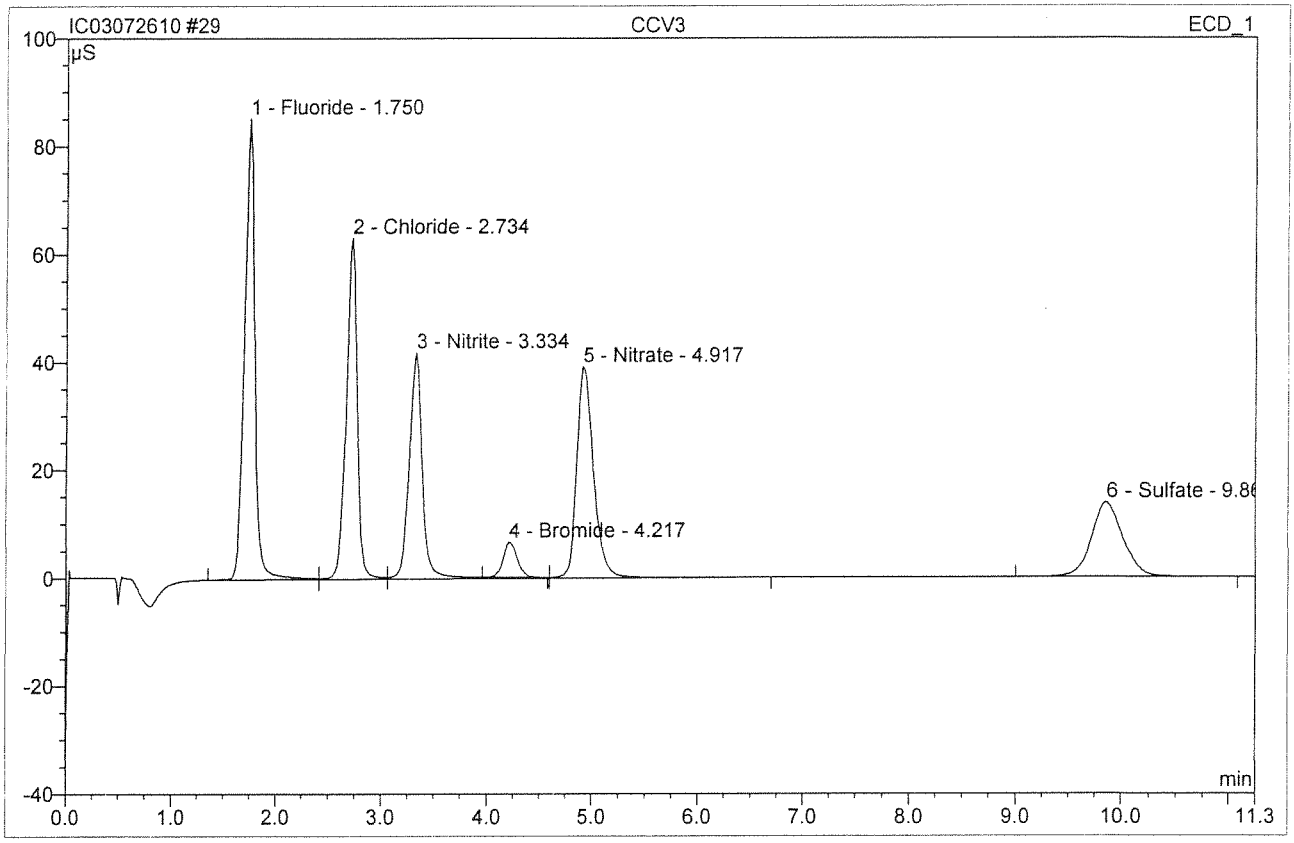


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

29 CCV3

CCV3

Sample Name:	**CCV3**	*Injection Volume:*	**200.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 14:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	85.361	9.909	26.74	5.305	BM
2	2.73	Chloride	63.239	7.719	20.83	4.972	M
3	3.33	Nitrite	41.886	6.279	16.94	1.972	M
4	4.22	Bromide	6.475	1.021	2.76	1.928	Rd
5	4.92	Nitrate	39.138	7.389	19.94	1.979	MB
6	9.87	Sulfate	13.809	4.741	12.79	4.768	BMB
Total:			249.908	37.057	100.00	20.924	

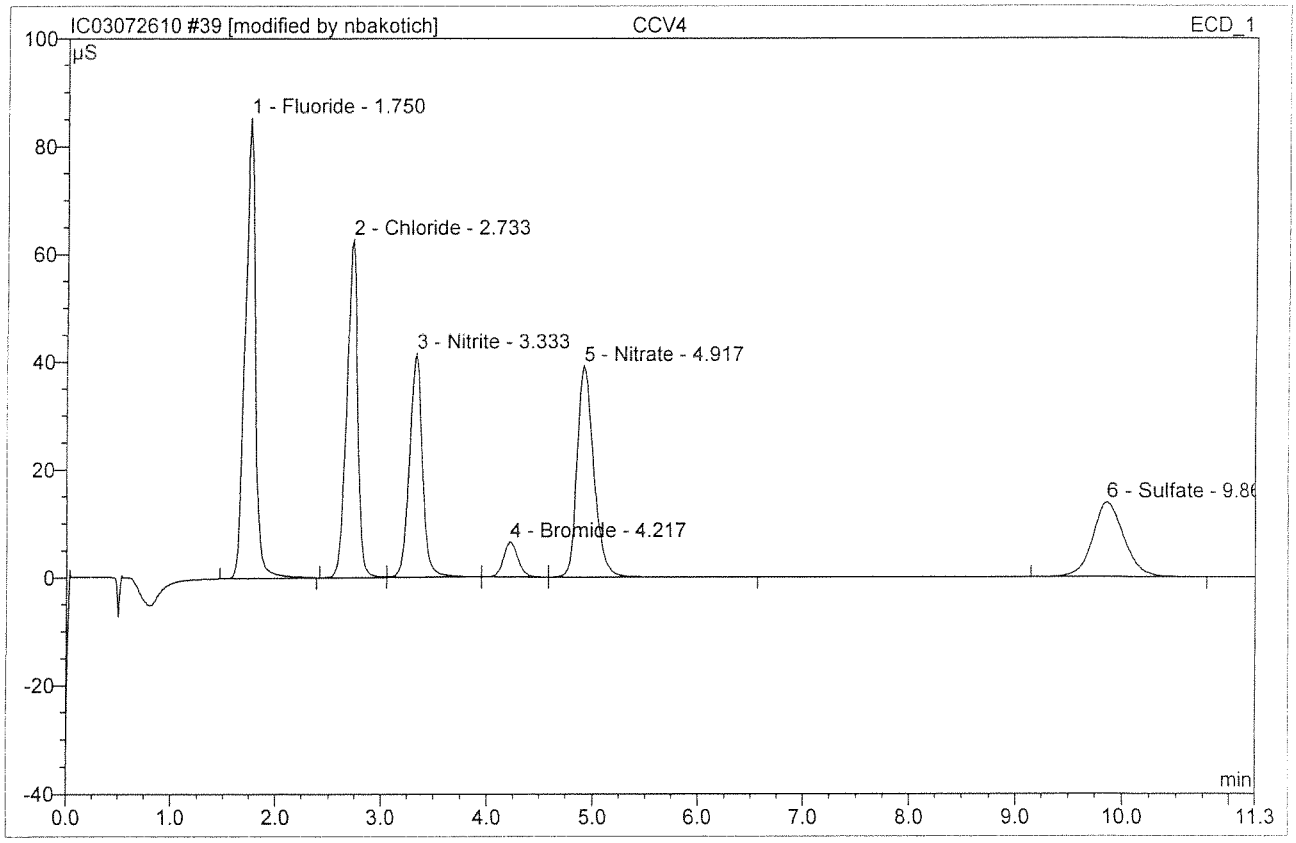
Before

JUL 2 6 2010

39 CCV4

CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**200.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 17:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	85.494	9.761	26.94	105% 5.226	BMB*
2	2.73	Chloride	62.794	7.604	20.99	98% 4.898	BM *
3	3.33	Nitrite	41.552	5.913	16.32	93% 1.857	Mb*
4	4.22	Bromide	6.505	1.022	2.82	97% 1.929	bMb*
5	4.92	Nitrate	39.175	7.210	19.90	97% 1.931	bMB*
6	9.87	Sulfate	13.859	4.723	13.03	95% 4.750	BMB
Total:			249.379	36.233	100.00	20.592	

After Initials nb

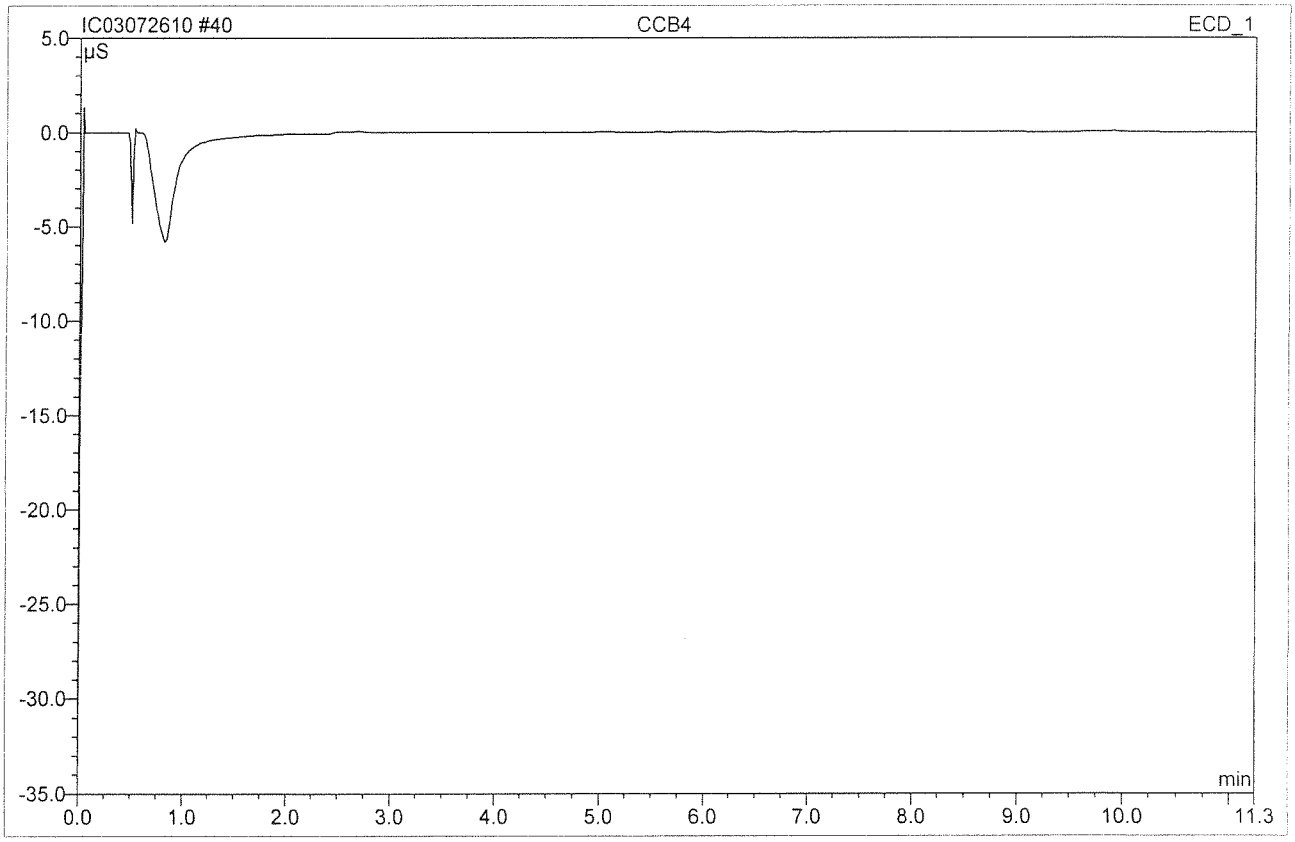
JUL 26 2010

☑ Wrong Peak/Peak not Found
☐ Baseline/shoulder Incorrect
☐ Other

40 CCB4

CCB4

Sample Name:	**CCB4**	*Injection Volume:*	**200.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 17:50**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**

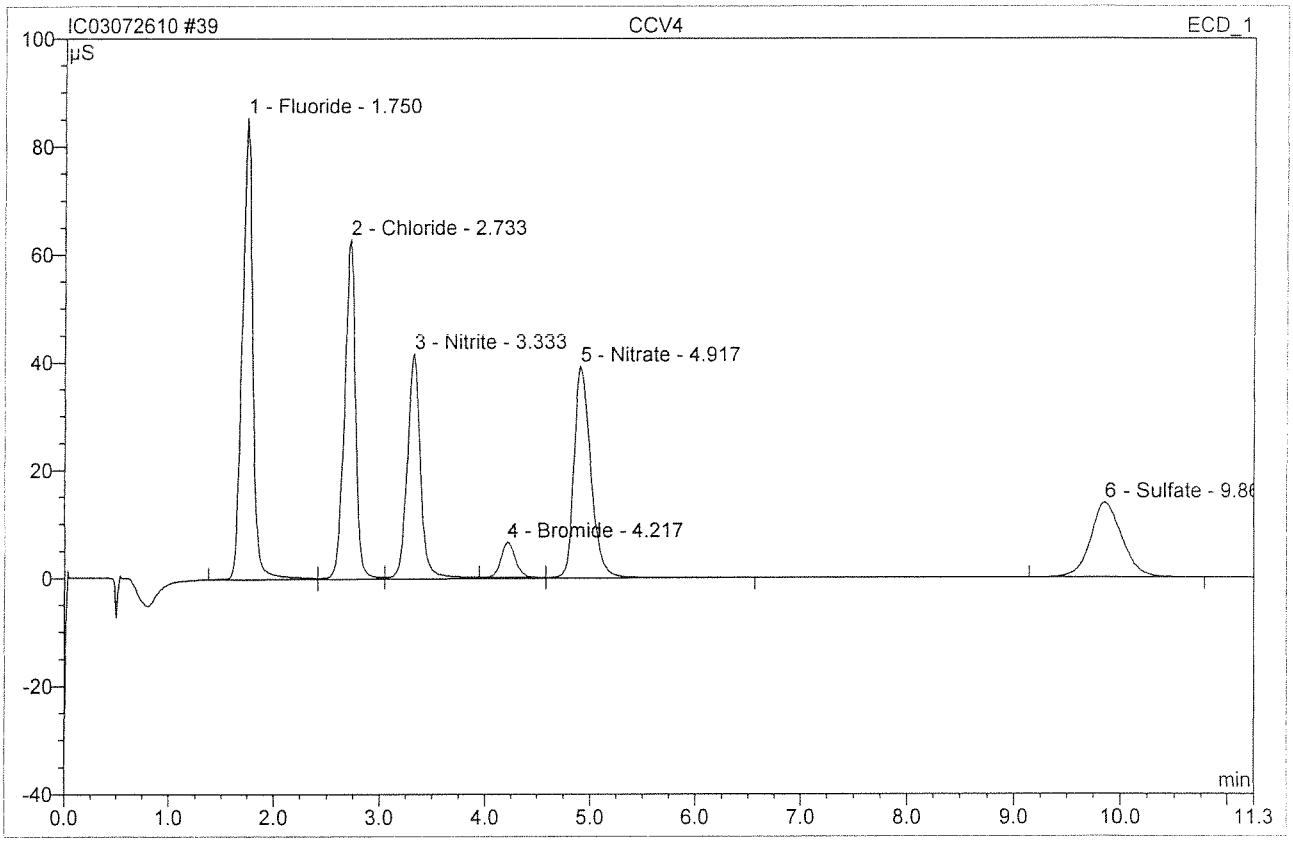


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

39 CCV4

CCV4

Sample Name:	**CCV4**	*Injection Volume:*	**200.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/26/2010 17:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	85.584	9.880	26.68	5.290	BM
2	2.73	Chloride	62.991	7.728	20.87	4.978	M
3	3.33	Nitrite	41.788	6.282	16.96	1.973	M
4	4.22	Bromide	6.505	1.022	2.76	1.929	Rd
5	4.92	Nitrate	39.331	7.395	19.97	1.981	MB
6	9.87	Sulfate	13.859	4.723	12.75	4.750	BMB
Total:			250.057	37.030	100.00	20.901	

Before
JUL 2 7 2010

COLUMBIA ANALYTICAL SERVICES, INC.

Ion Chromatography Calibration Data

Sequence: IC03072010c

Date: 07/20/10

Anion	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Corr.Coeff.	Slope
F	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9588	1.8676
Cl	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9324	1.5522
NO2	0.0	0.1	0.5	1.0	2.0	5.0	-	99.9911	3.1836
Br	0.0	0.1	0.5	1.0	2.0	5.0	-	99.9445	0.5299
NO3	0.0	0.1	0.5	1.0	2.0	5.0	-	99.8858	3.7330
SO4	0.0	0.2	0.5	1.0	5.0	7.5	10.0	99.9680	0.9943

All calibration standard concentrations are in mg/L unless otherwise noted.
Zero point forced through zero.

No.	Peak Name	Cal.Type	#Points	Rel.Std.Dev. %	Corr.Coeff. %	Offset	Slope	Curve
1	Fluoride	Lin	6	3.0407	99.9588	0	1.8676	0
2	Chloride	Lin	6	5.0312	99.9324	0	1.5522	0
n.a.	Nitrite	Lin	5	1.5619	99.9911	0	3.1836	0
n.a.	Bromide	Lin	5	6.1127	99.9445	0	0.5299	0
n.a.	Nitrate	Lin	5	9.4241	99.8858	0	3.733	0
3	Sulfate	Lin	6	3.3145	99.968	0	0.9943	0
Average:			5.5	4.7475	99.9468	0	1.9768	0

EC 7/23/10

Sequence: IC03072010C
Operator: nbakotich
Printed: 7/20/2010 4:48:36 PM

Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 12

Created: 7/20/2010 12:05:20 PM by ACQWET10
Last Update: 7/20/2010 4:44:25 PM by ACQWET10

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status	Inj. Date/Time
1	std2/lvl2	Standard	1	200.0	epa300	epa300	Finished	7/20/2010 1:14:08 PM
2	std3/lvl3	Standard	2	200.0	epa300	epa300	Finished	7/20/2010 1:30:36 PM
3	std4/lvl4	Standard	3	200.0	epa300	epa300	Finished	7/20/2010 1:45:33 PM
4	std5/lvl5	Standard	4	200.0	epa300	epa300	Finished	7/20/2010 2:00:31 PM
5	std6/lvl6	Standard	5	200.0	epa300	epa300	Finished	7/20/2010 2:14:58 PM
6	std7/lvl7	Standard	6	200.0	epa300	epa300	Finished	7/20/2010 2:29:26 PM
7	std1/lvl1	Standard	7	200.0	epa300	epa300	Finished	7/20/2010 2:43:54 PM
8	NO2 AN11-29-J	Unknown	10	200.0	epa300	epa300	Finished	7/20/2010 2:58:21 PM
9	NO3 AN1-33-E	Unknown	11	200.0	epa300	epa300	Finished	7/20/2010 3:12:49 PM
10	CLSO4 ERA#0107-10-02	Unknown	12	200.0	epa300	epa300	Finished	7/20/2010 3:27:17 PM
11	F AN 1-33-D	Unknown	13	200.0	epa300	epa300	Finished	7/20/2010 3:41:44 PM
12	Br AN1-33-L	Unknown	14	200.0	epa300	epa300	Finished	7/20/2010 3:56:12 PM

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

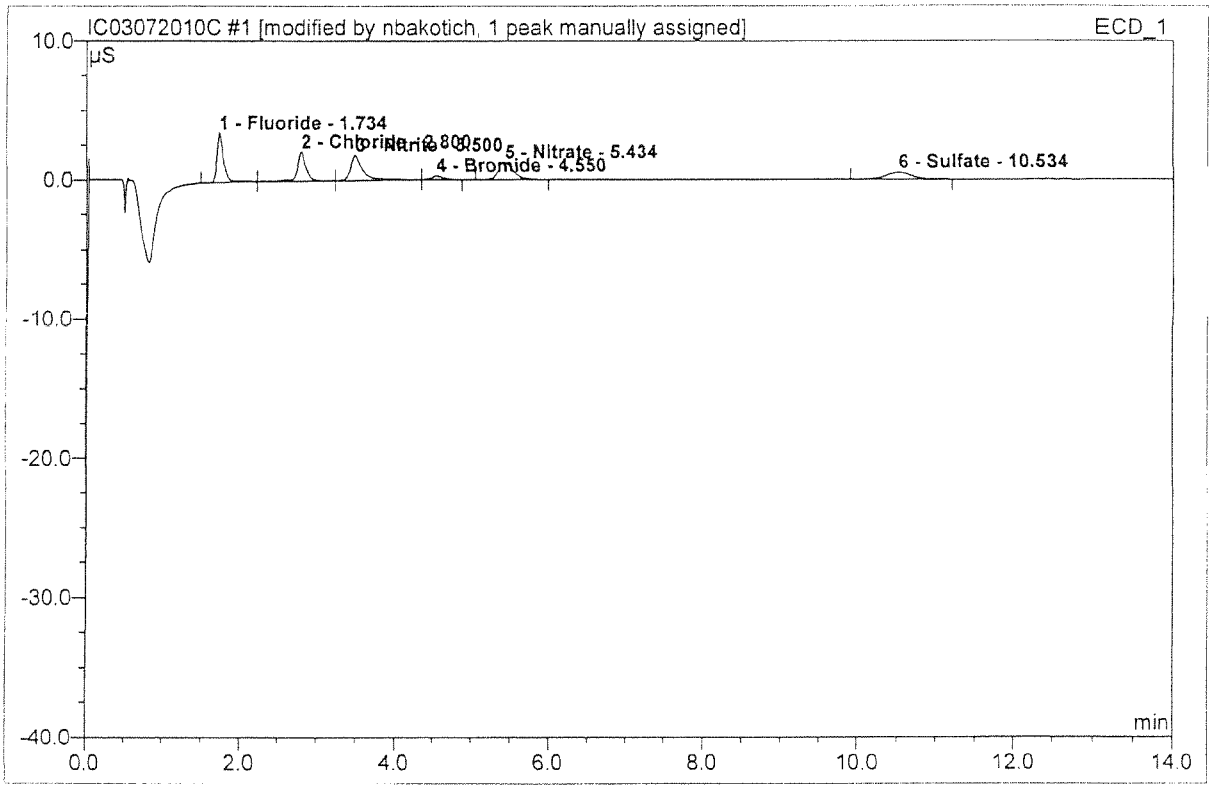
Title:
Datasource: ACQWET10_local
Location: DX120A
Timebase: DX120
#Samples: 12
Created: 7/20/2010 12:05:20 PM by ACQWET10
Last Update: 7/20/2010 4:44:25 PM by ACQWET10

No.	Name	Dil. Factor	Comment
1	std2/lvl2	1.0000	
2	std3/lvl3	1.0000	
3	std4/lvl4	1.0000	
4	std5/lvl5	1.0000	
5	std6/lvl6	1.0000	
6	std7/lvl7	1.0000	
7	std1/lvl1	1.0000	
8	NO2 AN11-29-J	25.0000	NO2
9	NO3 AN1-33-E	20.0000	NO3
10	CLSO4 ERA#0107-10-02	1.0000	CLSO4
11	F AN 1-33-D	2.0000	F
12	Br AN1-33-L	1.0000	Br

Chromeleon © Dionex Corporation, Version 6.80 SP1 Build 2238

1 std2/lvl2

Sample Name:	**std2/lvl2**	*Injection Volume:*	**200.0**
Vial Number:	**1**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**14.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.73	Fluoride	3.545	0.363	24.73	0.194	BMb*
2	2.80	Chloride	2.071	0.272	18.54	0.175	bM
3	3.50	Nitrite	1.805	0.321	21.85	0.101	Mb*
4	4.55	Bromide	0.255	0.045	3.04	0.084	bMB*
5	5.43	Nitrate	1.263	0.280	19.07	0.075	BMB
6	10.53	Sulfate	0.499	0.187	12.77	0.188	BMB^
Total:			9.438	1.468	100.00	0.818	

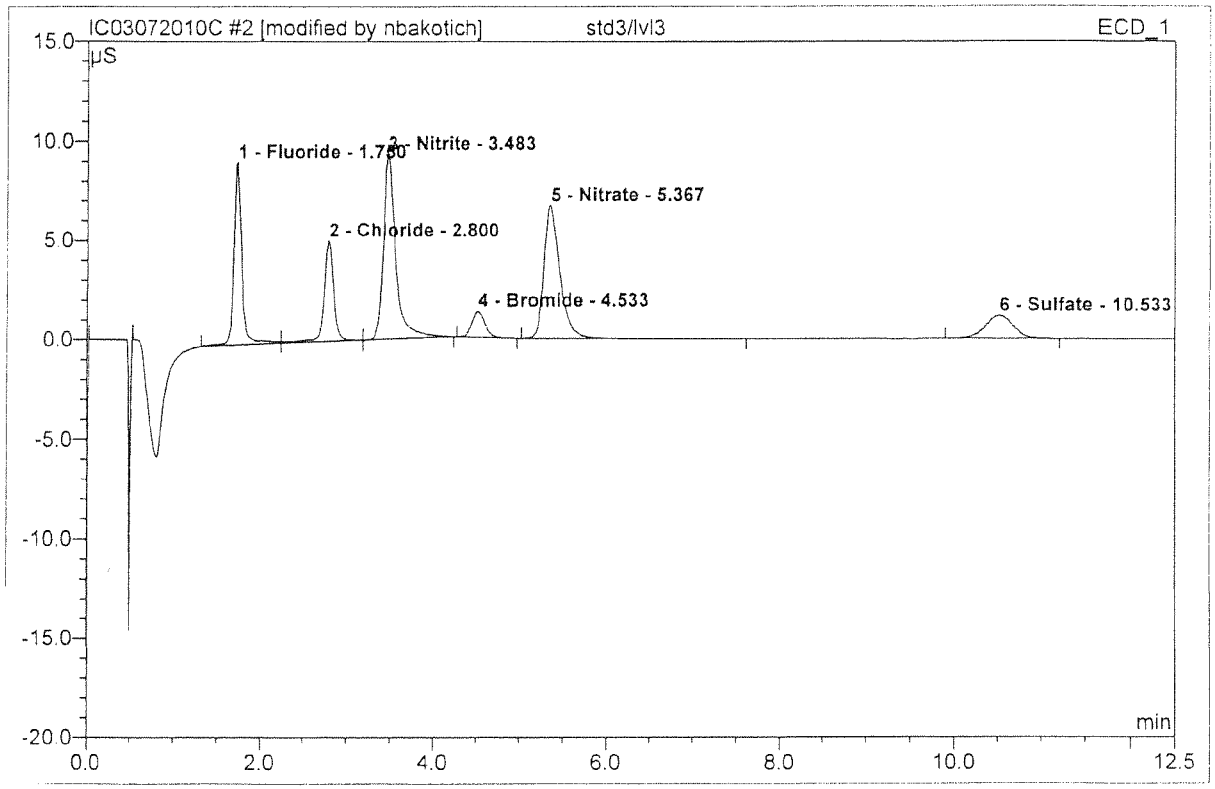
7/20/10

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

2 std3/lvl3

Sample Name:	**std3/lvl3**	*Injection Volume:*	**200.0**
Vial Number:	**2**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:30**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	9.205	0.973	18.42	0.521	BM *
2	2.80	Chloride	5.081	0.655	12.41	0.422	M *
3	3.48	Nitrite	9.350	1.560	29.54	0.490	MB*
4	4.53	Bromide	1.315	0.230	4.35	0.434	BMB*
5	5.37	Nitrate	6.707	1.436	27.19	0.385	BMB*
6	10.53	Sulfate	1.163	0.428	8.10	0.430	BMB
Total:			32.821	5.283	100.00	2.682	

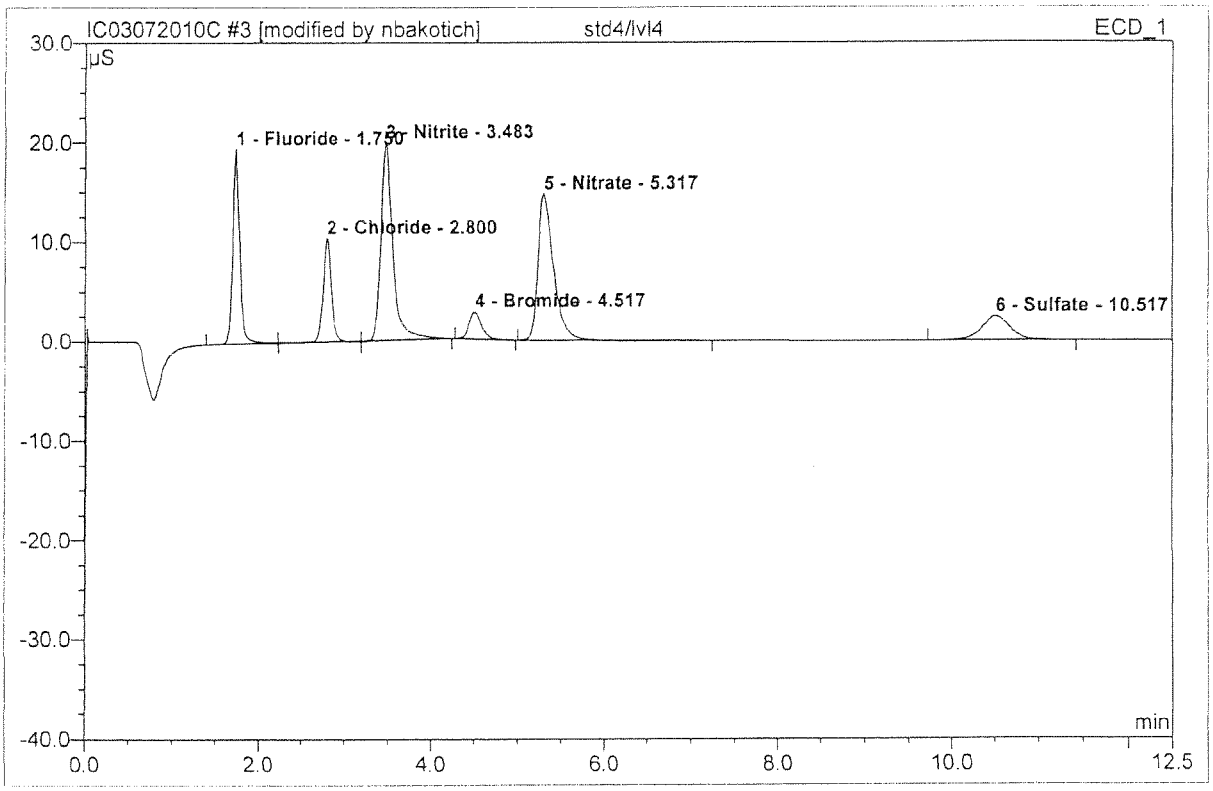
nb 7/20/10

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

3 std4/lvl4

Sample Name:	**std4/lvl4**	*Injection Volume:*	**200.0**
Vial Number:	**3**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 13:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.50**	*Sample Amount:*	**1.0000**



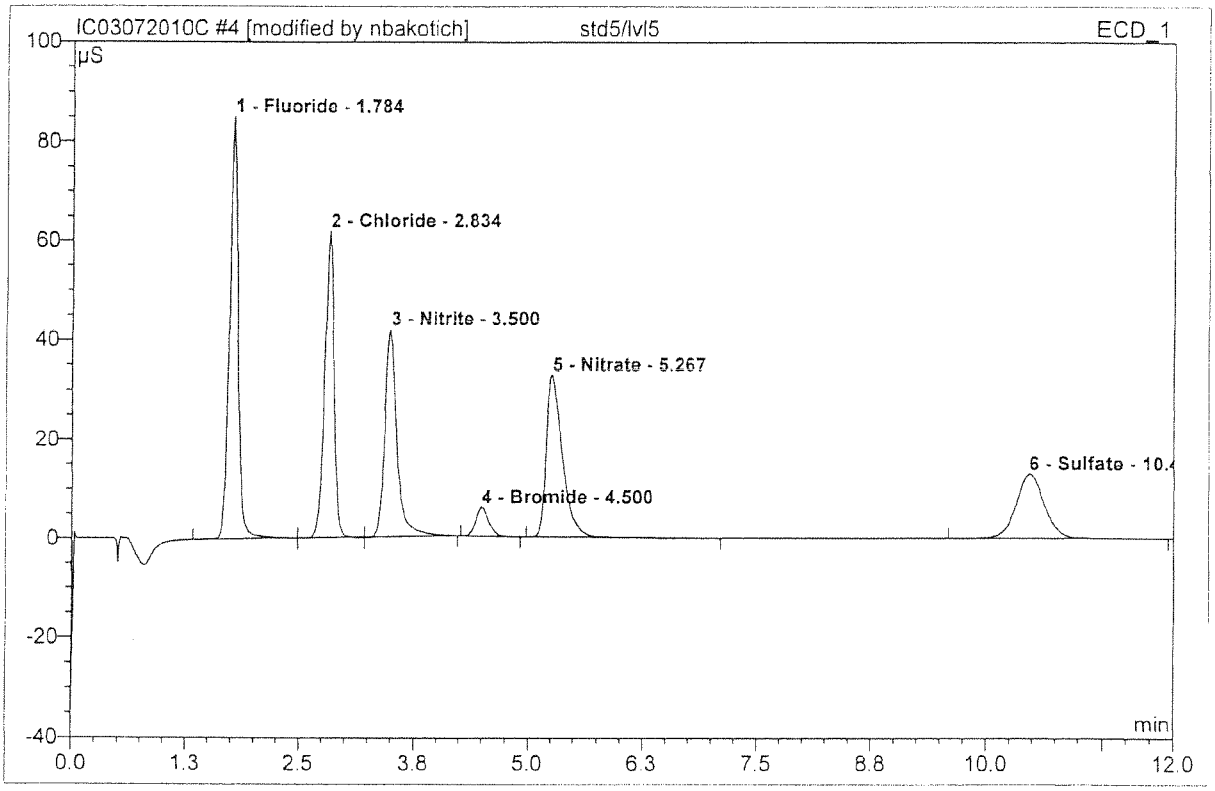
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.75	Fluoride	19.535	1.902	17.78	1.019	BM *
2	2.80	Chloride	10.376	1.197	11.19	0.771	M *
3	3.48	Nitrite	19.878	3.181	29.73	0.999	MB*
4	4.52	Bromide	2.746	0.469	4.38	0.885	BMB*
5	5.32	Nitrate	14.681	3.069	28.68	0.822	BMB*
6	10.52	Sulfate	2.364	0.882	8.24	0.887	BMB
Total:			69.581	10.700	100.00	5.383	

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

4 std5/lvl5

Sample Name:	**std5/lvl5**	*Injection Volume:*	**200.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	85.132	9.610	26.73	5.145	BM *
2	2.83	Chloride	61.798	7.298	20.30	4.702	M *
3	3.50	Nitrite	41.755	6.525	18.15	2.050	MB*
4	4.50	Bromide	5.906	0.991	2.76	1.870	BMB*
5	5.27	Nitrate	32.796	6.764	18.82	1.812	BMB*
6	10.47	Sulfate	13.153	4.758	13.24	4.785	BMB
Total:			240.541	35.945	100.00	20.364	

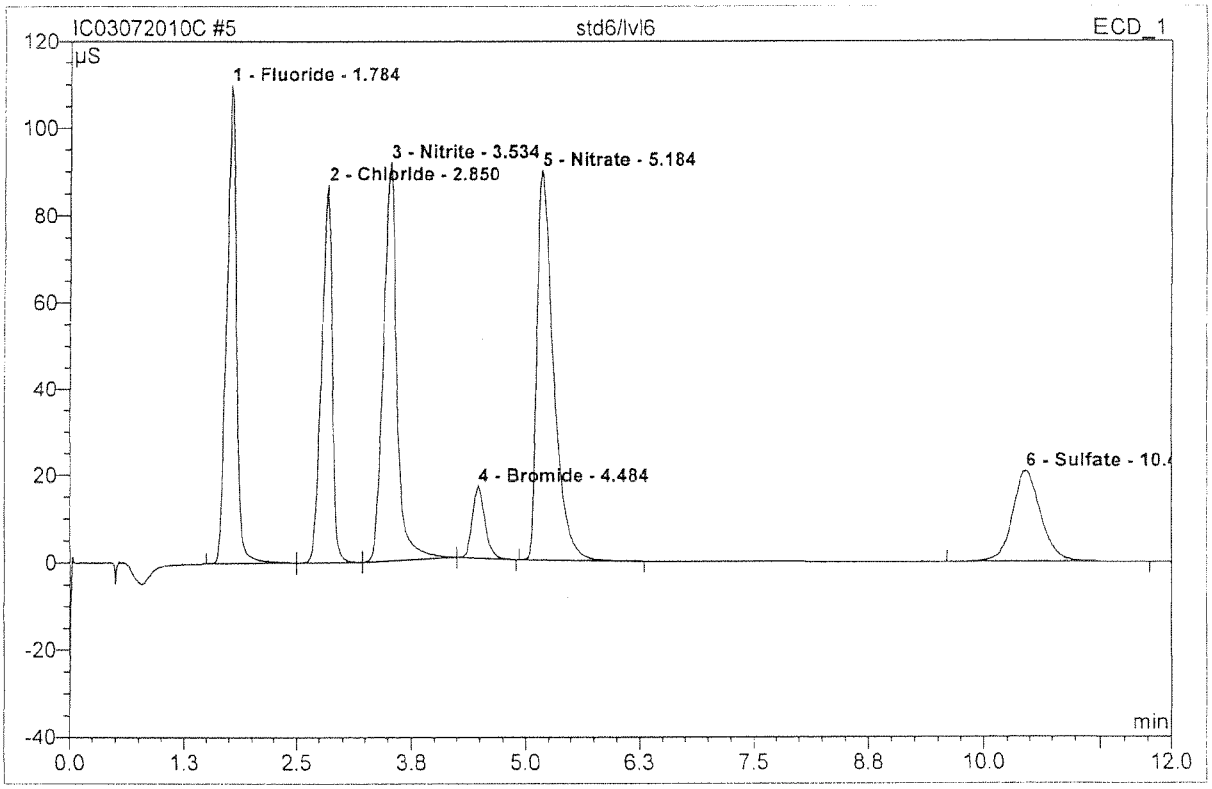
7/20/10

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

5 std6/lvl6

Sample Name:	**std6/lvl6**	*Injection Volume:*	**200.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:14**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**

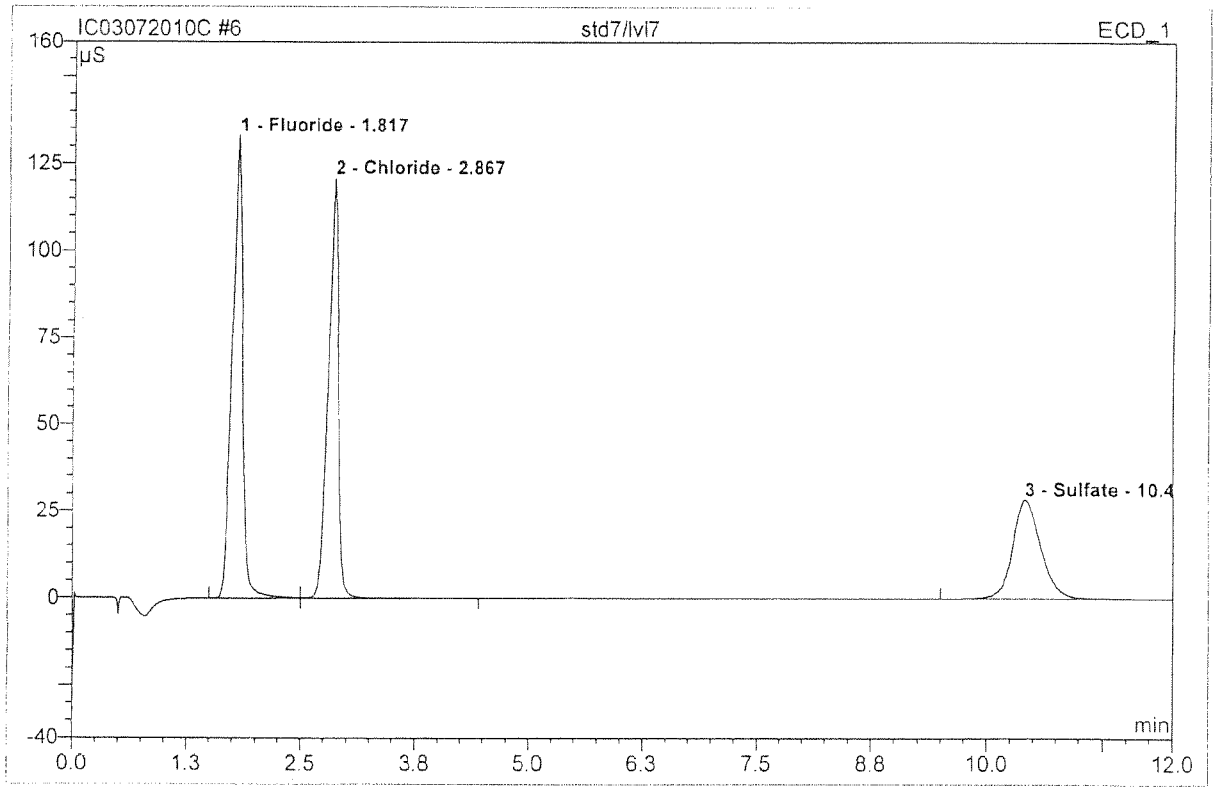


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.78	Fluoride	110.065	14.275	20.13	7.644	BMb
2	2.85	Chloride	87.060	11.556	16.29	7.445	bMB
3	3.53	Nitrite	91.775	15.859	22.36	4.981	bMb
4	4.48	Bromide	16.593	2.693	3.80	5.082	bMB
5	5.18	Nitrate	89.877	19.123	26.96	5.123	BMB
6	10.47	Sulfate	20.826	7.423	10.47	7.466	BMB
Total:			416.196	70.929	100.00	37.741	

7/20/10

6 std7/lvl7

Sample Name:	**std7/lvl7**	*Injection Volume:*	**200.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



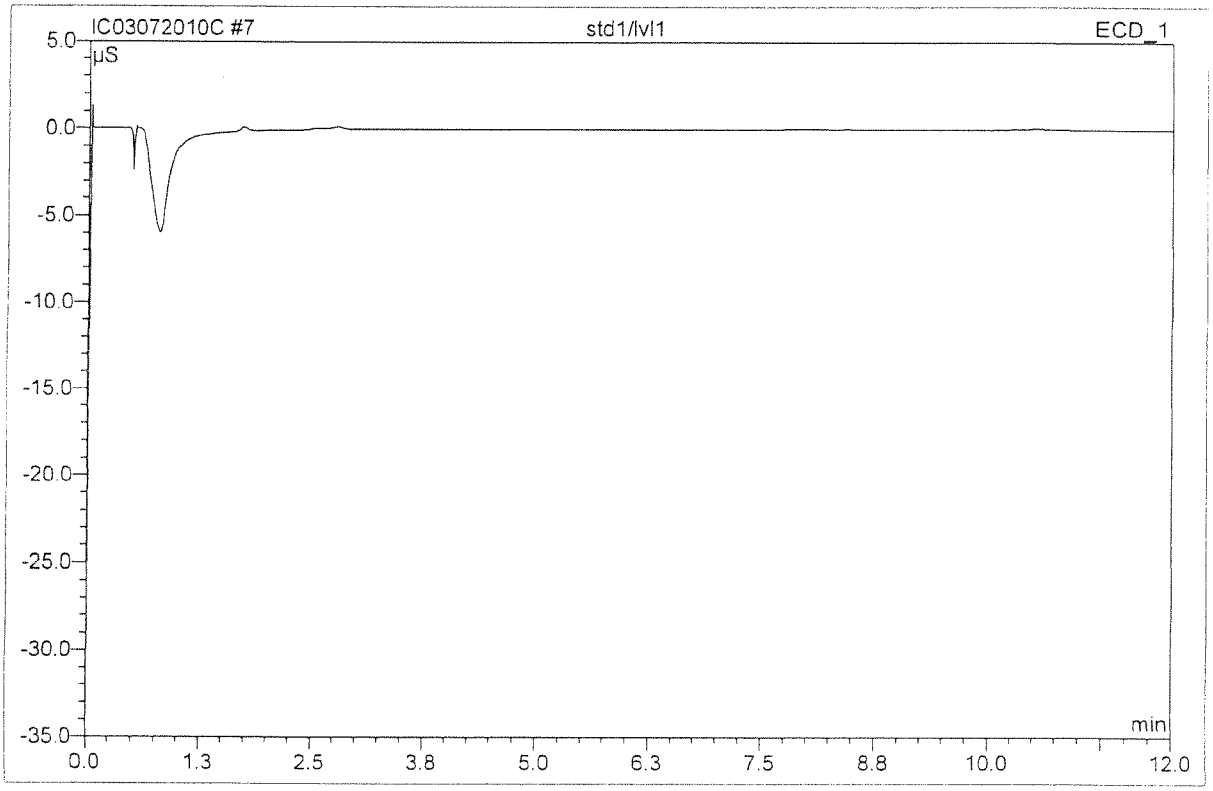
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.82	Fluoride	133.296	18.334	41.40	9.817	BM
2	2.87	Chloride	120.903	15.859	35.81	10.217	MB
3	10.42	Sulfate	28.395	10.091	22.79	10.148	BMB
Total:			282.595	44.284	100.00	30.183	

default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

7 std1/lvl1

Sample Name:	**std1/lvl1**	*Injection Volume:*	**200.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 14:43**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
Total:			0.000	0.000	0.00	0.000	

nb 7.20.10

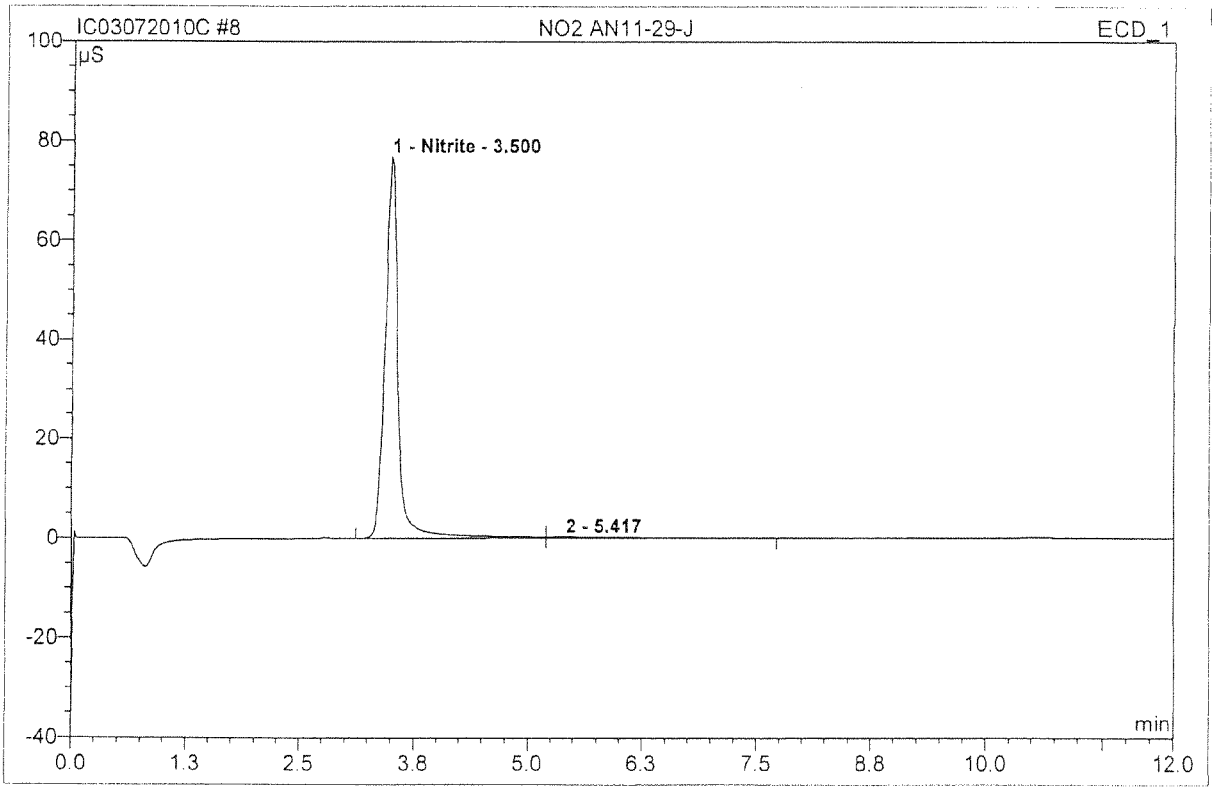
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

8 NO2 AN11-29-J

NO2

Sample Name:	**NO2 AN11-29-J**	*Injection Volume:*	**200.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**25.0000**
Recording Time:	**7/20/2010 14:58**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	3.50	Nitrite	76.868	13.074	98.03	102.665	BM
2	5.42	n.a.	0.335	0.263	1.97	n.a.	MB
Total:			77.202	13.336	100.00	102.665	

7/20/10

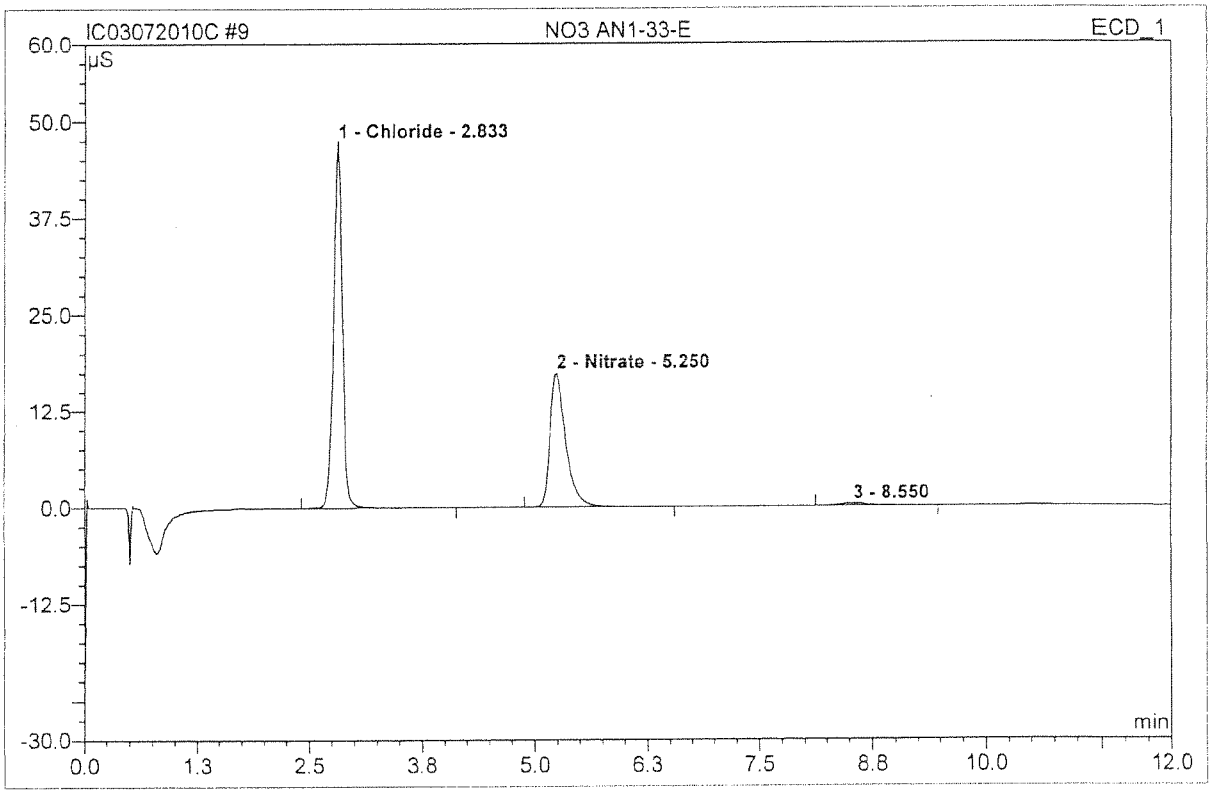
default/Integration

Chromeleon (c) Dionex 1996-2001
Version 6.80 SP1 Build 2238

9 NO3 AN1-33-E

NO3

Sample Name:	NO3 AN1-33-E	*Injection Volume:*	200.0
Vial Number:	11	*Channel:*	ECD_1
Sample Type:	unknown	*Wavelength:*	n.a.
Control Program:	epa300	*Bandwidth:*	n.a.
Quantif. Method:	epa300	*Dilution Factor:*	20.0000
Recording Time:	7/20/2010 15:12	*Sample Weight:*	1.0000
Run Time (min):	12.00	*Sample Amount:*	1.0000



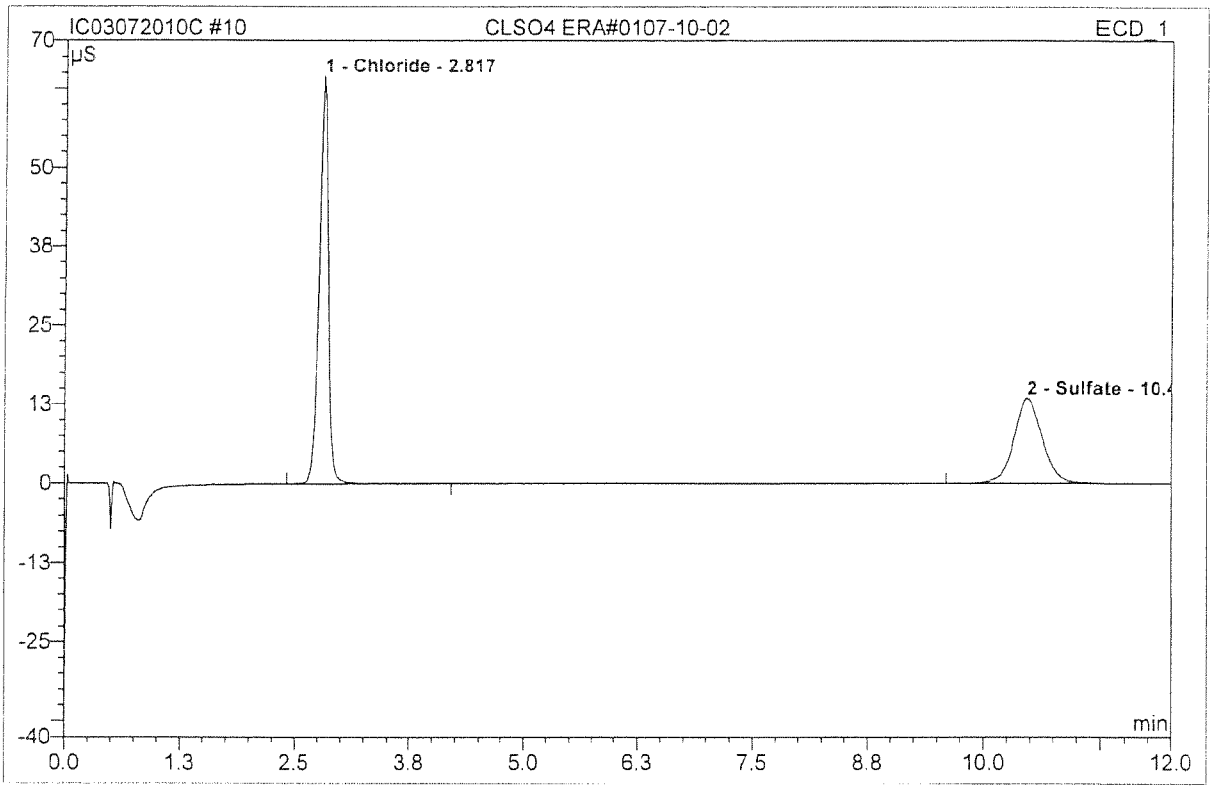
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.83	Chloride	47.477	5.326	58.89	68.625	BMB
2	5.25	Nitrate	17.429	3.581	39.60	19.185	BMB
3	8.55	n.a.	0.347	0.136	1.51	n.a.	BMB
Total:			65.253	9.043	100.00	87.811	

nb 7.20.10

10 CLSO4 ERA#0107-10-02

CLSO4

Sample Name:	**CLSO4 ERA#0107-10-02**	*Injection Volume:*	**200.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:27**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



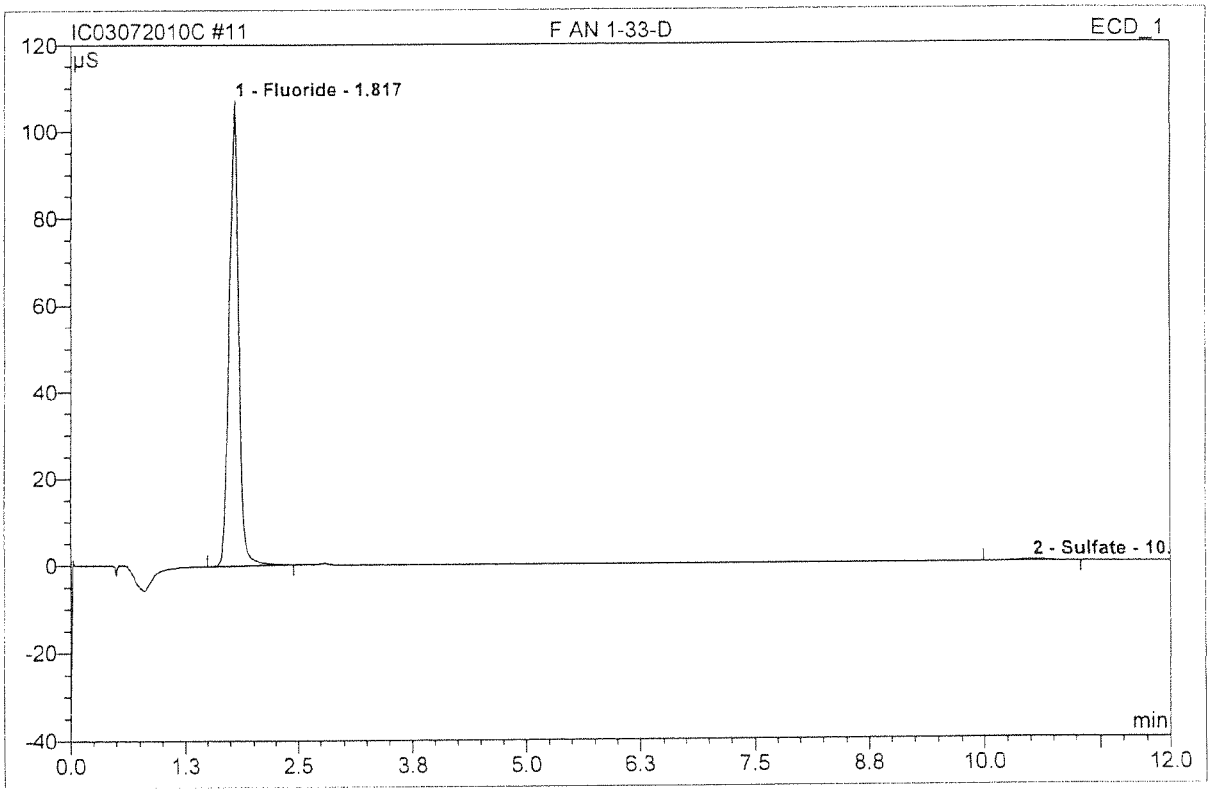
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.82	Chloride	64.536	7.515	60.92	4.842	BMB
2	10.47	Sulfate	13.372	4.820	39.08	4.848	BMB
Total:			77.908	12.335	100.00	9.689	

nb 7.20.10

11 F AN 1-33-D

F

Sample Name:	**F AN 1-33-D**	*Injection Volume:*	**200.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**2.0000**
Recording Time:	**7/20/2010 15:41**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



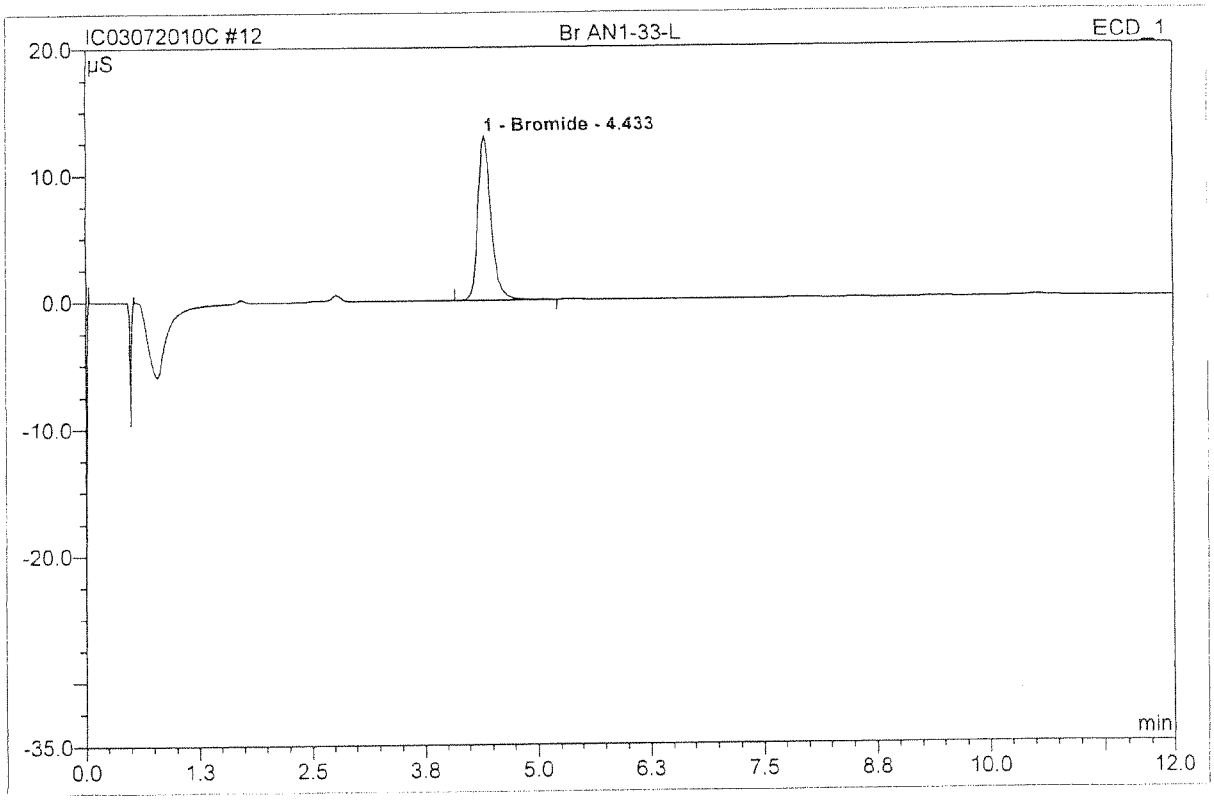
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	1.82	Fluoride	107.266	13.275	99.10	14.216	BMB
2	10.53	Sulfate	0.331	0.121	0.90	0.243	BMB
Total:			107.597	13.396	100.00	14.459	

nb 7.20.10

12 Br AN1-33-L

Br

Sample Name:	**Br AN1-33-L**	*Injection Volume:*	**200.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**1.0000**
Recording Time:	**7/20/2010 15:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**12.00**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	4.43	Bromide	13.016	2.174	100.00	4.103	BMB
Total:			13.016	2.174	100.00	4.103	

nb 7/20/10

Work Request # Original (K7230) K7240 K7282 K7306 K7348 K7383 K7395 K7399

Tier: I II II II II I V II

Date Analyzed: 07/19/10

Analyst: [signature]

Analysis: NH_3

209 095

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 7/20/10

DQREPORT

I II II II II I VI II
KT230, KT240, KT282, KT306, KT348, KT383, KT395, KT399

BRAN+LUEBBE

Post-run report

Name of Run	: 100719C	Name of Analysis	:Ammonia.ANL
Date of Report	: 7/19/2010	System No.	:1
Date of Run	: 7/19/2010	Type of System	:AA3
Operator	:	Start/Stop time	:13:22 - 14:53
Comment	:		

LCS ID#: B+L NH3/, -35-A T.V.=14.3
Spike ID#: B+LNH3/,-85-R T.V.= 2.00
Curve, CCV ID#: B+LNH3/-56-C T.V.=2.00
MBMS=2.00

Channel	:	2
Method	:	Method 2
Unit	:	mg/L
Calibr. Fit	:	Linear
Corr. Coeff.	:	0.9999
Base	:	-23831
Gain	:	20
Sensitivity	:	0.4314
Sample Limit 1	:	
Sample Limit 2	:	

Pk	Cup		Sample Id	Value	
0	0	B	Baseline	-0.0385	
1	1	P	Primer	4.9699	
2	1	D	Drift	4.9957	
3	1	C	5.00	5.0119	
4	2	C	2.00	1.9699	
5	3	C	0.50	0.4901	
6	4	C	0.05	0.0956	
7	5	C	0	-0.0175	
8	0	B	Baseline	-0.0385	
9	1	H1	High	4.9863	
10	0	L1	Low	-0.0245	
11	0	L1	Low	-0.0245	
12	5	QC2	CCB1	-0.0300	<0.020
13	2	QC1	CCV1	1.9343	1.93 97%
14	10	QC3	LCS1*10	1.3599	~~14.0~~ 13.6 95%
15	11	S	MB MS	2.0144	2.01 101%
16	0	N	Null	-0.0272N	
17	5	QC2	MB1	-0.0250	<0.020
18	12	S	k1007230-001	0.3585	0.359
19	13	S	k1007240-001	0.0151	<0.050 $\bar{x}$ = ND RPD = —
20	14	S	k1007240-001d	0.0225	<0.050
21	15	S	k1007240-001ms	1.9910	1.99 100%
22	16	S	k1007240-001msd	2.0377	2.04 102%
23	0	B	baseline	-0.0385	
24	5	QC2	CCB2	-0.0290	<0.020
25	2	QC1	CCV2	1.9379	1.94 97%
26	17	S	k1007240-002	0.1420	0.142

① TH 07/19/10

07/19/10
Hauguel

27	18	S	k1007240-003	-0.0187	<0.050
28	19	S	k1007240-004	0.0040	<0.050
29	20	S	k1007282-001	-0.0343	NR
30	21	S	k1007282-002	-0.0383	<0.050
31	22	S	k1007282-004*5	1.8410	9.21
32	23	S	k1007282-005	0.0170	<0.050
33	24	S	k1007282-006	0.0166	<0.050
34	25	S	k1007306-001*5	1.0165	5.08
35	0	B	BASELINE	-0.0385	
36	5	QC2	CCB-3	-0.0346	<0.020
37	2	QC1	CCV-3	1.9309	1.93 97%
38	26	S	k1007348-001	0.3880	0.388
39	27	S	k1007348-002	0.1453	0.145
40	28	S	k1007348-003	0.7915	0.792
41	29	S	k1007348-004	1.6049	1.60 $\bar{x}$ = 1.61 RPD <1%
42	30	S	k1007348-004d	1.6109	1.61
43	31	S	k1007348-004ms	3.6290	3.63 102%
44	32	S	k1007348-004msd	3.6739	3.67 104%
45	33	S	k1007348-005	0.3540	0.354
46	34	S	k1007348-006	0.0053	<0.050
47	0	B	Baseline	-0.0385	
48	5	QC2	CCB4	-0.0340	<0.020
49	2	QC1	CCV4	1.9324	1.93 97%
50	10	QC3	LCS2*10	1.3556	13.6 95%
51	0	N	Null	-0.0302N	
52	5	QC2	MB2	-0.0557	<0.020
53	35	S	k1007383-001	-0.0566	<0.050
54	36	S	k1007395-001	0.0232	0.023J
55	37	S	k1007399-001	1.6805	1.68 $\bar{x}$ = 1.69 RPD = 1%
56	38	S	k1007399-001d	1.6951	1.70
57	39	S	k1007399-001ms	3.6571	3.66 99%
58	40	S	k1007399-001msd	3.6811	3.68 100%
59	0	B	Baseline	-0.0385	
60	5	QC2	CCB5	-0.0395	<0.020
61	2	QC1	CCV5	1.9118	1.91 96%
62	41	S	k1007399-002	-0.0334	<0.050
63	42	S	k1007282-001	-0.0382	<0.050 $\bar{x}$ = ND RPD = —
64	43	S	k1007282-001d	-0.0452	<0.050
65	44	S	k1007282-001ms	2.0325	2.03 102%
66	45	S	k1007282-001msd	1.9487	1.95 98%
67	46	S	k1007282-005	-0.0287	NR
68	47	S		-0.0332	
69	48	S		-0.0342	
70	0	B	Baseline	-0.0385	
71	5	QC2	CCB6	-0.0431	<0.020
72	2	QC1	CCV6	1.9284	1.93 97%
73	1	D	Drift	4.9957	
74	0	B	Baseline	-0.0385	
75	0	B	FinalBase	-0.0385	

QC Limits

07/19/10

Channel :	2
QC 1	Unused
QC 2	Unused
QC 3	Unused
QC 4	Unused
QC 5	Unused
QC 6	Unused
QC 7	Unused
QC 8	Unused
QC 9	Unused
QC10	Unused

CORRECTIONS

Channel :	2
Baseline :	Yes
Drift :	Yes
Carry over :	Yes
%:	0.3

---

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

07/19/10

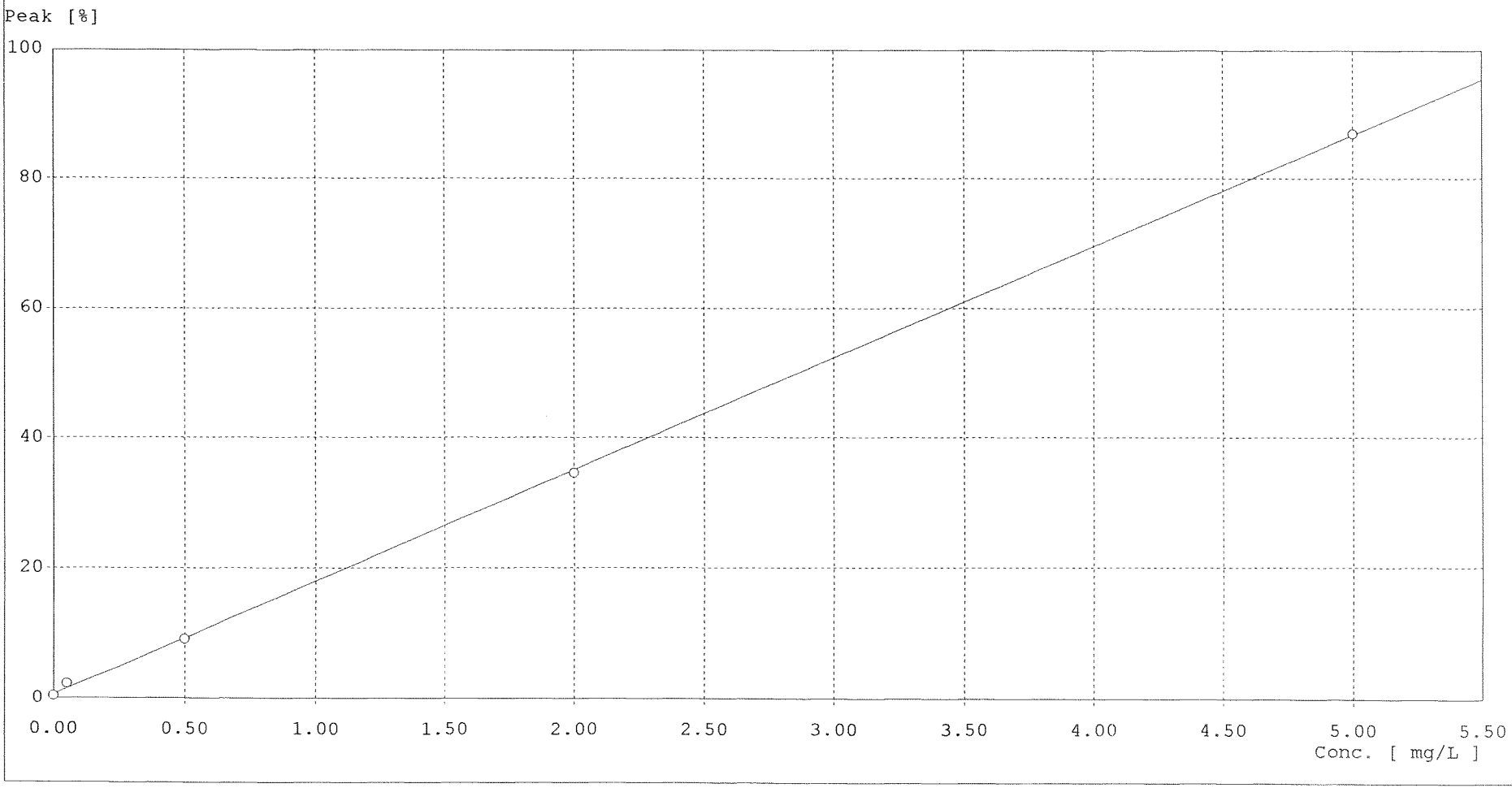
BRAN+LUEBBE

Calibration Curve

Name of run :100719C.run
Comment :

Name of analysis :Ammonia.ANL

Channel :2
Method :Method 2
Curve fit :linear a=-3.3384E-001 b=8.8586E-005
Corr. coeff. :0.9999



329

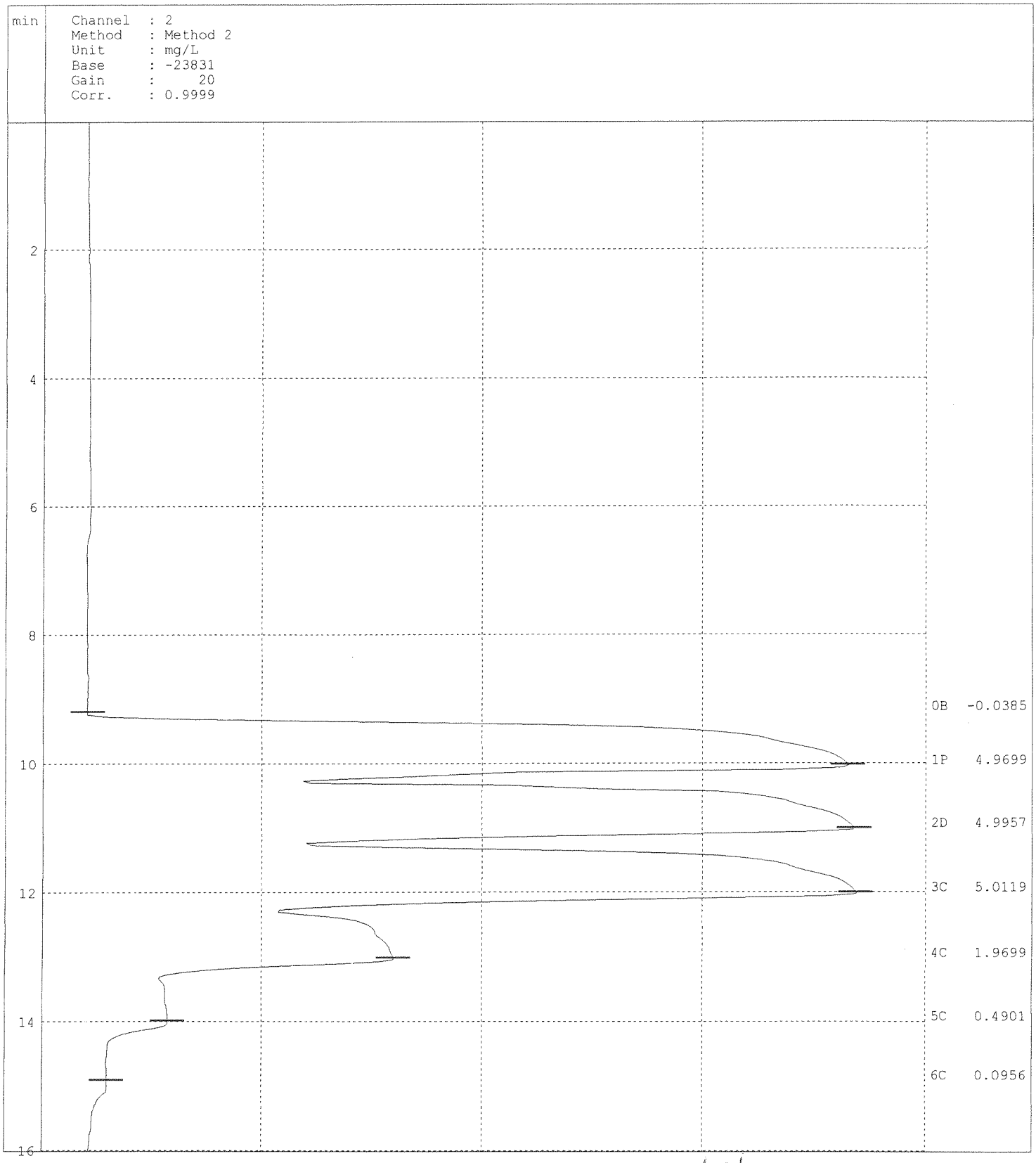
07/19/10

BRAN+LUEBBE

Post-run chart

Name of run :100719C.RUN
Comment :

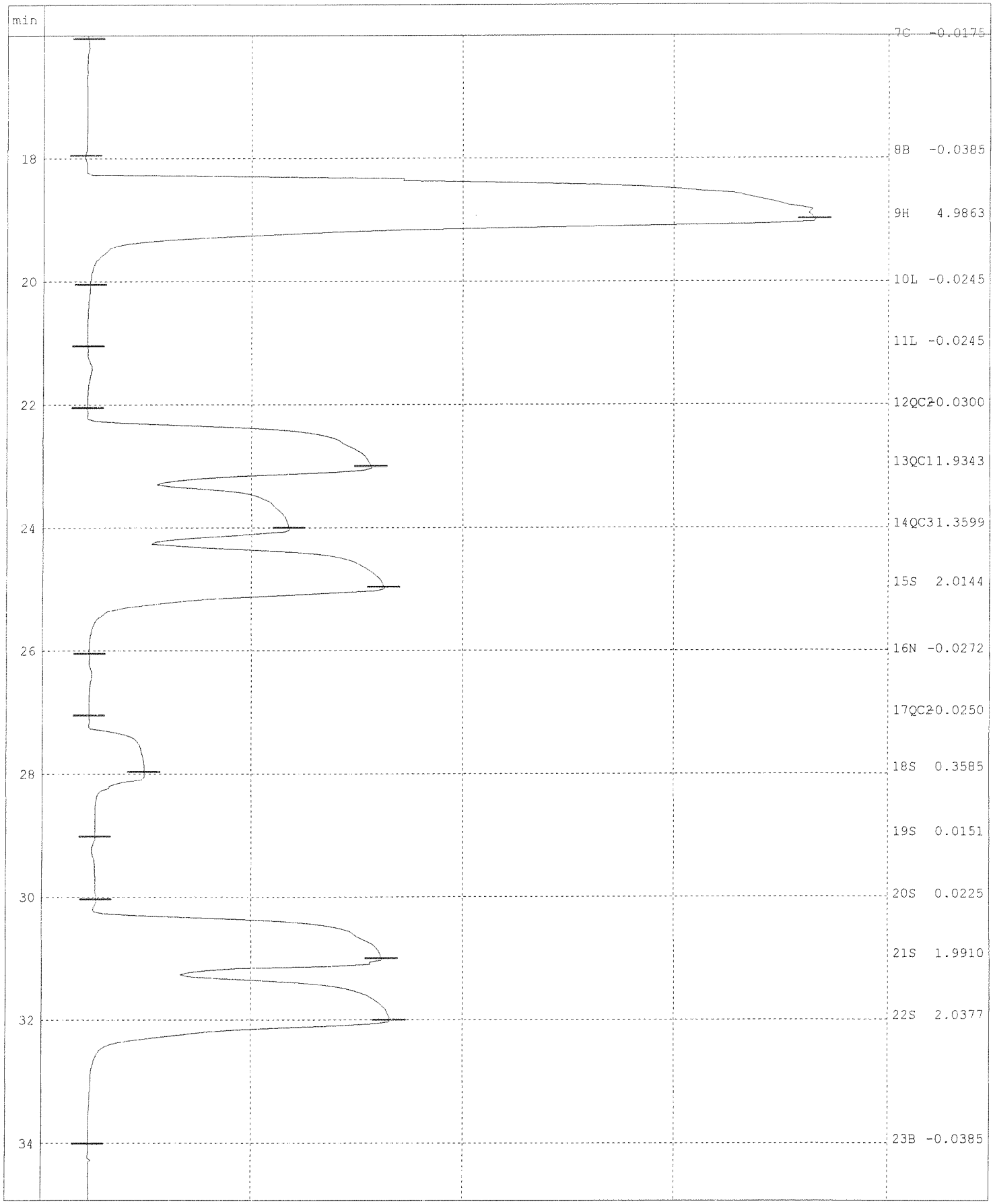
Name of analysis :Ammonia.ANL



07/19/10

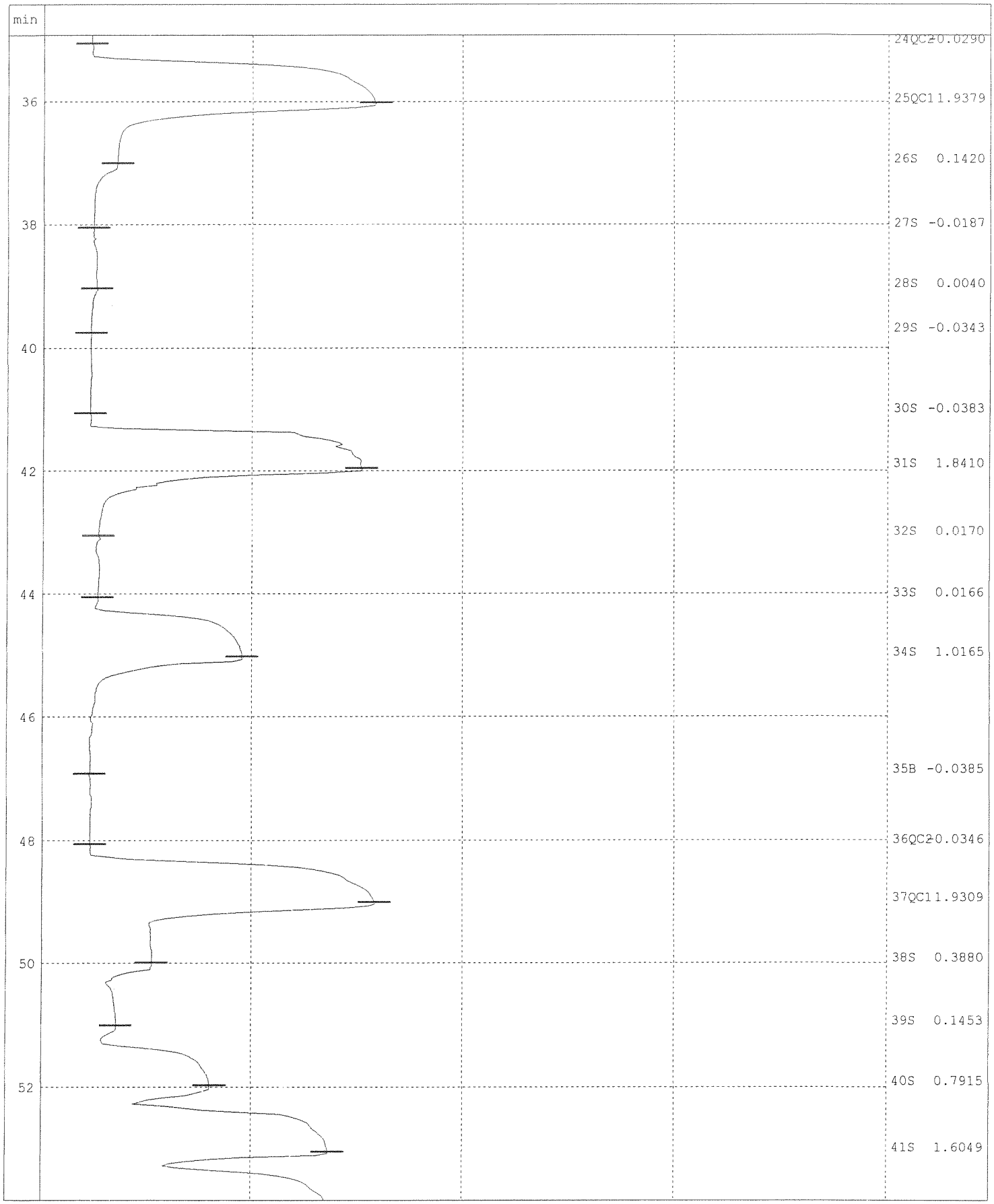
Name of run :100719C.RUN
Comment :

Name of analysis :Ammonia.ANL



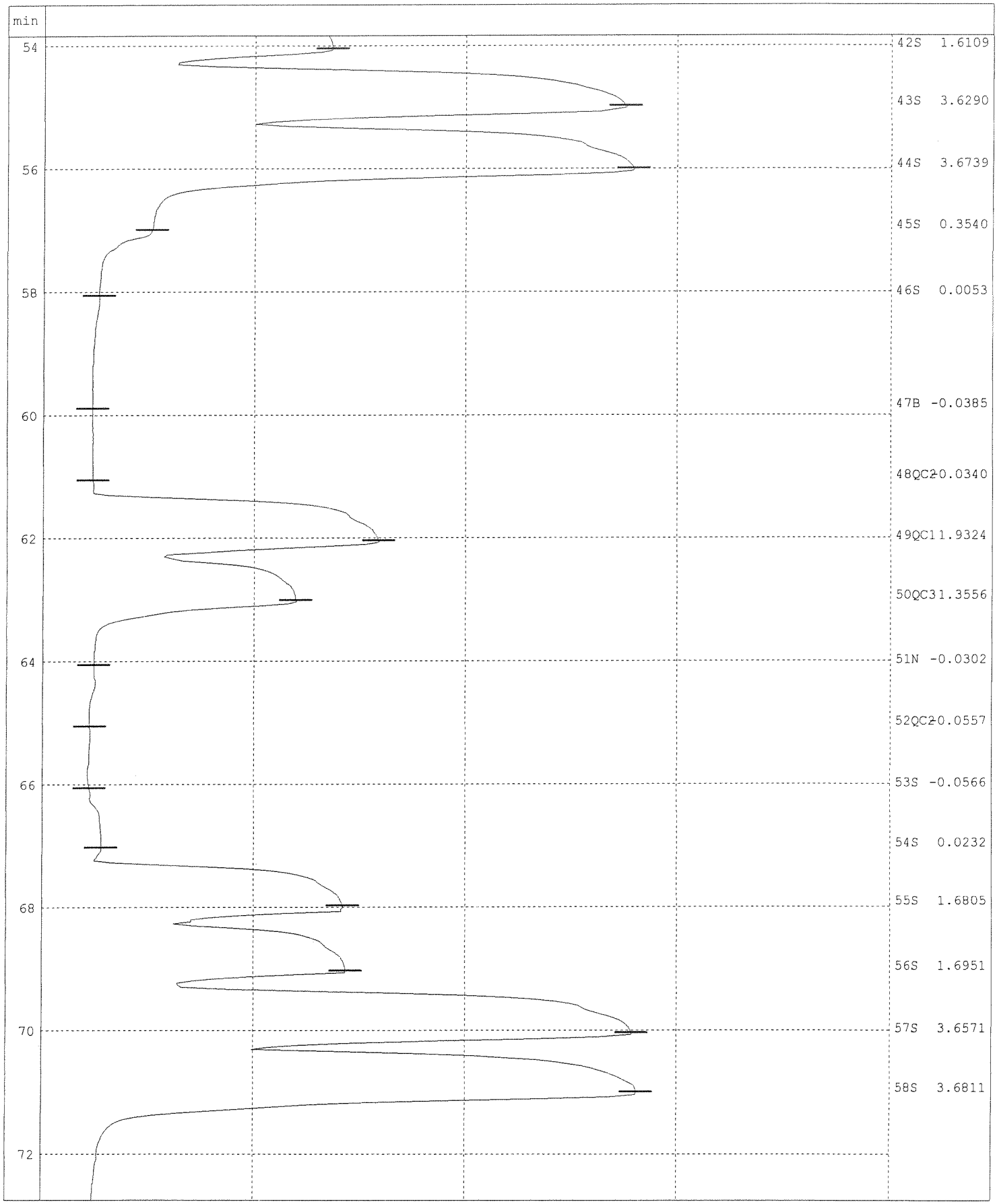
Name of run :100719C.RUN
Comment :

Name of analysis :Ammonia.ANL



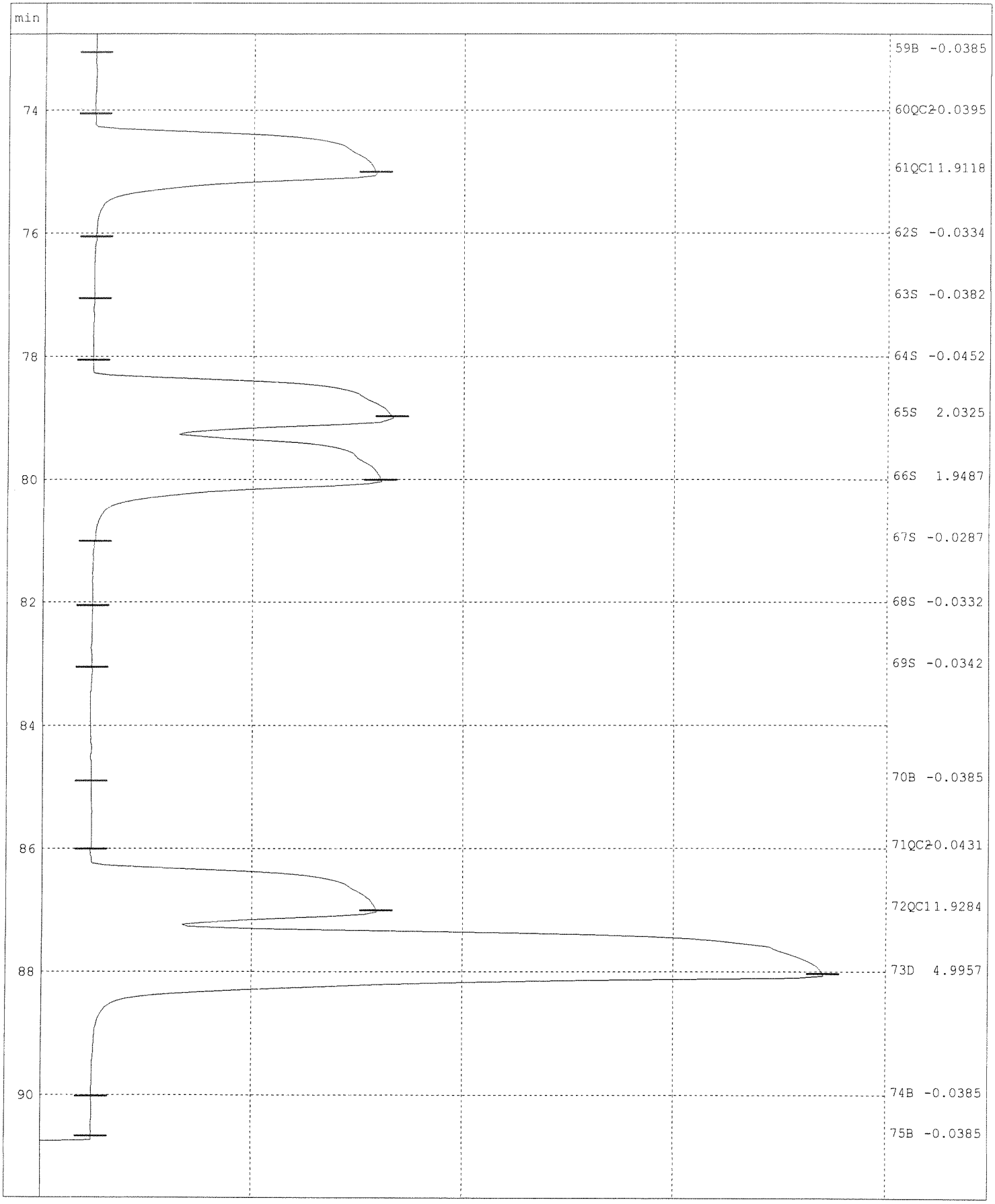
Name of run :100719C.RUN
Comment :

Name of analysis :Ammonia.ANL



Name of run :100719C.RUN
Comment :

Name of analysis :Ammonia.ANL



Work Request # (Original) K7395 K7451 K7539 K7612

Tier: III II II IIA

Date Analyzed: 07/27/10

Analyst: Fanyun

Analysis: NH_3 @ 350.1

210242

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA
2.	Holding times met for all analyses and for all samples?	yes/no/NA
3.	Are calculations correct?	yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA
5.	All quality control criteria met?	yes/no/NA
	a. Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c. Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d. Are results for methods blanks all ND?	yes/no/NA
	e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f. Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?	yes/no/NA
7.	Are all samples labelled correctly?	yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA
9.	Are detection limits and units reported correctly?	yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA

COMMENTS:

Final Approved by: _____ Date: 7/28/10

DQREPORT

III K7395, II K7451, II K7539, IIA K7612, IIA K7650 NR, III K7751 NR, II K7777 NR, IIA K7522 NR

BRAN+LUEBBE

Post-run report

Name of Run	: 100727AR2	Name of Analysis	:Ammonia.ANL
Date of Report	: 7/27/2010	System No.	:1
Date of Run	: 7/27/2010	Type of System	:AA3
Operator	:	Start/Stop time	:15:01 - 17:12
Comment	:Recalculate from Run100727A.run		

Channel	:	2
Method	:	Method 2
Unit	:	mg/L
Calibr. Fit	:	Linear
Corr. Coeff.	:	0.9997
Base	:	-23448
Gain	:	20
Sensitivity	:	0.4351
Sample Limit 1	:	
Sample Limit 2	:	

Spike ID#: B+LNH3/,-85-T T.V.=2.00
LCS ID#: B+LNH3/,-35-A T.V.=14.3
Curve, CCV ID#: B+LNH3/,-56-E T.V.=2.00
MBMS=2.00

Pk	Cup		Sample Id	Value		
0	0	B	Baseline	0.0076		
1	1	P	Primer	4.8692		
2	1	D	Drift	4.8358		
3	1	C	5.00	5.0293		
4	2	C	2.00	1.9237		
5	3	C	0.50	0.4893		
6	4	C	0.05	0.0981		
7	5	C	0	0.0096		
8	0	B	Baseline	0.0076		
9	1	H1	High	4.9228		
10	0	L1	Low	0.0272		
11	0	L1	Low	0.0275		
12	5	QC2	CCB1	0.0238	0.0247	
13	2	QC1	CCV1	1.9447	1.94	97%
14	10	QC3	LCS1*10	1.3862	13.9	97%
15	11	S	MB MS	2.0261	2.03	102%
16	0	N	Null	0.0192N		
17	5	QC2	MB1	-0.0002	<0.020	
18	12	S	k1007395-001	0.0310	<0.050	NR
19	13	S	k1007395-002	0.0118	<0.050	
20	14	S	k1007395-003	0.0110	<0.050	
21	15	S	k1007395-004	0.0047	<0.050	
22	16	S	k1007395-005	0.0113	<0.050	$\bar{x}$ = ND RPD = –
23	0	B	baseline	0.0076		
24	5	QC2	CCB2	0.0137	<0.050	
25	2	QC1	CCV2	1.9391	1.94	97%
26	17	S	k1007395-005d	0.0118	<0.050	

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27	18	S	k1007395-005ms	2.0209	2.02 101%
28	19	S	k1007395-005msd	1.9947	1.99 100%
29	20	S	k1007395-006	0.0154	<0.050
30	21	S	k1007395-007	0.0319	<0.050
31	22	S	k1007451-001	0.0290	<0.050
32	23	S	k1007451-002	0.1492	0.149
33	24	S	k1007451-003	0.0339	<0.050
34	25	S	k1007451-004	0.0633	0.063
35	0	B	BASELINE	0.0076	
36	5	QC2	CCB-3	0.0212	0.0217 98%
37	2	QC1	CCV-3	1.9481	1.95
38	26	S	k1007451-005	0.0323	<0.050
39	27	S	k1007539-002	0.0259	<0.050
40	28	S	k1007539-003	0.0138	<0.050
41	29	S	k1007539-004	0.0391	<0.050
42	30	S	k1007539-006	0.0217	<0.050
43	31	S	k1007612-001	0.9567	0.957
44	32	S	k1007612-002	2.8868	2.89
45	33	S	k1007612-003	1.5109	1.51
46	34	S	k1007612-004	0.9004M	0.900
47	0	B	Baseline	0.0076	
48	5	QC2	CCB4	0.0095	<0.020 97%
49	2	QC1	CCV4	1.9354	1.94
50	10	QC3	LCS2*10	1.3742	
51	0	N	Null	0.0098N	
52	5	QC2	MB2	0.0078	
53	35	S	k1007612-005	0.0748	
54	36	S	k1007612-006	0.8739	
55	37	S	k1007612-007	1.2315	
56	38	S	k1007612-008	0.4861	
57	39	S	k1007612-009	0.2408	
58	40	S	k1007612-011	0.0582	
59	0	B	Baseline	0.0076	
60	5	QC2	CCB5	-0.0016	
61	2	QC1	CCV5	1.9293	
62	41	S	k1007612-012	1.3999	
63	42	S	k1007612-012d	1.3873	
64	43	S	k1007612-012ms	3.2181	
65	44	S	k1007612-012msd	3.2414	
66	45	S	k1007612-013	-0.0077M	
67	46	S	k1007612-014	0.0458	
68	47	S	k1007612-017	16.7285*	
69	48	S	k1007612-018	58.3937*	
70	49	S	k1007612-019	58.1132*	
71	0	N	Null	-0.0885N	
72	5	QC2	CCB6	0.1970	
73	2	QC1	CCV6	2.0767	
74	10	QC3	LCS3*10	1.4818	
75	0	N	Null	0.0802N	
76	5	QC2	MB3	0.0772	
77	50	S	k1007650-001	0.1639	
78	51	S	k1007650-002	0.0803	

NR

07/27/10

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79	52	S	k1007650-003	0.7545	
80	53	S	k1007650-004	0.0471	
81	54	S	k1007751-001	0.0473	
82	55	S	k1007751-001d	0.0302	
83	0	B	Baseline	0.0076	
84	5	QC2	CCB7	0.0093	<0.020
85	2	QC1	CCV7	1.9409	1.94 97%
86	56	S	k1007751-001ms	1.9885	
87	57	S	k1007751-001msd	2.0096	
88	58	S	k1007751-002	0.0502	
89	59	S	k1007777-004	0.0625	
90	60	S	k1007777-006	0.1568M	
91	61	S	k1007777-008	0.2216	
92	62	S	k1007777-011	0.0666	
93	63	S	k1007522-001	1.1780	
94	34	S	k1007612-004	0.9027M	
95	0	B	Baseline	0.0076M	
96	5	QC2	CCB8	0.0127	<0.020
97	2	QC1	CCV8	1.9198	1.92 96%
98	64	S	k1007612-012ms	3.1446	
99	65	S	k1007612-012msd	3.1233	
100	66	S	k1007612-017*10	1.6840	
101	67	S	k1007612-018*100	4.3890	
102	68	S	k1007612-019*100	4.6230	
103	69	S	rinse	0.0866	
104	70	S	k1007751-001ms	2.1004	
105	71	S	k1007751-001msd	2.1261	
106	60	S	k1007777-006	0.1808M	
107	0	B	Baseline	0.0076	
108	5	QC2	CCB9	0.0272	0.027 F 99%
109	2	QC1	CCV9	1.9753	1.98
110	1	D	Drift	4.8358	
111	0	B	Baseline	0.0076	
112	0	B	FinalBase	0.0076	

NR

QC Limits

Channel : 2

QC 1	Unused
QC 2	Unused
QC 3	Unused
QC 4	Unused
QC 5	Unused
QC 6	Unused
QC 7	Unused
QC 8	Unused
QC 9	Unused
QC10	Unused

CORRECTIONS

Channel : 2

HLS 7/29/ 07/27/10

Baseline	:	Yes
Drift	:	Yes
Carry over	:	Yes
%:		0.7

```
* ... Sample offscale
+ ... Result higher than sample limit
- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **
```

#25 07/27/10

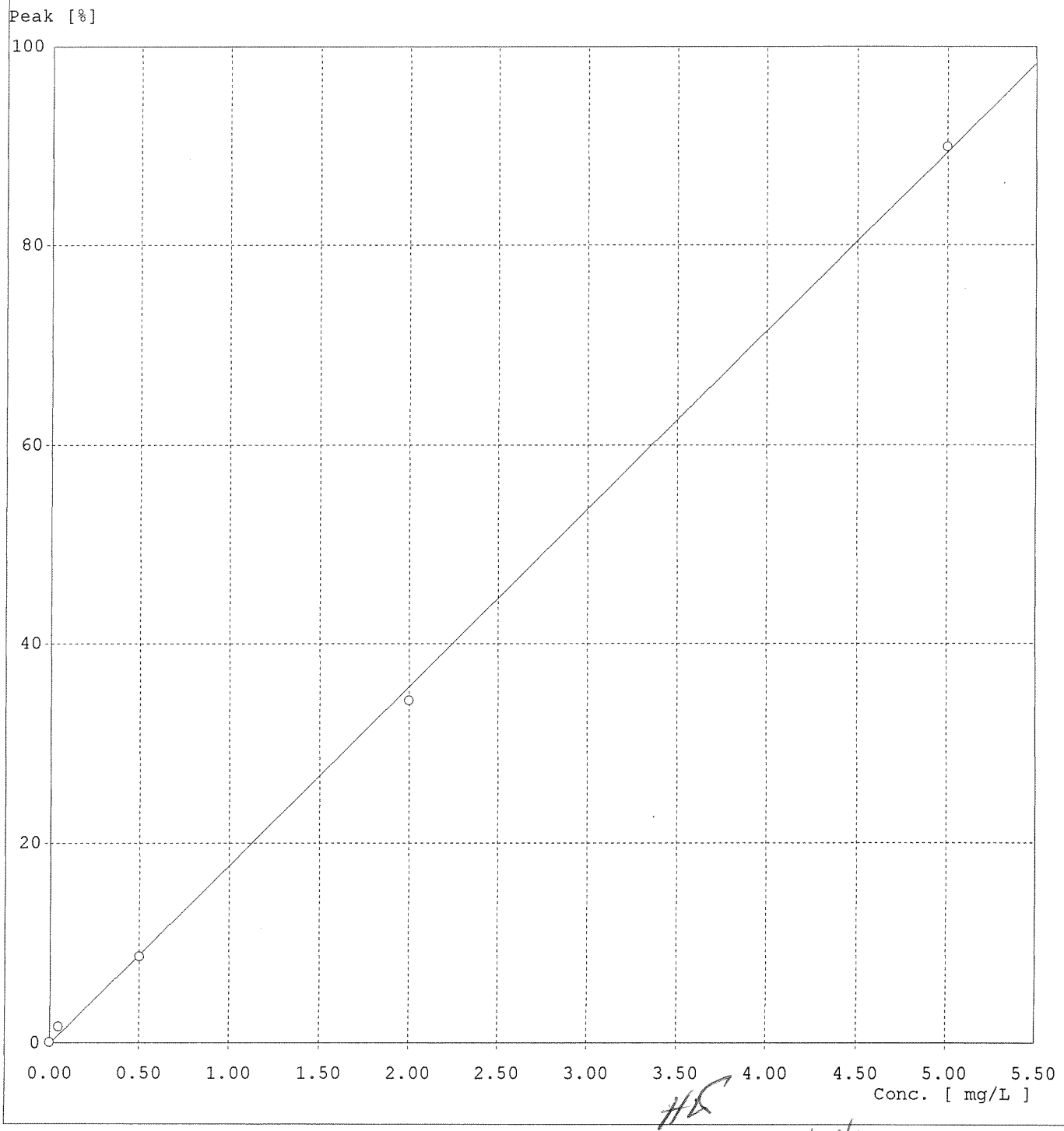
BRAN+LUEBBE

Calibration Curve

Name of run :100727AR2.run
Comment :Recalculate from Run100727A.run

Name of analysis :Ammonia.ANL

Channel	:2		
Method	:Method 2		
Curve fit	:linear	a=-2.6058E-001	b=8.5257E-005
Corr. coeff.	:0.9997		



#6

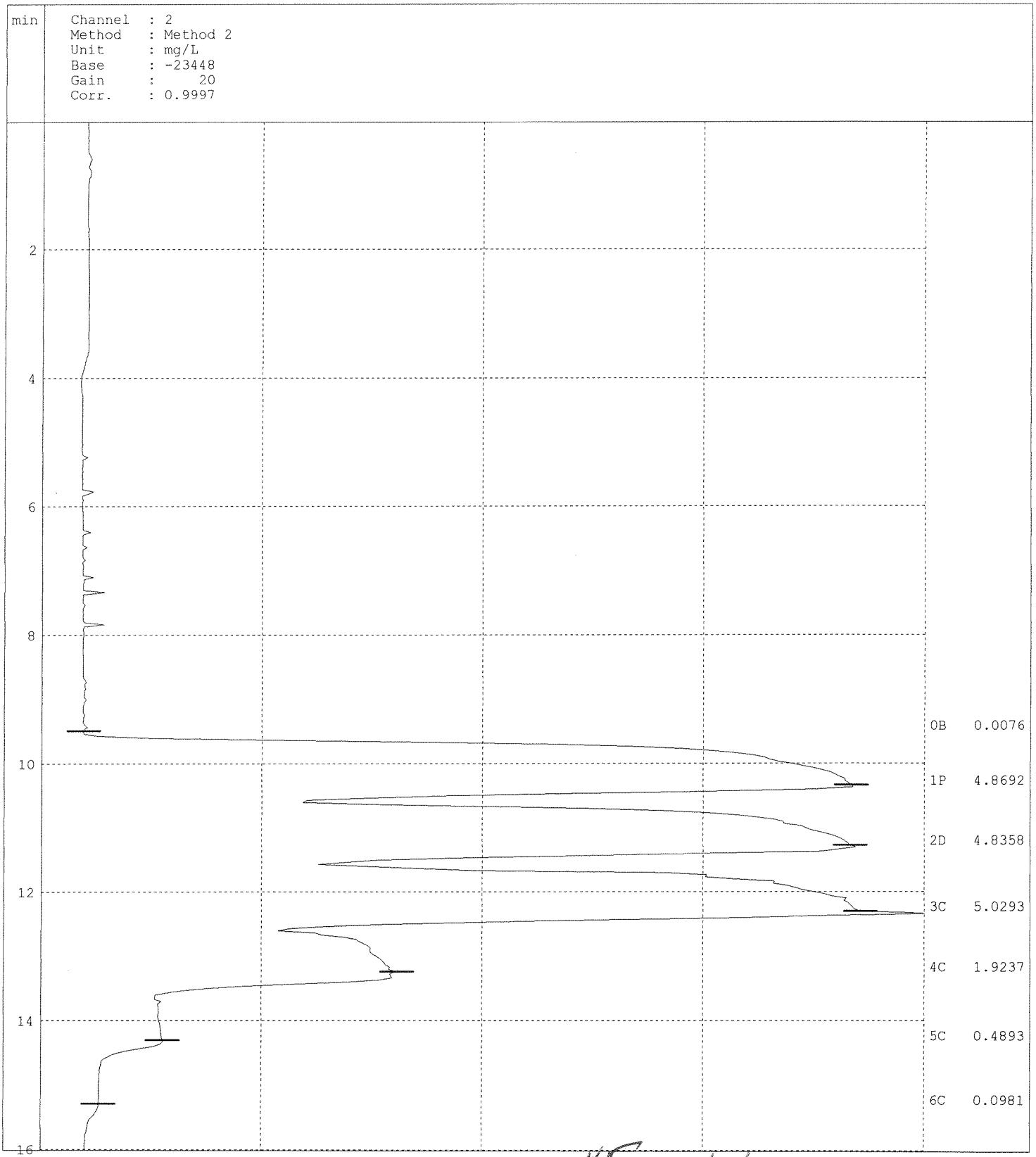
01/27/10

BRAN+LUEBBE

Post-run chart

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

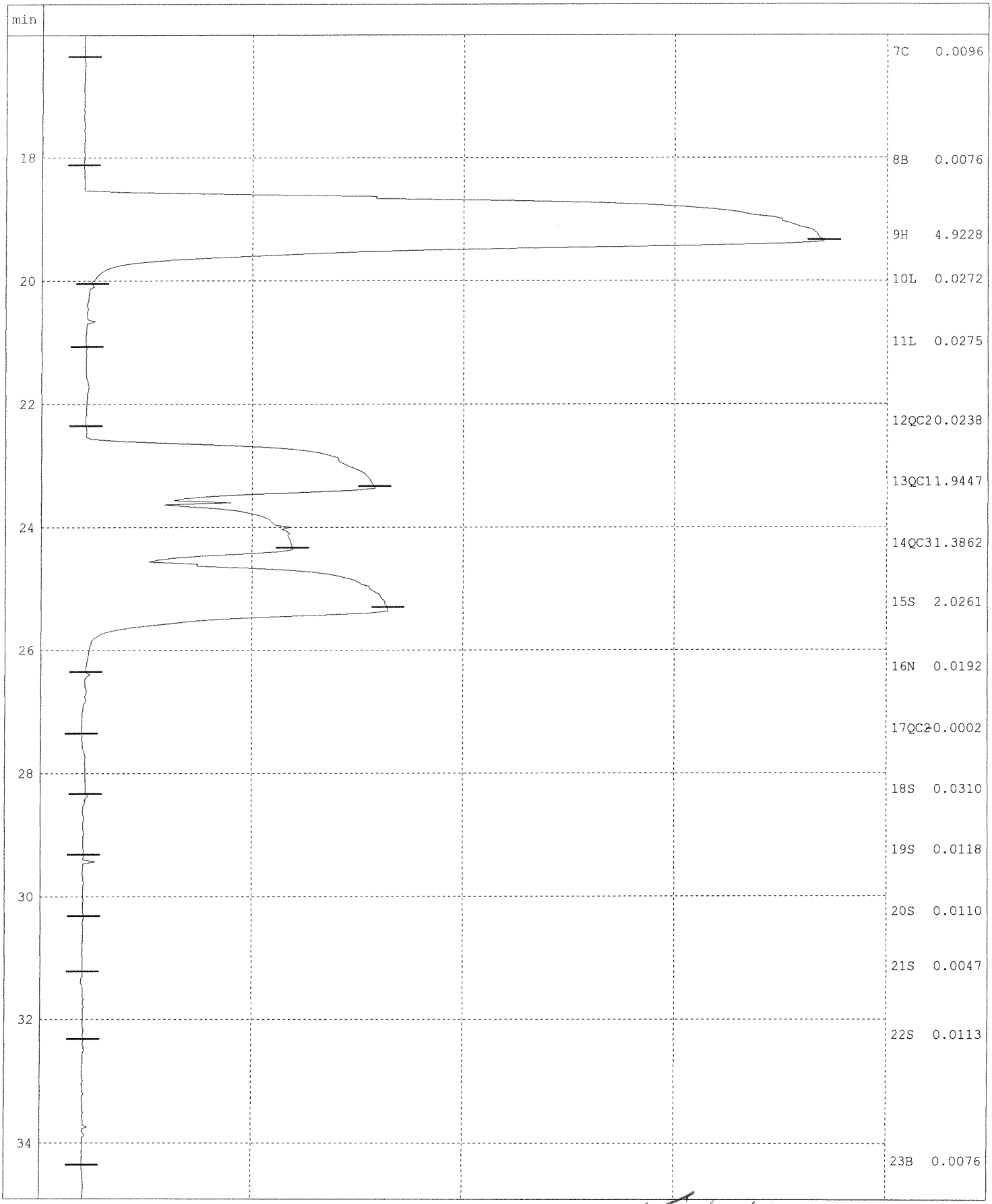
Name of analysis :Ammonia.ANL



HLG 7/8/10 07/27/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

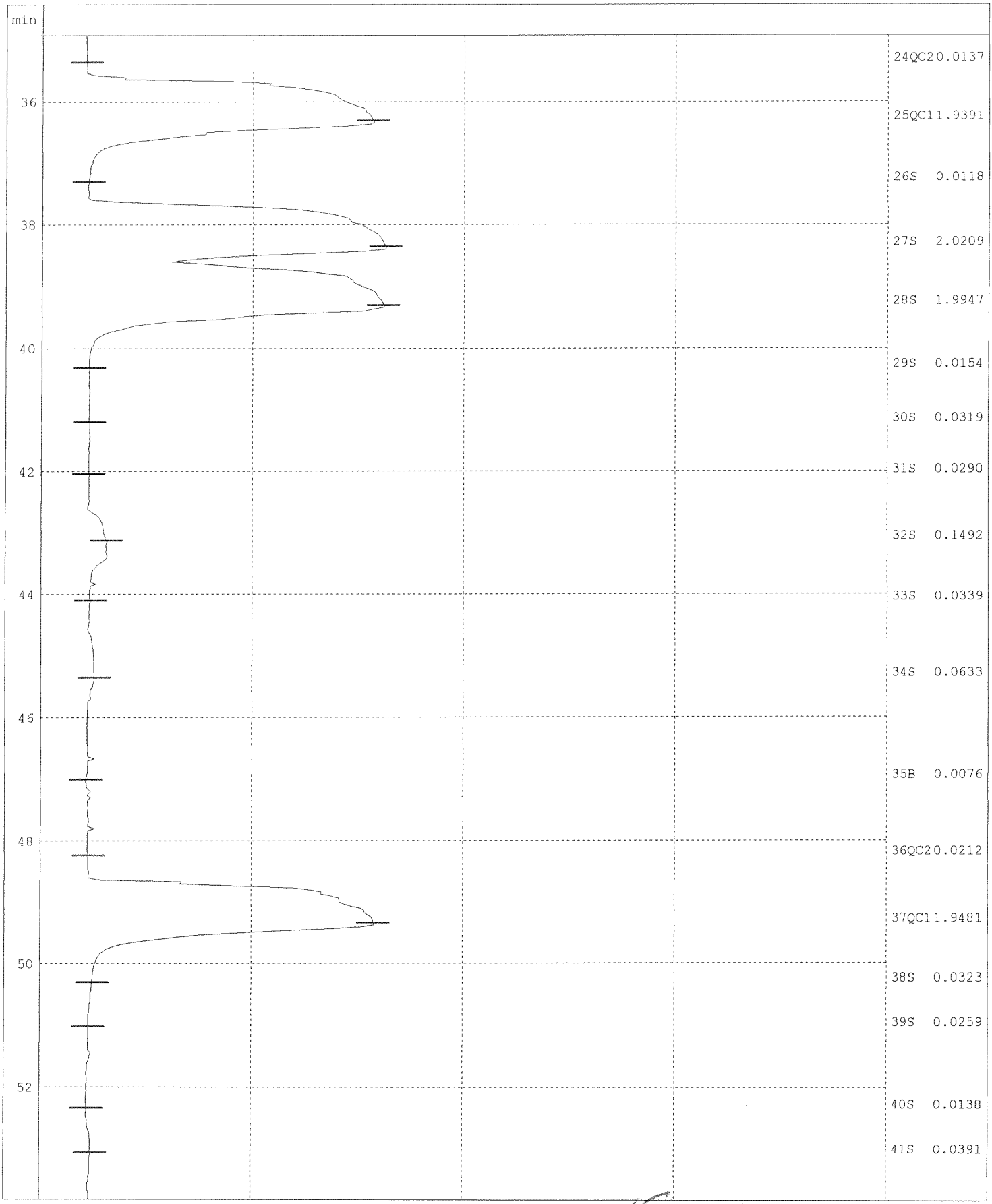
Name of analysis :Ammonia.ANL



HT 7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

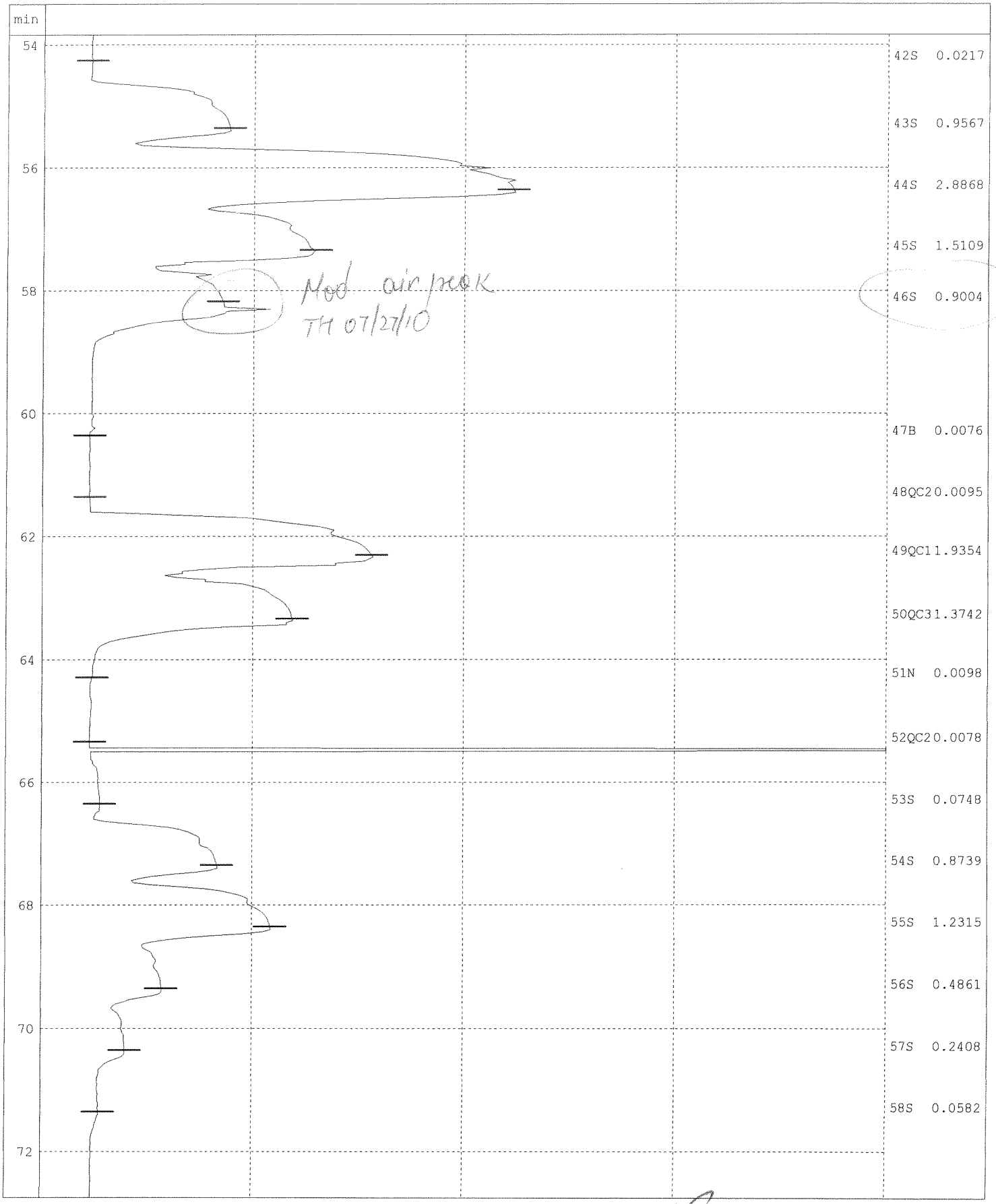
Name of analysis :Ammonia.ANL



#6 7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

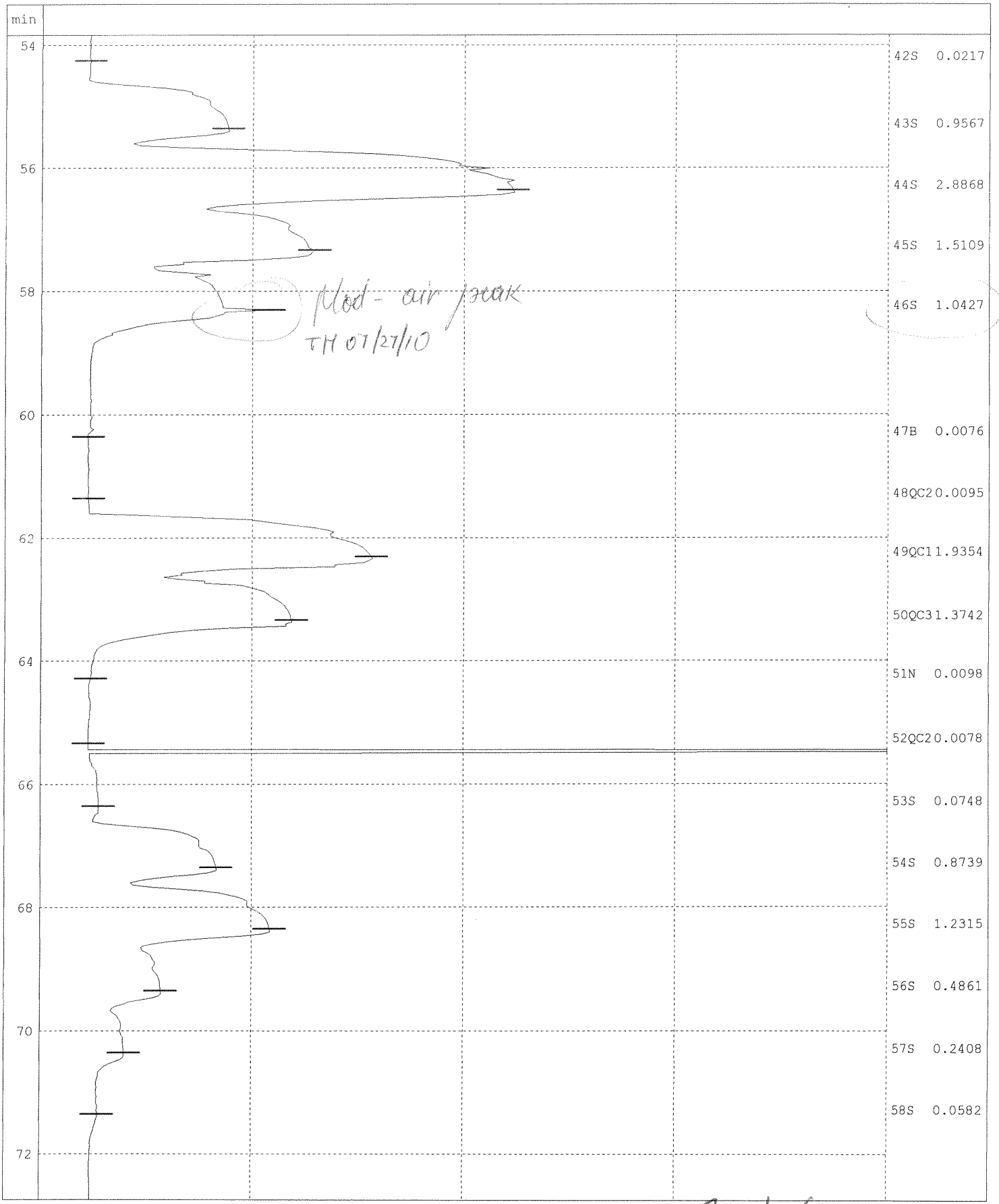
Name of analysis :Ammonia.ANL



7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

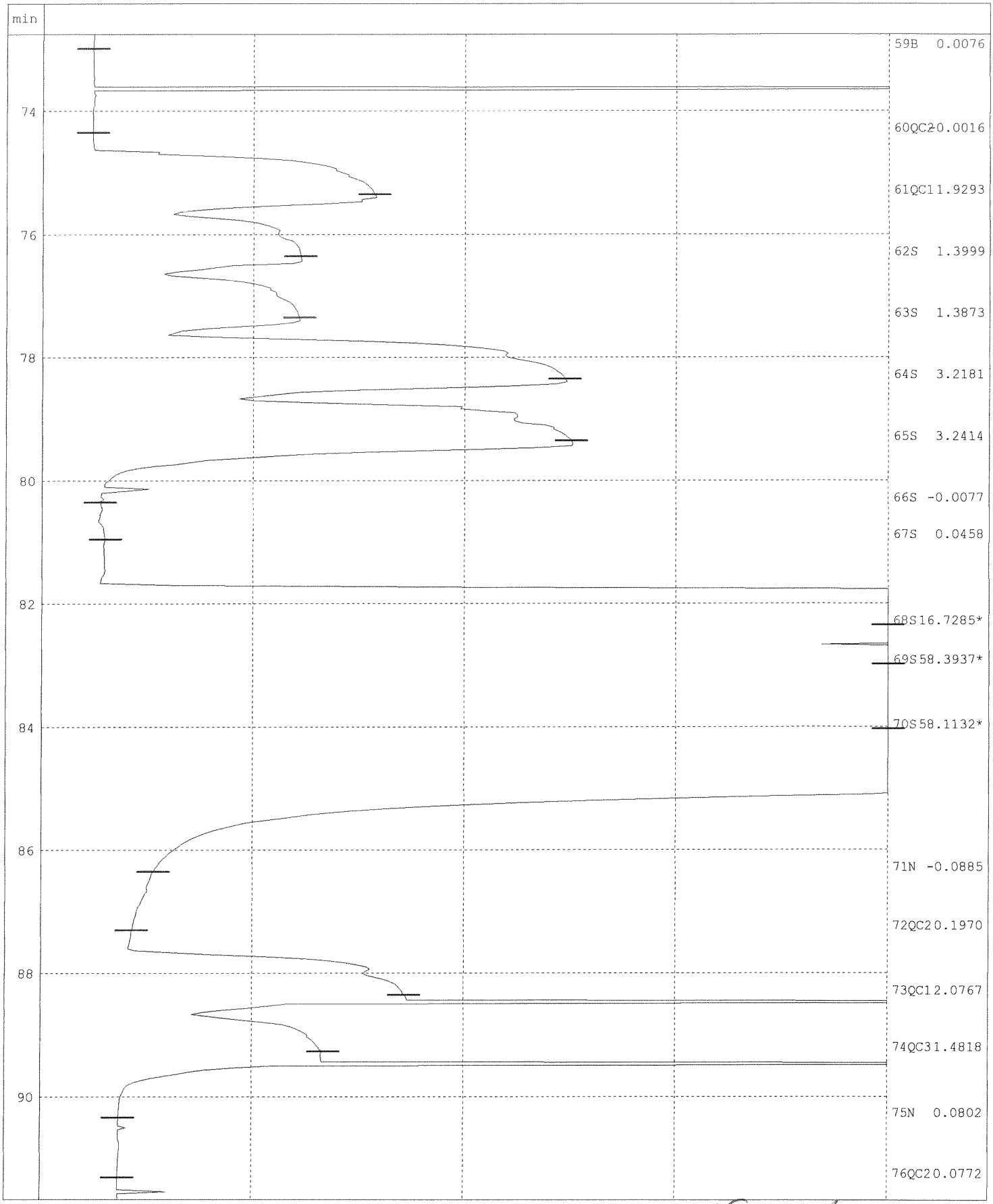
Name of analysis :Ammonia.ANL



HG 7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

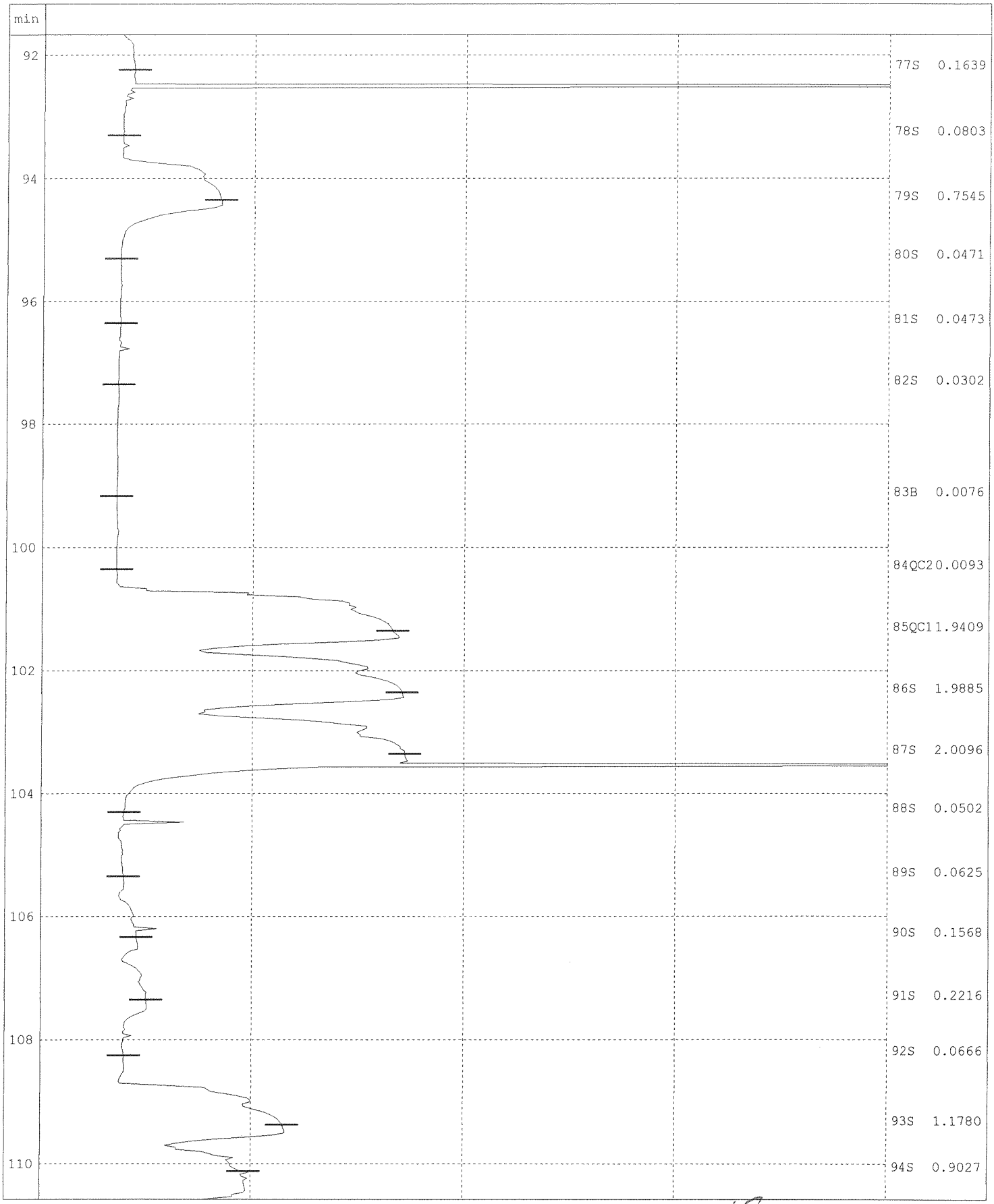
Name of analysis :Ammonia.ANL



HG 7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

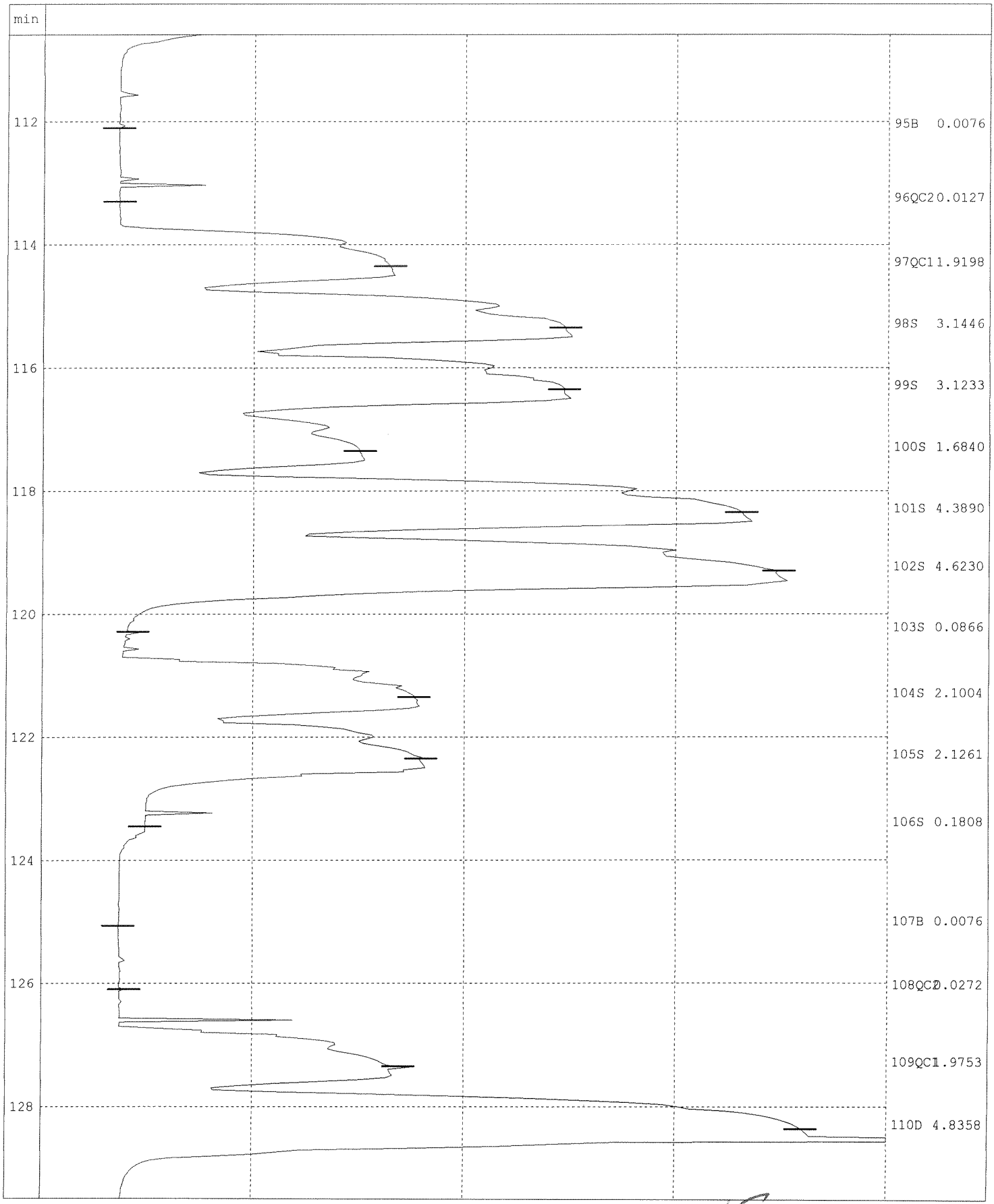
Name of analysis :Ammonia.ANL



HS 7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

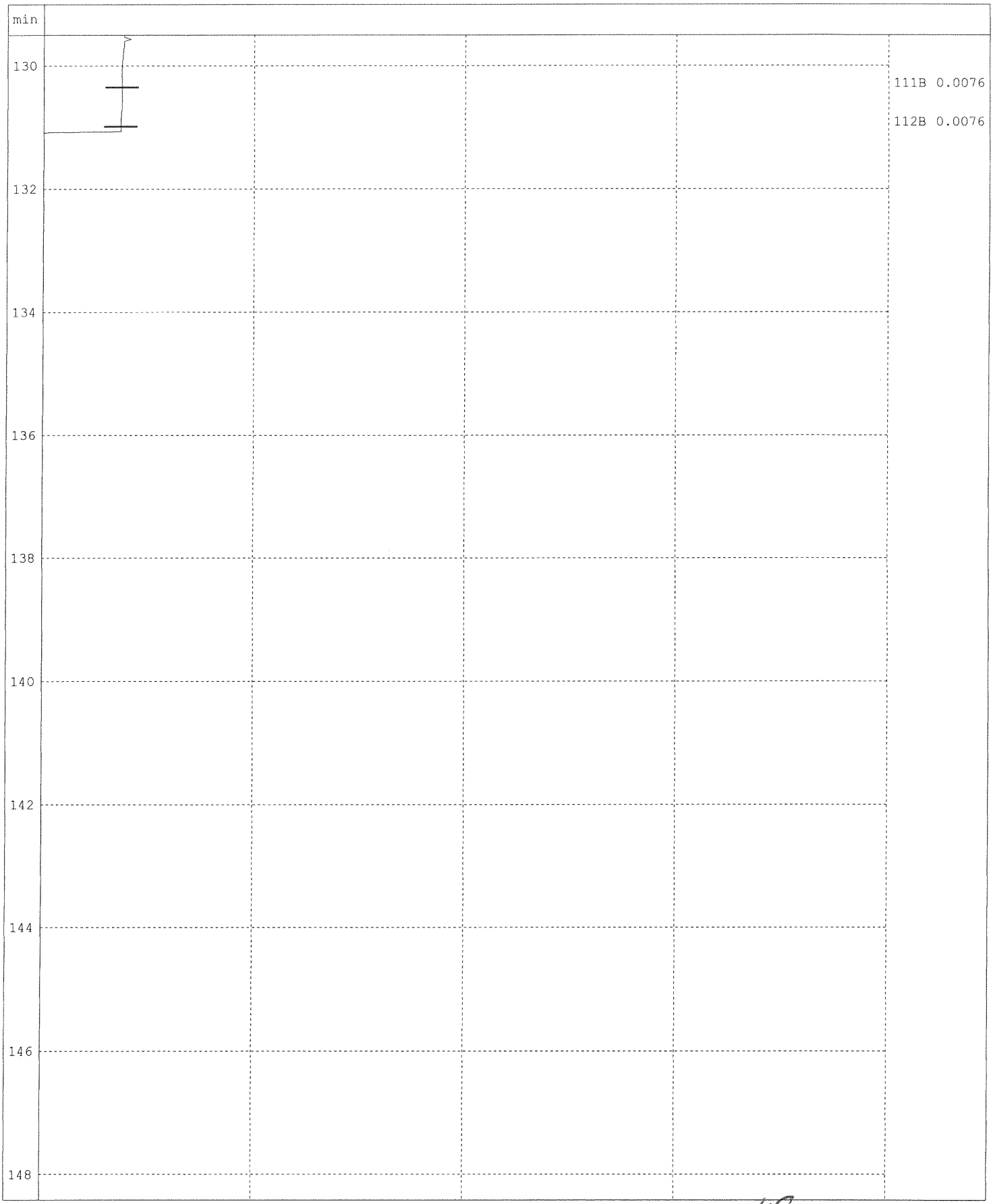
Name of analysis :Ammonia.ANL



HLG 7/28/10

Name of run :100727AR2.RUN
Comment :Recalculate from Run100727A.run

Name of analysis :Ammonia.ANL



HLG 7/28/10

Work Request # Original (K7069) K7071 K7230 K7317 K7318 K7395 K7397 K7431 K7635 K7636

Tier: II II I I I III III V V II

Date Analyzed: 07/23/10

Analyst: [signature]

Analysis: NO_2/NO_3 - 353.2

K7664 K7278
I III

209693

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

COMMENTS: K7431, K7635 - Rush - due date = 07/29/10

Final Approved by: [signature] Date: 7/26/10

DQREPORT

R:\WET\FORMS\LAB\DATAQUAL.DOC

K7069, T071, K7230, K7317, K7318, K7395, K7397, K7431, K7635, K7636,
diss
Rush(07/29) Rush(07/29)
K7664, K7278

BRAN+LUEBBE

Post-run report

Name of Run	:	100723A	Name of Analysis	:	NO2+NO3
Date of Report	:	7/23/2010	System No.	:	1
Date of Run	:	7/23/2010	Type of System	:	AA3
Operator	:		Start/Stop time	:	09:20 - 11:27
Comment	:				

Channel	:	2
Method	:	Method 2
Unit	:	mg/L
Calibr. Fit	:	Linear
Corr. Coeff.	:	0.9998
Base	:	-33039
Gain	:	5
Sensitivity	:	1.4888
Sample Limit 1	:	
Sample Limit 2	:	

LCS ID#: B+LNH3/1-35-A T.V.=14.8
Spike ID#: B+LNO3/1-95-Q T.V.=2.00
Curve, CCV ID#: B+LNO3/1-86-A T.V.=2.00
ICV ID#: B+LNO3/1-80-GG T.V.=2.00
MB MS = 2.00

Pk	Cup		Sample Id	Value		
0	0	B	Baseline	0.0126		
1	1	P	primer	4.9887		
2	1	D	Drift	5.0151		
3	1	C	5.00	5.0251		
4	2	C	2.00	1.9351		
5	3	C	0.50	0.4948		
6	4	C	0.05	0.0722		
7	5	C	0	0.0229		
8	1	H1	High	5.0798		
9	0	L1	Low	0.0337		
10	0	L1	Low	0.0337		
11	9	QC3	ICV	1.9804	1.98	99%
12	5	QC2	ICB	0.0211	0.021 J	
13	5	QC2	CCB1	0.0122	0.012 J	
14	2	QC1	CCV1	1.9184	1.92	96%
15	10	QC4	LCS1*10	1.3734	13.7	93%
16	11	S	MB MS	1.9644	1.96	98%
17	0	N	Null	0.0205N		
18	5	QC2	MB1	0.0130	0.013 J	
19	12	S	k1007069-001diss	0.0429	<0.050	
20	13	S	k1007071-001	0.0332	<0.050	
21	14	S	k1007071-002	0.0348	<0.050	
22	15	S	k1007230-001	0.0432	<0.050	
23	16	S	k1007317	0.1341	0.134	
24	0	B	Baseline	0.0126		
25	5	QC2	CCB2	0.0225	0.023 J	
26	2	QC1	CCV2	1.9141	1.91	96%

07/23/10
[signature]

27	17	S	k1007318-001	8.9245*	J NR
28	18	S	k1007395-001	0.3840	J NR
29	19	S	k1007395-002	1.0451	1.05
30	20	S	k1007395-003	0.2402	0.240
31	21	S	k1007395-004	0.2336	0.234
32	22	S	k1007395-005	0.4231	0.423 $\bar{x}$ = 0.424 RPD < 1%
33	23	S	k1007395-005d	0.4236	0.424
34	24	S	k1007395-005ms	2.3933	2.39 98%
35	25	S	k1007395-005msd	2.4086	2.41 99%
36	0	B	Baseline	0.0126	
37	5	QC2	CCB3	0.0256	0.0267
38	2	QC1	CCV3	1.9219	1.92 96%
39	26	S	k1007395-006	0.0304	< 0.050
40	27	S	k1007395-007	0.2650	0.265
41	28	S	k1007397-001	0.0215	0.0227
42	29	S	k1007397-006	0.0257	0.0267
43	30	S	k1007397-007	0.0271	0.027J
44	31	S	k1007397-008	0.0249	0.025J
45	32	S	k1007397-009	0.0331	0.033J
46	33	S	k1007431-001	0.1117	0.112 $\bar{x}$ = 0.113 RPD < 1%
47	34	S	k1007431-001d	0.1129	0.113
48	0	B	Baseline	0.0126	
49	5	QC2	CCB4	0.0153	0.015J
50	2	QC1	CCV4	1.9018	1.90 95%
51	10	QC4	LCS2*10	1.4846	14.8 100%
52	0	N	Null	0.0270N	
53	5	QC2	MB2	0.0285	0.029J
54	35	S	k1007431-001ms	2.0611	2.06 97%
55	36	S	k1007431-001msd	2.0801	2.08 98%
56	37	S	k1007431-002	0.0735	0.074
57	38	S	k1007431-003	0.0440	0.044J
58	39	S	k1007431-004	0.0643	0.064
59	40	S	k1007431-005	0.0342	0.034J
60	0	B	Baseline	0.0126	
61	5	QC2	CCB5	0.0284	0.028J
62	2	QC1	CCV5	1.8941	1.89 95%
63	41	S	k1007431-006	0.0688	0.069
64	42	S	k1007318-001*10	0.7037	7.04
65	18	S	k1007395-001	0.3482	0.348
66	43	S	k1007635-001	0.0406	0.041J $\bar{x}$ = 0.040 RPD = 5%
67	44	S	k1007635-001d	0.0392	0.039J
68	45	S	k1007635-001ms	1.9718	1.97 96%
69	46	S	k1007635-001msd	1.9672	1.97 96%
70	47	S	k1007635-002	0.0371	0.037J
71	48	S	k1007635-003	0.0306	0.031J
72	0	B	Baseline	0.0126	
73	5	QC2	CCB6	0.0201	0.020J
74	2	QC1	CCV6	1.8819	1.88 94%
75	10	QC4	LCS3*10	1.4856	14.9 101%
76	0	N	Null	0.0173N	
77	5	QC2	MB3	0.0198	0.020J
78	49	S	k1007635-004	0.0213	0.021J

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79	50	S	k1007636-001*10	0.7897	7.90
80	51	S	k1007636-001	15.4083*	NR
81	52	S	rinse	0.0663	
82	53	S	k1007664-001	0.0654	0.065
83	54	S	k1007278-001	0.1774	0.177
84	0	B	Baseline	0.0126	
85	5	QC2	CCB7	0.0172	0.0177 93%
86	2	QC1	CCV7	1.8618	1.86
87	55	S	k1007278-002	0.0376	<0.050
88	56	S	k1007278-003	0.1977	0.198
89	57	S	k1007278-004	0.2158	0.216
90	58	S	k1007278-005	0.2079	0.208
91	59	S	k1007278-006	0.5241	0.524
92	60	S	k1007278-007	1.0146	1.01
93	61	S	k1007278-008	0.3124	0.312
94	62	S	k1007278-009	0.1616	0.162
95	63	S	k1007278-010	0.8020	0.802
96	0	B	Baseline	0.0126	
97	5	QC2	CCB8	0.0204	0.0207 94%
98	2	QC1	CCV8	1.8663	1.87
99	64	S	k1007278-011	0.1847	0.185
100	65	S	k1007278-012	0.1764	0.176
101	66	S	k1007278-013	0.0641	0.064
102	0	B	Baseline	0.0126	
103	5	QC2	CCB9	0.0167	0.0177 93%
104	2	QC1	CCV9	1.8577	1.86
105	1	D	Drift	5.0151	
106	0	B	Baseline	0.0126	
107	0	B	FinalBase	0.0126	

QC Limits

Channel	:	2
QC 1	Unused	
QC 2	Unused	
QC 3	Unused	
QC 4	Unused	
QC 5	Unused	
QC 6	Unused	
QC 7	Unused	
QC 8	Unused	
QC 9	Unused	
QC10	Unused	

CORRECTIONS

Channel	:	2
Baseline	:	Yes
Drift	:	Yes
Carry over	:	Yes
%:		0.1

07/23/10

HC 7/26/10

```
* ... Sample offscale
+ ... Result higher than sample limit
- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **
```

07/23/10

7/26/10

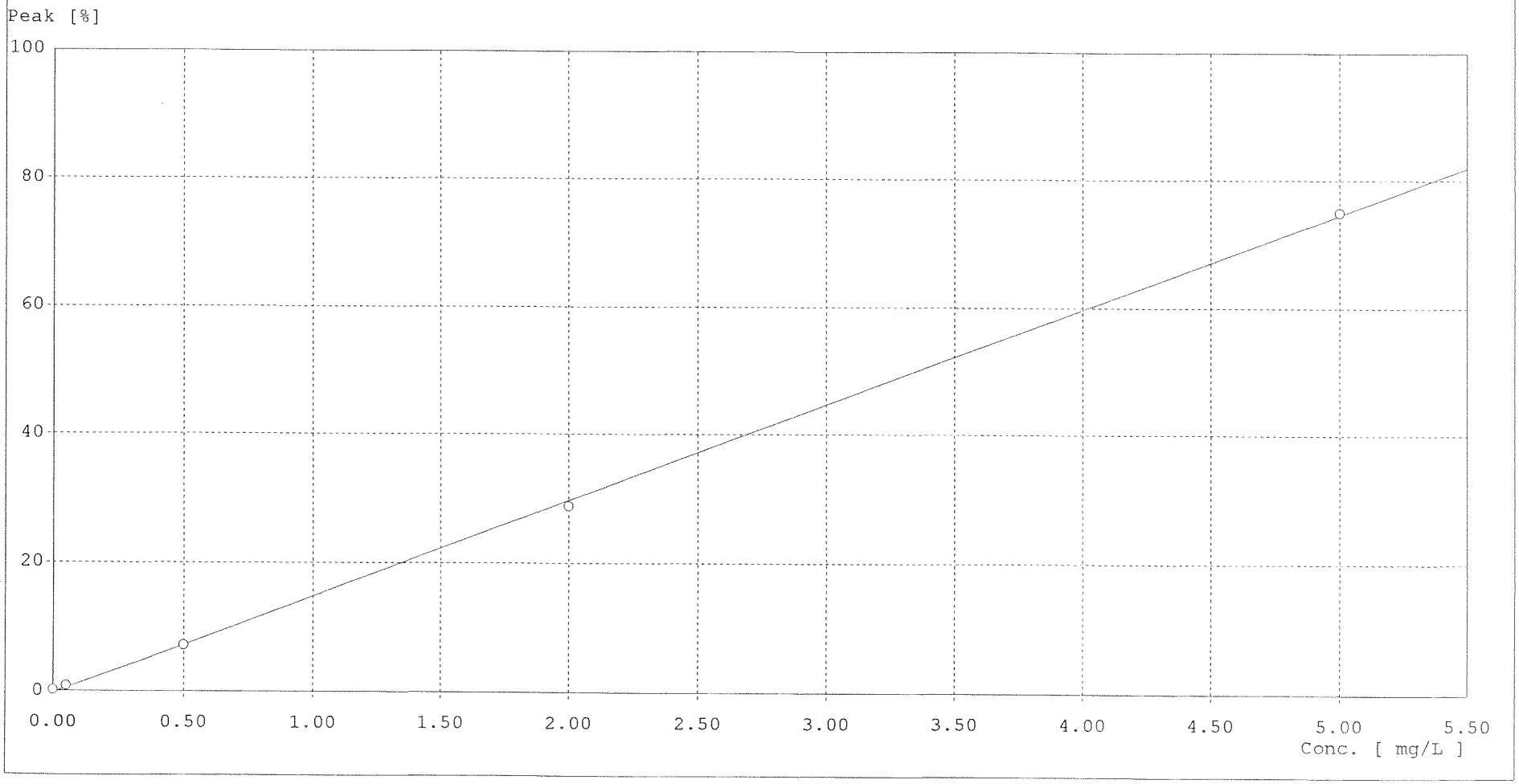
BRAN+LUEBBE

Calibration Curve

Name of run :100723A.run
Comment :

Name of analysis :NO2+NO3

Channel :2
Method :Method 2
Curve fit :linear a=-3.1725E-001 b=1.0200E-004
Corr. coeff. :0.9998



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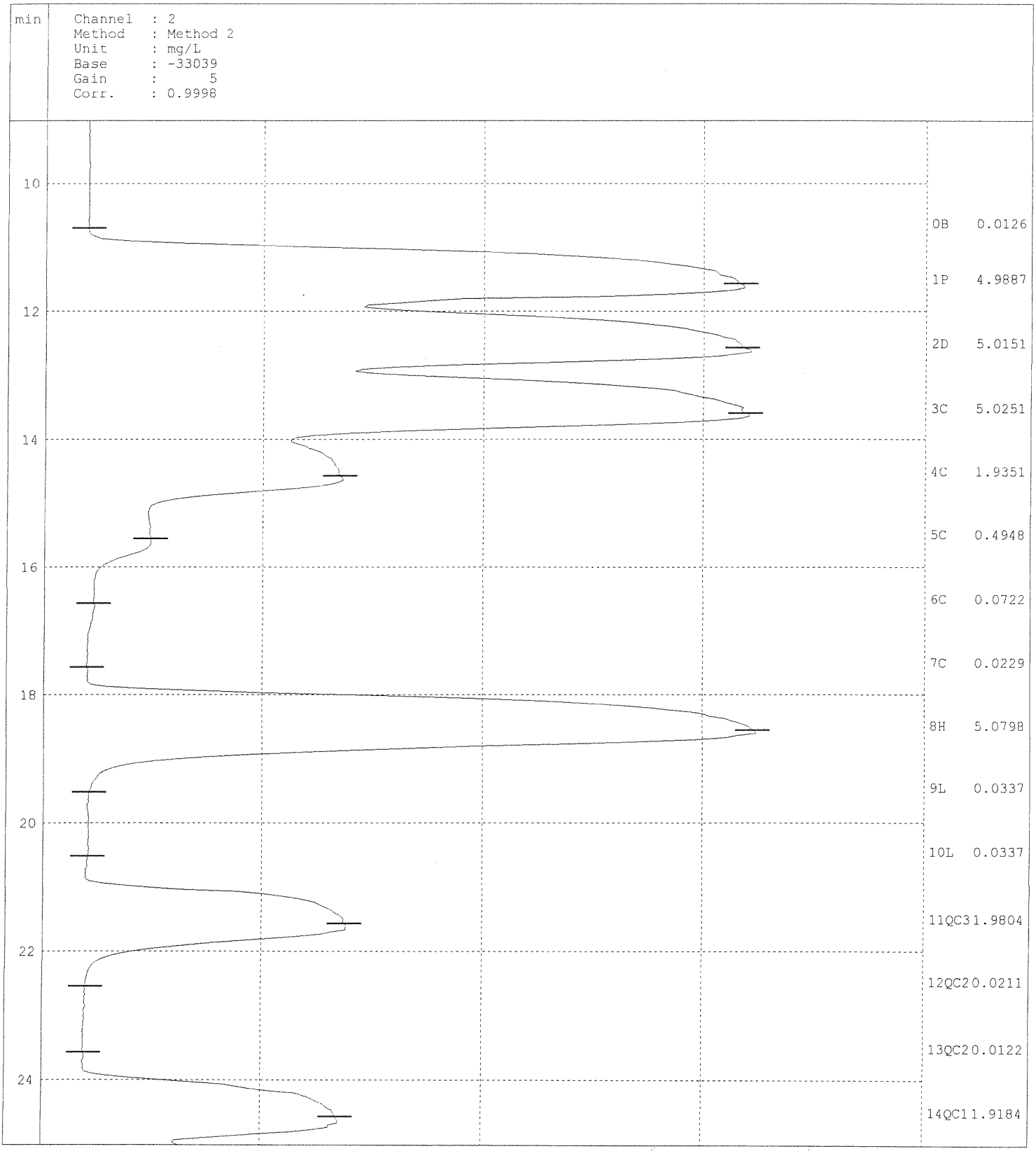
Post-run chart

Name of run :100723A.RUN
Comment :

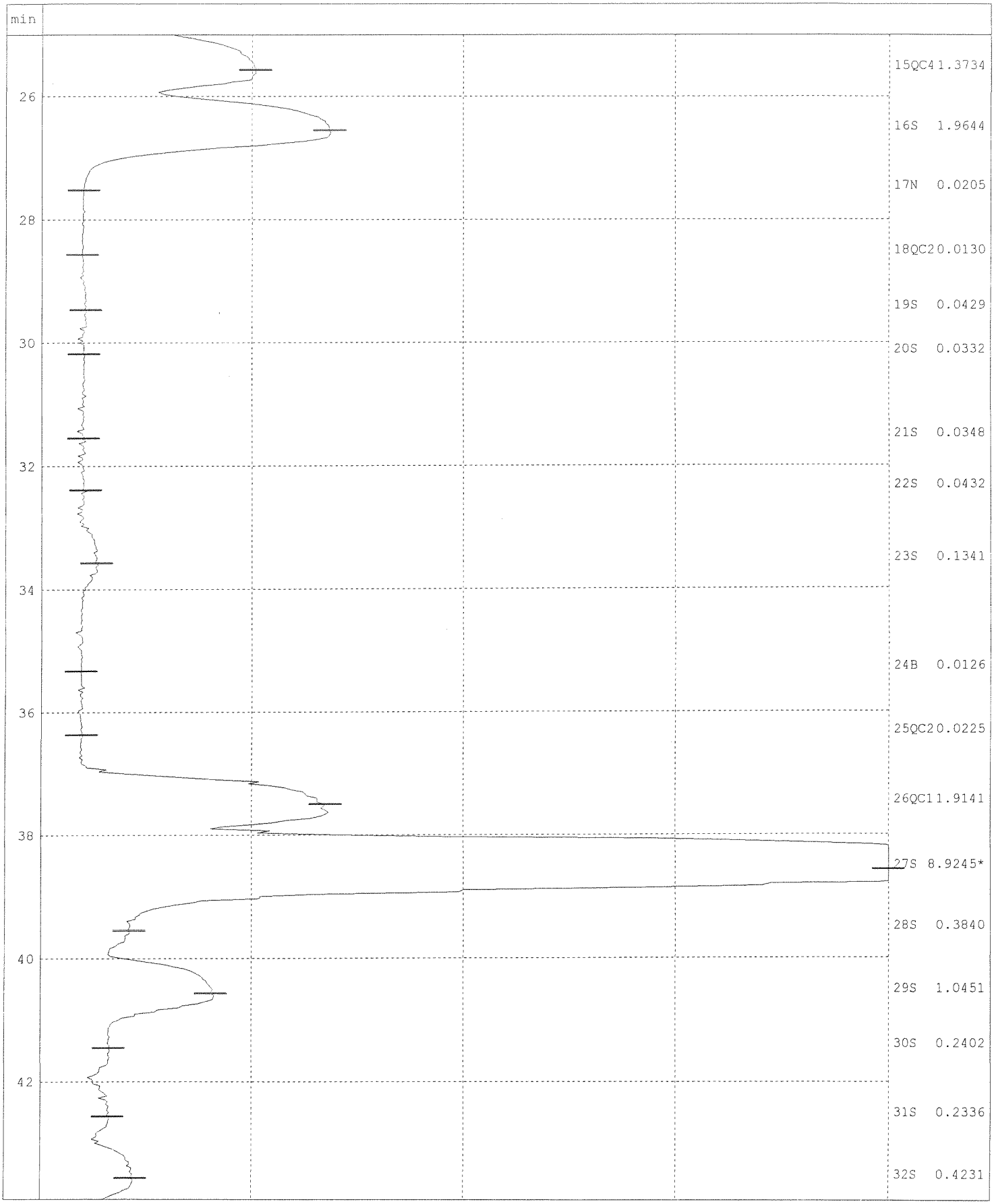
Name of analysis :NO2+NO3



7/26/10 07/23/10

Name of run :100723A.RUN
Comment :

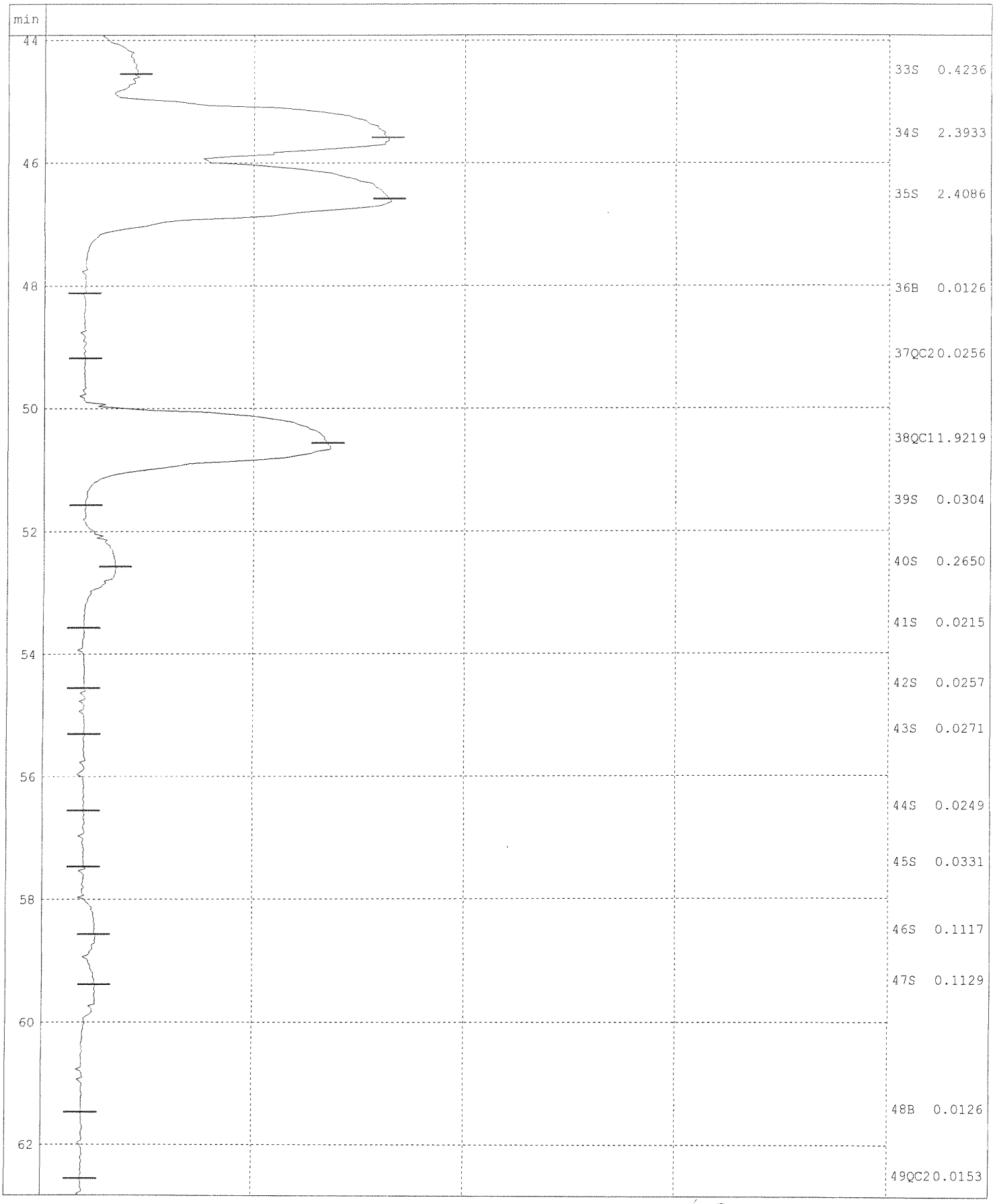
Name of analysis :NO2+NO3



9/26/12

Name of run :100723A.RUN
Comment :

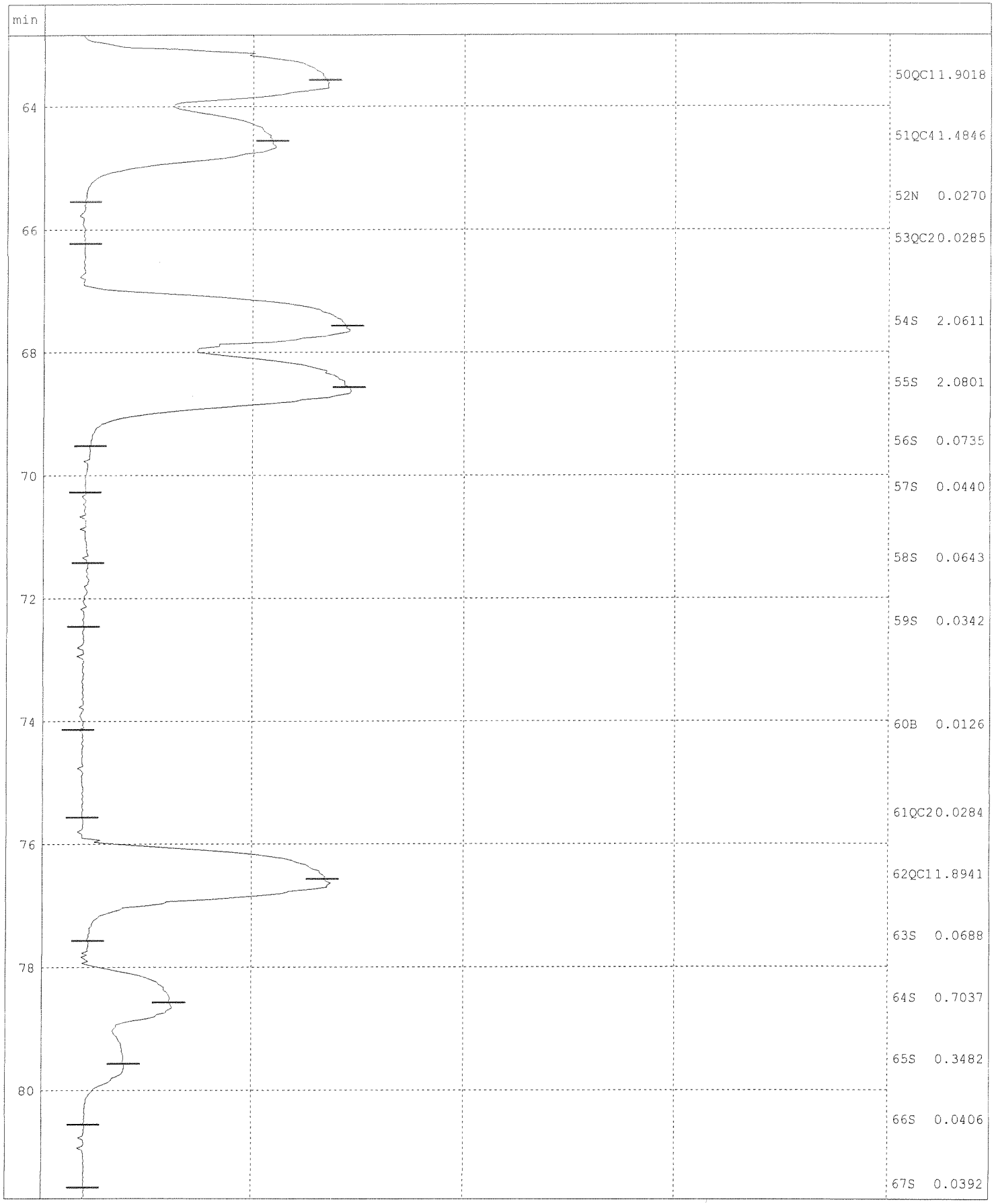
Name of analysis :NO2+NO3



7/26/10

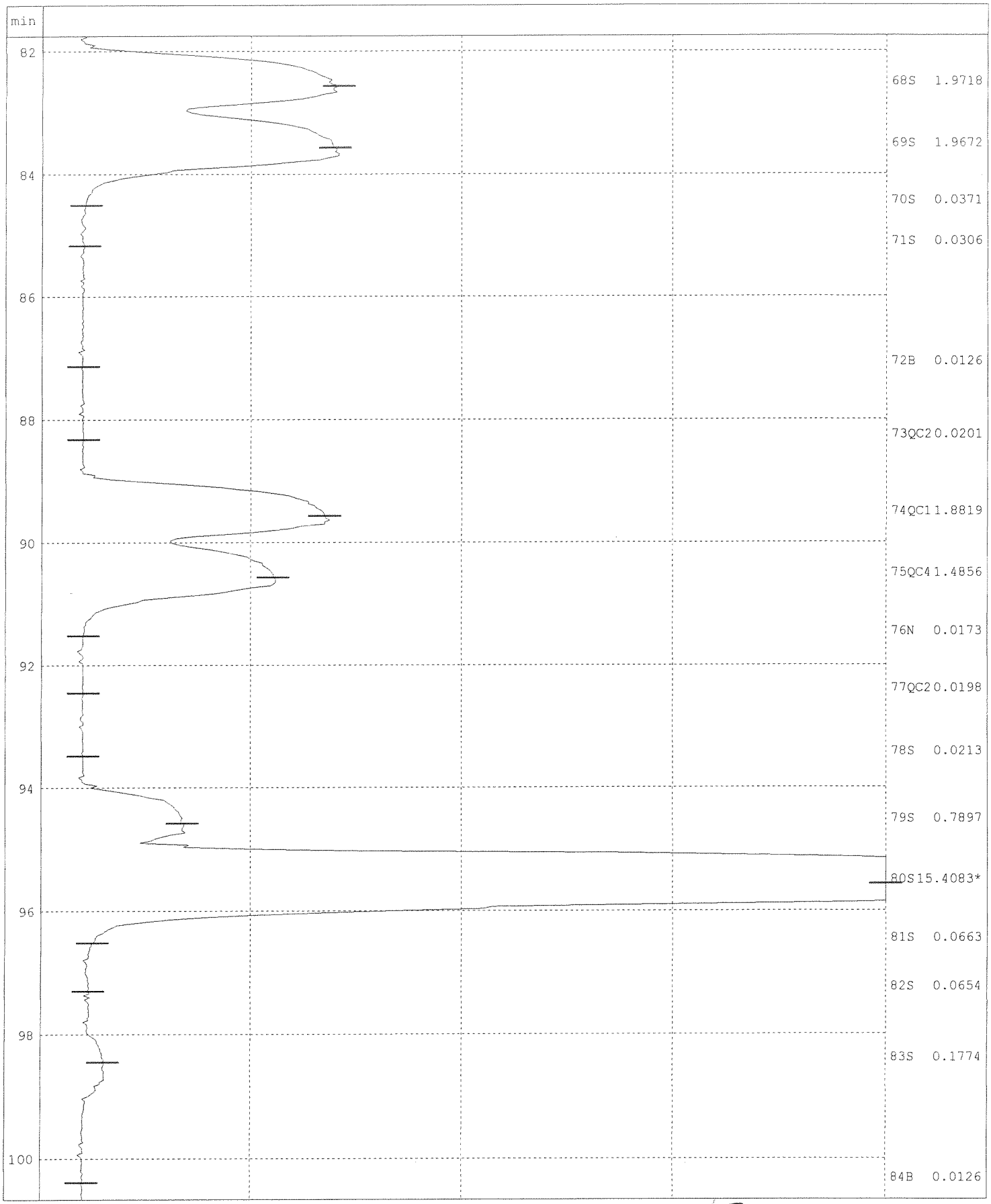
Name of run :100723A.RUN
Comment :

Name of analysis :NO2+NO3



Name of run :100723A.RUN
Comment :

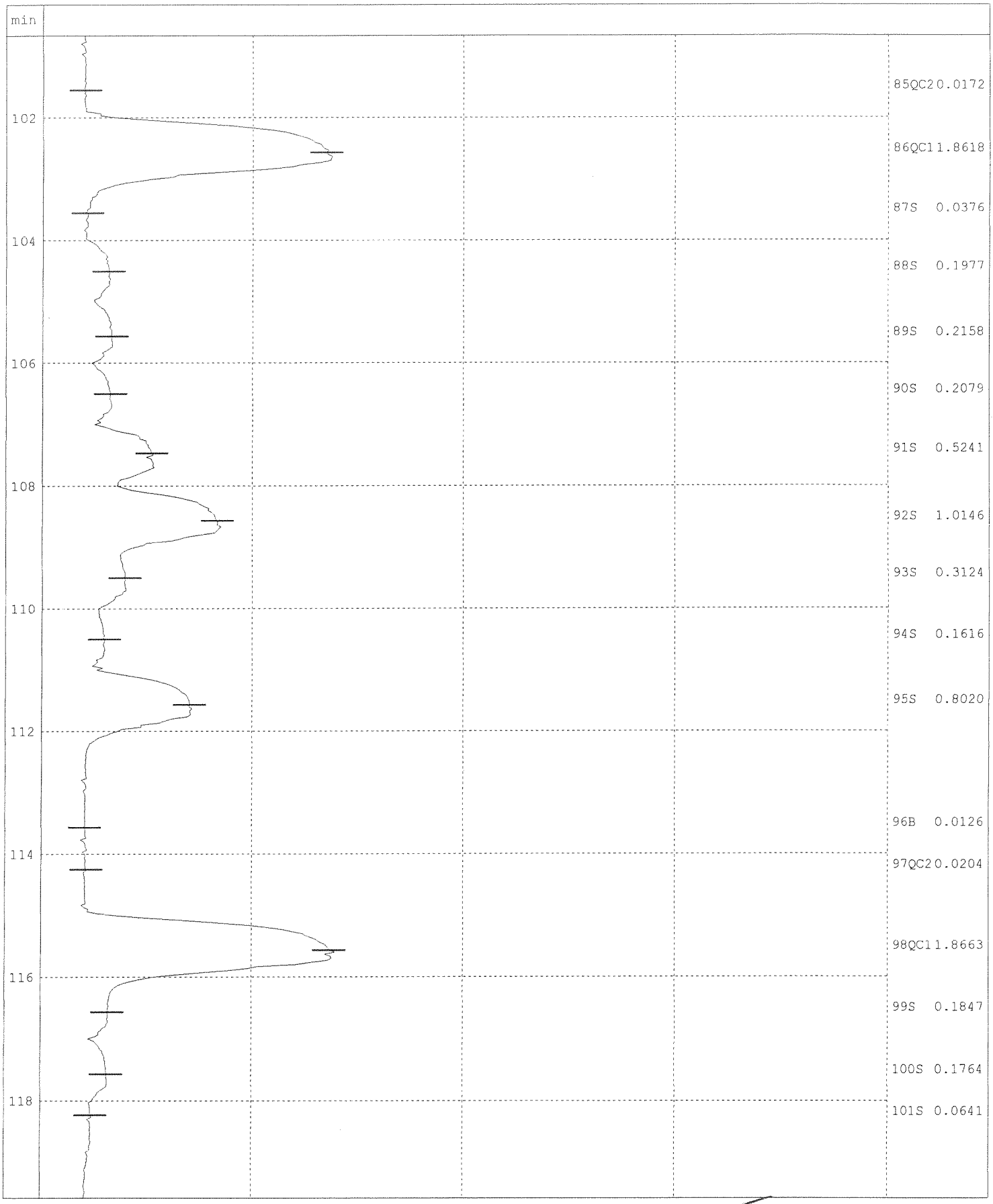
Name of analysis :NO2+NO3



HLS 7/26/10

Name of run :100723A.RUN
Comment :

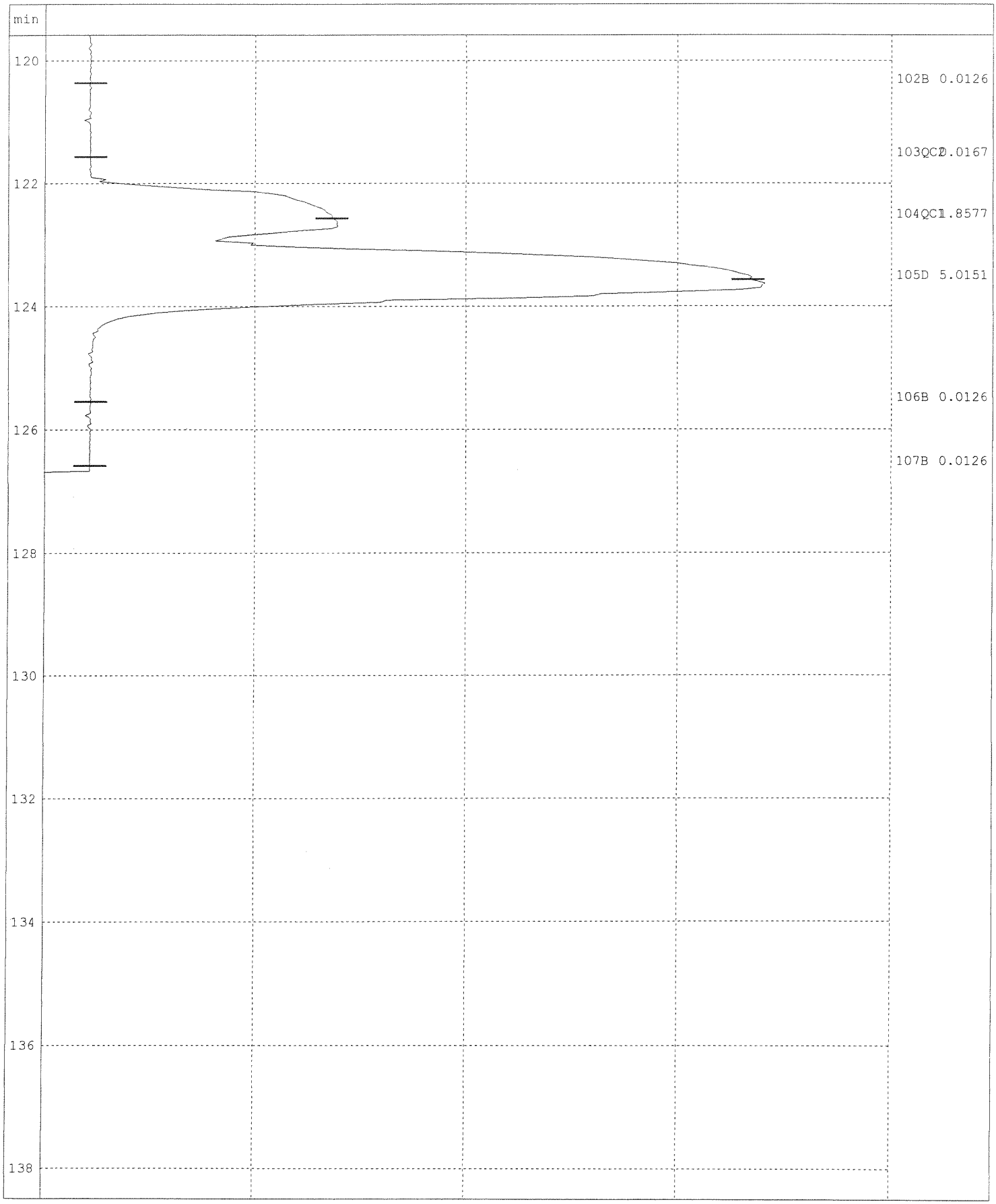
Name of analysis :NO2+NO3



7/26/10

Name of run :100723A.RUN
Comment :

Name of analysis :NO2+NO3



7/26/10

Work Request # (Original K7348) K7395 K7399 K7451 IPA

Tier: II III II II

Date Analyzed: 7/26/10

Analyst: JF ~ anks

Analysis: TPHOS - 365.3

RUN # 210027

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	yes/no/(NA)
5.	All quality control criteria met?	(yes)/no/NA JF 7/26/10
a.	Is the calibration curve correlation coefficient ≥ 0.995?	(yes)/no/NA
b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
d.	Are results for methods blanks all ND?	(yes)/no/NA
e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
f.	Are all exceptions explained?	yes/no/(NA)
6.	Are all service requests that apply attached?	(yes)/no/NA
7.	Are all samples labelled correctly?	(yes)/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	(yes)/no/NA
9.	Are detection limits and units reported correctly?	(yes)/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	(yes)/no/NA
11.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS:

Final Approved by: HC Date: 7/30/10

DQREPORT

Analytical Results Summary

trument Name: K-UV-VIS-01 **Analyst:** THANGANU **Analysis Lot:** 210027 **Method/Testcode:** 365.3/Phos T

Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
)7348-001	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.024 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7348-002	Phosphorus, Total	N/A		Water	0.27 mg/L	100 mL	0.269 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7348-003	Phosphorus, Total	N/A		Water	0.01 mg/L	100 mL	0.015 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7348-004	Phosphorus, Total	N/A		Water	0.17 mg/L	50 mL	0.172 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
)7348-005	Phosphorus, Total	N/A		Water	0.04 mg/L	100 mL	0.036 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7348-006	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.021 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7395-001	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.021 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7395-002	Phosphorus, Total	N/A		Water	0.08 mg/L	100 mL	0.084 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7395-003	Phosphorus, Total	N/A		Water	0.20 mg/L	100 mL	0.200 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7395-004	Phosphorus, Total	N/A		Water	0.19 mg/L	100 mL	0.187 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
)7395-005	Phosphorus, Total	N/A		Water	0.19 mg/L	50 mL	0.187 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
)7395-006	Phosphorus, Total	N/A		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
)7395-007	Phosphorus, Total	N/A		Water	0.52 mg/L	100 mL	0.521 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7399-001	Phosphorus, Total	N/A		Water	0.66 mg/L	50 mL	0.655 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
)7399-002	Phosphorus, Total	N/A		Water	0.08 mg/L	100 mL	0.076 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7451-001	Phosphorus, Total	N/A		Water	0.03 mg/L	100 mL	0.031 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7451-002	Phosphorus, Total	N/A		Water	0.26 mg/L	100 mL	0.263 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7451-003	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.017 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7451-004	Phosphorus, Total	N/A		Water	0.50 mg/L	100 mL	0.497 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
)7451-005	Phosphorus, Total	N/A		Water	0.13 mg/L	100 mL	0.127 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
007412-01	Phosphorus, Total	MS	K1007399-001	Water	0.58 mg/L	50 mL	1.16 mg/L	2	0.008	0.020	100		7/26/10 16:00:00	N	V
007412-02	Phosphorus, Total	DMS	K1007399-001	Water	0.31 mg/L	50 mL	1.53 mg/L	5	0.020	0.050	88	28*	7/26/10 16:00:00	N	V
007412-05	Phosphorus, Total	LCS		Water	0.32 mg/L	10 mL	3.24 mg/L	1	0.04	0.10	100		7/26/10 16:00:00	N	V
007412-06	Phosphorus, Total	MB		Water	-0.01 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
007412-07	Phosphorus, Total	MS	K1007348-004	Water	0.58 mg/L	50 mL	0.579 mg/L	1	0.004	0.010	81		7/26/10 16:00:00	N	V
007412-08	Phosphorus, Total	DMS	K1007348-004	Water	0.58 mg/L	50 mL	1.17 mg/L	2	0.008	0.020	99	67*	7/26/10 16:00:00	N	V
007412-09	Phosphorus, Total	DUP	K1007348-004	Water	0.17 mg/L	50 mL	0.174 mg/L	1	0.004	0.010		1	7/26/10 16:00:00	N	V
007412-10	Phosphorus, Total	MS	K1007395-005	Water	0.68 mg/L	50 mL	0.680 mg/L	1	0.004	0.010	99		7/26/10 16:00:00	N	V
007412-11	Phosphorus, Total	DMS	K1007395-005	Water	0.60 mg/L	50 mL	1.21 mg/L	2	0.008	0.020	102	56*	7/26/10 16:00:00	N	V
007412-12	Phosphorus, Total	DUP	K1007395-005	Water	0.22 mg/L	50 mL	0.224 mg/L	1	0.004	0.010		18	7/26/10 16:00:00	N	V
007412-15	Phosphorus, Total	DUP	K1007399-001	Water	0.69 mg/L	50 mL	0.689 mg/L	1	0.004	0.010		5	7/26/10 16:00:00	N	V
007415-01	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
007415-02	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
007415-03	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
007415-04	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.004 mg/L J	1	0.004	0.010			7/26/10 16:00:00	N	V
007415-05	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
007415-06	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4886 mg/L	1	0.004	0.010	98%		7/26/10 16:00:00	N	V
007415-07	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4875 mg/L	1	0.004	0.010	98%		7/26/10 16:00:00	N	V
007415-08	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4878 mg/L	1	0.004	0.010	98%		7/26/10 16:00:00	N	V

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licates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

nstrument Name: K-UV-VIS-01 **Analyst:** THANGANU **Analysis Lot:** 210027 **Method/Testcode:** 365.3/Phos T

b Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
)1007415-09	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4855 mg/L	1	0.004	0.010	97%		7/26/10 16:00:00	N	V
)1007415-10	Phosphorus, Total	CCV		Water	0.48 mg/L	100 mL	.4821 mg/L	1	0.004	0.010	96%		7/26/10 16:00:00	N	V

SPIKE = 0.50 ppm
SPIKE DUP = 1.00 ppm
ICB = <0.01
ICV = 0.40 ppm
LCS = 3.23

If 7/26/10

365

ndicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 116145
Team: GenChem
Analyst: Imee Franks
Prep Workflow: Gen Dig Phos
Prep Method: Method
Rush/NPDES: N/A
Status: Prepped
Current Step: Digestion
Prep Date: 07/26/2010 09:30
Due Date: 08/02/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	Comments
KQ1007412-06	Method Blank		100 mL	100 mL			
KQ1007412-05	Lab Control Sample		10 mL	100 mL	10 mL	17756	
K1007348-001	GW-071510-DK-16	.15	100 mL	100 mL			
K1007348-002	GW-071510-BS-18	.15	100 mL	100 mL			
K1007348-003	GW-071510-MC-25	.15	100 mL	100 mL			
K1007348-004	GW-071510-MC-27	.15	50 mL	50 mL			
K1007348-004: KQ1007412-09	Duplicate	.15	50 mL	50 mL			
K1007348-004: KQ1007412-07	Matrix Spike	.15	50 mL	50 mL	0.25 mL	18561	
K1007348-004: KQ1007412-08	Duplicate Matrix Spike	.15	50 mL	50 mL	0.5 mL	18561	
K1007348-005	GW-071510-BS-22	.15	100 mL	100 mL			
K1007348-006	GW-071510-DK-20	.15	100 mL	100 mL			
K1007395-001	MW-06-3	.09	100 mL	100 mL			
K1007395-002	MW-06-1	.09	100 mL	100 mL			
K1007395-003	MW-02-3	.09	100 mL	100 mL			
K1007395-004	MW-82-3	.09	100 mL	100 mL			
K1007395-005	MW-06-2	.09	50 mL	50 mL			
K1007395-005: KQ1007412-12	Duplicate	.09	50 mL	50 mL			
K1007395-005: KQ1007412-10	Matrix Spike	.09	50 mL	50 mL	0.25 mL	18561	
K1007395-005: KQ1007412-11	Duplicate Matrix Spike	.09	50 mL	50 mL	0.5 mL	18561	
K1007395-006	MW-60-12	.09	100 mL	100 mL			
K1007395-007	MW-02-4	.09	100 mL	100 mL			
K1007399-001	GW-071610-MC-29	.15	50 mL	50 mL			

K1007399-001: KQ1007412-15	Duplicate	.15	50 mL	50 mL			
K1007399-001: KQ1007412-01	Matrix Spike	.15	50 mL	50 mL	0.25 mL	18561	
K1007399-001: KQ1007412-02	Duplicate Matrix Spike	.15	50 mL	50 mL	0.5 mL	18561	
K1007399-002	GW-071610-BS-24	.15	100 mL	100 mL			
K1007451-001	GW-071910-DK-26	.14	100 mL	100 mL			
K1007451-002	GW-071910-GM-31	.14	100 mL	100 mL			
K1007451-003	GW-071910-DK-28	.14	100 mL	100 mL			
K1007451-004	GW-071910-GM-33	.14	100 mL	100 mL			
K1007451-005	GW-071910-GM-35	.14	100 mL	100 mL			
KQ1007412-03	Initial Calibration Blank		100 mL	100 mL			
KQ1007412-04	Initial Calibraton Verification		100 mL	100 mL			

33 Total Samples consisting of 20 Client Samples, 9 Client QC Samples, 4 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
Phosphorus (Total) 100 ppm as P from Adenosine	Spike	18561	11/1/2010

Name	Type	ID	Expires
Phosphorus, total LCS water	Spike	17756	11/4/2011

Preparation Materials

Preparation Hardware / Equipment

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	26-JUL-10 09:30	26-JUL-10 10:30	Imee Franks		N	

Comments

Review

Reviewed by: _____ Date: 7/30/10

IF 7/26/10

IF 7/26/10

TPHOS

K7348, K7395, K7399, K7451

IPR

DU520 S/N: 0112U2001732 1.03
26-JUL-10 17:28:08 SCA
Wavelength: 650.0 nm
Formula: A=a+bC a: 0.0052 b: 1.9346

r2=1.000 Var=0.0001

mg/L	Net A
0.0000	-0.000
0.0100	0.019
0.0500	0.099
0.1000	0.205
0.2000	0.399
0.5000	0.980
0.7000	1.351

IF 7/26/10

TPHOS

DU520 S/N: 0112U2001732 1.03
26-JUL-10 17:28:37 SCA Group 1217
Wavelength: 650.0 nm
Formula: A=a+bC a: 0.0052 b: 1.9346

Sample		Net A	Dil X	mg/L	
0001	ICB	0.000	1.0000	-0.0027	
0002	ICV	0.746	1.0000	0.3827	
0003	CCB1	0.002	1.0000	-0.0015	
0004	CCV1	0.950	1.0000	0.4886	
0005	MB	-0.017	1.0000	-0.0117	
0006	LCS1	0.632	1.0000	0.3240	
0007	LCS2	0.639	1.0000	0.3275	
0008	LCS3	0.642	1.0000	0.3293	
0009	LCS4	0.632	1.0000	0.3240	
0010	IC7348 -1	0.051	1.0000	0.0237	
0011	-2	0.526	1.0000	0.2690	
0012	-3	0.034	1.0000	0.0147	
0013	-4	0.337	1.0000	0.1718	
0014	-4D	0.341	1.0000	0.1737	
0015		~~1.146~~	~~1.0000~~	~~0.5898~~	①
0016	CCB2	0.005	1.0000	-0.0002	
0017	CCV2	0.948	1.0000	0.4875	
0018	IC7348--4MS	1.125	1.0000	0.5789	
0019	4MSD	1.132 1/2	1.0000	0.5825	
0020	5	0.075	1.0000	0.0362	
0021	6	0.046	1.0000	0.0212	
0022	IC7395 - 1	0.167	1.0000	0.0835	
0023	2	0.392	1.0000	0.2002	
0024	3	0.366	1.0000	0.1867	
0025	4	0.366	1.0000	0.1867	
0026	5	0.439	1.0000	0.2241	
0027	5D	0.362	1.0000	0.1845	
0028	CCB3	0.006	1.0000	0.0002	
0029	CCV3	0.949	1.0000	0.4878	
0030	IC7395-5MS	1.320	1.0000	0.6797	
0031	-5MSD	1.172 1/2	1.0000	0.6033	
0032	-6	-0.002	1.0000	-0.0035	
0033	-7	1.012	1.0000	0.5205	
0034	IC7399 -1	1.273	1.0000	0.6552	
0035		~~1.273~~	~~1.0000~~	~~0.6556~~	①
0036	-1D	1.339	1.0000	0.6893	
0037	-1MS	1.123 1/2	1.0000	0.5779	
0038	-1MSD	0.597 1/5	1.0000	0.3061	
0039	2	0.153	1.0000	0.0763	
0040	IC7451 -1	0.064	1.0000	0.0305	
0041	-2	0.514	1.0000	0.2628	
0042	CCB4	0.013	1.0000	0.0041	
0043	CCV4	0.944	1.0000	0.4855	
0044	IC7451- 3	0.039	1.0000	0.0174	
0045	-4	0.966	1.0000	0.4967	
0046	-5	0.251	1.0000	0.1269	
0047	CCB5	0.012	1.0000	0.0035	
0048	CCV5	0.938	1.0000	0.4821	

② IF 7/26/10

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #: K7748, K7795, K7799, K7451 IPR Method: EPA 365.3

Analysis: Total Phosphorus

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol. (g) or (ml)	Final Volume (ml)	mg/L (in solution)	mg/L - mg/kg As Rec'd	% Solids	mg/kg Dry Wt.
7/26/10	MB,	100	100				
	LCS,	10					
	ICB	100					
	ICV	0.4					
	K7748-1	100					
	-2	100 ①					
	-3	100					
	-4	50	50				
	-4D	50					
	-4MS	50					
	-4MSD	50					
	-5	100	100				
	-6	100					
	K7795-1	100					
	-2	100					
	-3	100					
	-4	100					
	-5	50	50				
	5D	50					
	-5MS	50					
	-5MSD	50					
	6	100	100				
	-7	100					
	K7799-1	50	50				

LCS T.V. = 4.75 APG: Lot #: P169-525 ID #: PO4/3-79-C

Spike(- s) = ml x ppm P / ICV# PO4/3-44-CC TV = 0.4

Comments:

Spike = 0.25 x 100 ppm / 50 mL = ~~.05~~ 0.50 ② ppm

Spike Dup = 0.50 x 100 / 50 mL = 1.00 PPM RPD =

Standard ID #: Spike Rec. = Curve ID#: PO4/3-5-B

Spike Dup Rec. = CCV ID#: PO4/3-25-B

Prepared By:		Date Prepared:	7/26/10 Time: 9:30
Analyzes By:		Date Analyzed:	7/26/10
Reviewed By:		Date Reviewed:	7/28/10

② IF 7/26/10

Page of

COLUMBIA ANALYTICAL SERVICES, INC.

Work Order #.: _____ Method: EPA 365.3

Analysis: Total Phosphorus

Date Prepared	Sample Name / Lab Code	Initial Wt./Vol. (g) or (ml)	Final Volume (ml)	mg/L (in solution)	mg/L - mg/kg As Rec'd	% Solids	mg/kg Dry Wt.
	MB						
7/26/10	K7399-1D	50	50				
	-1MS	50					
	1-MSD	50					
	-2	100	100				
	K7451-1	100					
	-2	100					
	-3	100					
	-4	100					
	-5	100					
	LCS1	10					
	LCS2						
	LCS3						

LCS T.V. = APG: 2185 Lot #: ID #:

Spike(- s) = ml x ppm P /

Comments:

x =

RPD =

Standard ID #: Spike Rec. =

Spike Dup Rec. =

Prepared By:	[signature]	Date Prepared:	7/26/10
Analyzes By:	[signature]	Date Analyzed:	7/26/10
Reviewed By:	[signature]	Date Reviewed:	7/30/10

210948

Work Request # Original (7395) 7948, 7814, 7782, 7868, 7830, 7801, 7903, 7653

Tier: √ √ 1 √ 1 II II IV I

Date Analyzed: 8/2/10

Analyst: CV

Analysis: Alk Buret

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	yes/no/NA	
2.	Holding times met for all analyses and for all samples?	yes/no/NA	Holding time missed sample 7395-1 sampled July 16 analyzed Aug 2
3.	Are calculations correct?	yes/no/NA	
4.	Is the reporting basis correct? (Dry Weight)	yes/no/NA	
5.	All quality control criteria met?	yes/no/NA	
a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA	
b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? (dup @ 1/20 SOP says 1/10)	yes/no/NA	
c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA	
d.	Are results for methods blanks all ND?	yes/no/NA	MB
e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA	
f.	Are all exceptions explained?	yes/no/NA	
6.	Are all service requests that apply attached?	yes/no/NA	
7.	Are all samples labelled correctly?	yes/no/NA	
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	yes/no/NA	
9.	Are detection limits and units reported correctly?	yes/no/NA	
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/NA	
11.	Is the unused space on the benchsheet crossed out?	yes/no/NA	
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	yes/no/NA	

COMMENTS:

7633-is a Re Run, I had preserved bottle the first time.

7395 - is to check a previous result — confirmed earlier result even though past HT.

Dup every 20

Final Approved by: _____ Date: 8/3/10

DQREPORT

COLUMBIA ANALYTICAL SERVICES, INC.

Analyte: Alkalinity Low Level
Method: 310.1 / SM20 2320 B

Analyst: cv | Date: 8/2/10
Pipette: burette | Time: 10:00

pH meter cal:

	Buffer Lot #:
4.0	4904285
7.0	1808758
10.0	1901439

Reagent:

cv 8/3

	Concentration		Log #	Date
~~H2SO4~~:	0.02	N	HCl by Ricca Lot#1002358	

LCS TV = 80.9 ERA Lot # 5162-698

Alkalinity, mg CaCO3 /L = $\frac{(2B-C) \times N \times 50{,}000}{\text{mL sample}}$

where:
B = mL standard acid used
C = total ml titrant to reach 0.3 pH units lower

	Folder #	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol.@pH 4.5		Vol.@pH -0.3		Total Alkalinity (mg/L)
						Vol.(B)	pH	Vol.(C)	pH	
1		MB-1	100.0	5.52		0.19	4.47	0.31	4.2	0.70
2		LCS-1	50.0	8.93		3.85	4.5	3.85	4.5	77.00
3		K1007395-001	40.0	8.09		3.38	4.48	3.38	4.48	84.50
4		K1007395-001d	25.0	8.07		2.21	4.5	2.21	4.5	88.40
5		K1007948-001	53.0	7.84		3.38	4.49	3.38	4.49	63.77
6		K1007948-002	50.0	7.77		7.68	4.48	7.68	4.48	153.60
7		K1007948-003	50.0	7.70		7.4	4.52	7.4	4.52	148.00
8		K1007814-001	3.0	7.62		12.25	4.5	12.25	4.5	4083.33
9		K1007782-001	100.0	7.23		1.49	4.48	1.62	4.2	13.60
10		K1007782-002	50.0	7.57		1.36	4.47	1.36	4.47	27.20
11		MB-2	100.0	5.54		0.19	4.49	0.31	4.2	0.70
12		K1007782-003	50.0	7.40		1.08	4.5	1.08	4.5	21.60
13		K1007782-004	50.0	7.43		1.01	4.51	1.01	4.51	20.20
14		K1007868-004	50.0	7.40		1.45	4.48	1.45	4.48	29.00
15		K1007830-008	100.0	5.63		0.2	4.46	0.38	4.18	0.20
16		K1007801-001	50.0	6.85		0.95	4.5	1.12	4.2	15.60
17		K1007903-017	50.0	7.38		1.45	4.48	1.45	4.48	29.00
18		K1007903-018	50.0	7.41		1.5	4.47	1.5	4.47	30.00
19		K1007903-019	50.0	7.21		1.49	4.52	1.49	4.52	29.80
20		K1007903-020	50.0	7.25		1.5	4.5	1.5	4.5	30.00
21		MB-3	100.0	5.54		0.13	4.5	0.3	4.2	-0.40
22		K1007633-001	50.0	8.00		5.45	4.46	5.45	4.46	109.00
23		buffer check		3.98						
24										

96%

MB 8/3/10

Work Request # (Original 7348) 7395, 7539, 7451, 7574, 7612 204840

Tier: V

Date Analyzed: 7/22/10

Analyst: CV

Analysis: A/K

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?		yes/no/NA
2.	Holding times met for all analyses and for all samples?		yes/no/NA
3.	Are calculations correct?		yes/no/NA
4.	Is the reporting basis correct? (Dry Weight)		yes/no/NA
5.	All quality control criteria met?		yes/no/NA
	a.	Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/NA
	b.	MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	yes/no/NA
	c.	Are ICVs, CCVs, and CCBs all within acceptance limits?	yes/no/NA
	d.	Are results for methods blanks all ND?	yes/no/NA
	e.	Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	yes/no/NA
	f.	Are all exceptions explained?	yes/no/NA
6.	Are all service requests that apply attached?		yes/no/NA
7.	Are all samples labelled correctly?		yes/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)		yes/no/NA
9.	Are detection limits and units reported correctly?		yes/no/NA
10.	Are proper Analysis/Extraction stickers included on report?		yes/no/NA
11.	Is the unused space on the benchsheet crossed out?		yes/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)		yes/no/NA

COMMENTS:

Final Approved by: [signature] Date: 7/26/10

DQREPORT

Z098910

Date: 07/26/2010
RunID = Z0722101222
InstrumentID = SN=1234A
Site Name = Your Company Name Here
Analyst = ACQWE
Test Name/ID = 7/22/10
Titrant Name/ID = HCl 0.02N RICCA LOT#1002358
Standard(s) Name/ID = LCS TV=80.9

Test ID	LIMS ID	Meth ID	Smpl ID	pH	SmplVol	Tot Vol	SmplRe:	Units	Re	End Pt	Slope (m	Calc C	Date	Time	Analyst	Run ID	Instr ID
'/22/10	MB-1	3	1	5.71	30	<9	5.7561	ppm('		0.173 mL (146.6 mV)	57.63	04839	07-22-10	13:31	ACQWE	Z0722101222	SN=123
'/22/10	LCS-1	3	2	9.00	30		48.188	ppm('		1.444 mL (-72.4 mV)	57.63	04839	07-22-10	13:34	ACQWE	Z0722101222	SN=123
'/22/10	LCS-1	3	2	9.00	30		81.920	ppm('		2.455 mL (146.6 mV)	57.63	04839	07-22-10	13:34	ACQWE	Z0722101222	SN=123
'/22/10	LCS-1d	3	3	9.01	30		47.552	ppm('		1.425 mL (-72.4 mV)	57.63	04839	07-22-10	13:39	ACQWE	Z0722101222	SN=123
'/22/10	LCS-1d	3	3	9.01	30		78.171	ppm('		2.343 mL (146.6 mV)	57.63	04839	07-22-10	13:39	ACQWE	Z0722101222	SN=123
'/22/10	K1007348-005 15X	3	4	6.88	~~30~~ 2	1260	~~85.462~~	ppm('		2.502 mL (146.6 mV)	57.63	04839	07-22-10	13:44	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-001.08	3	5	7.29	30		212.56	ppm('		6.371 mL (146.6 mV)	57.63	04839	07-22-10	13:49	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-004.8	3	6	7.44	30		137.19	ppm('		4.112 mL (146.6 mV)	57.63	04839	07-22-10	13:58	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-004d	3	7	7.44	30		135.42	ppm('		4.059 mL (146.6 mV)	57.63	04839	07-22-10	14:05	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-002.08	3	8	7.55	30		136.61	ppm('		4.095 mL (146.6 mV)	57.63	04839	07-22-10	14:11	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-004 3X	3	9	5.82	30		6.3628	ppm('		0.191 mL (146.6 mV)	57.63	04839	07-22-10	14:18	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-006.08	3	10	7.19	30		224.22	ppm('		6.720 mL (146.6 mV)	57.63	04839	07-22-10	14:20	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-007.08	3	11	6.44	30		498.74	ppm('		14.949 mL (146.6 mV)	57.63	04839	07-22-10	14:30	ACQWE	Z0722101222	SN=123
'/22/10	K1007539-002.13	3	12	6.56	30						57.63	04839	07-22-10	14:49	ACQWE	Z0722101222	SN=123
'/22/10	K1007539-003.13	3	13	5.77	30		6.2929	ppm('		0.189 mL (146.6 mV)	57.63	04839	07-22-10	15:14	ACQWE	Z0722101222	SN=123
'/22/10	K1007539-004.13	3	14	7.33	30		682.75	ppm('		20.464 mL (146.6 mV)	57.63	04839	07-22-10	15:17	ACQWE	Z0722101222	SN=123
'/22/10	K1007451-005.13	3	15	10.8	30	NR	636.27	ppm('		19.071 mL (-72.4 mV)	57.63	04839	07-22-10	15:42	ACQWE	Z0722101222	SN=123
'/22/10	K1007451-004.13	3	16	7.76	30		446.08	ppm('		13.370 mL (146.6 mV)	57.63	04839	07-22-10	16:08	ACQWE	Z0722101222	SN=123
'/22/10	K1007451-002.13	3	17	11.5	30						57.63	04839	07-22-10	16:25	ACQWE	Z0722101222	SN=123
'/22/10	K1007451-001.13	3	18	7.00	30		633.84	ppm('		18.998 mL (146.6 mV)	57.63	04839	07-22-10	16:50	ACQWE	Z0722101222	SN=123
'/22/10	K1007574-001.02	3	19	7.07	30		15.674	ppm('		0.470 mL (146.6 mV)	57.63	04839	07-22-10	17:13	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-008.04	3	20	6.61	30		85.049	ppm('		2.549 mL (146.6 mV)	57.63	04839	07-22-10	17:16	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-008.04	3	21	6.60	30		123.61	ppm('		3.705 mL (146.6 mV)	57.63	04839	07-22-10	17:21	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-007.04	3	22	6.76	30		204.63	ppm('		6.133 mL (146.6 mV)	57.63	04839	07-22-10	17:28	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-006.04	3	23	6.97	30		247.18	ppm('		7.409 mL (146.6 mV)	57.63	04839	07-22-10	17:36	ACQWE	Z0722101222	SN=123
'/22/10	MB-2	3	24	5.92	30	<9	6.3647	ppm('		0.191 mL (146.6 mV)	57.63	04839	07-22-10	17:47	ACQWE	Z0722101222	SN=123
'/22/10	LCS-2	3	25	9.02	30		44.496	ppm('		1.334 mL (-72.4 mV)	57.63	04839	07-22-10	17:49	ACQWE	Z0722101222	SN=123
'/22/10	LCS-2	3	25	9.02	30		78.500	ppm('		2.353 mL (146.6 mV)	57.63	04839	07-22-10	17:49	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-005	3	26	7.60	30		102.13	ppm('		3.061 mL (146.6 mV)	57.63	04839	07-22-10	17:54	ACQWE	Z0722101222	SN=123
'/22/10	K1007395-005d	3	27	7.72	30		102.30	ppm('		3.066 mL (146.6 mV)	57.63	04839	07-22-10	18:00	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-005.04	3	28	6.77	30		55.284	ppm('		1.657 mL (146.6 mV)	57.63	04839	07-22-10	18:05	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-004.04	3	29	6.90	30		310.19	ppm('		9.297 mL (146.6 mV)	57.63	04839	07-22-10	18:10	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-003.04	3	30	6.99	30		251.66	ppm('		7.543 mL (146.6 mV)	57.63	04839	07-22-10	18:22	ACQWE	Z0722101222	SN=123

375

JR 7/26/10

Z09890

Your Company Name Here
EZ_960 Data Summary Run ID - Z0722101222.EZ page 2 07/26/2010

Test ID	LIMS ID	Meth ID	Smpl ID	pH	SmplVol	Tot Vol	SmplRe	Units	Re	End Pt	Slope (m	Calc C	Date	Time	Analyst	Run ID	Instr ID
'/22/10	K1007612-002.04	3	31	6.75	30		266.94	ppm('		8.001 mL (146.6 mV)	57.63	04839	07-22-10	18:32	ACQWE	Z0722101222	SN=123
'/22/10	K1007612-001.04	3	32	7.32	30		298.26	ppm('		8.940 mL (146.6 mV)	57.63	04839	07-22-10	18:43	ACQWE	Z0722101222	SN=123
'/22/10	MB-3	3	33	5.81	30	<9	6.2558	ppm('		0.188 mL (146.6 mV)	57.63	04839	07-22-10	18:55	ACQWE	Z0722101222	SN=123
'/22/10	MB-4	3	34	5.80	30	<9	6.0892	ppm('		0.183 mL (146.6 mV)	57.63	04839	07-22-10	18:58	ACQWE	Z0722101222	SN=123

Low levels = 7395-3, 7539-2, 7574-1
Need to Redo

High level - 7539-2 Need to Redo & 7451-2

LCS TV = 80.9

LCS % Rec
1 = 101
1d = 97
2 = 97

7395-4 x = 136 RPD = <1

7395-5 x = ~~136~~ 102.2 (CV 7/26) RPD = <1

all carbonate results are 0.0
Bicarb = the Alkalinity in the Smpl Results colm

JG 7/26/10

L04 L11

Work Request # Original (7399) 7348, 7282, 7177, 7395, 7397, 7431, 7635 (III)

Tier: V

Date Analyzed: 7/20/10

Analyst: CV

Analysis: ~~TOC~~ Alk
CV 7/21/10

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1. Is the method name and number correct and appropriate? yes/no/NA
2. Holding times met for all analyses and for all samples? yes/no/NA
3. Are calculations correct? yes/no/NA
4. Is the reporting basis correct? (Dry Weight) yes/no/NA
5. All quality control criteria met? yes/no/NA
   a. Is the calibration curve correlation coefficient ≥ 0.995? yes/no/NA
   b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency? yes/no/NA
   c. Are ICVs, CCVs, and CCBs all within acceptance limits? yes/no/NA
   d. Are results for methods blanks all ND? yes/no/NA
   e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.) yes/no/NA
   f. Are all exceptions explained? yes/no/NA
6. Are all service requests that apply attached? yes/no/NA
7. Are all samples labelled correctly? yes/no/NA
8. Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample) yes/no/NA
9. Are detection limits and units reported correctly? yes/no/NA
10. Are proper Analysis/Extraction stickers included on report? yes/no/NA
11. Is the unused space on the benchsheet crossed out? yes/no/NA
12. Was analysis turned in by the due date? (n-2) (If not record SR#) yes/no/NA

COMMENTS:

7282-1 & 7431-6 were over Titrated & will have
To be run again
Alongwith 7399-1 (overflowed the beaker)
And The low & high hexadecanes.

Final Approved by: [signature] Date: 7/26/10

DQREPORT

R:\WET\FORMS\LAB\DATAQUAL.DOC

Analyte: Alkalinity | Regular Level X | Analyst: cv | Date: 7/20/10
Method: 310.1 / SM20 2320 B | High Level | Pipette: orion auto | Time: 12:30

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate Concentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

Alkalinity, mg CaCO3 /L = ($A_{(mL\ acid\ used)}$ x $N_{(H2SO4)}$ x 50,000) /mL sample

pH meter cal:

		Buffer Lot #:
4.0	4.01	~~5E+06~~ 4904285
7.0		7/20
10.0	10.01	~~2E+06~~ 1901431

Reagents:	Concentration		Log #
H2SO4:	0.020	N	HCl lot# 1002358
Reg Level Reference:	50	mg/L	
High Level Reference:	5000	mg/L	
LCS/MS Solution:	1000	mg/L	TV=80.9 LOT#=5162-68

* Soils - 1g of sample diluted to 100mLs in DI

	Folder #	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.
1		MB-1	30.0			0.11						3.8
2		LCS-1	30.0			2.41						80.2
3		LCS-1d	30.0			2.35						78.4
4	over flowed	K1007399-001	10.0			24.90						2489.7
5	over flowed	K1007399-001d	10.0			24.50						2449.6
6	7394 #6	K100~~7399~~-002	30.0			11.80						393.5
7		K1007348--002	30.0			19.73						657.5
8	low level	K1007348--003	30.0									0.0
9	7348 cf 7/20	K100~~7399~~-004	10.0			6.56						655.6
10		K1007348--004d	10.0			5.60						559.7
11	high level	K1007348--005	30.0									0.0
12		MB-2	30.0			0.09						3.0
13		K1007348--006	30.0			9.14						304.6
14		K1007282-001	30.0			14.30						476.5
15		K1007282-001d	10.0			4.73						473.2
16		K1007282-002	30.0			14.66						488.6
16	Low level	K1007282-004	30.0									0.0
17	Not valid	K1007282-005	30.0			21.87						728.8
18		K1007282-006	30.0			8.05						268.3
19		K1007177-007	15.0			7.26						483.8
20		K1007395-001	30.0			2.58						86.1
21		MB-3	30.0			0.03						1.0
22		MB-4	30.0			0.07						2.3
23		LCS-2	30.0			2.42						80.6
24		LCS-2d	30.0			2.50						83.5
25	Low level	K1007397-006	30.0									0.0
26		K1007397-007	30.0			2.49						82.9
27	Low level	K1007397-008	30.0									0.0
28	Low level	K1007397-009	30.0			0.03						0.9
29	Low level	K1007431-001	30.0			0.51						17.0
30	Low level	K1007431-002	30.0			0.46						15.5
31		K1007431-003	30.0			1.60						53.2
32		MB-5	30.0			0.07						2.3
33		K1007431-004	30.0			2.50						83.5
34	Low level	K1007431-005	30.0			0.08						2.6
35	Not valid	K1007431-006	30.0			4.14						138.1
36		K100~~7431-007~~ cf 7635-1 7/24	30.0	8.48		1.35	0.10	3.3	0.0	6.6	38.5	45.1

Analyte: Alkalinity Regular Level X Analyst: cv Date: 7/20/10
Method: 310.1 / SM20 2320 B High Level Pipette: orion auto Time: 12:30

Table 403.1 Alkalinaty Relationships

Result of titration	Hydroxide Alkalinaty as CaCO3	Carbonate Alkalinaty as CaCO3	Bicarbonate Concentration as CaCO3
P = 0	0.0	0.0	T
P < 1/2T	0.0	2P	T - 2P
P = 1/2T	0.0	2P	0
P > 1/2T	2P - T	2(T- P)	0
P = T	T	0.0	0

P = Phenolphthalein Alkalinity T = Total Alkalinaty

Phenolphthalein alkalinity = the quantity measured by titration to pH 8.3

pH meter cal:

		Buffer Lot #:
4.0	4.01	5E+06
7.0		
10.0	10.01	2E+06

Reagents:	Concentration		Log #
H2SO4:	0.020	N	HCl lot# 1002358
Reg Level Reference:	50	mg/L	
High Level Reference:	5000	mg/L	
LCS/MS Solution:	1000	mg/L	

Alkalinity, mg CaCO3 /L = ($A_{(mL\ acid\ used)}$ x $N_{(H2SO4)}$ x 50,000) /mL sample

* Soils - 1g of sample diluted to 100mLs in DI

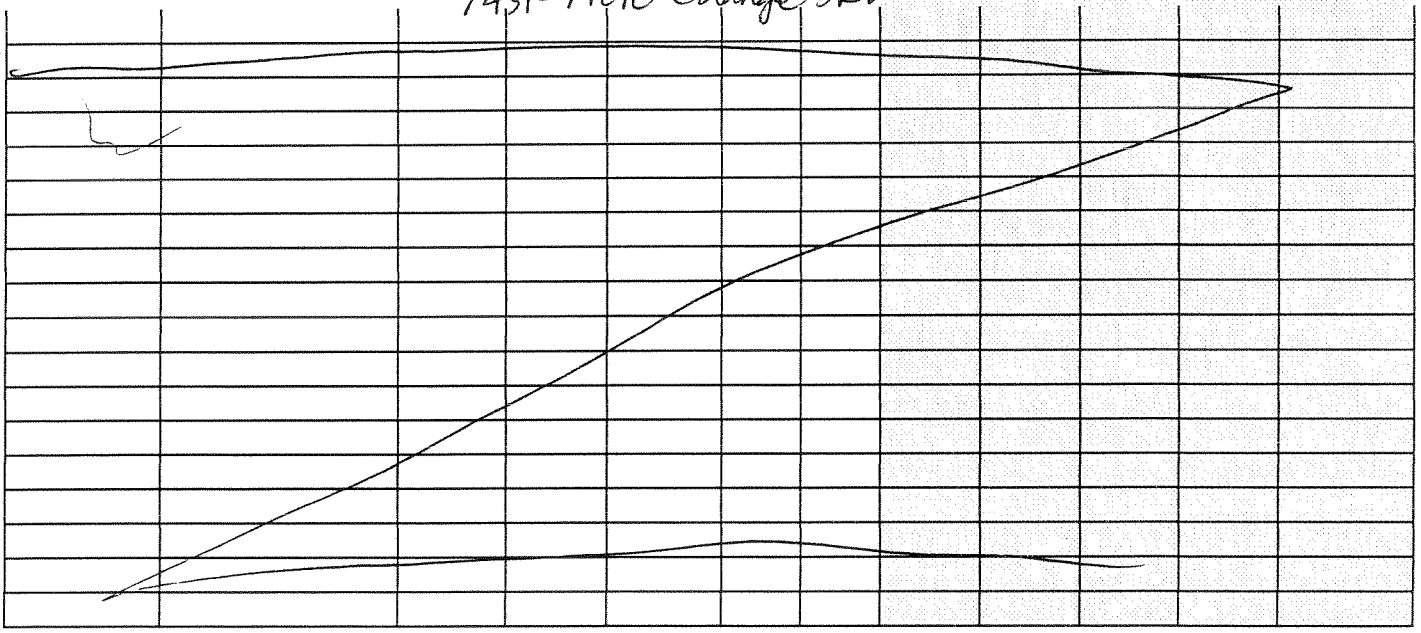
	Folder #	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol to pH 4.5	Vol to pH 8.3	Phen. Alk.	OH- Alk.	Carb Alk.	Bicarb Alk.	Total Alk.
37	7655-2	~~K1007431-008~~	30.0			2.13						70.9
38	7635-3	~~K1007431-009~~	30.0			1.98						66.0
39	7635-4	K1007431-010	30.0			1.86						61.9
40												
41												
42												
43												
44	LL, HL, and	overflows										
45	7282-1	and 7431-6 were	over	titrated								#DIV/0!
46	They will	all be run again										

7348-4 x = 607/608 RPD = 16

7282-1 x = 474, 85 = 475
RPD = <1

LCS-1 %Rec = 99
LCS-1d %Rec = 97
LCS2 %Rec = 100
LCS-2d %Rec = 103

7431-7to10 change SRM to 7655-1 to 854



Z09271

Date: 07/20/2010
RunID = Z0720101110
InstrumentID = SN=1234A
Site Name = Your Company Name Here
Analyst = ACQWE
Test Name/ID = 7.20.10
Titrant Name/ID = HCl
Standard(s) Name/ID =

	Meth ID	Smpl ID	pH	SmplVol	Tot Vol	SmplResults	Units	Re	End Pt	Slope (m	Calc C	Date	Time	Analyst	Run ID	Instr ID	
MB-1	4	1	7.90	30		3.8184	ppm(		0.114 mL (146.1 mV)	58.05	04839	07-20-10	12:38	ACQWE	Z0720101110	SN=123	
CS-1	4	2	8.92	30		42.986	ppm(		1.288 mL (-74.5 mV)	58.05	04839	07-20-10	12:42	ACQWE	Z0720101110	SN=123	
CS-1	4	2	8.92	30		80.259	ppm(		2.406 mL (146.1 mV)	58.05	04839	07-20-10	12:42	ACQWE	Z0720101110	SN=123	
CS-1d	4	3	8.98	30		43.394	ppm(		1.301 mL (-74.5 mV)	58.05	04839	07-20-10	12:50	ACQWE	Z0720101110	SN=123	
CS-1d	4	3	8.98	30		79.808	ppm(		2.392 mL (146.1 mV)	58.05	04839	07-20-10	12:50	ACQWE	Z0720101110	SN=123	~~O.F.B~~ CV 7/20
349-1	4	4	11.2	~~30~~ 10	CV 7/20	526.93	ppm(		15.794 mL (-74.5 mV)	58.05	04839	07-20-10	12:59	ACQWE	Z0720101110	SN=123	O.F.B
349-1d	4	4	11.2	~~30~~ 10	CV 7/20	830.66	ppm(		24.897 mL (146.1 mV)	58.05	04839	07-20-10	12:59	ACQWE	Z0720101110	SN=123	
349-4	4	5	11.1	~~30~~ 10	CV 7/20	516.61	ppm(		15.484 mL (-74.5 mV)	58.05	04839	07-20-10	13:15	ACQWE	Z0720101110	SN=123	
349-4	4	5	11.1	~~30~~ 10	CV 7/20	817.27	ppm(		24.496 mL (146.1 mV)	58.05	04839	07-20-10	13:15	ACQWE	Z0720101110	SN=123	
349-2	4	6	7.79	30		393.82	ppm(		11.804 mL (146.1 mV)	58.05	04839	07-20-10	13:32	ACQWE	Z0720101110	SN=123	
348-2	4	7	7.12	30		658.10	ppm(		19.725 mL (146.1 mV)	58.05	04839	07-20-10	13:41	ACQWE	Z0720101110	SN=123	
346-3	4	8	LL	30						58.05	04839	07-20-10	13:50	ACQWE	Z0720101110	SN=123	
-4	4	9	6.44	~~30~~ 10	CV 7/20	218.72	ppm(		6.556 mL (146.1 mV)	58.05	04839	07-20-10	13:52	ACQWE	Z0720101110	SN=123	
-4d	4	10	6.49	~~30~~ 10	CV 7/20	186.72	ppm(		5.597 mL (146.1 mV)	58.05	04839	07-20-10	13:59	ACQWE	Z0720101110	SN=123	
-5	4	11	6.75	30	HL.					58.05	04839	07-20-10	14:05	ACQWE	Z0720101110	SN=123	O.F.B
MB-2	4	12	5.85	30		2.9957	ppm(		0.090 mL (146.1 mV)	58.05	04839	07-20-10	14:12	ACQWE	Z0720101110	SN=123	
348-6	4	13	7.16	30		304.84	ppm(		9.137 mL (146.1 mV)	58.05	04839	07-20-10	14:15	ACQWE	Z0720101110	SN=123	
7282-1	4	14	6.88	30		476.93	ppm(		14.295 mL (146.1 mV)	58.05	04839	07-20-10	14:23	ACQWE	Z0720101110	SN=123	
-1d	4	15	6.95	~~30~~ 10		157.87	ppm(		4.732 mL (146.1 mV)	58.05	04839	07-20-10	14:31	ACQWE	Z0720101110	SN=123	
-2	4	16	6.95	30		489.00	ppm(		14.657 mL (146.1 mV)	58.05	04839	07-20-10	14:38	ACQWE	Z0720101110	SN=123	
-4	4	17	LL	~~30~~ 10						58.05	04839	07-20-10	14:47	ACQWE	Z0720101110	SN=123	
-5	4	~~18~~	~~6.95~~	~~30~~		~~729.50~~	~~ppm(~~		~~21.865 mL (146.1 mV)~~	~~58.05~~	~~04839~~	~~07-20-10~~	~~14:49~~	ACQWE	~~Z0720101110~~	~~SN=123~~	Not valid Refer to the detailed printout. CV 7/20
-6	4	19	7.98	30		268.51	ppm(		8.048 mL (146.1 mV)	58.05	04839	07-20-10	14:58	ACQWE	Z0720101110	SN=123	
77-7	4	20	7.30	~~30~~ 15	CV 7/20	242.11	ppm(		7.257 mL (146.1 mV)	58.05	04839	07-20-10	15:06	ACQWE	Z0720101110	SN=123	
345-1	4	21	8.15	30		86.188	ppm(		2.583 mL (146.1 mV)	58.05	04839	07-20-10	15:14	ACQWE	Z0720101110	SN=123	
MB-3	4	22	4.69	30		1.0113	ppm(		0.030 mL (146.1 mV)	58.05	04839	07-20-10	15:21	ACQWE	Z0720101110	SN=123	
MB-4	4	23	5.77	30		2.3699	ppm(		0.071 mL (146.1 mV)	58.05	04839	07-20-10	15:24	ACQWE	Z0720101110	SN=123	
CS-2	4	24	8.98	30		41.373	ppm(		1.240 mL (-74.5 mV)	58.05	04839	07-20-10	15:28	ACQWE	Z0720101110	SN=123	
CS-2	4	24	8.98	30		80.664	ppm(		2.418 mL (146.1 mV)	58.05	04839	07-20-10	15:28	ACQWE	Z0720101110	SN=123	
CS 2d	4	25	8.95	30		43.000	ppm(		1.289 mL (-74.5 mV)	58.05	04839	07-20-10	15:36	ACQWE	Z0720101110	SN=123	
CS 2d	4	25	8.95	30		83.555	ppm(		2.504 mL (146.1 mV)	58.05	04839	07-20-10	15:36	ACQWE	Z0720101110	SN=123	
347-6	4	26	LL	30						58.05	04839	07-20-10	15:45	ACQWE	Z0720101110	SN=123	
-7	4	27	8.02	30		83.016	ppm(		2.488 mL (146.1 mV)	58.05	04839	07-20-10	15:47	ACQWE	Z0720101110	SN=123	

Your Company Name Here

EZ_960 Data Summary Run ID - Z0720101110.EZ page 2 07/20/2010

	Meth ID	Smpl ID	pH	SmplVol	Tot Vol	SmplResults	Units	Re	End Pt	Slope (m	Calc C	Date	Time	Analyst	Run ID	Instr ID
97-8	4	28	LiLi	30						58.05	04839	07-20-10	15:55	ACQWE	Z0720101110	SN=123
9	4	29	4.63	30		.89366	ppm(		0.027 mL (146.1 mV)	58.05	04839	07-20-10	15:57	ACQWE	Z0720101110	SN=123
131-1	4	30	6.95	30		17.008	ppm(		0.510 mL (146.1 mV)	58.05	04839	07-20-10	16:00	ACQWE	Z0720101110	SN=123
131-2	4	31	6.84	30		15.479	ppm(		0.464 mL (146.1 mV)	58.05	04839	07-20-10	16:05	ACQWE	Z0720101110	SN=123
-3	4	32	7.69	30		53.242	ppm(		1.596 mL (146.1 mV)	58.05	04839	07-20-10	16:08	ACQWE	Z0720101110	SN=123
MB-5	4	33	5.73	30		2.3305	ppm(		0.070 mL (146.1 mV)	58.05	04839	07-20-10	16:14	ACQWE	Z0720101110	SN=123
431-4	4	34	8.04	30		83.534	ppm(		2.504 mL (146.1 mV)	58.05	04839	07-20-10	16:17	ACQWE	Z0720101110	SN=123
5	4	35	5.80	30		2.6032	ppm(		0.078 mL (146.1 mV)	58.05	04839	07-20-10	16:25	ACQWE	Z0720101110	SN=123
6	4	36	8.02	30		138.26	ppm(		4.144 mL (146.1 mV)	58.05	04839	07-20-10	16:28	ACQWE	Z0720101110	SN=123
7	4	37	8.48	30		3.3006	ppm(		0.099 mL (-74.5 mV)	58.05	04839	07-20-10	16:36	ACQWE	Z0720101110	SN=123
78	4	37	8.48	30		45.161	ppm(		1.354 mL (146.1 mV)	58.05	04839	07-20-10	16:36	ACQWE	Z0720101110	SN=123
8 SK	4	38	7.97	30		70.927	ppm(		2.126 mL (146.1 mV)	58.05	04839	07-20-10	16:41	ACQWE	Z0720101110	SN=123
9 LO	4	39	7.95	30		66.018	ppm(		1.979 mL (146.1 mV)	58.05	04839	07-20-10	16:48	ACQWE	Z0720101110	SN=123
10	4	40	7.89	30		61.947	ppm(		1.857 mL (146.1 mV)	58.05	04839	07-20-10	16:55	ACQWE	Z0720101110	SN=123
Final	MB - didnt read															

Not valid Refer to Long form Printout

Not low Levels CV #20 CV #10

Low levels Need to rerun

High Levels need to rerun

O.F.B = over flowed beaker need to rerun

RunID = Z0720101110
InstrumentID = SN=1234A
Site Name = Your Company Name Here
Analyst = ACQWE
Test Name/ID = 7.20.10
Titrant Name/ID = HCl
Standard(s) Name/ID =
Copyright 2003 THERMO ELECTRON
960 AUTOCHEMISTRY SYSTEM Rev 6.3
40-SAMPLES READY
NO. 1 WASH OF 3
10 SECOND WASH
133.7 mV pH 4.732
NO. 2 WASH OF 3
10 SECOND WASH
98.3 mV pH 5.337
NO. 3 WASH OF 3
10 SECOND WASH
101.0 mV pH 5.291
BEAKER[4] ANALYSIS
BUFFER 1: 4.010pH E= 174.6 mV
NO. 1 WASH OF 3
10 SECOND WASH
168.0 mV pH 4.145
NO. 2 WASH OF 3
10 SECOND WASH
128.9 mV pH 4.814
NO. 3 WASH OF 3
10 SECOND WASH
134.7 mV pH 4.714
BEAKER[5] ANALYSIS
BUFFER 2: 10.013pH E=-173.9 mV
12:37 07-20-10
ELECTRODE: 1:pH calibrated
Eo= 1.0 mV SLOPE= 58.05 mV/dec
NO. 1 WASH OF 3
10 SECOND WASH
-18.2 mV pH 7.331
NO. 2 WASH OF 3
10 SECOND WASH
-57.7 mV pH 8.011
NO. 3 WASH OF 3
10 SECOND WASH
-34.9 mV pH 7.618
BEAKER[6] ANALYSIS
==========
METHOD 4 SUMMARY
==========
SAMPLE ID NUMBER: 1
TEST: MBI
SITE:
ANALYST:
12:38 07-20-10 ELECTRODE: 1:pH
TECHNIQUE 8 PRESET END POINT
SLOPE 58.05 mV/dec
Eo 1.0 mV
SAMPLE VOLUME 30.000 mL
TITRANT .02000 M of _____
CONST INCREMENT 10.0 mV
MAX TITRANT VOL 30.000 mL
TIMED READINGS 8.0 sec
PRESTIR 12.0 sec
CONTINUOUS STIRRING
REACTION RATIO 0.5000
MOLECULAR WEIGHT 100.09
CAL CONSTANT 1.04839
PRESET pH(1) 8.300
PRESET pH(2) 4.500
0 v= 0.000 mL E= -51.3 mV
pH= 7.901
1 v= 0.052 mL E= 66.4 mV
pH= 5.873
2 v= 0.105 mL E= 142.8 mV
pH= 4.557
3 v= 0.157 mL E= 160.9 mV
pH= 4.245
1.1 min
==========
PRESET END POINT ANALYSIS
==========
SAMPLE = 3.8184 ppm (v)
END POINT VOL= 0.114 mL (146.1 mV)
(pH 4.500)
Excess Titre= 0.043 mL
Relative Scale
vol ==========
0.000| *
0.005| *
0.010| *
0.015| *
0.020| *
0.025| *
0.030| *
0.036| *
0.041| *
0.046| *
0.051| *
0.056| *
0.061| *
0.066| *
0.071| *
0.076| *
0.081| *
0.086| *
0.091| *
0.096| *
0.101| *
0.107| *
0.112| *
0.117| *
0.122| *
0.127| *
0.132| *
0.137| *
0.142| *
0.147| *
0.152| *
0.157| *
mL ==========
Symbols: * = mV

NO. 1 WASH OF 3
10 SECOND WASH
47.7 mV pH 6.195
NO. 2 WASH OF 3
10 SECOND WASH
21.4 mV pH 6.649
NO. 3 WASH OF 3
10 SECOND WASH
69.7 mV pH 5.816
BEAKER[7] ANALYSIS
==========
METHOD 4 SUMMARY
==========
SAMPLE ID NUMBER: 2
TEST: LCS-1
SITE:
ANALYST:
12:42 07-20-10 ELECTRODE: 1:pH
TECHNIQUE 8 PRESET END POINT

Work Request # (Original 7495) 7451 7164, 7635, 7539, 7395, 7612 216470

Tier: I V I V V V

7164 is a Rerun to confirm

Date Analyzed: 7/28/10

Analyst: CV

Analysis: Alk on bmwt

DATA QUALITY REPORT
INORGANICS

Explain any "no" responses to questions below, and any corrective actions in the comments section below.

1.	Is the method name and number correct and appropriate?	(yes)/no/NA
2.	Holding times met for all analyses and for all samples?	(yes)/no/NA
3.	Are calculations correct?	(yes)/no/NA
4.	Is the reporting basis correct? (Dry Weight)	(yes)/no/NA
5.	All quality control criteria met?	(yes)/no/NA
	a. Is the calibration curve correlation coefficient ≥ 0.995?	yes/no/(NA)
	b. MBs, CCVs, CCBs, LCSs, Dups, and Spikes, analyzed at proper frequency?	(yes)/no/NA
	c. Are ICVs, CCVs, and CCBs all within acceptance limits?	(yes)/no/NA
	d. Are results for methods blanks all ND?	(yes)/no/NA
	e. Are all QC samples within acceptance criteria? (LCS % rec, MS/DMS % rec, DUP or MS/DMS RPDs, etc.)	(yes)/no/NA
	f. Are all exceptions explained?	yes/no/(NA)
6.	Are all service requests that apply attached?	(yes)/no/NA
7.	Are all samples labelled correctly?	(yes)/no/NA
8.	Have all instructions on the service request been followed? (e.g. Special MRLs, QC on a specific sample)	(yes)/no/NA
9.	Are detection limits and units reported correctly?	(yes)/no/NA
10.	Are proper Analysis/Extraction stickers included on report?	yes/no/(NA)
11.	Is the unused space on the benchsheet crossed out?	(yes)/no/NA
12.	Was analysis turned in by the due date? (n-2) (If not record SR#)	(yes)/no/NA

COMMENTS:

Final Approved by: _____ Date: 7/30/10

DQREPORT

210470

Analyte: Alkalinity Low Level
Method: 310.1 / SM20 2320 B

Analyst: cv Date: 7/28/10
Pipette: k-pH-01 Time: 3:30

pH meter cal:

	Buffer Lot #:
4.0	4904285
7.0	1908758
10.0	1901439

Reagent:

CV 7/29

	Concentration		Log #	Date
~~H2SO4~~:	0.02	N	HCl 0.02N Ricca	lot=1909615

LCS ERA Lot#5162-698 TV=80.9

Alkalinity, mg CaCO3 /L = $\frac{(2B-C) \times N \times 50{,}000}{\text{mL sample}}$

where:
B = mL standard acid used
C = total ml titrant to reach 0.3 pH units lower

	Folder #	Order #	Sample Vol (mL)	pH Initial	Titrant Volume Initial (mL)	Vol.@pH 4.5		Vol.@pH -0.3		Total Alkalinity (mg/L)	
						Vol.(B)	pH	Vol.(C)	pH		
1		MB-1	100.0	5.28		0.13	4.48	0.28	4.21	-0.20	<2
2		LCS-1	50.0	8.95		3.88	4.45	3.88	4.45	77.60	
3		K1007485-001	50.0	6.85		0.95	4.48	1.18	4.14	14.40	
4		K1007451-005	25.0	7.58		34.1	4.47	34.1	4.47	1364.00	
5		K1007164-004	50.0	5.42		0.15	4.48	0.31	4.19	-0.20	<2
6		K1007633-001	50.0	1.80						0.00	<2
7		K1007539-002	25.0	6.58		12.35	4.48	12.25	4.48	498.00	X=506 RPD=3
8		K1007539-002d	15.0	6.58		7.71	4.47	7.71	4.47	514.00	
9		K1007395-003	59.0	7.76		7.9	4.52	7.9	4.52	133.90	
10		K1007612-013	100.0	5.84		0.31	4.5	0.51	4.18	1.10	<2
11		MB-2	100.0	5.84		0.15	4.46	0.3	4.17	0.00	<2
12		buffer check		4.00							
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											

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Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Barr Engineering Company
Project Name: Rhodia Silver Bow
Project No.: 2646006.17-GW10-100

Service Request: K1007395

Sample Name:	Lab Code:
MW-06-3	K1007395-001
MW-06-1	K1007395-002
MW-02-3	K1007395-003
MW-82-3	K1007395-004
MW-06-2	K1007395-005
MW-06-2D	K1007395-005D
MW-06-2S	K1007395-005S
MW-60-12	K1007395-006
MW-02-4	K1007395-007
Method Blank	K1007395-MB

Comments:

Approved By: _____ **Date:** 8/13/10

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/16/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/17/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-06-3 **Lab Code:** K1007395-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.19		
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	4.7		
Barium	6020	0.05	1.0	08/04/10	08/05/10	53.7		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Calcium	6010B	50	1.0	08/04/10	08/05/10	199000		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	2.1		
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	1.70		
Copper	6020	0.1	1.0	08/04/10	08/05/10	1.3		
Iron	6010B	20	1.0	08/04/10	08/05/10	99		
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.10		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	22500		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	2.67		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	1.4		
Potassium	6010B	400	1.0	08/04/10	08/05/10	14200		
Selenium	6020	1.0	1.0	08/04/10	08/05/10	1.4		
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	59000		
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	7.370		
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	3.3		
Zinc	6020	0.5	1.0	08/04/10	08/05/10	5.3		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/17/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/20/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-06-1 **Lab Code:** K1007395-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.26		
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	4.9		
Barium	6020	0.05	1.0	08/04/10	08/05/10	63.9		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.04		
Calcium	6010B	50	1.0	08/04/10	08/05/10	245000		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.2		
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	0.29		
Copper	6020	0.1	1.0	08/04/10	08/05/10	4.0		
Iron	6010B	20	1.0	08/04/10	08/05/10	66		
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.16		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	49800		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	1.91		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	3.7		
Potassium	6010B	400	1.0	08/04/10	08/05/10	15800		
Selenium	6020	1.0	1.0	08/04/10	08/05/10	1.4		
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	53900		
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	39.6		
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	3.0		
Zinc	6020	0.5	1.0	08/04/10	08/05/10	7.8		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/17/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/20/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-02-3 **Lab Code:** K1007395-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.16		
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	11.2		
Barium	6020	0.05	1.0	08/04/10	08/05/10	25.1		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Calcium	6010B	50	1.0	08/04/10	08/05/10	285000		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.3		
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	1.17		
Copper	6020	0.1	1.0	08/04/10	08/05/10	2.8		
Iron	6010B	20	1.0	08/04/10	08/05/10	104		
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.20		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	42000		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	1.83		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	4.3		
Potassium	6010B	400	1.0	08/04/10	08/05/10	14200		
Selenium	6020	1.0	1.0	08/04/10	08/05/10	9.4		
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	76500		
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	14.0		
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	4.2		
Zinc	6020	0.5	1.0	08/04/10	08/05/10	8.2		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/17/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/20/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-82-3 **Lab Code:** K1007395-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.17		
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	11.3		
Barium	6020	0.05	1.0	08/04/10	08/05/10	25.0		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Calcium	6010B	50	1.0	08/04/10	08/05/10	294000		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.4		
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	1.15		
Copper	6020	0.1	1.0	08/04/10	08/05/10	2.9		
Iron	6010B	20	1.0	08/04/10	08/05/10	89		
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.20		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	42700		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	1.74		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	4.7		
Potassium	6010B	400	1.0	08/04/10	08/05/10	14400		
Selenium	6020	1.0	1.0	08/04/10	08/05/10	9.3		
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	79200		
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	13.9		
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	4.1		
Zinc	6020	0.5	1.0	08/04/10	08/05/10	8.5		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/18/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/20/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-06-2 **Lab Code:** K1007395-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.15		
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	11.0		
Barium	6020	0.05	1.0	08/04/10	08/05/10	32.9		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Calcium	6010B	50	1.0	08/04/10	08/05/10	327000		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.3		
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	1.00		
Copper	6020	0.1	1.0	08/04/10	08/05/10	1.7		
Iron	6010B	20	1.0	08/04/10	08/05/10	46		
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.14		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	51000		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	0.99		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	7.7		
Potassium	6010B	400	1.0	08/04/10	08/05/10	17400		
Selenium	6020	1.0	1.0	08/04/10	08/05/10	17.4		
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	83500		
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	9.950		
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	3.9		
Zinc	6020	0.5	1.0	08/04/10	08/05/10	5.8		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/18/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/20/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-60-12 **Lab Code:** K1007395-006

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.05	U	
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	0.5	U	
Barium	6020	0.05	1.0	08/04/10	08/05/10	0.58		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Calcium	6010B	50	1.0	08/04/10	08/05/10	119		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.2	U	
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Copper	6020	0.1	1.0	08/04/10	08/05/10	0.2		
Iron	6010B	20	1.0	08/04/10	08/05/10	20	U	
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.04		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	23		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	0.13		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	0.7		
Potassium	6010B	400	1.0	08/04/10	08/05/10	400	U	
Selenium	6020	1.0	1.0	08/04/10	08/05/10	1.0	U	
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	100	U	
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	0.020	U	
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	0.2	U	
Zinc	6020	0.5	1.0	08/04/10	08/05/10	2.6		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	07/18/10
Project Name:	Rhodia Silver Bow	**Date Received:**	07/20/10
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: MW-02-4 **Lab Code:** K1007395-007

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.14		
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	20.5		
Barium	6020	0.05	1.0	08/04/10	08/05/10	34.0		
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02		
Calcium	6010B	50	1.0	08/04/10	08/05/10	314000		
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.2	U	
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	0.52		
Copper	6020	0.1	1.0	08/04/10	08/05/10	2.2		
Iron	6010B	20	1.0	08/04/10	08/05/10	145		
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.18		
Magnesium	6010B	20	1.0	08/04/10	08/05/10	50600		
Manganese	6020	0.05	1.0	08/04/10	08/05/10	2.07		
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	4.0		
Potassium	6010B	400	1.0	08/04/10	08/05/10	16500		
Selenium	6020	1.0	1.0	08/04/10	08/05/10	1.0	U	
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/05/10	80600		
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	30.0		
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	5.5		
Zinc	6020	0.5	1.0	08/04/10	08/05/10	6.1		

% Solids: 0.0

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Date Collected:**	
Project Name:	Rhodia Silver Bow	**Date Received:**	
Matrix:	WATER	**Units:**	ug/L
		Basis:	N/A

Sample Name: Method Blank **Lab Code:** K1007395-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020	0.05	1.0	08/04/10	08/05/10	0.05	U	
Arsenic	6020	0.5	1.0	08/04/10	08/05/10	0.5	U	
Barium	6020	0.05	1.0	08/04/10	08/05/10	0.05	U	
Beryllium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Cadmium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Calcium	6010B	50	1.0	08/04/10	08/06/10	50	U	
Chromium	6020	0.2	1.0	08/04/10	08/05/10	0.2	U	
Cobalt	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Copper	6020	0.1	1.0	08/04/10	08/05/10	0.1	U	
Iron	6010B	20	1.0	08/04/10	08/06/10	20	U	
Lead	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Magnesium	6010B	20	1.0	08/04/10	08/06/10	20	U	
Manganese	6020	0.05	1.0	08/04/10	08/05/10	0.05	U	
Mercury	7470A	0.2	1.0	07/22/10	07/23/10	0.2	U	
Nickel	6020	0.2	1.0	08/04/10	08/05/10	0.2	U	
Potassium	6010B	400	1.0	08/04/10	08/06/10	400	U	
Selenium	6020	1.0	1.0	08/04/10	08/05/10	1.0	U	
Silver	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Sodium	6010B	100	1.0	08/04/10	08/06/10	100	U	
Thallium	6020	0.02	1.0	08/04/10	08/05/10	0.02	U	
Uranium	6020	0.020	1.0	08/04/10	08/05/10	0.020	U	
Vanadium	6020	0.2	1.0	08/04/10	08/05/10	0.2	U	
Zinc	6020	0.5	1.0	08/04/10	08/05/10	0.5	U	

% Solids: 0.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	25.0	24.3	97	25.0	25.1	100	24.9	100	6020
Arsenic	25.0	24.5	98	25.0	25.1	100	25.1	100	6020
Barium	100.0	102.0	102	25.0	25.1	100	24.9	100	6020
Beryllium	2.50	2.53	101	25.00	25.22	101	25.58	102	6020
Cadmium	12.5	12.5	100	25.0	25.0	100	24.9	100	6020
Calcium	5000	5122	102	2500	2499	100	2487	99	6010B
Calcium	12500	12695	102	25000	25548	102	25893	104	6010B
Chromium	10.0	9.7	97	25.0	24.9	100	25.0	100	6020
Cobalt	25.0	24.4	98	25.0	24.6	98	25.0	100	6020
Copper	12.5	12.1	97	25.0	24.5	98	24.8	99	6020
Iron	2500	2437	97	500	499	100	505	101	6010B
Iron	10000	9905	99	25000	25108	100	25186	101	6010B
Lead	25.0	24.5	98	25.0	24.9	100	25.1	100	6020
Magnesium	5000	5009	100	2000	1992	100	1989	99	6010B
Magnesium	12500	12582	101	25000	25158	101	25310	101	6010B
Manganese	25.00	24.8	99	25.00	25.0	100	25.1	100	6020
Mercury	5.00	5.40	108	5.00	5.20	104	5.20	104	7470A
Nickel	25.0	24.4	98	25.0	25.0	100	25.2	101	6020
Potassium	12500	12688	102	10000	10066	101	9925	99	6010B
Selenium	25.0	24.9	100	25.0	25.7	103	25.1	100	6020
Silver	12.5	12.6	101	25.0	25.0	100	24.9	100	6020
Sodium	12500	12076	97	10000	9828	98	9684	97	6010B
Thallium	25.0	24.7	99	25.0	24.9	100	25.1	100	6020
Uranium	25.00	25.0	100	25.00	24.9	100	25.2	101	6020
Vanadium	25.0	24.8	99	25.0	24.9	100	25.0	100	6020
Zinc	25.0	23.6	94	25.0	24.8	99	24.9	100	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.1	100	24.9	100	6020
Arsenic				25.0	24.9	100	24.6	98	6020
Barium				25.0	24.9	100	24.8	99	6020
Beryllium				25.00	25.27	101	25.64	103	6020
Cadmium				25.0	25.2	101	24.9	100	6020
Calcium				2500	2546	102	2626	105	6010B
Calcium				25000	25963	104	25820	103	6010B
Chromium				25.0	25.0	100	24.7	99	6020
Cobalt				25.0	24.7	99	24.5	98	6020
Copper				25.0	24.5	98	24.2	97	6020
Iron				500	530	106	550	110	6010B
Iron				25000	25402	102	24866	99	6010B
Lead				25.0	25.1	100	25.0	100	6020
Magnesium				2000	2048	102	2073	104	6010B
Magnesium				25000	25535	102	25491	102	6010B
Manganese				25.00	25.2	101	25.1	100	6020
Mercury				5.00	5.20	104	5.30	106	7470A
Nickel				25.0	24.7	99	24.7	99	6020
Potassium				10000	10072	101	10205	102	6010B
Selenium				25.0	25.5	102	24.6	98	6020
Silver				25.0	25.0	100	24.9	100	6020
Sodium				10000	9898	99	9801	98	6010B
Thallium				25.0	24.9	100	24.8	99	6020
Uranium				25.00	25.2	101	25.0	100	6020
Vanadium				25.0	25.0	100	24.7	99	6020
Zinc				25.0	25.1	100	24.6	98	6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony				25.0	25.1	100			6020
Arsenic				25.0	25.0	100			6020
Barium				25.0	25.0	100			6020
Beryllium				25.00	25.86	103			6020
Cadmium				25.0	25.3	101			6020
Calcium				2500	2481	99	2528	101	6010B
Calcium				25000	25693	103	25409	102	6010B
Chromium				25.0	24.8	99			6020
Cobalt				25.0	24.7	99			6020
Copper				25.0	24.3	97			6020
Iron				500	477	95	488	98	6010B
Iron				25000	25044	100	24429	98	6010B
Lead				25.0	25.1	100			6020
Magnesium				2000	1970	98	1985	99	6010B
Magnesium				25000	24934	100	24947	100	6010B
Manganese				25.00	25.3	101			6020
Mercury				5.00	5.20	104	5.20	104	7470A
Nickel				25.0	24.8	99			6020
Potassium				10000	9895	99	9976	100	6010B
Selenium				25.0	24.7	99			6020
Silver				25.0	25.1	100			6020
Sodium				10000	9608	96	9482	95	6010B
Thallium				25.0	24.9	100			6020
Uranium				25.00	25.2	101			6020
Vanadium				25.0	25.0	100			6020
Zinc				25.0	24.8	99			6020

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				2500	2584	103			6010B
Calcium				25000	25237	101			6010B
Iron				500	491	98			6010B
Iron				25000	24418	98			6010B
Magnesium				2000	2011	101			6010B
Magnesium				25000	25018	100			6010B
Mercury				5.00	5.30	106			7470A
Potassium				10000	10116	101			6010B
Sodium				10000	9525	95			6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium	5000	5129	103	2500	2504	100	2514	101	6010B
Calcium	12500	12616	101	25000	25130	101	26179	105	6010B
Iron	2500	2428	97	500	489	98	494	99	6010B
Iron	10000	9687	97	25000	24536	98	25352	101	6010B
Magnesium	5000	5001	100	2000	1987	99	1991	100	6010B
Magnesium	12500	12511	100	25000	24989	100	25231	101	6010B
Potassium	12500	12671	101	10000	10019	100	9922	99	6010B
Sodium	12500	12104	97	10000	9649	96	9665	97	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICV Source: Inorganic Ventures CCV Source: CAS MIXED

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					Method
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Calcium				2500	2530	101			6010B
Calcium				25000	26734	107			6010B
Iron				500	494	99			6010B
Iron				25000	24796	99			6010B
Magnesium				2000	1990	100			6010B
Magnesium				25000	25194	101			6010B
Potassium				10000	9791	98			6010B
Sodium				10000	9523	95			6010B

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				0.05	0.05	100		
Arsenic				0.50	0.55	110		
Barium				0.05	0.05	100		
Beryllium				0.02	0.02	100		
Cadmium				0.02	0.02	100		
Calcium				50.0	26.1	52		
Chromium				0.20	0.18	90		
Cobalt				0.02	0.02	100		
Copper				0.1	0.10	100		
Iron				20.0	9.7	48		
Lead				0.02	0.02	100		
Magnesium				20.0	15.9	80		
Manganese				0.05	0.0968	194		
Mercury				0.20	0.20	100		
Nickel				0.20	0.24	120		
Potassium				400.0	388.4	97		
Selenium				1.00	0.88	88		
Silver				0.02	0.02	100		
Sodium				200.0	185.2	93		
Thallium				0.02	0.02	100		
Uranium				0.02	0.02	100		
Vanadium				0.20	0.19	95		
Zinc				0.5	0.5	100		

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			CRDL Standard for ICP Final	
	True	Found	%R	True	Found	%R	Found	%R
Calcium				50.0	38.5	77		
Iron				20.0	13.6	68		
Magnesium				20.0	16.3	82		
Potassium				400.0	384.5	96		
Sodium				200.0	173.6	87		

Metals

- 3 -

BLANKS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony	0.05	U	0.05	U	0.05	U	0.05	U	6020
Arsenic	0.5	U	0.5	U	0.5	U	0.5	U	6020
Barium	0.05	U	0.05	U	0.05	U	0.05	U	6020
Beryllium	0.02	U	0.02	U	0.02	U	0.02	U	6020
Cadmium	0.02	U	0.02	U	0.02	U	0.02	U	6020
Calcium	50	U	50	U	50	U	50	U	6010B
Chromium	0.2	U	0.2	U	0.2	U	0.2	U	6020
Cobalt	0.02	U	0.02	U	0.02	U	0.02	U	6020
Copper	0.1	U	0.1	U	0.1	U	0.1	U	6020
Iron	20	U	20	U	20	U	20	U	6010B
Lead	0.02	U	0.02	U	0.02	U	0.02	U	6020
Magnesium	20	U	20	U	20	U	20	U	6010B
Manganese	0.05	U	0.05	U	0.05	U	0.05	U	6020
Mercury	0.20	U	0.20	U	0.20	U	0.20	U	7470A
Nickel	0.2	U	0.2	U	0.2	U	0.2	U	6020
Potassium	400	U	400	U	400	U	400	U	6010B
Selenium	1.0	U	1.0	U	1.0	U	1.0	U	6020
Silver	0.02	U	0.02	U	0.02	U	0.02	U	6020
Sodium	100	U	100	U	100	U	100	U	6010B
Thallium	0.02	U	0.02	U	0.02	U	0.02	U	6020
Uranium	0.020	U	0.020	U	0.020	U	0.020	U	6020
Vanadium	0.2	U	0.2	U	0.2	U	0.2	U	6020
Zinc	0.5	U	0.5	U	0.5	U	0.5	U	6020

Metals

- 3 -

BLANKS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Antimony			0.05	U	0.05	U			6020
Arsenic			0.5	U	0.5	U			6020
Barium			0.05	U	0.05	U			6020
Beryllium			0.02	U	0.02	U			6020
Cadmium			0.02	U	0.02	U			6020
Calcium			50	U	50	U	50	U	6010B
Chromium			0.2	U	0.2	U			6020
Cobalt			0.02	U	0.02	U			6020
Copper			0.1	U	0.1	U			6020
Iron			20	U	20	U	20	U	6010B
Lead			0.02	U	0.02	U			6020
Magnesium			20	U	20	U	20	U	6010B
Manganese			0.05	U	0.05	U			6020
Mercury			0.20	U	0.20	U	0.20	U	7470A
Nickel			0.2	U	0.2	U			6020
Potassium			400	U	400	U	400	U	6010B
Selenium			1.0	U	1.0	U			6020
Silver			0.02	U	0.02	U			6020
Sodium			100	U	100	U	100	U	6010B
Thallium			0.02	U	0.02	U			6020
Uranium			0.020	U	0.020	U			6020
Vanadium			0.2	U	0.2	U			6020
Zinc			0.5	U	0.5	U			6020

Metals

- 3 -

BLANKS

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Calcium			50	U					6010B
Iron			20	U					6010B
Magnesium			20	U					6010B
Mercury			0.20	U	0.20	U			7470A
Potassium			400	U					6010B
Sodium			100	U					6010B

Metals

- 3 -

BLANKS

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Concentration Units: ug/L

Analyte	Initial Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Method
Calcium	50	U	50	U	50	U	50	U	6010B
Iron	20	U	20	U	20	U	20	U	6010B
Magnesium	20	U	20	U	20	U	20	U	6010B
Potassium	400	U	400	U	400	U	400	U	6010B
Sodium	100	U	100	U	100	U	100	U	6010B

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-MS-03 ICS Source: Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	0.00		0.03	0.04				
Arsenic	0.00	25.00	-0.05	24.11	96			
Barium	0.00		0.25	0.24				
Beryllium	0.00		0.00	0.00				
Cadmium	0.00	25.00	0.29	24.91	100			
Chromium	0.00	50.00	0.46	48.81	98			
Cobalt	0.00	50.00	0.76	47.91	96			
Copper		50	1	46	92			
Lead	0.00		0.06	0.06				
Manganese	0.00	50.00	1.94	50.74	101			
Nickel	0.00	50.00	1.07	47.62	95			
Selenium	0.00	25.00	-0.30	23.16	93			
Silver	0.00	12.50	0.11	11.68	93			
Thallium	0.00		0.03	0.03				
Uranium				0.00				
Vanadium	0.00	50.00	-0.01	48.93	98			
Zinc		25	0	23	92			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Calcium	500000	500000	487084	492767.2	98.6			
Iron	200000	200000	195324	196538.3	98.3			
Magnesium	500000	500000	514767	506594.3	101.3			
Potassium			5	-66.3				
Sodium			97	36.8				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Matrix: WATER

Service Request: K1007395

Units: UG/L

Basis: N/A

% Solids: 0.0

Sample Name: MW-06-2S

Lab Code: K1007395-005S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	66 - 133	20.4		0.15		20.00	101.2		6020
Arsenic	72 - 129	30.3		11.0		20.00	96.5		6020
Barium	86 - 117	52.1		32.9		20.00	96.0		6020
Beryllium	73 - 125	18.8		0.02	U	20.00	94.0		6020
Cadmium	87 - 113	19.8		0.02	U	20.00	98.9		6020
Calcium		345000		327000		10000.00	180.0		6010B
Chromium	76 - 115	18.8		0.3		20.00	92.5		6020
Cobalt	84 - 115	19.4		1.00		20.00	92.0		6020
Copper	74 - 114	19.5		1.7		20.00	89.0		6020
Iron	72 - 131	1000		46		1000.00	95.4		6010B
Lead	76 - 117	19.0		0.14		20.00	94.3		6020
Magnesium		61600		51000		10000.00	106.0		6010B
Manganese	25 - 180	20.1		0.99		20.00	95.6		6020
Mercury	76 - 126	1.00		0.2	U	1.00	100.0		7470A
Nickel	78 - 117	25.6		7.7		20.00	89.5		6020
Potassium	75 - 125	27500		17400		10000.00	101.0		6010B
Selenium	58 - 131	35.6		17.4		20.00	91.0		6020
Silver	76 - 114	19.3		0.02	U	20.00	96.5		6020
Sodium		92700		83500		10000.00	92.0		6010B
Thallium	86 - 108	18.9		0.02	U	20.00	94.5		6020
Uranium	75 - 125	29.9		9.950		20.00	99.8		6020
Vanadium	82 - 119	22.7		3.9		20.00	94.0		6020
Zinc	65 - 126	22.6		5.8		20.00	84.0		6020

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-AES-02 **ICS Source:** Inorganic Ventures

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Calcium	500000	500000	506457	483154.6	96.6			
Iron	200000	200000	200885	196147.5	98.1			
Magnesium	500000	500000	506936	503941.2	100.8			
Potassium			-52	-69.4				
Sodium			104	45.8				

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company

Service Request: K1007395

Project No.: 2646006.17-GW10-100

Units: UG/L

Project Name: Rhodia Silver Bow

Basis: N/A

Matrix: WATER

Sample Name: Batch QC1A

Lab Code: K1006741-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Manganese	75 - 125	21.06		0.15		20.0	105		6020

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: Barr Engineering Company

Service Request: K1007395

Project No.: 2646006.17-GW10-100

Units: UG/L

Project Name: Rhodia Silver Bow

Basis: N/A

Matrix: WATER

Sample Name: Batch QC2A

Lab Code: K1006963-003A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	21.01		0.13		20.0	104		6020
Arsenic	75 - 125	21.21		0.50	U	20.0	106		6020
Barium	75 - 125	180.91		165.29		20.0	78		6020
Beryllium	75 - 125	20.53		0.02	U	20.0	103		6020
Cadmium	75 - 125	20.41		0.02	U	20.0	102		6020
Chromium	75 - 125	20.12		0.20	U	20.0	101		6020
Cobalt	75 - 125	21.90		1.92		20.0	100		6020
Copper	75 - 125	20.44		0.51		20.0	100		6020
Lead	75 - 125	20.15		0.13		20.0	100		6020
Nickel	75 - 125	22.61		2.55		20.0	100		6020
Selenium	75 - 125	20.70		1.00	U	20.0	104		6020
Silver	75 - 125	9.74		0.02	U	10.0	97		6020
Thallium	75 - 125	19.86		0.02	U	20.0	99		6020
Uranium	75 - 125	20.97		0.48		20.0	102		6020
Vanadium	75 - 125	20.70		0.24		20.0	102		6020
Zinc	75 - 125	23.80		3.22		20.0	103		6020

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client:	Barr Engineering Company	**Service Request:**	K1007395
Project No.:	2646006.17-GW10-100	**Units:**	UG/L
Project Name:	Rhodia Silver Bow	**Basis:**	N/A
Matrix:	WATER		

Sample Name: MW-06-2A **Lab Code:** K1007395-005A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	85 - 115	1.10		0.20	U	1.00	110.0		7470A

Metals

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DUPLICATES

Client: Barr Engineering Company

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Matrix: WATER

Service Request: K1007395

Units: UG/L

Basis: N/A

% Solids: 0.0

Sample Name: MW-06-2D

Lab Code: K1007395-005D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.15		0.15		0.0		6020
Arsenic	20	11.0		11.1		0.9		6020
Barium	20	32.9		32.6		0.9		6020
Beryllium		0.02	U	0.02	U			6020
Cadmium		0.02	U	0.02		200.0		6020
Calcium	20	327000		329000		0.6		6010B
Chromium		0.3		0.3		0.0		6020
Cobalt	20	1.00		0.98		2.0		6020
Copper	20	1.7		1.7		0.0		6020
Iron		46		43		6.7		6010B
Lead	20	0.14		0.14		0.0		6020
Magnesium	20	51000		50100		1.8		6010B
Manganese	20	0.99		0.89		10.6		6020
Mercury		0.2	U	0.2	U			7470A
Nickel	20	7.7		7.6		1.3		6020
Potassium	20	17400		16900		2.9		6010B
Selenium	20	17.4		17.3		0.6		6020
Silver		0.02	U	0.02	U			6020
Sodium	20	83500		80500		3.7		6010B
Thallium		0.02	U	0.02	U			6020
Uranium	20	9.950		9.840		1.1		6020
Vanadium	20	3.9		3.9		0.0		6020
Zinc	20	5.8		4.8		18.9		6020

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Aqueous LCS Source: CAS MIXED **Solid LCS Source:**

Analyte	Aqueous: ug/L			Solid: mg/kg				
	True	Found	%R	True	Found	C	Limits	%R
Antimony	20	20.2	101.0					
Arsenic	20	19.7	98.5					
Barium	20	20.1	100.5					
Beryllium	20	19.7	98.5					
Cadmium	20	20.3	101.5					
Calcium	12500	12900	103.2					
Chromium	20	20.1	100.5					
Cobalt	20	20.0	100.0					
Copper	20	19.8	99.0					
Iron	2500	2490	99.6					
Lead	20	19.9	99.5					
Magnesium	12500	12800	102.4					
Manganese	20	20.0	100.0					
Mercury	5	5.10	102.0					
Nickel	20	20.0	100.0					
Potassium	12500	12800	102.4					
Selenium	20	19.8	99.0					
Silver	20	20.0	100.0					
Sodium	12500	12400	99.2					
Thallium	20	19.9	99.5					
Uranium	20	20.0	100.0					
Vanadium	20	20.0	100.0					
Zinc	20	19.6	98.0					

Metals

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company

Service Request: K1007395

Project No.: 2646006.17-GW10-100

Units: UG/L

Project Name: Rhodia Silver Bow

Sample Name: Batch QC1L

Lab Code: K1006963-003L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.13		0.25	U	100.0		MS
Arsenic	0.50	U	2.50	U			MS
Barium	165.29		162.03		2		MS
Beryllium	0.02	U	0.10	U			MS
Cadmium	0.02	U	0.10	U			MS
Chromium	0.20	U	1.00	U			MS
Cobalt	1.92		1.89		2		MS
Copper	0.51		0.63		24		MS
Lead	0.13		0.25		92		MS
Manganese	931.56		939.42		1		MS
Nickel	2.55		2.67		5		MS
Selenium	1.00	U	5.00	U			MS
Silver	0.02	U	0.10	U			MS
Thallium	0.02	U	0.10	U			MS
Uranium	0.48		0.46		4		MS
Vanadium	0.24		1.00	U	100.0		MS
Zinc	3.22		8.25		156		MS

Metals

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ICP SERIAL DILUTIONS

Client: Barr Engineering Company

Service Request: K1007395

Project No.: 2646006.17-GW10-100

Units: UG/L

Project Name: Rhodia Silver Bow

Sample Name: MW-06-2L

Lab Code: K1007395-005L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Calcium	326736.60		311975.50		4.5		P
Iron	45.85		100.00	U	100.0		P
Magnesium	51024.99		50807.00		0.4		P
Potassium	17394.28		17475.45		0.5		P
Sodium	83476.27		81615.00		2.2		P

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP/ICP-MS ID #: K-ICP-AES-02

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Calcium	211.2		50	50	P
Iron	259.90		20	20	P
Magnesium	202.5		20	20	P
Potassium	766.49		400	400	P
Sodium	330.23		100	100	P

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP/ICP-MS ID #: K-ICP-MS-03

GFAA ID #: AA ID #:

Analyte	Isotope	Back-ground	MRL ug/L	MDL ug/L	M
Antimony	123		0.05	0.05	MS
Arsenic	75		0.5	0.5	MS
Barium	137		0.05	0.05	MS
Beryllium	9		0.02	0.02	MS
Cadmium	111		0.02	0.02	MS
Chromium	52		0.2	0.2	MS
Cobalt	59		0.02	0.02	MS
Copper	65		0.1	0.1	MS
Lead	208		0.02	0.02	MS
Manganese	55		0.1	0.1	MS
Nickel	60		0.20	0.20	MS
Selenium	82		1.0	1.0	MS
Silver	107		0.02	0.02	MS
Thallium	205		0.02	0.02	MS
Uranium	238		0.02	0.02	MS
Vanadium	51		0.2	0.2	MS
Zinc	66		0.5	0.5	MS

Comments:

Metals

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DETECTION LIMITS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP/ICP-MS ID #:

GFAA ID #: AA ID #:

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.7		0.20	0.20	CV

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	As
Aluminum	308.215	0.0000000	0.0000000	-0.0004100	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	-0.0001100	-0.0000900	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0005800	0.0000000	0.0000000
Cadmium	228.802	0.0000000	0.0000000	0.0000900	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000200	0.0000000	0.0000000
Copper	324.754	0.0000000	0.0000000	-0.0000200	0.0000000	0.0000000
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0001200	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000100	0.0000000	-0.0000100	-0.0000100	0.0000000
Nickel	231.604	0.0000000	0.0000000	-0.0000700	0.0000000	0.0000000
Phosphorus	214.9	-0.0002000	0.0000000	0.0004400	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0000600	0.0000000	-0.0000600	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0001100	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0001900	-0.0000900	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0000400	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	-0.0000100	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Co	Cr	Cu	Mn	Mo
Aluminum	308.215	-0.0052000	-0.0034300	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0002400	0.0080100	0.0000000	-0.0001500	-0.0184200
Arsenic	189.042	0.0000000	0.0004000	0.0000000	0.0000000	0.0005700
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000800
Beryllium	313.042	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.678	0.0000000	-0.0001000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000500	0.0000000	0.0000000	0.0000000	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.616	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006000
Copper	324.754	0.0000000	-0.0000500	0.0000000	0.0000000	0.0002700
Iron	271.4	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0003800	-0.0002100	0.0000000	0.0000000	-0.0016500
Magnesium	202.5	0.3183600	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0001200	0.0000000	0.0000000	-0.0000900	0.0000000
Nickel	231.604	0.0000700	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0010100	-0.0810500	0.0000000	0.0038000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0003600	-0.0003700	0.0000000	0.0000000	0.0000000
Silicon	228.158	0.0000000	0.0000000	0.0000000	-0.0026300	0.0090100
Silver	328.068	0.0000000	0.0000800	0.0000000	0.0000000	-0.0005600
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0073700	0.0000000	0.0000000	0.0000000	0.0000000
Tin	189.989	-0.0002500	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	-0.0000900	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	-0.0012600	0.0000000	0.0000000	-0.0001000

Comments:

Metals

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ICP INTERELEMENT CORRECTION FACTORS

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-AES-02

Analyte	Wave-length (nm)	Interelement Correction Factors for: Ni	P	Ti	V
Aluminum	308.215	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.838	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	-0.0014400
Beryllium	313.042	0.0000000	0.0000000	-0.0000200	0.0016600
Boron	249.678	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.802	-0.0000900	0.0000000	0.0000500	0.0000000
Calcium	211.2	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000200	0.0000000	0.0000000
Cobalt	228.616	0.0001300	0.0000000	0.0012500	0.0000000
Copper	324.754	0.0000000	0.0000000	0.0000000	-0.0008400
Iron	271.4	0.0000000	0.0000000	0.0000000	-0.0315100
Lead	220.353	0.0003800	0.0000000	-0.0006200	0.0000000
Magnesium	202.5	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	293.9	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	-0.0000500	0.0000000	0.0000000	0.0000000
Nickel	231.604	0.0000000	0.0000000	0.0000000	0.0000000
Phosphorus	214.9	0.0000000	0.0000000	0.0000000	-0.0020400
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.026	-0.0007900	0.0000000	0.0000000	0.0004900
Silicon	228.158	0.0000000	0.0000000	0.0753200	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0007300	0.0000000
Sodium	588.995	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	421.552	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.864	0.0000000	0.0000000	-0.0015400	0.0000000
Tin	189.989	0.0000000	0.0000000	-0.0015800	0.0000000
Titanium	334.941	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	213.856	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

Metals
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ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-MS-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Antimony	15.000	2000	6020
Arsenic	15.000	2000	6020
Barium	15.000	2000	6020
Beryllium	15.000	2000	6020
Cadmium	15.000	2000	6020
Chromium	15.000	2000	6020
Cobalt	15.000	2000	6020
Copper	15.000	2000	6020
Lead	15.000	2000	6020
Manganese	15.000	2000	6020
Nickel	15.000	2000	6020
Selenium	15.000	2000	6020
Silver	15.000	2000	6020
Thallium	15.000	2000	6020
Uranium	15.000	2000	6020
Vanadium	15.000	1000	6020
Zinc	15.000	2000	6020

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

ICP ID Number: K-ICP-AES-02

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium	5.000	1800000	6010B
Iron	5.000	900000	6010B
Magnesium	5.000	900000	6010B
Potassium	5.000	450000	6010B
Sodium	5.000	180000	6010B

Comments:

Metals
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PREPARATION LOG

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Method: ~~MS~~ CV

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1007395-001	07/22/10	20.0	20.0
K1007395-002	07/22/10	20.0	20.0
K1007395-003	07/22/10	20.0	20.0
K1007395-004	07/22/10	20.0	20.0
K1007395-005	07/22/10	20.0	20.0
K1007395-005D	07/22/10	20.0	20.0
K1007395-005S	07/22/10	20.0	20.0
K1007395-006	07/22/10	20.0	20.0
K1007395-007	07/22/10	20.0	20.0
K1007395-MB	07/22/10	20.0	20.0
LCSW	07/22/10	20.0	20.0

Metals
-13-
PREPARATION LOG

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Method: MS

Sample ID	Preparation Date	Initial Volume	Final Volume (mL)
K1007395-001	08/04/10	50.0	50.0
K1007395-002	08/04/10	50.0	50.0
K1007395-003	08/04/10	50.0	50.0
K1007395-004	08/04/10	50.0	50.0
K1007395-005	08/04/10	50.0	50.0
K1007395-005D	08/04/10	50.0	50.0
K1007395-005S	08/04/10	50.0	50.0
K1007395-006	08/04/10	50.0	50.0
K1007395-007	08/04/10	50.0	50.0
K1007395-MB	08/04/10	50.0	50.0
LCSW	08/04/10	50.0	50.0

Metals
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PREPARATION LOG

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Method: P

Sample ID	Preparation Date	Initial Volume	Final Volume(mL)
K1007395-001	08/04/10	50.0	50.0
K1007395-002	08/04/10	50.0	50.0
K1007395-003	08/04/10	50.0	50.0
K1007395-004	08/04/10	50.0	50.0
K1007395-005	08/04/10	50.0	50.0
K1007395-005D	08/04/10	50.0	50.0
K1007395-005S	08/04/10	50.0	50.0
K1007395-006	08/04/10	50.0	50.0
K1007395-007	08/04/10	50.0	50.0
K1007395-MB	08/04/10	50.0	50.0
LCSW	08/04/10	50.0	50.0

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company Service Request: K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-AES-02 Method: P

Start Date: 08/05/10 End Date: 08/05/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1	14:56								X				X		X				X			X				
STDB	1	14:59								X				X		X				X			X				
STDA	1	15:02								X				X		X											
ICV1	1	15:05								X				X		X				X			X				
ICV1	1	15:08								X				X		X											
ICB1	1	15:11								X				X		X				X			X				
CCV1	1	15:14								X				X		X				X			X				
CCV1	1	15:17								X				X		X											
CCB1	1	15:20								X				X		X				X			X				
ZZZZZZ	1	15:23																									
CRA1	1	15:33								X				X		X				X			X				
ICS-A1	1	15:37								X				X		X				X			X				
ICS-AB1	1	15:40								X				X		X				X			X				
ZZZZZZ	1	15:43																									
CCV2	1	15:46								X				X		X				X			X				
CCV2	1	15:49								X				X		X											
CCB2	1	15:52								X				X		X				X			X				
ZZZZZZ	1	15:55																									
ZZZZZZ	1	15:58																									
ZZZZZZ	1	16:01																									
ZZZZZZ	1	16:04																									
ZZZZZZ	1	16:07																									
ZZZZZZ	5	16:10																									
ZZZZZZ	1	16:13																									
ZZZZZZ	1	16:16																									
ZZZZZZ	1	16:18																									
ZZZZZZ	1	16:21																									
CCV3	1	16:24								X				X		X				X			X				
CCV3	1	16:27								X				X		X											
CCB3	1	16:30								X				X		X				X			X				
ZZZZZZ	1	16:33																									
ZZZZZZ	1	16:36																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 08/05/10 **End Date:** 08/05/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	16:39																												
ZZZZZZ	1	16:42																												
ZZZZZZ	1	16:45																												
ZZZZZZ	1	16:48																												
ZZZZZZ	1	16:51																												
ZZZZZZ	1	16:54																												
ZZZZZZ	1	16:57																												
ZZZZZZ	1	17:00																												
CCV4	1	17:03								X				X		X				X			X							
CCV4	1	17:06								X				X		X														
CCB4	1	17:09								X				X		X				X			X							
ZZZZZZ	1	17:17																												
ZZZZZZ	1	17:20																												
ZZZZZZ	1	17:23																												
ZZZZZZ	1	17:26																												
ZZZZZZ	1	17:29																												
ZZZZZZ	1	17:32																												
ZZZZZZ	1	17:35																												
ZZZZZZ	1	17:38																												
ZZZZZZ	1	17:41																												
ZZZZZZ	1	17:44																												
CCV5	1	17:47								X				X		X				X			X							
CCV5	1	17:49								X				X		X														
CCB5	1	17:52								X				X		X				X			X							
ZZZZZZ	1	17:56																												
ZZZZZZ	1	17:58																												
ZZZZZZ	1	18:01																												
LCSW	1	18:04								X				X		X				X			X							
ZZZZZZ	1	18:07																												
ZZZZZZ	1	18:10																												
K1007395-001	1	18:13								X				X		X				X			X							
K1007395-002	1	18:16								X				X		X				X			X							

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 08/05/10 **End Date:** 08/05/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
K1007395-003	1	18:19								X				X		X				X			X				
K1007395-004	1	18:22								X				X		X				X			X				
CCV6	1	18:25								X				X		X				X			X				
CCV6	1	18:28								X				X		X											
CCB6	1	18:31								X				X		X				X			X				
K1007395-005	1	18:34								X				X		X				X			X				
K1007395-005L	5	18:37								X				X		X				X			X				
K1007395-005D	1	18:40								X				X		X				X			X				
K1007395-005S	1	18:43								X				X		X				X			X				
K1007395-006	1	18:46								X				X		X				X			X				
K1007395-007	1	18:50								X				X		X				X			X				
ZZZZZZ	1	18:53																									
ZZZZZZ	1	18:56																									
ZZZZZZ	1	18:59																									
ZZZZZZ	1	19:02																									
CCV7	1	19:05								X				X		X				X			X				
CCV7	1	19:08								X				X		X											
CCB7	1	19:11								X				X		X				X			X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 08/05/10 **End Date:** 08/05/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
Cal. Blk	1	10:59			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
Cal. Stn	1	11:03			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ICV1	1	11:09			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCV1	1	11:15			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ICB1	1	11:20			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCB1	1	11:25			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CRA1	1	11:30			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ICS-A1	1	11:34			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		
ICS-AB1	1	11:41			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-MB	1	11:47			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
LCSW	1	11:52			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ZZZZZZ	1	11:57																												
ZZZZZZ	1	12:02																												
K1006963-003L	5	12:06			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1006963-003A	1	12:11			X	X	X	X	X		X	X	X		X				X		X	X		X	X	X		*
ZZZZZZ	1	12:16																												
CCV2	1	12:22			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCB2	1	12:32			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ZZZZZZ	1	12:37																												
ZZZZZZ	1	12:42																												
ZZZZZZ	1	12:47																												
ZZZZZZ	1	12:51																												
ZZZZZZ	1	12:56																												
ZZZZZZ	1	13:01																												
ZZZZZZ	1	13:05																												
ZZZZZZ	1	13:10																												
ZZZZZZ	1	13:15																												
ZZZZZZ	1	13:19																												
CCV3	1	13:24			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCB3	1	13:29			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ZZZZZZ	1	13:34																												
ZZZZZZ	1	13:39																												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-MS-03 **Method:** MS

Start Date: 08/05/10 **End Date:** 08/05/10

Sample No.	D/F	Time	% R	Analytes																												
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	
K1007395-005	1	13:46			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-005D	1	13:51			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-005S	1	13:56			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-001	1	14:02			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-002	1	14:07			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-003	1	14:12			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-004	1	14:17			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-006	1	14:22			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCV4	1	14:33			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCB4	1	14:39			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
K1007395-007	1	14:44			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
ZZZZZZ	1	14:49																														
K1006741-001A	1	14:54															X															
ZZZZZZ	1	14:58																														
CCV5	1	15:05			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*
CCB5	1	15:11			X	X	X	X	X		X	X	X		X		X		X		X	X		X	X	X		*

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-MS-03 Method: MS
Start Date: 08/05/10 End Date: 08/05/10

Sample No.	D/F	Time	% R	B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U
Cal. Blk	1.00	10:59															X
Cal. Stn	1.00	11:03															X
ICV1	1.00	11:09															X
CCV1	1.00	11:15															X
ICB1	1.00	11:20															X
CCB1	1.00	11:25															X
CRA1	1.00	11:30															X
ICS-A1	1.00	11:34															
ICS-AB1	1.00	11:41															X
K1007395-MB	1.00	11:47															X
LCSW	1.00	11:52															X
ZZZZZZ	1.00	11:57															
ZZZZZZ	1.00	12:02															
K1006963-003L	5.00	12:06															X
K1006963-003A	1.00	12:11															X
ZZZZZZ	1.00	12:16															
CCV2	1.00	12:22															X
CCB2	1.00	12:32															X
ZZZZZZ	1.00	12:37															
ZZZZZZ	1.00	12:42															
ZZZZZZ	1.00	12:47															
ZZZZZZ	1.00	12:51															
ZZZZZZ	1.00	12:56															
ZZZZZZ	1.00	13:01															
ZZZZZZ	1.00	13:05															
ZZZZZZ	1.00	13:10															
ZZZZZZ	1.00	13:15															
ZZZZZZ	1.00	13:19															
CCV3	1.00	13:24															X
CCB3	1.00	13:29															X
ZZZZZZ	1.00	13:34															
ZZZZZZ	1.00	13:39															
K1007395-005	1.00	13:46															X
K1007395-005D	1.00	13:51															X

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-MS-03 Method: MS

Start Date: 08/05/10 End Date: 08/05/10

Sample No.	D/F	Time	% R	Analytes																							
				B	AU	LI	MO	OS	PD	P	PT	SI	S	SN	SR	TI	U										
K1007395-005S	1.00	13:56															X										
K1007395-001	1.00	14:02															X										
K1007395-002	1.00	14:07															X										
K1007395-003	1.00	14:12															X										
K1007395-004	1.00	14:17															X										
K1007395-006	1.00	14:22															X										
CCV4	1.00	14:33															X										
CCB4	1.00	14:39															X										
K1007395-007	1.00	14:44															X										
ZZZZZZ	1.00	14:49																									
K1006741-001A	1.00	14:54																									
ZZZZZZ	1.00	14:58																									
CCV5	1.00	15:05															X										
CCB5	1.00	15:11															X										

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-ICP-AES-02 **Method:** P

Start Date: 08/06/10 **End Date:** 08/06/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Blank	1	10:48								X				X		X				X			X				
STDB	1	10:51								X				X		X				X			X				
STDA	1	10:54								X				X		X											
ICV2	1	10:57								X				X		X				X			X				
ICV2	1	11:00								X				X		X											
ICB2	1	11:03								X				X		X				X			X				
CCV1	1	11:06								X				X		X				X			X				
CCV1	1	11:09								X				X		X											
CCB1	1	11:12								X				X		X				X			X				
CRA2	1	11:15								X				X		X				X			X				
ICS-A2	1	11:18								X				X		X				X			X				
ICS-AB2	1	11:22								X				X		X				X			X				
ZZZZZZ	1	11:25																									
CCV2	1	11:28								X				X		X				X			X				
CCV2	1	11:31								X				X		X											
CCB2	1	11:34								X				X		X				X			X				
K1007395-MB	1	11:37								X				X		X				X			X				
ZZZZZZ	1	11:40																									
ZZZZZZ	1	11:43																									
ZZZZZZ	1	11:46																									
ZZZZZZ	1	11:49																									
ZZZZZZ	1	11:52																									
ZZZZZZ	1	11:55																									
ZZZZZZ	1	11:58																									
ZZZZZZ	1	12:02																									
ZZZZZZ	1	12:05																									
CCV3	1	12:08								X				X		X				X			X				
CCV3	1	12:11								X				X		X											
CCB3	1	12:14								X				X		X				X			X				

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 07/23/10 **End Date:** 07/23/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CalibrationBlank	1	11:55																X									
Standard#1	1	11:57																X									
Standard#2	1	11:58																X									
Standard#3	1	12:00																X									
Standard#4	1	12:02																X									
Standard#5	1	12:03																X									
ICV1	1	12:05																X									
ICB1	1	12:07																X									
CRA1	1	12:08																X									
CCV1	1	12:10																X									
CCB1	1	12:11																X									
ZZZZZZ	1	12:13																									
ZZZZZZ	1	12:15																									
ZZZZZZ	1	12:16																									
ZZZZZZ	1	12:18																									
ZZZZZZ	1	12:19																									
ZZZZZZ	1	12:21																									
ZZZZZZ	1	12:27																									
ZZZZZZ	1	12:28																									
ZZZZZZ	1	12:30																									
ZZZZZZ	1	12:32																									
CCV2	1	12:33																X									
CCB2	1	12:35																X									
ZZZZZZ	1	12:36																									
ZZZZZZ	1	12:38																									
ZZZZZZ	1	12:40																									
ZZZZZZ	1	12:41																									
ZZZZZZ	1	12:43																									
ZZZZZZ	1	12:44																									
ZZZZZZ	1	12:46																									
ZZZZZZ	1	12:48																									
ZZZZZZ	1	12:49																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 07/23/10 **End Date:** 07/23/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	12:51																												
CCV3	1	12:53																X												
CCB3	1	12:54																X												
ZZZZZZ	1	12:56																												
ZZZZZZ	1	12:57																												
ZZZZZZ	1	12:59																												
ZZZZZZ	1	13:01																												
ZZZZZZ	1	13:02																												
ZZZZZZ	1	13:10																												
ZZZZZZ	1	13:12																												
ZZZZZZ	1	13:13																												
ZZZZZZ	1	13:15																												
ZZZZZZ	1	13:16																												
CCB4	1	13:18																X												
CCB4	1	13:20																X												
ZZZZZZ	1	13:21																												
ZZZZZZ	1	13:23																												
ZZZZZZ	1	13:24																												
ZZZZZZ	1	13:26																												
ZZZZZZ	1	13:28																												
ZZZZZZ	1	13:29																												
ZZZZZZ	1	13:31																												
ZZZZZZ	1	13:33																												
ZZZZZZ	1	13:34																												
ZZZZZZ	1	13:36																												
CCV4	1	13:37																X												
CCB5	1	13:39																X												
ZZZZZZ	1	13:41																												
ZZZZZZ	1	13:42																												
ZZZZZZ	1	13:44																												
ZZZZZZ	1	13:45																												
ZZZZZZ	1	13:47																												

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Metals
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ANALYSIS RUN LOG

Client: Barr Engineering Company **Service Request:** K1007395

Project No.: 2646006.17-GW10-100

Project Name: Rhodia Silver Bow

Instrument ID Number: K-CVAA-02 **Method:** CV

Start Date: 07/23/10 **End Date:** 07/23/10

Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN			
ZZZZZZ	1	13:49																												
ZZZZZZ	1	13:50																												
ZZZZZZ	1	13:52																												
ZZZZZZ	1	13:54																												
ZZZZZZ	1	13:55																												
CCV5	1	13:57																X												
CCB6	1	13:58																X												
ZZZZZZ	1	14:00																												
ZZZZZZ	1	14:02																												
ZZZZZZ	1	14:03																												
ZZZZZZ	1	14:05																												
ZZZZZZ	1	14:06																												
ZZZZZZ	1	14:08																												
ZZZZZZ	1	14:10																												
K1007395-MB	1	14:14																X												
LCSW	1	14:16																X												
K1007395-001	1	14:18																X												
CCV6	1	14:19																X												
CCB7	1	14:21																X												
K1007395-002	1	14:22																X												
K1007395-003	1	14:24																X												
K1007395-004	1	14:26																X												
K1007395-005	1	14:27																X												
K1007395-005A	1	14:29																X												
K1007395-005D	1	14:30																X												
K1007395-005S	1	14:32																X												
K1007395-006	1	14:34																X												
K1007395-007	1	14:35																X												
ZZZZZZ	1	14:37																												
CCV7	1	14:39																X												
CCB8	1	14:40																X												

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 116781
Team: Metals
Analyst: JJones

Prep Workflow: MetDigAqICP
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: NPDES

Status: Prepped
Current Step: Digestion

Prep Date: 08/04/2010 18:15
Due Date: 07/24/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007887-03	Method Blank		50 mL	50 mL			Metals T	1%HNO3, 5%HCl
KQ1007887-04	Lab Control Sample		50 mL	50 mL	0.25 mL 0.25 mL 0.25 mL 0.5 mL	12778 14972 18109 18980	Metals T	1%HNO3, 5%HCl
K1006922-001	L3a 070610	.04	50 mL	50 mL			Metals D	1%HNO3, 5%HCl
K1006922-001	L3a 070610	.03	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-001	MW-06-3	.11	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-002	MW-06-1	.11	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-003	MW-02-3	.12	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-004	MW-82-3	.11	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-005	MW-06-2	.22	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-005: KQ1007887-05	Duplicate	.22	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-005: KQ1007887-01	Matrix Spike	.22	50 mL	50 mL	0.5 mL 0.5 mL 0.5 mL 0.5 mL	18837 18980 19543 19813	Metals T	1%HNO3, 5%HCl
K1007395-006	MW-60-12	.10	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007395-007	MW-02-4	.10	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007632-001	INF. 7-21	.03	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1007632-002	EFF. 7-21	.03	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1008002-002	WW/Effluent	.02	50 mL	50 mL			Metals T	1%HNO3, 5%HCl
K1008003-001	Olequa Creek	.01	50 mL	50 mL			Metals T	1%HNO3, 5%HCl

16 Total Samples consisting of 12 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET QCP-CICV-1	Spike	18109	6/1/2011	K-MET SS3	Spike	18837	12/1/2010
K-MET QCP-CICV-2	Spike	12778	12/1/2010	K-MET SS4	Spike	18980	12/16/2010

K-MET QCP-CICV-3	Spike	14972	1/28/2011	K-MET SS5	Spike	19543	2/25/2011
K-MET SS1	Spike	19813	9/1/2010				

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850	Digestion	K-MET HNO3	18888
Digestion	K-MET HCL	18676			

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-05	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	04-AUG-10 18:15	04-AUG-10 20:15	JJones		N	

Comments

Review

Reviewed by: _____ Date: 8/5/10

METALS SPIKING SOLUTIONS CONCENTRATIONS FORM

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added
K-MET SS1	HNO3	50.0	1000ml	-	0.50
	Al	100*	1000ml	200	
	Ag	100*	1000ml	5	
	Ba	100*	1000ml	200	
	Be	100*	1000ml	5	
	Cd	100*	1000ml	5	
	Co	100*	1000ml	50	
	Cr	100*	1000ml	20	
	Cu	100*	1000ml	25	
	Fe	100*	1000ml	100	
	Pb	100*	1000ml	50	
	Mn	100*	1000ml	50	
	Ni	100*	1000ml	50	
	Sb	50	1000ml	50	
	V	100*	1000ml	50	
	Zn	100*	1000ml	50	
K-MET SS2	HNO3	25.0	500ml	-	
	As	2.0	500ml	4	
	Cd	2.0	500ml	4	
	Pb	2.0	500ml	4	
	Se	2.0	500ml	4	
	Tl	2.0	500ml	4	
	Cu	2.0	500ml	4	
K-MET SS3	HNO3	25.0	500ml	-	0.50
	As	50.0	500ml	100	
	Se	50.0	500ml	100	
	Tl	50.0	500ml	100	
K-MET SS4	HNO3	25	500ml	-	0.50
	B	50	500ml	100	
	Mo	50	500ml	100	
K-MET SS5	HNO3	10.0	200ml	-	0.50
	K**	20	200ml	1000	
	Na**	20	200ml	1000	
	Mg**	20	200ml	1000	
	Ca**	20	200ml	1000	

K-MET GFLCSW	HNO3	10.0	1000ml	-	
	As, Pb, Se, Tl	5.0	1000ml	2.5	
	Cd	-	-	1.25	
	Cu	2.5	1000ml	2.5	
K-MET QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500	0.25
	Al, Ba	no dilution	-	1000	
	Fe	no dilution	-	500	
	Co, Mn, Ni, V, Zn	no dilution	-	250	
	Cu, Ag	no dilution	-	125	
	Cr	no dilution	-	100	
	Be	no dilution	-	25	
K-MET QCP-CICV-2	Sb	no dilution	-	500	0.25
K-MET QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500	0.25
	Cd	no dilution	-	250	

* Denotes volume of mixed stock standard.

** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 116780
Team: Metals
Analyst: JJones

Prep Workflow: MetDigAqMS
Prep Method: EPA CLP-METALS ILM04.0
Rush/NPDES: NPDES

Status: Prepped
Current Step: Digestion

Prep Date: 08/04/2010 18:15
Due Date: 07/17/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007884-07	Method Blank		50 mL	50 mL			Metals T	1%HNO3 Ultrex
KQ1007884-08	Lab Control Sample		50 mL	50 mL	1 mL 1 mL	11605 19309	Metals T	1%HNO3 Ultrex
K1006741-001	LPR-062910-RB	.01	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1006922-001	L3a 070610	.04	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1006922-001	L3a 070610	.03	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1006948-001	351139106382910	.05	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1006949-001	352237106300810	.05	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1006963-003	TW0246	.09	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1006963-003: KQ1007884-03	Duplicate	.09	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1006963-003: KQ1007884-04	Matrix Spike	.09	50 mL	50 mL	1 mL 1 mL	11605 19309	Metals T	1%HNO3 Ultrex
K1006966-001	350405106402110	.05	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1006999-001	350411106392610	.11	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1007003-001	350243106420810	.08	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1007004-001	350304106412910	.08	50 mL	50 mL			Metals D	1%HNO3 Ultrex
K1007279-010	Rinsate-071510	.06	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-001	MW-06-3	.11	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-002	MW-06-1	.11	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-003	MW-02-3	.12	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-004	MW-82-3	.11	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-005	MW-06-2	.22	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-005: KQ1007884-05	Duplicate	.22	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007395-005: KQ1007884-01	Matrix Spike	.22	50 mL	50 mL	1 mL 1 mL	11605 19309	Metals T	1%HNO3 Ultrex
K1007395-006	MW-60-12	.10	50 mL	50 mL			Metals T	1%HNO3 Ultrex

K1007395-007	MW-02-4	.10	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007632-001	INF. 7-21	.03	50 mL	50 mL			Metals T	1%HNO3 Ultrex
K1007632-002	EFF. 7-21	.03	50 mL	50 mL			Metals T	1%HNO3 Ultrex

25 Total Samples consisting of 19 Client Samples, 4 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET 200.8 1000ug/L Stock	Spike	19309	1/5/2011	K-MET Ag 1000 ppb Stock	Spike	11605	8/17/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET 50ml Centrifuge Tube	16850	Digestion	K-MET HNO3 ULTREX	19688

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-05	Temperature	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	04-AUG-10 18:15	04-AUG-10 20:15	JJones		N	

Comments

Review

Reviewed by: _____ Date: 8/5/10

CVAA Mercury Data Review Form

K-CVAA-02

Element: Hg

Analysis Lot #: 209678

Cal. STD/CCV Source: HG1-93-Y

Service Request Numbers:

K1007431, k1007635, K1007279, K1007348, K1007366, K1007399, K1007395, K1007451, K1007291, K1007391

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments: K1007348 postspike #7/23/10 =119%, K1007399-005=75%
K1007451 #5 dissolved=0.55ppb total=0.02ppb,
K1007291 postspike=120%, K1007291 postspike=119%
Redigest + all samples

Data reviewed against service request(s) to ensure no samples were omitted: MS (initials)

Primary Reviewed By: MAS Date: 7/23/10

Secondary Reviewed By: JDB Date: 7/26/10

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K1007431, k1007635, K1007279, K1007348, K1007366, K1007399, K1007395, K1007451, K1007291, K1007391
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.40			108%
2	ICB1	~	~	~	0.00			< 0.2
3	CRA1	~	~	~	0.20			100%
4	CCV1	~	~	~	5.20			104%
5	CCB1	~	~	~	0.00			< 0.2
6	K1007431MB	20	20	~	0.00			0.00
7	LCSW K1007431	20	20	~	5.30			106%
8	K1007431-001	20	20	~	0.01			0.01
9	K1007431-002	20	20	~	0.01			0.01
10	K1007431-002A	20	20	~	1.10	109%		
11	K1007431-002D	20	20	~	0.01			0.01
12	K1007431-003	20	20	~	0.01			0.01
13	K1007431-003S	20	20	~	1.10			109%
14	K1007431-004	20	20	~	0.01			0.01
15	K1007431-005	20	20	~	0.01			0.01
16	CCV2	~	~	~	5.20			104%
17	CCB2	~	~	~	0.01			< 0.2
18	K1007431-006	20	20	~	0.01			0.01
19	K1007431-001 DISS	20	20	~	0.01			0.01
20	K1007431-002 DISS	20	20	~	0.01			0.01
21	K1007431-003 DISS	20	20	~	0.01			0.01
22	K1007434-004 DISS	20	20	~	0.01			0.01
23	K1007431-005 DISS	20	20	~	0.01			0.01
24	K1007431-006 DISS	20	20	~	0.01			0.01
25	K1007635-001	20	20	~	0.01			0.01

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level: x @ 5 µg/L

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
	7/23/10	1

[Water july23] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K1007635-002	20	20	~	0.01			0.01
27	K1007635-003	20	20	~	0.00			0.00
28	CCV3	~	~	~	5.20			104%
29	CCB3	~	~	~	0.00			< 0.2
30	K1007635-004	20	20	~	0.01			0.01
31	K1007635-001 DISS	20	20	~	0.01			0.01
32	K1007635-002 DISS	20	20	~	0.01			0.01
33	K1007635-003 DISS	20	20	~	0.01			0.01
34	K1007635-004 DISS	20	20	~	0.00			0.00
35	K1007279-MB	20	20	~	0.00			0.00
36	LCSW K1007279	20	20	~	5.30			106%
37	K1007279-010	20	20	~	0.00			0.00
38	K1007279-010A	20	20	~	1.10	110%		
39	K1007279-010D	20	20	~	0.00			0.00
40	CCB4	~	~	~	5.30			106%
41	CCB4	~	~	~	-0.01			< 0.2
42	K1007279-010S	20	20	~	1.10			110%
43	K1007348-001	20	20	~	0.01			0.01
44	K1007348-002	20	20	~	0.01			0.01
45	K1007348-003	20	20	~	0.01			0.01
46	K1007348-004	20	20	~	0.01			0.01
47	K1007348-004D	20	20	~	0.02			0.02
48	K1007348-004S	20	20	~	1.00			99%
49	K1007348-005	20	20	~	0.01			0.01
50	K1007348-006	20	20	~	0.01			0.01

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa Smith	7/23/10	2

[Water july23] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	K1007348-001 DISS	20	20	~	0.01			0.01
52	CCV5	~	~	~	5.30			106%
53	CCB5	~	~	~	0.00			< 0.2
54	K1007348-002 DISS	20	20	~	0.01			0.01
55	K1007348-003 DISS	20	20	~	0.01			0.01
56	K1007348-004 DISS	20	20	~	0.01			0.01
57	K1007348-004D DISS	20	20	~	0.01			0.01
58	K1007348-004S DISS	20	20	~	1.10			109%
59	K1007348-005 DISS	20	20	~	0.01			0.01
60	K1007348-006 DISS	20	20	~	0.00			0.00
61	K1007366-014	20	20	~	0.01			0.01
62	K1007366-023	20	20	~	0.00			0.00
63	K1007399-001	20	20	~	0.24	0.32		0.32
64	CCV6	~	~	~	5.20			104%
65	CCB6	~	~	~	0.00			< 0.2
66	K1007399-001D	20	20	~	0.25	0.29		0.29
67	K1007399-001S	20	20	~	0.93	1.07		75%
68	K1007399-002	20	20	~	0.03	0.03		0.03
69	K1007399-001 DISS	20	20	~	0.26	0.35		0.35
70	K1007399-001D DISS	20	20	~	0.25	0.33		0.33
71	K1007399-001S DISS	20	20	~	0.97	1.17		82%
72	K1007399-002 DISS	20	20	~	0.04	0.03		0.03
73	K1007395-MB	20	20	~	0.03			0.03
74	LCSW K1007395	20	20	~	5.10			102%
75	K1007395-001	20	20	~	0.01			0.01

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa Ash	7/23/10	3

[Water july23] HG3.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
76	CCV7	~	~	~	5.20			104%
77	CCB7	~	~	~	0.00			< 0.2
78	K1007395-002	20	20	~	0.02			0.02
79	K1007395-003	20	20	~	0.01			0.01
80	K1007395-004	20	20	~	0.01			0.01
81	K1007395-005	20	20	~	0.01			0.01
82	K1007395-005A	20	20	~	1.10	109%		
83	K1007395-005D	20	20	~	0.01			0.01
84	K1007395-005S	20	20	~	0.97			96%
85	K1007395-006	20	20	~	0.03			0.03
86	K1007395-007	20	20	~	0.05			0.05
87	K1007451-001	20	20	~	0.01			0.01
88	CCV8	~	~	~	5.30			106%
89	CCB8	~	~	~	0.00			< 0.2
90	K1007451-002	20	20	~	0.03			0.03
91	K1007451-003	20	20	~	0.01			0.01
92	K1007451-004	20	20	~	0.09			0.09
93	K1007451-005	20	20	~	0.02			0.02
94	K1007451-001 DISS	20	20	~	0.00			0.00
95	K1007451-002 DISS	20	20	~	0.01			0.01
96	K1007451-003 DISS	20	20	~	0.01			0.01
97	K1007451-004 DISS	20	20	~	0.05			0.05
98	K1007451-005 DISS	20	20	~	0.55			0.55
99	~~K1007291-MB~~	~~20~~	~~20~~	~	~~0.12~~ wrong tubes			
100	CCV9	~	~	~	5.30			106%

Comments: Reporting Levels:
Soil/Tissue Spike Level:
Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	7/23/10	4

[Water july23] HG4.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
101	CCB9	~	~	~	0.00			< 0.2
102	~~LCSW K1007291~~	~~20~~	~~20~~	~~~~	~~0.05~~			
103	~~K1007291-001~~	~~20~~	~~20~~	~~~~	~~0.11~~			
104	~~K1007291-001A~~	~~20~~	~~20~~	~~~~	~~0.02~~	wrong		
105	~~K1007291-001S~~	~~20~~	~~20~~	~~~~	~~0.00~~	tubes		
106	~~K1007291-001SD~~	~~20~~	~~20~~	~~~~	~~0.12~~			
107	~~K1007391-003~~	~~20~~	~~20~~	~~~~	~~0.13~~	MS		
108	~~K1007391-004~~	~~20~~	~~20~~	~~~~	~~0.12~~	7/23/10		
109	~~K1007391-004S~~	~~20~~	~~20~~	~~~~	~~0.12~~			
110	~~K1007391-004SD~~	~~20~~	~~20~~	~~~~	~~0.11~~			
111	~~K1007391-005~~	~~20~~	~~20~~	~~~~	~~0.12~~			
112	CCV10	~	~	~	5.30			106%
113	CCB10	~	~	~	-0.01			< 0.2
114	~~K1007391-006~~	~~20~~	~~20~~	~~~~	~~0.12~~	MS		
115	~~K1007391-007~~	~~20~~	~~20~~	~~~~	~~0.11~~	7/23/10		
116	K1007291-MB	20	20	~	0.01			0.01
117	LCSW K1007291	20	20	~	5.30			106%
118	K1007291-001	20	20	~	0.01			0.01
119	K1007291-001A	20	20	~	1.20	119%		
120	K1007291-001S	20	20	~	0.99			98%
121	K1007291-001SD	20	20	~	1.00			99%
122	K1007391-003	20	20	~	0.02			0.02
123	K1007391-004	20	20	~	0.01			0.01
124	CCV11	~	~	~	5.10			102%
125	CCB11	~	~	~	0.01			< 0.2

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	7/23/10	5

[Water july23] HG5.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
126	K1007391-004S	20	20	~	1.10			109%
127	K1007391-004SD	20	20	~	1.10			109%
128	K1007391-005	20	20	~	0.01			0.01
129	K1007391-006	20	20	~	0.01			0.01
130	K1007391-007	20	20	~	0.00			0.00
131	K1007391-009	20	20	~	0.02			0.02
132	K1007391-010	20	20	~	0.01			0.01
133	K1007391-010S	20	20	~	1.10			109%
134	K1007391-010SD	20	20	~	1.10			109%
135	K1007391-012	20	20	~	0.00			0.00
136	CCV12	~	~	~	5.10			102%
137	CCB12	~	~	~	0.00			< 0.2
138	K1007391-013	20	20	~	0.01			0.01
139	K1007391-010A	20	20	~	1.20			120%
140	POST SPIKE	20	20	~	0.94			
141	POST SPIKE	20	20	~	1.20	Prepared w/MB Sol.		
142	K1007399-001A	20	20	~	1.00	76%		
143	K1007399-001DA	20	20	~	1.10	85%		
144	K1007399-001SA	20	20	~	1.80	87%		
145	K1007399-002A	20	20	~	1.20	117%		
146	K1007399-001A DISS	20	20	~	1.00	74%		
147	K1007399-001DA DISS	20	20	~	1.00	75%		
148	CCV13	~	~	~	5.20			104%
149	CCB13	~	~	~	0.04			< 0.2
150	K1007399-001SA DISS	20	20	~	1.80	83%		

Comments: Reporting Levels:

Soil/Tissue Spike Level:

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa Acosta	7/23/10	6

[Water july23] HG6.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:_____
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : Batch #3
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	MSA Calculated (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	K1007399-002A DISS	20	20	~	1.20	116%		
2	K1007348-004A MS 7/23/10	20	20	~	1.20	119%		
3	K1007451-005 DISS	20	20	~	0.57			0.57
4	K1007451-005	20	20	~	0.04			0.04
5	NH2OH-HCL #J07600	20	20	~	0.78			0.78
6	CCV14	~	~	~	5.20			104%
7	CCB14	~	~	~	0.00			< 0.2
8								
9								
10								
11								
12								
13								
14								
15				MS 7/23/10				
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

Comments: Reporting Levels:
Soil/Tissue Spike Level:
Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	83-117%	76-126%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-130%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	6.80 mg/kg	0.02 mg/kg	72-128%	60-130%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-130%	60-130%	30%

Analyst:	Date:	Page Number:
[signature]	7/23/10	7

[Water july23] HG7.XLS

Columbia Analytical Services K-CVAA-02

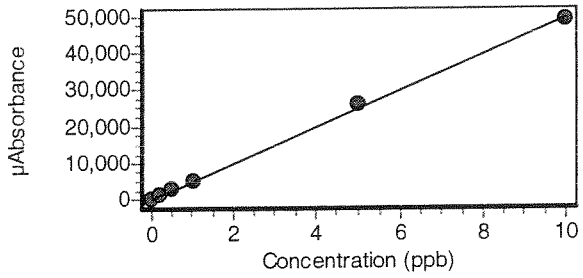
Report Generated By CETAC QuickTrace
Analyst: ACQMET18
Worksheet file: C:\Program Files\QuickTrace\Worksheets\Hg 072310A.wsz
Date Started: 7/23/2010 11:47:32 AM
Comment:

Results

Sample Name					Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
Calibration Blank					STD	07/23/10 11:55:45 am	0.00	77	26.60	
Replicates	88.0	65.0	100.9	56.0						
Standard #1					STD	07/23/10 11:57:21 am	0.20	1056	2.61	
Replicates	1061.5	1071.6	1015.0	1074.1						
Standard #2					STD	07/23/10 11:58:58 am	0.50	2613	3.07	
Replicates	2721.3	2626.6	2558.1	2546.6						
Standard #3					STD	07/23/10 12:00:35 pm	1.00	4958	0.29	
Replicates	4972.5	4968.2	4944.7	4947.0						
Standard #4					STD	07/23/10 12:02:13 pm	5.00	25820	1.45	
Replicates	26335.5	25602.7	25493.4	25849.2						
Standard #5					STD	07/23/10 12:03:52 pm	10.00	48721	1.14	
Replicates	49494.1	48748.0	48364.2	48278.2						

Calibration

Equation: A = 77.495 + 4921.164C
R2: 0.99904
SEE: 735.4160
Flags:



ICV1					ICV	07/23/10 12:05:31 pm	5.40	26582	1.36	
Replicates	26153.4	26410.9	26851.6	26911.5						
% Recovery	107.72									

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
ICB1				ICB	07/23/10 12:07:06 pm	0.00	57	24.47	
Replicates	68.9	45.1	69.1	44.6					
CRA1				CRDL	07/23/10 12:08:42 pm	0.20	1075	2.22	
Replicates	1045.3	1065.0	1095.2	1092.7					
% Recovery	101.30								
CCV1				CCV	07/23/10 12:10:20 pm	5.20	25487	0.12	
Replicates	25441.5	25508.5	25506.2	25492.7					
% Recovery	103.27								
CCB1				CCB	07/23/10 12:11:56 pm	0.00	98	13.12	
Replicates	97.3	90.0	88.5	116.5					
K1007431MB				MB	07/23/10 12:13:32 pm	0.00	89	36.26	
Replicates	115.6	42.7	92.9	105.2					
LCSW K1007431				LCS	07/23/10 12:15:08 pm	5.30	26055	0.38	
Replicates	25951.5	26121.6	26155.0	25992.8					
% Recovery	105.58								
K1007431-001				UNK	07/23/10 12:16:44 pm	0.01	114	16.74	
Replicates	140.6	102.8	97.9	115.0					
K1007431-002				UNK	07/23/10 12:18:20 pm	0.01	126	7.94	
Replicates	120.2	123.2	140.3	118.7					
K1007431-002A				SPK	07/23/10 12:19:57 pm	1.10	5699	0.22	
Replicates	5700.5	5714.5	5684.0	5695.6					
% Recovery	113.25								
K1007431-002D				DUP	07/23/10 12:21:34 pm	0.01	131	17.17	D
Replicates	129.1	156.6	102.2	137.1					
		RPD 0.00							
K1007431-003				UNK	07/23/10 12:27:08 pm	0.01	127	25.17	
Replicates	128.0	93.0	170.0	118.4					
K1007431-003S				UNK	07/23/10 12:28:46 pm	1.10	5529	0.78	
Replicates	5580.0	5548.6	5503.6	5485.4					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007431-004				UNK	07/23/10 12:30:24 pm	0.01	108	6.62	
Replicates	107.8	118.1	105.0	101.5					
K1007431-005				UNK	07/23/10 12:32:02 pm	0.01	128	27.46	
Replicates	161.7	125.7	144.5	80.1					
CCV2				CCV	07/23/10 12:33:40 pm	5.20	25652	0.06	
Replicates	25667.0	25658.2	25650.1	25631.2					
% Recovery	103.94								
CCB2				CCB	07/23/10 12:35:15 pm	0.01	123	18.70	
Replicates	117.0	92.9	144.8	135.6					
K1007431-006				UNK	07/23/10 12:36:54 pm	0.01	111	21.37	
Replicates	104.0	108.1	87.3	143.6					
K1007431-001 DISS				UNK	07/23/10 12:38:33 pm	0.01	130	16.07	
Replicates	138.1	155.0	112.2	112.8					
K1007431-002 DISS				UNK	07/23/10 12:40:08 pm	0.01	118	4.21	
Replicates	115.6	120.6	111.7	122.7					
K1007431-003 DISS				UNK	07/23/10 12:41:43 pm	0.01	151	16.96	
Replicates	136.4	132.1	147.3	188.2					
K1007434-004 DISS				UNK	07/23/10 12:43:19 pm	0.01	107	13.90	
Replicates	88.7	124.7	108.9	104.0					
K1007431-005 DISS				UNK	07/23/10 12:44:55 pm	0.01	118	11.76	
Replicates	137.0	117.1	110.5	105.6					
K1007431-006 DISS				UNK	07/23/10 12:46:32 pm	0.01	135	28.11	
Replicates	148.1	175.3	84.9	131.4					
K1007635-001				UNK	07/23/10 12:48:08 pm	0.01	144	13.23	
Replicates	134.6	172.3	136.8	132.0					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007635-002				UNK	07/23/10 12:49:45 pm	0.01	108	18.42	
Replicates	127.3	103.5	82.0	118.8					
K1007635-003				UNK	07/23/10 12:51:22 pm	0.00	95	25.41	
Replicates	125.4	93.0	66.2	96.2					
CCV3				CCV	07/23/10 12:53:00 pm	5.20	25651	0.15	
Replicates	25666.1	25613.9	25627.5	25697.0					
% Recovery	103.93								
CCB3				CCB	07/23/10 12:54:36 pm	0.00	65	40.79	
Replicates	101.1	44.2	66.7	46.4					
K1007635-004				UNK	07/23/10 12:56:13 pm	0.01	131	15.73	
Replicates	146.4	101.2	143.0	134.6					
K1007635-001 DISS				UNK	07/23/10 12:57:51 pm	0.01	120	4.35	
Replicates	114.8	126.6	121.7	117.1					
K1007635-002 DISS				UNK	07/23/10 12:59:29 pm	0.01	108	9.63	
Replicates	115.8	94.1	115.9	105.3					
K1007635-003 DISS				UNK	07/23/10 01:01:08 pm	0.01	116	9.45	
Replicates	102.0	121.9	112.9	126.9					
K1007635-004 DISS				UNK	07/23/10 01:02:43 pm	0.00	91	19.61	
Replicates	89.4	107.9	98.9	66.5					
K1007279-MB				MB	07/23/10 01:10:29 pm	0.00	94	6.52	
Replicates	84.9	97.1	98.3	94.6					
LCSW K1007279				LCS	07/23/10 01:12:05 pm	5.30	26261	0.23	
Replicates	26218.1	26229.2	26248.9	26349.6					
% Recovery	106.41								
K1007279-010				UNK	07/23/10 01:13:41 pm	0.00	65	51.75	
Replicates	105.8	61.0	69.5	23.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007279-010A				SPK	07/23/10 01:15:17 pm	1.10	5481	2.34	
Replicates	5320.5	5434.9	5584.9	5584.9					
% Recovery	110.06								
K1007279-010D				UNK	07/23/10 01:16:54 pm	0.00	101	22.90	
Replicates	93.5	102.6	75.9	131.1					
CCB4				CCV	07/23/10 01:18:32 pm	5.30	26247	1.93	
Replicates	26848.6	26472.3	25927.0	25739.9					
% Recovery	106.35								
CCB4				CCB	07/23/10 01:20:08 pm	-0.01	47	43.50	
Replicates	64.3	63.3	23.2	36.4					
K1007279-010S				UNK	07/23/10 01:21:44 pm	1.10	5353	1.42	
Replicates	5270.2	5316.3	5383.4	5443.2					
K1007348-001				UNK	07/23/10 01:23:22 pm	0.01	146	18.80	
Replicates	154.4	140.9	110.8	176.1					
K1007348-002				UNK	07/23/10 01:24:59 pm	0.01	110	21.74	
Replicates	123.3	134.5	100.7	80.9					
K1007348-003				UNK	07/23/10 01:26:37 pm	0.01	140	12.49	
Replicates	114.8	142.1	151.5	152.1					
K1007348-004				UNK	07/23/10 01:28:15 pm	0.01	139	10.47	
Replicates	123.5	147.5	154.7	130.3					
K1007348-004D				UNK	07/23/10 01:29:53 pm	0.02	157	13.44	
Replicates	141.5	188.3	148.7	149.9					
K1007348-004S				UNK	07/23/10 01:31:29 pm	1.00	5212	0.47	
Replicates	5205.9	5229.3	5233.0	5180.5					
K1007348-005				UNK	07/23/10 01:33:05 pm	0.01	139	11.38	
Replicates	147.9	120.5	130.9	155.2					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007348-006				UNK	07/23/10 01:34:41 pm	0.01	136	16.27	
Replicates	140.6	114.5	165.4	124.6					
K1007348-001 DISS				UNK	07/23/10 01:36:17 pm	0.01	131	13.76	
Replicates	150.6	108.7	139.0	125.8					
CCV5				CCV	07/23/10 01:37:55 pm	5.30	26006	1.66	
Replicates	26601.7	26044.7	25693.7	25683.2					
% Recovery	105.37								
CCB5				CCB	07/23/10 01:39:30 pm	0.00	93	32.17	
Replicates	113.0	63.3	124.2	72.1					
K1007348-002 DISS				UNK	07/23/10 01:41:07 pm	0.01	132	4.20	
Replicates	138.7	129.0	134.5	126.3					
K1007348-003 DISS				UNK	07/23/10 01:42:43 pm	0.01	123	15.28	
Replicates	119.7	101.2	147.0	124.7					
K1007348-004 DISS				UNK	07/23/10 01:44:20 pm	0.01	130	7.50	
Replicates	129.6	136.9	137.7	116.6					
K1007348-004D DISS				UNK	07/23/10 01:45:57 pm	0.01	128	5.84	
Replicates	127.4	133.5	118.3	134.6					
K1007348-004S DISS				UNK	07/23/10 01:47:35 pm	1.10	5563	0.76	
Replicates	5521.1	5619.6	5567.8	5541.8					
K1007348-005 DISS				UNK	07/23/10 01:49:13 pm	0.01	106	14.13	
Replicates	104.1	119.7	85.7	114.4					
K1007348-006 DISS				UNK	07/23/10 01:50:51 pm	0.00	92	23.41	
Replicates	121.6	91.6	85.7	70.1					
K1007366-014				UNK	07/23/10 01:52:29 pm	0.01	107	9.93	
Replicates	107.8	92.0	115.0	114.1					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007366-023				UNK	07/23/10 01:54:05 pm	0.00	98	9.15	
Replicates	101.4	109.5	91.8	90.3					
K1007399-001				UNK	07/23/10 01:55:41 pm	0.24	1273	1.60	
Replicates	1275.6	1269.7	1249.2	1298.7					
CCV6				CCV	07/23/10 01:57:19 pm	5.20	25546	0.20	
Replicates	25566.2	25520.3	25491.1	25605.5					
% Recovery	103.51								
CCB6				CCB	07/23/10 01:58:55 pm	0.00	97	34.18	
Replicates	134.6	54.5	104.5	93.7					
K1007399-001D				UNK	07/23/10 02:00:31 pm	0.25	1309	1.54	
Replicates	1280.7	1310.1	1323.1	1323.9					
K1007399-001S				UNK	07/23/10 02:02:07 pm	0.93	4670	0.58	
Replicates	4706.2	4641.1	4662.2	4671.2					
K1007399-002				UNK	07/23/10 02:03:43 pm	0.03	233	15.17	
Replicates	236.0	280.2	216.2	198.1					
K1007399-001 DISS				UNK	07/23/10 02:05:20 pm	0.26	1365	0.85	
Replicates	1359.1	1365.6	1354.0	1380.6					
K1007399-001D DISS				UNK	07/23/10 02:06:57 pm	0.25	1329	0.90	
Replicates	1326.7	1313.5	1340.1	1337.0					
K1007399-001S DISS				UNK	07/23/10 02:08:34 pm	0.97	4855	1.76	
Replicates	4976.3	4845.4	4815.8	4780.7					
K1007399-002 DISS				UNK	07/23/10 02:10:11 pm	0.04	290	8.53	
Replicates	317.6	263.4	302.4	275.4					
K1007395-MB				UNK	07/23/10 02:14:47 pm	0.03	216	11.97	
Replicates	243.1	205.7	230.0	184.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
LCSW K1007395				UNK	07/23/10 02:16:25 pm	5.10	25328	1.25	
Replicates	25021.2	25092.1	25567.1	25631.6					
K1007395-001				UNK	07/23/10 02:18:04 pm	0.01	150	14.77	
Replicates	177.7	156.2	136.6	128.1					
CCV7				CCV	07/23/10 02:19:42 pm	5.20	25517	0.43	
Replicates	25450.8	25437.7	25503.1	25675.2					
% Recovery	103.39								
CCB7				UNK	07/23/10 02:21:17 pm	0.00	83	32.10	
Replicates	50.8	73.0	99.5	110.1					
K1007395-002				UNK	07/23/10 02:22:54 pm	0.02	166	8.72	
Replicates	148.3	160.9	180.6	174.9					
K1007395-003				UNK	07/23/10 02:24:30 pm	0.01	128	23.63	
Replicates	118.7	91.0	141.0	161.5					
K1007395-004				UNK	07/23/10 02:26:07 pm	0.01	123	15.83	
Replicates	137.1	116.5	141.1	99.0					
K1007395-005				UNK	07/23/10 02:27:43 pm	0.01	123	15.66	
Replicates	146.4	101.1	115.7	128.6					
K1007395-005A				UNK	07/23/10 02:29:20 pm	1.10	5276	0.69	
Replicates	5282.8	5312.5	5225.8	5281.8					
K1007395-005D				UNK	07/23/10 02:30:56 pm	0.01	112	10.58	
Replicates	115.7	120.1	94.9	119.2					
K1007395-005S				UNK	07/23/10 02:32:33 pm	0.97	4861	0.30	
Replicates	4868.7	4871.7	4863.6	4840.0					
K1007395-006				UNK	07/23/10 02:34:11 pm	0.03	204	6.12	
Replicates	219.4	202.1	189.1	205.7					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007395-007				UNK	07/23/10 02:35:48 pm	0.05	317	2.09	
Replicates	316.7	309.3	325.5	317.5					
K1007451-001				UNK	07/23/10 02:37:26 pm	0.01	116	12.63	
Replicates	120.6	131.7	115.7	96.5					
CCV8				CCV	07/23/10 02:39:04 pm	5.30	25943	1.16	
Replicates	25709.3	25754.0	25942.5	26367.2					
% Recovery	105.12								
CCB8				CCB	07/23/10 02:40:39 pm	0.00	75	37.13	
Replicates	84.1	52.9	110.8	52.9					
K1007451-002				UNK	07/23/10 02:42:17 pm	0.03	228	4.85	
Replicates	239.9	218.3	234.0	218.2					
K1007451-003				UNK	07/23/10 02:43:56 pm	0.01	118	19.08	
Replicates	87.1	131.7	116.6	137.5					
K1007451-004				UNK	07/23/10 02:45:33 pm	0.09	520	6.72	
Replicates	482.3	503.3	530.8	563.0					
K1007451-005				UNK	07/23/10 02:47:09 pm	0.02	177	10.01	
Replicates	185.7	159.8	165.8	198.1					
K1007451-001 DISS				UNK	07/23/10 02:48:46 pm	0.00	93	25.50	
Replicates	112.0	77.4	68.0	114.4					
K1007451-002 DISS				UNK	07/23/10 02:50:23 pm	0.01	145	12.71	
Replicates	142.9	149.8	166.7	122.1					
K1007451-003 DISS				UNK	07/23/10 02:52:00 pm	0.01	122	21.82	
Replicates	158.7	96.6	123.8	110.0					
K1007451-004 DISS				UNK	07/23/10 02:53:36 pm	0.05	314	6.39	
Replicates	311.5	292.1	312.4	340.9					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007451-005 DISS				UNK	07/23/10 02:55:13 pm	0.55	2780	1.54	
Replicates	2802.0	2798.5	2802.4	2715.6					
K1007291-MB				UNK	07/23/10 03:00:37 pm	0.12	679	2.02	
Replicates	668.7	678.1	670.6	698.6					
CCV9				CCV	07/23/10 03:02:15 pm	5.30	26027	0.64	
Replicates	25888.5	26203.2	26135.4	25881.0					
% Recovery	105.46								
CCB9				CCB	07/23/10 03:03:51 pm	0.00	81	20.37	
Replicates	90.8	87.1	56.1	88.5					
LCSW K1007291				UNK	07/23/10 03:05:28 pm	0.05	302	10.02	
Replicates	346.7	291.3	286.9	282.0					
K1007291-001				UNK	07/23/10 03:07:06 pm	0.11	599	5.35	
Replicates	597.1	555.0	615.9	628.2					
K1007291-001A				UNK	07/23/10 03:08:44 pm	0.02	191	4.50	
Replicates	198.1	192.0	195.9	178.9					
K1007291-001S				UNK	07/23/10 03:10:23 pm	0.00	91	11.29	
Replicates	78.9	87.0	102.9	94.4					
K1007291-001SD				UNK	07/23/10 03:12:00 pm	0.12	646	7.30	
Replicates	633.9	708.7	647.8	595.0					
K1007391-003				UNK	07/23/10 03:13:37 pm	0.13	713	5.04	
Replicates	723.8	668.1	706.3	754.2					
K1007391-004				UNK	07/23/10 03:15:14 pm	0.12	650	4.98	
Replicates	603.7	679.3	660.6	655.3					
K1007391-004S				UNK	07/23/10 03:16:51 pm	0.12	669	4.58	
Replicates	637.7	649.0	702.0	687.8					

MS 7/23/10

MS 7/23/10

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007391-004SD				UNK	07/23/10 03:18:28 pm	0.11	631	5.00	
Replicates	636.8	636.4	662.2	586.9					
K1007391-005				UNK	07/23/10 03:20:05 pm	0.12	664	7.02	
Replicates	688.5	675.4	696.9	595.4					
CCV10				CCV	07/23/10 03:21:43 pm	5.30	25962	1.81	
Replicates	26593.0	26042.5	25633.1	25578.5					
% Recovery	105.20								
CCB10				CCB	07/23/10 03:23:18 pm	-0.01	50	55.79	
Replicates	65.6	19.2	80.9	35.4					
K1007391-006				UNK	07/23/10 03:24:56 pm	0.12	685	5.99	
Replicates	624.6	704.1	699.5	712.3					
K1007391-007				UNK	07/23/10 03:26:33 pm	0.11	598	5.35	
Replicates	626.9	615.4	554.0	596.9					
K1007291-MB				UNK	07/23/10 03:33:19 pm	0.01	110	12.77	
Replicates	120.7	90.8	119.8	107.1					
LCSW K1007291				UNK	07/23/10 03:34:57 pm	5.30	26079	0.19	
Replicates	26023.6	26135.8	26098.5	26057.4					
K1007291-001				UNK	07/23/10 03:36:35 pm	0.01	122	16.97	
Replicates	132.7	125.4	91.9	137.9					
K1007291-001A				UNK	07/23/10 03:38:14 pm	1.20	6015	0.28	
Replicates	6016.7	5999.2	6038.2	6006.4					
K1007291-001S				UNK	07/23/10 03:39:51 pm	0.99	4958	0.81	
Replicates	5004.2	4930.7	4918.8	4977.8					
K1007291-001SD				UNK	07/23/10 03:41:28 pm	1.00	5061	0.89	
Replicates	5039.3	5096.2	5099.7	5007.2					

MS 7/23/10

MS 7/23/10

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007391-003				UNK	07/23/10 03:43:06 pm	0.02	165	4.29	
Replicates	174.3	164.2	157.2	163.7					
K1007391-004				UNK	07/23/10 03:44:43 pm	0.01	145	11.28	
Replicates	158.3	159.4	131.4	129.8					
CCV11				CCV	07/23/10 03:46:21 pm	5.10	25254	0.72	
Replicates	25513.3	25233.2	25097.7	25171.6					
% Recovery	102.32								
CCB11				CCB	07/23/10 03:47:56 pm	0.01	105	7.50	
Replicates	104.4	111.1	93.8	109.8					
K1007391-004S				UNK	07/23/10 03:49:34 pm	1.10	5426	0.98	
Replicates	5351.8	5476.4	5446.4	5430.5					
K1007391-004SD				UNK	07/23/10 03:51:11 pm	1.10	5505	0.42	
Replicates	5515.4	5532.0	5490.0	5481.3					
K1007391-005				UNK	07/23/10 03:52:48 pm	0.01	106	23.84	
Replicates	131.7	81.0	123.9	88.1					
K1007391-006				UNK	07/23/10 03:54:26 pm	0.01	122	25.71	
Replicates	164.6	90.3	125.3	109.9					
K1007391-007				UNK	07/23/10 03:56:03 pm	0.00	94	10.34	
Replicates	80.9	91.4	101.4	101.0					
K1007391-009				UNK	07/23/10 03:57:41 pm	0.02	155	4.45	
Replicates	161.1	151.2	147.4	160.8					
K1007391-010				UNK	07/23/10 03:59:19 pm	0.01	109	6.27	
Replicates	116.1	113.4	104.1	102.1					
K1007391-010S				UNK	07/23/10 04:00:57 pm	1.10	5331	0.16	
Replicates	5342.1	5328.5	5332.8	5321.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007391-010SD				UNK	07/23/10 04:02:35 pm	1.10	5247	0.43	
Replicates	5275.0	5249.4	5241.0	5220.6					
K1007391-012				UNK	07/23/10 04:04:13 pm	0.00	102	9.32	
Replicates	97.7	90.8	104.9	112.8					
CCV12				CCV	07/23/10 04:05:50 pm	5.10	25170	0.65	
Replicates	25134.5	25028.1	25113.9	25404.0					
% Recovery	101.98								
CCB12				CCB	07/23/10 04:07:26 pm	0.00	98	23.74	
Replicates	110.2	109.2	62.9	108.6					
K1007391-013				UNK	07/23/10 04:09:04 pm	0.01	127	8.49	
Replicates	122.2	139.6	114.5	129.8					
K1007391-010A				UNK	07/23/10 04:13:31 pm	1.20	5761	0.46	
Replicates	5800.4	5744.8	5754.3	5744.2					
POST SPIKE				UNK	07/23/10 04:16:45 pm	0.94	4719	0.43	
Replicates	4691.5	4717.1	4731.5	4736.3					
POST SPIKE				UNK	07/23/10 04:23:31 pm	1.20	5794	0.07	
Replicates	5794.4	5799.7	5792.9	5790.7					
K1007399-001A				UNK	07/23/10 04:33:39 pm	1.00	5108	0.17	
Replicates	5113.5	5095.0	5110.8	5112.0					
K1007399-001DA				UNK	07/23/10 04:40:26 pm	1.10	5377	0.88	
Replicates	5329.5	5418.9	5417.3	5343.3					
K1007399-001SA				UNK	07/23/10 04:42:04 pm	1.80	8724	0.33	
Replicates	8759.4	8713.4	8732.3	8691.0					
K1007399-002A				UNK	07/23/10 04:43:42 pm	1.20	5792	0.64	
Replicates	5742.8	5815.4	5825.1	5784.8					

Sample Name				Type	Date/Time	Conc (ppb)	µAbs	%RSD	Flags
K1007399-001A DISS				UNK	07/23/10 04:45:20 pm	1.00	5035	0.45	
Replicates	5011.8	5026.8	5066.0	5036.3					
K1007399-001DA DISS				UNK	07/23/10 04:46:58 pm	1.00	5024	0.70	
Replicates	4977.6	5014.1	5052.9	5049.8					
CCV13				CCV	07/23/10 04:48:36 pm	5.20	25714	0.15	
Replicates	25760.6	25729.4	25692.3	25675.1					
% Recovery	104.19								
CCB13				CCB	07/23/10 04:50:12 pm	0.04	248	40.99	
Replicates	374.4	286.3	163.9	167.5					
K1007399-001SA DISS				UNK	07/23/10 04:51:50 pm	1.80	9026	0.76	
Replicates	8960.2	8977.5	9061.0	9104.5					
K1007399-002A DISS				UNK	07/23/10 04:53:28 pm	1.20	6011	0.97	
Replicates	6056.3	6058.1	5993.5	5936.1					
K1007348-004A				UNK	07/23/10 04:55:06 pm	1.20	6030	0.82	
Replicates	5997.3	6103.6	6018.2	6002.8					
K1007451-005 DISS				UNK	07/23/10 04:59:36 pm	0.57	2893	0.99	
Replicates	2901.4	2916.1	2903.5	2851.3					
K1007451-005				UNK	07/23/10 05:03:54 pm	0.04	255	5.04	
Replicates	261.0	248.8	240.2	269.2					
NH2OH-HCL #J07600				UNK	07/23/10 05:05:32 pm	0.78	3899	1.43	
Replicates	3836.3	3873.6	3922.0	3964.2					
CCV14				CCV	07/23/10 05:07:10 pm	5.20	25772	0.89	
Replicates	26051.3	25854.4	25652.9	25527.6					
% Recovery	104.42								
CCB14				CCB	07/23/10 05:08:46 pm	0.00	86	17.54	
Replicates	64.2	92.8	88.7	98.5					

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115844
Team: Metals
Analyst: S. Patterson
Prep Workflow: HgDigAq
Prep Method: Method
Rush/NPDES: RUSH
Status: Draft
Current Step: Digestion
Prep Date: 07/22/2010 12:15
Due Date: 07/27/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007223-01	Method Blank		20 mL	20 mL			Hg T	
KQ1007223-02	Lab Control Sample		20 mL	20 mL	0.1 mL	19170	Hg T	
K1007431-001	WQ1	.04	20 mL	20 mL			Hg D	
K1007431-001	WQ1	.03	20 mL	20 mL			Hg T	
K1007431-002	WQ2	.04	20 mL	20 mL			Hg D	
K1007431-002	WQ2	.03	20 mL	20 mL			Hg T	
K1007431-002: KQ1007223-03	Duplicate	.03	20 mL	20 mL			Hg T	
K1007431-003	WQ14	.04	20 mL	20 mL			Hg D	
K1007431-003	WQ14	.03	20 mL	20 mL			Hg T	
K1007431-003: KQ1007223-04	Matrix Spike	.03	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007431-004	WQ20	.04	20 mL	20 mL			Hg D	
K1007431-004	WQ20	.03	20 mL	20 mL			Hg T	
K1007431-005	WQ21	.04	20 mL	20 mL			Hg D	
K1007431-005	WQ21	.03	20 mL	20 mL			Hg T	
K1007431-006	EFF1	.04	20 mL	20 mL			Hg D	
K1007431-006	EFF1	.03	20 mL	20 mL			Hg T	
K1007431-007	PAG Pond	.04	20 mL	20 mL			Hg D	
K1007431-007	PAG Pond	.03	20 mL	20 mL			Hg T	
K1007431-008	L01	.04	20 mL	20 mL			Hg D	
K1007431-008	L01	.03	20 mL	20 mL			Hg T	
K1007431-009	L02	.04	20 mL	20 mL			Hg D	
K1007431-009	L02	.03	20 mL	20 mL			Hg T	
K1007431-010	HW1	.04	20 mL	20 mL			Hg D	

SP 7-22-1
Samples 7-1
put onto
V100763

~~K1007431-010~~	~~HW1~~	~~.03~~	~~20 mL~~	~~20 mL~~			~~Hg T~~	SR1.22-6
K1007635-001	Pag Pond	.04	20 mL	20 mL			Hg D	
K1007635-001	Pag Pond	.03	20 mL	20 mL			Hg T	
K1007635-002	L01	.04	20 mL	20 mL			Hg D	
K1007635-002	L01	.03	20 mL	20 mL			Hg T	
K1007635-003	L02	.04	20 mL	20 mL			Hg D	
K1007635-003	L02	.03	20 mL	20 mL			Hg T	
K1007635-004	HW1	.04	20 mL	20 mL			Hg D	
K1007635-004	HW1	.03	20 mL	20 mL			Hg T	

18 Total Samples consisting of 14 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19694	7/23/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID	Step	Name	ID
Digestion	K-MET NACl Hg	15559	Digestion	K-MET 50ml Centrifuge Tube	16850
Digestion	K-MET K2S2O8 Hg	15561	Digestion	K-MET SnCl Hg	18000
Digestion	K-MET KMnO4 Hg	15563	Digestion	K-MET HNO3	18888
Digestion	K-MET H2SO4 Hg	16385	Digestion	K-MET NH2OH-HCl Hg	19081

Preparation Hardware / Equipment

Step	Name	Property	Value		Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C	Digestion	K-HotBlock-02	Temp.	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	22-JUL-10 12:15	22-JUL-10 14:15	S. Patterson		N	

Comments

Review

Reviewed by: JDB Date: 7/26/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115845
Team: Metals
Analyst: S. Patterson
Prep Workflow: HgDigAq
Prep Method: Method
Rush/NPDES: NPDES
Status: Prepped
Current Step: Digestion
Prep Date: 07/22/2010 12:15
Due Date: 08/02/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007224-03	Method Blank		20 mL	20 mL			Hg T	
KQ1007224-04	Lab Control Sample		20 mL	20 mL	0.1 mL	19170	Hg T	
K1007279-010	Rinsate-071510	.07	20 mL	20 mL			Hg T	
K1007279-010: KQ1007224-09	Duplicate	.07	20 mL	20 mL			Hg T	
K1007279-010: KQ1007224-10	Matrix Spike	.07	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007348-001	GW-071510-DK-16	.16	20 mL	20 mL			Hg D	
K1007348-001	GW-071510-DK-16	.17	20 mL	20 mL			Hg T	
K1007348-002	GW-071510-BS-18	.16	20 mL	20 mL			Hg D	
K1007348-002	GW-071510-BS-18	.17	20 mL	20 mL			Hg T	
K1007348-003	GW-071510-MC-25	.16	20 mL	20 mL			Hg D	
K1007348-003	GW-071510-MC-25	.17	20 mL	20 mL			Hg T	
K1007348-004	GW-071510-MC-27	.16	20 mL	20 mL			Hg D	
K1007348-004	GW-071510-MC-27	.17	20 mL	20 mL			Hg T	
K1007348-004: KQ1007224-05	Duplicate	.16	20 mL	20 mL			Hg T	
K1007348-004: KQ1007224-11	Duplicate	.16	20 mL	20 mL			Hg D	
K1007348-004: KQ1007224-06	Matrix Spike	.16	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007348-004: KQ1007224-12	Matrix Spike	.16	20 mL	20 mL	0.2 mL	19694	Hg D	
K1007348-005	GW-071510-BS-22	.16	20 mL	20 mL			Hg D	
K1007348-005	GW-071510-BS-22	.17	20 mL	20 mL			Hg T	
K1007348-006	GW-071510-DK-20	.16	20 mL	20 mL			Hg D	
K1007348-006	GW-071510-DK-20	.17	20 mL	20 mL			Hg T	
K1007366-014	ER-071310	.01	20 mL	20 mL			Hg T	
K1007366-023	ER-071410	.01	20 mL	20 mL			Hg T	

K1007399-001	GW-071610-MC-29	.16	20 mL	20 mL			Hg D	
K1007399-001	GW-071610-MC-29	.17	20 mL	20 mL			Hg T	
K1007399-001: KQ1007224-07	Duplicate	.16	20 mL	20 mL			Hg T	
K1007399-001: KQ1007224-13	Duplicate	.16	20 mL	20 mL			Hg D	
K1007399-001: KQ1007224-08	Matrix Spike	.17	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007399-001: KQ1007224-14	Matrix Spike	.16	20 mL	20 mL	0.2 mL	19694	Hg D	
K1007399-002	GW-071610-BS-24	.16	20 mL	20 mL			Hg D	
K1007399-002	GW-071610-BS-24	.17	20 mL	20 mL			Hg T	

23 Total Samples consisting of 11 Client Samples, 10 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19694	7/23/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET K2S2O8 Hg	15561
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET H2SO4 Hg	16385
Digestion	K-MET 50ml Centrifuge Tube	16850

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	19603

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Step	Name	Property	Value	
Digestion	K-HotBlock-02	Temp.	95	deg C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	22-JUL-10 12:15	22-JUL-10 14:15	S. Patterson		N	

Comments

Review

Reviewed by: JDB Date: 7/26/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115912
Team: Metals
Analyst: S. Patterson
Prep Workflow: HgDigAq
Prep Method: Method
Rush/NPDES: N/A
Status: Prepped
Current Step: Digestion
Prep Date: 07/22/2010 14:30
Due Date: 08/02/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007279-04	Method Blank		20 mL	20 mL			Hg T	
KQ1007279-05	Lab Control Sample		20 mL	20 mL	0.1 mL	19170	Hg T	
K1007395-001	MW-06-3	.10	20 mL	20 mL			Hg T	
K1007395-002	MW-06-1	.11	20 mL	20 mL			Hg T	
K1007395-003	MW-02-3	.12	20 mL	20 mL			Hg T	
K1007395-004	MW-82-3	.10	20 mL	20 mL			Hg T	
K1007395-005	MW-06-2	.24	20 mL	20 mL			Hg T	
K1007395-005: KQ1007279-03	Duplicate	.24	20 mL	20 mL			Hg T	
K1007395-005: KQ1007279-01	Matrix Spike	.24	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007395-006	MW-60-12	.11	20 mL	20 mL			Hg T	
K1007395-007	MW-02-4	.11	20 mL	20 mL			Hg T	
K1007451-001	GW-071910-DK-26	.16	20 mL	20 mL			Hg D	
K1007451-001	GW-071910-DK-26	.17	20 mL	20 mL			Hg T	
K1007451-002	GW-071910-GM-31	.16	20 mL	20 mL			Hg D	
K1007451-002	GW-071910-GM-31	.17	20 mL	20 mL			Hg T	
K1007451-003	GW-071910-DK-28	.16	20 mL	20 mL			Hg D	
K1007451-003	GW-071910-DK-28	.17	20 mL	20 mL			Hg T	
K1007451-004	GW-071910-GM-33	.16	20 mL	20 mL			Hg D	
K1007451-004	GW-071910-GM-33	.17	20 mL	20 mL			Hg T	
K1007451-005	GW-071910-GM-35	.16	20 mL	20 mL			Hg D	
K1007451-005	GW-071910-GM-35	.17	20 mL	20 mL			Hg T	

16 Total Samples consisting of 12 Client Samples, 2 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19694	7/23/2010

Name	Type	ID	Expires
K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET K2S2O8 Hg	15561
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET H2SO4 Hg	16385
Digestion	K-MET 50ml Centrifuge Tube	16850

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	19603

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Step	Name	Property	Value	
Digestion	K-HotBlock-02	Temp	95	°C

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	22-JUL-10 14:30	22-JUL-10 16:30	S. Patterson		N	

Comments

Review

Reviewed by: JDB Date: 7/26/10

Columbia Analytical Services™ **Preparation Information Benchsheet**

Prep Run: 115911
Team: Metals
Analyst: S. Patterson
Prep Workflow: HgDigAq
Prep Method: Method
Rush/NPDES: NPDES
Status: Prepped
Current Step: Digestion
Prep Date: 07/22/2010 14:30
Due Date: 08/01/2010

Lab Code	Client ID	Bottle #	Initial Amt	Final Volume	Spike Amt	Spike ID	TestNo List	Comments
KQ1007281-05	Method Blank		20 mL	20 mL			Hg T	
KQ1007281-06	Lab Control Sample		20 mL	20 mL	0.1 mL	19170	Hg T	
K1007291-001	10HFP5201WA	.10	20 mL	20 mL			Hg T	
K1007291-001: KQ1007281-07	Matrix Spike	.10	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007291-001: KQ1007281-08	Duplicate Matrix Spike	.10	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007391-003	JPHC-10-304	.09	20 mL	20 mL			Hg T	
K1007391-004	JPHC-10-305	.09	20 mL	20 mL			Hg T	
K1007391-004: KQ1007281-03	Matrix Spike	.09	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007391-004: KQ1007281-04	Duplicate Matrix Spike	.09	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007391-005	JPHC-10-306	.09	20 mL	20 mL			Hg T	
K1007391-006	JPHC-10-310	.09	20 mL	20 mL			Hg T	
K1007391-007	JPHC-10-308	.09	20 mL	20 mL			Hg T	
K1007391-009	JPHC-10-302	.09	20 mL	20 mL			Hg T	
K1007391-010	JPHC-10-300	.09	20 mL	20 mL			Hg T	
K1007391-010: KQ1007281-01	Matrix Spike	.09	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007391-010: KQ1007281-02	Duplicate Matrix Spike	.09	20 mL	20 mL	0.2 mL	19694	Hg T	
K1007391-012	JPHC-10-312	.09	20 mL	20 mL			Hg T	
K1007391-013	JPHC-10-311	.09	20 mL	20 mL			Hg T	

18 Total Samples consisting of 10 Client Samples, 6 Client QC Samples, 2 Batch QC Samples associated with the current Prep Run.

Spiking Solutions

Name	Type	ID	Expires	Name	Type	ID	Expires
K-MET Hg Source Standard 100 ug/L	Spike	19694	7/23/2010	K-MET Hg Source Standard 1000 ug/L	Spike	19170	8/1/2010

Preparation Materials

Step	Name	ID
Digestion	K-MET NACl Hg	15559
Digestion	K-MET K2S2O8 Hg	15561
Digestion	K-MET KMnO4 Hg	15563
Digestion	K-MET H2SO4 Hg	16385
Digestion	K-MET 50ml Centrifuge Tube	16850

Step	Name	ID
Digestion	K-MET SnCl Hg	18000
Digestion	K-MET HNO3	18888
Digestion	K-MET NH2OH-HCl Hg	19081
Digestion	K-MET 100ml Centrifuge Tube	19603

Preparation Hardware / Equipment

Step	Name	Property	Value	
Digestion	K-BlockDigester-03	Temperature	95	deg C

Step	Name	Property	Value	
Digestion	K-HotBlock-02			

Preparation Steps

Step	Started	Finished	By	Assisted By	Training?	Comments
Digestion	22-JUL-10 14:30	22-JUL-10 16:30	S. Patterson		N	

Comments

Review

Reviewed by: JDS Date: 7/26/10

Service Request # 4395
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 8510A 080510A ICP02
Star Lims: 211466

Primary Review by WS Date 8/6/10

Secondary Review by [illegible] Date 8/6/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 08/05/10 14:56 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1039	.0263	.0173	.00007
Stddev	.0372	.0020	.0049	.00004
%RSD	35.76	7.514	28.35	63.094
#1	.0776	.0277	.0208	.00010
#2	.1302	.0249	.0138	.00004

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00370	.7357	.0002	.3658
Stddev	.00006	.0064	.0000	.0037
%RSD	1.5201	.8697	19.29	1.001
#1	-.00366	.7402	.0002	.3632
#2	-.00374	.7312	.0003	.3684

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.1215	-.0003	.0004	-.0400
Stddev	.0234	.0001	.0002	.0176
%RSD	19.29	47.40	44.92	43.89
#1	-.1380	-.0004	.0006	-.0525
#2	-.1049	-.0002	.0003	-.0276

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0055	.0006	.0000	.1344
Stddev	.0052	.0001	.0001	.0019
%RSD	93.60	9.359	266.4	1.387
#1	.0092	.0006	.0001	.1331
#2	.0019	.0006	.0000	.1357

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.05107	.00147	-.0003	.0002
Stddev	.04100	.00031	.0000	.0000
%RSD	80.267	20.912	.2259	3.155
#1	.08006	.00168	-.0003	.0002
#2	.02209	.00125	-.0003	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0001	.9458	-.0305	-.0083
Stddev	.0000	.0137	.0157	.0039
%RSD	23.10	1.448	51.36	47.14
#1	-.0001	.9554	-.0194	-.0110
#2	-.0001	.9361	-.0415	-.0055

WS 8/6/10 8/6/10

Sample Name: Blank Run Time: 08/05/10 14:56

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0042	.0005	.0071	.0010
Stddev	.0013	.0000	.0003	.0001
%RSD	30.65	1.755	3.543	7.592
#1	.0051	.0005	.0073	.0010
#2	.0033	.0005	.0070	.0011

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0194	.2147	.00336	.0000
Stddev	.0078	.0136	.00020	.0000
%RSD	40.34	6.316	5.9848	46.88
#1	.0139	.2052	.00350	.0000
#2	.0249	.2243	.00322	.0001

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.17117	.00406
Stddev	.13665	.00018
%RSD	79.835	4.4630
#1	.26779	.00419
#2	.07454	.00393

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	181.48
Stddev	.41
%RSD	.22411
#1	181.19
#2	181.77

Method: 2010A Sample Name: STDB ICP7-41-13 Operator:
Comment:
Run Time: 08/05/10 14:59 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.26	3.3143	.51334	39.92
Stddev	.10	.0085	.00029	.09
%RSD	.5118	.25711	.05687	.2200
#1	20.18	3.3203	.51355	39.86
#2	20.33	3.3082	.51313	39.98

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.8652	59.36	.7246	196.1
Stddev	.0049	.36	.0001	.1
%RSD	.5649	.5999	.0127	.0708
#1	.8618	59.11	.7245	196.0
#2	.8687	59.61	.7246	196.2

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.610	46.61	96.23	377.28
Stddev	.018	.18	.50	2.24
%RSD	.3788	.3963	.5163	.59475
#1	4.598	46.48	95.88	375.69
#2	4.623	46.75	96.59	378.86

Elem	Sr4077
Line	407.771 { 82}
Avg	8.9675
Stddev	.0286
%RSD	.31933
#1	8.9472
#2	8.9877

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	177.87
Stddev	.00
%RSD	.00052
#1	177.87
#2	177.87

Method: 2010A Sample Name: STDA Icp7-63-A Operator:
Comment:
Run Time: 08/05/10 15:02 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	16.60	11.84	48.07	.3272
Stddev	.13	.18	.23	.0027
%RSD	.7815	1.533	.4750	.8297
#1	16.51	11.71	47.91	.3253
#2	16.69	11.97	48.24	.3291

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	30.78	.1320	.2092	19.75
Stddev	.07	.0017	.0013	.03
%RSD	.2168	1.262	.6316	.1377
#1	30.83	.1308	.2083	19.73
#2	30.74	.1332	.2101	19.77

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4658	.0967	1409.6	3.4666
Stddev	.0153	.0010	.9	.0117
%RSD	3.285	.9978	.06361	.33624
#1	.4767	.0960	1410.2	3.4584
#2	.4550	.0974	1408.9	3.4749

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1676	.1895	10.53	18.66
Stddev	.0027	.0008	.18	.11
%RSD	1.628	.4002	1.749	.5667
#1	.1656	.1890	10.40	18.74
#2	.1695	.1901	10.66	18.59

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0916	.1609	.1677	.19198
Stddev	.0000	.0002	.0022	.00074
%RSD	.0258	.1148	1.297	.38325
#1	.0916	.1608	.1661	.19146
#2	.0916	.1611	.1692	.19250

Elem	Tl1908
Line	190.864 {176}
Avg	.0862
Stddev	.0011
%RSD	1.227
#1	.0854
#2	.0869

Sample Name: STDA Run Time: 08/05/10 15:02

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	182.39
Stddev	.09
%RSD	.04914
#1	182.46
#2	182.33

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 08/05/10 15:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.145	2.517	2.560	5.0819	.12291	.0025
Stddev	.033	.031	.019	.0129	.00017	.0001
%RSD	.6460	1.233	.7633	.25378	.13972	4.454
#1	5.121	2.495	2.547	5.0728	.12278	.0025
#2	5.168	2.539	2.574	5.0910	.12303	.0024
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	10.00%	10.00%	10.00%	10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.248	12.69	.5098	1.247	.6304	2.437
Stddev	.004	.08	.0051	.002	.0033	.008
%RSD	.2999	.6565	.9998	.1957	.5306	.3162
#1	1.245	12.64	.5062	1.246	.6280	2.432
#2	1.250	12.75	.5134	1.249	.6327	2.443
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.514	12.58	1.2548	2.006	1.242	12.69
Stddev	.006	.05	.0020	.024	.004	.09
%RSD	.2273	.3648	.15949	1.207	.2841	.7210
#1	2.518	12.55	1.2562	1.989	1.240	12.62
#2	2.510	12.61	1.2534	2.023	1.244	12.75
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	10.00%	10.00%	10.000%	10.00%	10.00%	10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.542	.6256	12.08	.0151	1.259	1.254
Stddev	.007	.0044	.04	.0045	.009	.005
%RSD	.2892	.7030	.3169	29.58	.6732	.3925
#1	2.547	.6287	12.05	.0183	1.253	1.251
#2	2.537	.6225	12.10	.0119	1.265	1.258
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	10.00%	10.00%	10.00%		10.00%	10.00%

Sample Name: ICV1 Run Time: 08/05/10 15:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	-.1325	2.0005	2.511	.00040	.00756
Stddev	.0044	.0025	.0008	.040	.00001	.00004
%RSD	1415.	1.907	.03969	1.604	2.5587	.48671
#1	-.0034	-.1307	1.9999	2.483	.00040	.00759
#2	.0028	-.1343	2.0011	2.540	.00041	.00753
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	183.36
Stddev	.32
%RSD	.17698
#1	183.13
#2	183.58

Method: 2010A Sample Name: ICVB1 ICP-74-A Operator:
Comment:
Run Time: 08/05/10 15:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.005	.0212	.0042	.00394	.00017	2.040
Stddev	.022	.0084	.0041	.00121	.00006	.014
%RSD	2.228	39.42	99.13	30.733	35.199	.6831
#1	1.021	.0271	.0012	.00480	.00013	2.030
#2	.9893	.0153	.0071	.00309	.00021	2.050
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	5.122	.0035	.0005	-.0006	9.905
Stddev	.0009	.030	.0027	.0001	.0012	.126
%RSD	199.1	.5916	76.75	26.12	206.7	1.269
#1	.0011	5.143	.0053	.0004	.0003	9.994
#2	-.0002	5.100	.0016	.0006	-.0014	9.816
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0116	5.0091	9.977	.0102	-.0001	.0296
Stddev	.0041	.0200	.218	.0062	.0004	.0242
%RSD	35.18	.39849	2.187	60.56	856.3	81.92
#1	.0144	5.0232	10.13	.0145	-.0004	.0125
#2	.0087	4.9949	9.823	.0058	.0003	.0467
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		10.000%	10.00%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210	.0041	7.924	4.887	.0020	.0018
Stddev	.0028	.0019	.116	.027	.0004	.0007
%RSD	13.30	45.35	1.468	.5611	19.59	37.51
#1	.0230	.0028	8.006	4.906	.0023	.0023
#2	.0190	.0055	7.842	4.868	.0017	.0013
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				10.00%		

Sample Name: ICVB1 Run Time: 08/05/10 15:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.056	5.227	.00154	.0223	1.9845	1.9278
Stddev	.016	.027	.00077	.0033	.0125	.0349
%RSD	.3188	.5137	49.853	14.61	.62897	1.8124
#1	5.045	5.208	.00209	.0200	1.9757	1.9525
#2	5.068	5.246	.00100	.0246	1.9933	1.9031
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	184.73
Stddev	3.06
%RSD	1.6565
#1	182.57
#2	186.89

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 08/05/10 15:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103	-.0029	.0012	-.00021	-.00003	.0002
Stddev	.0020	.0012	.0062	.00025	.00003	.0014
%RSD	19.16	40.17	530.3	120.16	87.247	673.8
#1	.0117	-.0037	.0056	-.00003	-.00005	.0012
#2	.0089	-.0021	-.0032	-.00038	-.00001	-.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	-.0076	-.0001	.0004	.0008	-.0027
Stddev	.0000	.0057	.0004	.0004	.0006	.0065
%RSD	101.5	74.76	249.3	103.7	77.04	241.1
#1	.0001	-.0036	-.0004	.0001	.0003	.0019
#2	.0000	-.0116	.0001	.0007	.0012	-.0073
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034	.00008	.00214	.0008	-.0001	-.0195
Stddev	.0045	.00011	.00200	.0004	.0002	.0238
%RSD	133.2	134.35	93.415	49.95	160.0	122.4
#1	.0065	.00016	.00355	.0011	.0000	-.0026
#2	.0002	.00000	.00072	.0005	-.0003	-.0363
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0003	-.0013	.0053	.0015	.0001
Stddev	.0084	.0023	.0009	.0086	.0013	.0003
%RSD	255.3	778.4	66.56	162.5	83.34	382.9
#1	-.0026	-.0013	-.0007	.0114	.0024	-.0001
#2	.0092	.0019	-.0020	-.0008	.0006	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: ICB Run Time: 08/05/10 15:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057	.0011	.00046	-.0080	.00045	.00019
Stddev	.0047	.0000	.00183	.0013	.00000	.00007
%RSD	81.64	2.446	401.21	15.80	.03038	36.735
#1	.0024	.0011	.00175	-.0071	.00045	.00024
#2	.0090	.0011	-.00084	-.0089	.00045	.00014
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	181.09
Stddev	.07
%RSD	.03604
#1	181.04
#2	181.14

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 15:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.030	-.0018	.0082	2.4004	.04898	.0028
Stddev	.045	.0064	.0116	.0164	.00015	.0002
%RSD	.8896	366.6	141.0	.68455	.29911	7.835
#1	4.999	.0028	.0000	2.3888	.04887	.0026
#2	5.062	-.0063	.0165	2.4120	.04908	.0030
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	25.55	.0019	-.0015	-.0003	25.11
Stddev	.0003	.12	.0010	.0007	.0013	.14
%RSD	18.60	.4743	52.43	47.80	382.6	.5759
#1	.0014	25.46	.0027	-.0020	-.0012	25.01
#2	.0018	25.63	.0012	-.0010	.0006	25.21
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	25.16	4.911	.0007	-.0032	10.07
Stddev	.0100	.10	.010	.0004	.0002	.03
%RSD	231.6	.3797	.1950	58.11	4.914	.3060
#1	.0027	25.09	4.904	.0004	-.0033	10.09
#2	-.0114	25.23	4.918	.0009	-.0031	10.04
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0136	.0031	9.828	.0031	.0024	.0014
Stddev	.0056	.0021	.046	.0038	.0029	.0002
%RSD	40.83	67.38	.4667	122.5	122.3	16.69
#1	.0175	.0016	9.861	.0059	.0003	.0015
#2	.0097	.0046	9.796	.0004	.0044	.0012
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/05/10 15:14

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.04	2.519	.00177	.0370	.49742	.49395
Stddev	.06	.017	.00021	.0050	.00193	.00137
%RSD	.5820	.6677	12.024	13.46	.38900	.27647
#1	9.997	2.508	.00162	.0405	.49878	.49298
#2	10.08	2.531	.00192	.0335	.49605	.49491
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	182.52
Stddev	.12
%RSD	.06739
#1	182.43
#2	182.61

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 15:17 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4964	2.474	2.462	.44938	.51100	.4994
Stddev	.0135	.022	.028	.00291	.00073	.0013
%RSD	2.728	.8918	1.137	.64770	.14361	.2672
#1	.5060	2.458	2.442	.44732	.51048	.4985
#2	.4868	2.490	2.482	.45143	.51152	.5004
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4874	2.499	.4885	.4878	.5020	.4990
Stddev	.0030	.004	.0058	.0040	.0060	.0085
%RSD	.6228	.1412	1.185	.8262	1.203	1.694
#1	.4852	2.497	.4844	.4849	.4977	.5050
#2	.4895	2.502	.4925	.4906	.5062	.4930
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.416	1.9920	.96987	.9741	.4894	5.070
Stddev	.024	.0011	.00609	.0078	.0049	.003
%RSD	.9847	.05599	.62789	.8034	1.008	.0533
#1	2.399	1.9912	.96556	.9686	.4859	5.068
#2	2.433	1.9927	.97417	.9796	.4929	5.072
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.435	.4957	.5287	2.371	.4970	.4844
Stddev	.003	.0013	.0030	.027	.0056	.0068
%RSD	.1225	.2556	.5643	1.122	1.131	1.405
#1	2.433	.4948	.5308	2.352	.4930	.4796
#2	2.438	.4966	.5266	2.390	.5010	.4892
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 15:17

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	.3004	.48395	4.800	.50585	.48547
Stddev	.0256	.0018	.00406	.018	.00208	.00276
%RSD	600.6	.6033	.83876	.3662	.41085	.56774
#1	.0139	.2992	.48108	4.787	.50438	.48352
#2	-.0224	.3017	.48682	4.812	.50732	.48742
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	186.21
Stddev	.10
%RSD	.05266
#1	186.28
#2	186.14

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 15:20 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131	.0042	.0032	-.00004	.00007	-.0007
Stddev	.0155	.0100	.0017	.00002	.00001	.0002
%RSD	118.8	237.9	51.25	55.236	7.6954	20.85
#1	.0241	.0113	.0044	-.00006	.00007	-.0008
#2	.0021	-.0029	.0021	-.00002	.00008	-.0006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	-.0074	.0010	-.0001	.0017	-.0084
Stddev	.0002	.0028	.0014	.0015	.0007	.0007
%RSD	42.55	38.43	134.9	1252.	41.47	8.411
#1	-.0007	-.0094	.0020	.0009	.0012	-.0079
#2	-.0004	-.0054	.0000	-.0012	.0022	-.0089
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0151	.00004	.00012	.0032	-.0005	-.0067
Stddev	.0009	.00000	.00044	.0017	.0002	.0094
%RSD	5.678	.10549	358.91	52.97	49.05	140.9
#1	.0145	.00004	.00044	.0044	-.0003	-.0133
#2	.0157	.00004	-.00019	.0020	-.0006	.0000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	.0022	-.0047	.0004	.0040	.0002
Stddev	.0074	.0013	.0014	.0026	.0040	.0005
%RSD	94.25	56.57	29.73	731.8	100.1	235.0
#1	.0026	.0031	-.0037	.0022	.0012	-.0001
#2	.0131	.0013	-.0057	-.0015	.0068	.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 15:20

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055	.0005	.00027	.0188	-.00005	.00003
Stddev	.0119	.0002	.00033	.0114	.00063	.00002
%RSD	215.6	54.28	122.23	60.69	1151.6	57.888
#1	-.0029	.0003	.00051	.0107	.00039	.00002
#2	.0139	.0006	.00004	.0268	-.00050	.00004
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	180.57
Stddev	.11
%RSD	.06312
#1	180.65
#2	180.49

Method: 2010A Sample Name: CRI Operator:
Comment:
Run Time: 08/05/10 15:23 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	Q .0689	.0350	.0871	.00449	.00449
Stddev	.0009	.0041	.0041	.00004	.00007
%RSD	1.315	11.78	4.707	.84312	1.4754
#1	.0695	.0379	.0900	.00452	.00454
#2	.0683	.0321	.0842	.00446	.00445
Check ?	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500
Range	30.00%	100.0%	100.0%	100.00%	100.00%

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0477	.0045	.0393	.0053	.0092
Stddev	.0001	.0004	.0051	.0008	.0007
%RSD	.1498	9.013	12.89	15.09	7.105
#1	.0476	.0048	.0358	.0047	.0088
#2	.0477	.0042	.0429	.0059	.0097
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0050	.0500	.0050	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%

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Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0090	Q .1435	.0521	.01939	.00560
Stddev	.0018	.0016	.0085	.00016	.00004
%RSD	19.77	1.134	16.23	.81976	.67061
#1	.0078	.1424	.0581	.01928	.00557
#2	.0103	.1447	.0461	.01950	.00563
Check ?	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass
Value	.0100	.0200	.0500	.02000	.00500
Range	100.0%	100.0%	100.0%	100.00%	100.00%

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0085	.0188	.4246	.0958	.0073
Stddev	.0014	.0005	.0049	.0018	.0000
%RSD	16.34	2.828	1.143	1.894	.0187
#1	.0095	.0184	.4212	.0971	.0073
#2	.0075	.0192	.4281	.0945	.0073
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0100	.0200	.4000	.1000	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 08/05/10 15:23

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.1962	.0310	.0082	.0086	.2091
Stddev	.0029	.0029	.0010	.0003	.0069
%RSD	1.455	9.400	11.84	3.365	3.296
#1	.1982	.0289	.0075	.0084	.2140
#2	.1942	.0330	.0088	.0088	.2042
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.0500	.0100	.0100	.2000
Range	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	.3960	.00746	.1396	.01070	.00902
Stddev	.0024	.00134	.0062	.00037	.00001
%RSD	.5957	18.021	4.411	3.4412	.05953
#1	.3944	.00651	.1352	.01044	.00902
#2	.3977	.00841	.1439	.01096	.00903
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.4000	.01000	.1000	.01000	.01000
Range	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	185.53
Stddev	.06
%RSD	.03414
#1	185.48
#2	185.57

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Method: 2010A Sample Name: CRI ICP7-76-13 Operator:
Comment:
Run Time: 08/05/10 15:33 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0586	.0330	.0871	.00439	.00455	.0483
Stddev	.0117	.0071	.0116	.00012	.00013	.0011
%RSD	19.95	21.46	13.34	2.8273	2.9090	2.349
#1	.0668	.0280	.0953	.00431	.00445	.0475
#2	.0503	.0380	.0789	.00448	.00464	.0491
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050	.0261	.0056	.0091	.0103	.0097
Stddev	.0002	.0003	.0010	.0002	.0014	.0014
%RSD	4.993	1.207	18.13	1.779	13.44	14.26
#1	.0052	.0259	.0063	.0092	.0093	.0087
#2	.0048	.0264	.0049	.0090	.0112	.0107
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0464	.01590	.00439	.0090	.0179	.3884
Stddev	.0017	.00022	.00020	.0008	.0002	.0096
%RSD	3.649	1.3841	4.5845	8.457	1.354	2.462
#1	.0476	.01575	.00454	.0085	.0178	.3816
#2	.0452	.01606	.00425	.0095	.0181	.3951
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0860	.0095	.1852	.0346	.0099	.0093
Stddev	.0046	.0023	.0031	.0050	.0016	.0003
%RSD	5.403	24.32	1.652	14.36	15.81	3.330
#1	.0893	.0111	.1830	.0310	.0110	.0091
#2	.0827	.0078	.1874	.0381	.0088	.0095
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 08/05/10 15:33

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1966	.3975	.00774	.0598	.01028	.00901
Stddev	.0035	.0001	.00055	.0050	.00034	.00005
%RSD	1.758	.0318	7.0953	8.399	3.3372	.57851
#1	.1941	.3974	.00735	.0633	.01053	.00897
#2	.1990	.3976	.00812	.0562	.01004	.00905
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.1000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	182.89
Stddev	.11
%RSD	.05882
#1	182.81
#2	182.96

Method: 2010A Sample Name: ICSA ICP7-64-B Operator:
Comment:
Run Time: 08/05/10 15:37 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	503.2	.0583	.0065	.00001	.00006	-.0238
Stddev	1.0	.0053	.0101	.00054	.00002	.0017
%RSD	.2008	9.083	156.3	4974.9	32.018	7.170
#1	502.4	.0620	.0136	.00039	.00007	-.0226
#2	503.9	.0545	-.0007	-.00037	.00005	-.0250
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086	506.5	-.0018	-.0002	.0027	200.9
Stddev	.0001	5.2	.0004	.0007	.0016	.5
%RSD	1.693	1.033	21.52	325.9	58.47	.2625
#1	.0087	502.8	-.0015	-.0007	.0038	200.5
#2	.0085	510.2	-.0020	.0003	.0016	201.3
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0209	506.9	.00446	.0041	-.0035	-.0523
Stddev	.0062	2.2	.00022	.0003	.0009	.0230
%RSD	29.76	.4291	4.9654	8.477	26.60	44.08
#1	.0253	508.5	.00431	.0044	-.0042	-.0360
#2	.0165	505.4	.00462	.0039	-.0029	-.0686
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0239	.0000	.1044	-.0044	.0004	.0068
Stddev	.0131	.001	.0082	.0000	.0013	.0004
%RSD	54.83	9712.	7.877	.0728	355.3	6.216
#1	.0146	.0004	.1102	-.0044	.0013	.0065
#2	.0331	-.0005	.0985	-.0044	-.0006	.0071
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 08/05/10 15:37

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0181	-.0176	.01121	.1318	.01075	.02220
Stddev	.0309	.0000	.00108	.0149	.00033	.00067
%RSD	170.5	.1402	9.6066	11.30	3.0386	2.9971
#1	.0399	-.0176	.01045	.1212	.01099	.02267
#2	-.0037	-.0176	.01197	.1423	.01052	.02172
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	166.13
Stddev	.26
%RSD	.15896
#1	165.95
#2	166.32

Method: 2010A Sample Name: ICSAB ICP7-75-F Operator:
Comment:
Run Time: 08/05/10 15:40 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	498.4	1.031	-.0016	.45356	.51481	-.0247
Stddev	4.0	.004	.0071	.00225	.00746	.0010
%RSD	.7948	.3535	453.9	.49506	1.4486	4.187
#1	495.6	1.028	.0035	.45514	.52008	-.0255
#2	501.2	1.033	-.0066	.45197	.50954	-.0240
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9586	483.2	.4901	.4759	.4755	196.1
Stddev	.0038	4.2	.0038	.0005	.0035	.3
%RSD	.3948	.8640	.7854	.1080	.7324	.1758
#1	.9613	480.2	.4928	.4762	.4780	195.9
#2	.9560	486.1	.4874	.4755	.4731	196.4
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9888	503.9	.45668	.0050	.9347	-.0694
Stddev	.0048	3.3	.00508	.0032	.0051	.0056
%RSD	.4820	.6501	1.1121	63.95	.5494	8.081
#1	.9921	501.6	.46027	.0027	.9383	-.0655
#2	.9854	506.3	.45309	.0073	.9310	-.0734
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0182	.9750	.0458	-.0189	.4997	.9441
Stddev	.0142	.0035	.0008	.0003	.0094	.0036
%RSD	77.70	.3600	1.655	1.644	1.874	.3833
#1	.0082	.9725	.0452	-.0191	.5064	.9466
#2	.0283	.9775	.0463	-.0187	.4931	.9415
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 08/05/10 15:40

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0248	-.0080	.01144	.1409	.01068	.02488
Stddev	.0218	.0007	.00027	.0077	.00025	.00122
%RSD	87.89	8.432	2.3623	5.473	2.3239	4.9141
#1	.0094	-.0075	.01125	.1355	.01051	.02574
#2	.0402	-.0085	.01163	.1464	.01086	.02401
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	167.77
Stddev	1.98
%RSD	1.1821
#1	166.37
#2	169.18

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 08/05/10 15:43 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	492.6	1.016	.0045	.45503	.51894	-.0263
Stddev	3.3	.027	.0034	.00291	.00056	.0007
%RSD	.6726	2.661	75.81	.63956	.10799	2.587
#1	490.2	.9966	.0021	.45297	.51934	-.0258
#2	494.9	1.035	.0069	.45709	.51854	-.0268
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9606	483.1	.4932	.4757	.4754	196.8
Stddev	.0086	4.0	.0037	.0040	.0004	2.5
%RSD	.8905	.8240	.7577	.8475	.0942	1.264
#1	.9546	480.3	.4906	.4728	.4751	195.1
#2	.9667	485.9	.4958	.4785	.4757	198.6
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9921	502.1	.45999	.0059	.9386	-.0700
Stddev	.0119	2.6	.00363	.0000	.0017	.0124
%RSD	1.197	.5106	.78919	.8347	.1825	17.74
#1	1.000	500.3	.45742	.0060	.9374	-.0612
#2	.9837	503.9	.46256	.0059	.9398	-.0788
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0179	.9783	.0428	-.0170	.5016	.9447
Stddev	.0050	.0136	.0035	.0002	.0000	.0107
%RSD	27.83	1.392	8.111	1.328	.0081	1.132
#1	.0144	.9687	.0403	-.0169	.5016	.9372
#2	.0215	.9879	.0452	-.0172	.5016	.9523
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 08/05/10 15:43

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	-.0108	.01150	.1500	.01047	.02565
Stddev	.0134	.0003	.00070	.0008	.00008	.00039
%RSD	97.60	3.226	6.1042	.5328	.74230	1.5192
#1	.0233	-.0106	.01101	.1505	.01052	.02593
#2	.0043	-.0111	.01200	.1494	.01041	.02538
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	166.93
Stddev	.25
%RSD	.14699
#1	166.76
#2	167.11

WS 8/5/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 15:46 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.223	.0053	.0009	2.3993	.04872	.0001
Stddev	.018	.0083	.0012	.0283	.00069	.0004
%RSD	.3399	154.8	128.2	1.1772	1.4089	261.3
#1	5.210	.0112	.0018	2.3793	.04823	.0004
#2	5.235	-.0005	.0001	2.4193	.04920	-.0001
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019	25.89	.0027	-.0006	.0000	25.19
Stddev	.0004	.19	.0015	.0013	.0030	.27
%RSD	22.37	.7152	55.50	195.0	24680.	1.073
#1	.0016	25.76	.0016	-.0015	-.0021	24.99
#2	.0022	26.02	.0038	.0002	.0021	25.38
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0115	25.31	4.869	.0028	-.0025	9.925
Stddev	.0062	.07	.069	.0012	.0012	.056
%RSD	54.46	.2688	1.407	41.98	48.93	.5609
#1	-.0159	25.26	4.821	.0036	-.0034	9.886
#2	-.0070	25.36	4.918	.0019	-.0016	9.965
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0287	.0050	9.684	.0024	.0026	.0020
Stddev	.0120	.0019	.131	.0062	.0016	.0001
%RSD	41.94	37.36	1.355	260.1	61.27	3.626
#1	.0372	.0037	9.591	-.0020	.0015	.0021
#2	.0202	.0064	9.777	.0068	.0037	.0020
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/05/10 15:46

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.966	2.514	.00192	.0280	.49172	.48737
Stddev	.071	.004	.00212	.0121	.00215	.00477
%RSD	.7084	.1782	110.37	43.13	.43641	.97775
#1	9.916	2.511	.00042	.0365	.49020	.48400
#2	10.02	2.517	.00342	.0195	.49323	.49074
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	183.54
Stddev	1.91
%RSD	1.0397
#1	184.89
#2	182.19

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 15:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5156	2.459	2.479	.44923	.51038	.4955
Stddev	.0000	.021	.007	.00139	.00073	.0038
%RSD	.0034	.8369	.2929	.30989	.14374	.7604
#1	.5156	2.445	2.474	.44824	.51090	.4928
#2	.5156	2.474	2.484	.45021	.50986	.4981
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4904	2.487	.4931	.4883	.5028	.5050
Stddev	.0032	.012	.0061	.0021	.0009	.0151
%RSD	.6455	.4680	1.230	.4334	.1750	2.992
#1	.4882	2.495	.4888	.4868	.5034	.5157
#2	.4926	2.479	.4974	.4898	.5022	.4943
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.420	1.9889	.96984	.9715	.4891	5.032
Stddev	.025	.0084	.00185	.0128	.0001	.002
%RSD	1.017	.42372	.19094	1.318	.0298	.0384
#1	2.402	1.9949	.97114	.9625	.4892	5.031
#2	2.437	1.9830	.96853	.9806	.4890	5.033
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.427	.4979	.5293	2.364	.4921	.4891
Stddev	.029	.0065	.0021	.041	.0003	.0069
%RSD	1.178	1.307	.3987	1.726	.0651	1.404
#1	2.407	.4933	.5308	2.335	.4923	.4842
#2	2.447	.5025	.5278	2.392	.4919	.4939
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 15:49

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0096	.2963	.48499	4.780	.50150	.48310
Stddev	.0024	.0008	.00167	.032	.00448	.00115
%RSD	25.20	.2868	.34520	.6592	.89357	.23707
#1	-.0113	.2957	.48381	4.802	.49833	.48229
#2	-.0079	.2969	.48617	4.757	.50467	.48391
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	185.99
Stddev	.21
%RSD	.11288
#1	185.84
#2	186.14

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 15:52 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	-.0024	.0003	.00014	.00003	-.0031
Stddev	.0107	.0089	.0025	.00036	.00003	.0002
%RSD	154.8	361.8	849.2	261.03	102.44	7.472
#1	.0145	.0038	-.0015	-.00012	.00005	-.0032
#2	-.0007	-.0087	.0021	.00039	.00001	-.0029
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0031	.0013	.0005	-.0008	-.0059
Stddev	.0000	.0019	.0006	.0006	.0019	.0015
%RSD	5.701	61.18	46.30	132.3	223.2	25.38
#1	-.0003	.0044	.0009	.0009	-.0022	-.0049
#2	-.0003	.0018	.0017	.0000	.0005	-.0070
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.00058	.00027	.0029	.0000	-.0152
Stddev	.0022	.00028	.00018	.0018	.000	.0150
%RSD	1231.	47.429	67.694	60.39	1653.	99.11
#1	.0017	.00078	.00039	.0042	.0002	-.0258
#2	-.0014	.00039	.00014	.0017	-.0002	-.0045
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052	.0010	-.0004	.0007	.0001	.0004
Stddev	.0056	.0025	.0008	.0022	.0019	.0001
%RSD	106.3	242.4	217.3	333.3	2911.	26.69
#1	.0092	-.0007	.0002	.0022	-.0013	.0004
#2	.0013	.0028	-.0009	-.0009	.0014	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 15:52

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056	-.0005	.00175	.0123	.00006	.00008
Stddev	.0073	.0000	.00012	.0001	.00002	.00005
%RSD	131.0	4.956	7.0474	.7802	27.862	62.252
#1	.0004	-.0005	.00184	.0122	.00007	.00012
#2	.0108	-.0005	.00167	.0124	.00004	.00005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	182.64
Stddev	.94
%RSD	.51620
#1	183.31
#2	181.97

Method: 2010A Sample Name: K1007366-MB Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 15:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076	-.0041	-.0044	.00019	.00001	.0046
#1	.0021	-.0054	-.0003	.00045	-.00002	.0050
#2	.0130	-.0029	-.0085	-.00007	.00004	.0042

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0051	.0007	-.0005	.0020	.0002
#1	-.0003	.0044	.0014	-.0005	.0031	.0004
#2	-.0002	.0058	.0001	-.0005	.0008	.0000

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.00129	.00011	.0019	.0003	.0140
#1	.0022	.00119	.00000	.0015	.0008	.0074
#2	.0062	.00139	.00022	.0023	-.0003	.0207

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	.0004	.0003	.0132	.0012	.0011
#1	.0000	.0028	.0019	.0124	.0023	.0013
#2	-.0079	-.0019	-.0012	.0141	.0001	.0009

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0216	.0061	-.00107	-.0080	-.00023	.00013
#1	.0110	.0052	.00023	-.0161	-.00023	.00013
#2	.0322	.0069	-.00238	.0000	-.00024	.00013

Int. Std.	Sc3572
Units	Cts/S
Avg	179.47
#1	178.63
#2	180.30

Method: 2010A Sample Name: K1007366-LCSS Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 15:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.20	.5623	.4356	2.0851	.28921	.5112
#1	42.00	.5541	.4463	2.0751	.28909	.5100
#2	42.40	.5705	.4250	2.0950	.28934	.5124

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4706	49.25	.7492	.9774	1.233	93.78
#1	.4690	49.09	.7468	.9759	1.224	93.69
#2	.4722	49.41	.7515	.9788	1.243	93.87

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5077	19.17	2.5411	.3205	1.018	20.25
#1	.5103	19.09	2.5528	.3174	1.015	20.10
#2	.5052	19.26	2.5295	.3236	1.021	20.41

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9818	.3895	3.282	.6676	.9275	1.463
#1	.9735	.3886	3.269	.6633	.9263	1.461
#2	.9902	.3903	3.294	.6719	.9287	1.464

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.188	11.08	2.2684	1.261	.04244	.64467
#1	4.178	11.07	2.2717	1.267	.04195	.64283
#2	4.199	11.09	2.2652	1.255	.04293	.64651

Int. Std.	Sc3572
Units	Cts/S
Avg	181.84
#1	181.40
#2	182.27

Method: 2010A Sample Name: K1007366-001 Operator:
Comment: 080510A 1/2
Run Time: 08/06/10 17:27 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	43.28	.0984	.1052	.73912	.00138	.0965
#1	43.31	.1005	.1128	.73704	.00133	.0982
#2	43.25	.0963	.0976	.74120	.00143	.0949

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079	429.9	.2649	.0429	1.408	232.6
#1	.0074	427.2	.2638	.0435	1.409	231.7
#2	.0083	432.6	.2661	.0423	1.407	233.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9567	33.28	3.0390	.0601	.2690	6.717
#1	.9495	33.24	3.0328	.0623	.2681	6.714
#2	.9639	33.32	3.0452	.0579	.2700	6.720

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0266	.0011	43.10	.1246	.1485	3.422
#1	.0005	.0007	43.06	.1339	.1507	3.409
#2	.0526	.0015	43.14	.1152	.1462	3.434

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.026	13.51	2.5292	.0900	.05671	3.3812
#1	2.992	13.57	2.5211	.0789	.05675	3.3842
#2	3.060	13.46	2.5373	.1011	.05667	3.3782

Int. Std.	Sc3572
Units	Cts/S
Avg	174.81
#1	174.54
#2	175.09

Method: 2010A Sample Name: K1007366-001 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 43.39	k .0873	k .1083	k .73257	k .00162	.1150
#1	k 43.42	k .0894	k .1158	k .73050	k .00158	.1166
#2	k 43.37	k .0852	k .1007	k .73464	k .00166	.1133

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0084	428.1	k .2670	k .0439	k 1.394	230.0
#1	k .0079	425.3	k .2658	k .0445	k 1.396	229.2
#2	k .0088	430.8	k .2681	k .0433	k 1.393	230.8

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .9700	k 33.40	2.964	k .0605	k .2713	6.760
#1	k .9627	k 33.35	2.957	k .0627	k .2703	6.756
#2	k .9773	k 33.44	2.971	k .0583	k .2723	6.763

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k .0335	k .0023	42.61	k .1264	k .1569	k 3.424
#1	k .0072	k .0018	42.57	k .1359	k .1592	k 3.412
#2	k .0598	k .0027	42.65	k .1168	k .1546	k 3.437

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	k 2.921	k 13.69	2.5436	k .0773	.05710	3.3523
#1	k 2.886	k 13.75	2.5354	k .0661	.05715	3.3553
#2	k 2.955	k 13.64	2.5517	k .0884	.05706	3.3493

Int. Std.	Sc3572
Units	Cts/S
Avg	174.81
#1	174.54
#2	175.09

changed Mo Line Switch pt
mmk 8/6/10

Method: 2010A Sample Name: K1007366-002 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	67.57	.0942	.1127	1.1627	.00167	.1553
#1	67.35	.0921	.1133	1.1606	.00162	.1540
#2	67.79	.0962	.1122	1.1647	.00173	.1567

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062	241.0	.1992	.0437	1.947	135.8
#1	.0062	251.6	.1962	.0415	1.937	135.6
#2	.0061	230.3	.2021	.0460	1.957	136.0

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8784	35.99	3.539	.0699	.1617	8.354
#1	.8826	35.92	3.528	.0681	.1607	8.341
#2	.8743	36.06	3.551	.0716	.1626	8.366

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	.0007	48.30	.1683	.1871	4.624
#1	.0241	.0005	48.26	.1722	.1874	4.610
#2	.0058	.0008	48.34	.1644	.1868	4.638

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.357	12.75	3.1672	.0775	.06292	1.7815
#1	3.329	12.84	3.1669	.0703	.06276	1.7772
#2	3.386	12.66	3.1674	.0848	.06308	1.7857

Int. Std.	Sc3572
Units	Cts/S
Avg	176.55
#1	176.27
#2	176.82

Method: 2010A Sample Name: K1007366-003 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:07 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	61.86	.0417	.0969	.58448	.00149	.1477
#1	61.78	.0446	.1075	.58639	.00143	.1472
#2	61.93	.0388	.0863	.58256	.00156	.1482

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	136.1	.1744	.0388	1.062	126.5
#1	.0068	135.5	.1752	.0393	1.056	126.7
#2	.0075	136.7	.1736	.0383	1.069	126.3

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4882	40.26	4.193	.0487	.1554	11.00
#1	.4776	40.17	4.202	.0481	.1548	10.94
#2	.4988	40.36	4.184	.0493	.1560	11.06

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219	.0023	64.85	.0351	.2018	2.846
#1	.0363	.0026	64.89	.0292	.2026	2.842
#2	.0075	.0020	64.80	.0410	.2010	2.849

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.394	17.15	3.9196	.0801	.06945	.71191
#1	3.399	17.34	3.9272	.0642	.06914	.71361
#2	3.389	16.96	3.9120	.0959	.06977	.71020

Int. Std.	Sc3572
Units	Cts/S
Avg	179.42
#1	178.61
#2	180.23

Method: 2010A Sample Name: K1007366-003L Operator:
Comment: 080510A 1/5
Run Time: 08/05/10 16:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.71	.0058	.0266	.11989	.00029	.0319
#1	12.70	.0179	.0324	.11946	.00027	.0315
#2	12.72	-.0063	.0207	.12032	.00031	.0322

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	28.37	.0355	.0081	.2095	24.73
#1	.0016	28.14	.0343	.0082	.2100	24.64
#2	.0025	28.60	.0367	.0081	.2090	24.83

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0888	7.8674	.85460	.0086	.0296	2.275
#1	.0902	7.8564	.84959	.0093	.0299	2.269
#2	.0875	7.8784	.85961	.0079	.0293	2.281

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101	.0003	12.90	.0096	.0405	.5860
#1	.0088	.0022	12.93	.0106	.0375	.5826
#2	.0115	-.0016	12.87	.0086	.0435	.5894

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6831	4.100	.78907	.0325	.01465	.14341
#1	.6950	4.154	.78745	.0377	.01471	.14315
#2	.6711	4.047	.79069	.0273	.01458	.14366

Int. Std.	Sc3572
Units	Cts/S
Avg	185.55
#1	185.55
#2	185.54

Method: 2010A Sample Name: K1007366-003D Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	60.42	.0546	.0870	.59285	.00143	.1405
#1	60.32	.0479	.0785	.59075	.00145	.1395
#2	60.53	.0612	.0956	.59495	.00142	.1416

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071	121.9	.1645	.0382	.8769	120.3
#1	.0070	120.6	.1640	.0398	.8790	119.9
#2	.0072	123.2	.1649	.0367	.8749	120.7

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4040	39.12	3.224	.0517	.1525	10.48
#1	.4002	38.90	3.217	.0496	.1529	10.51
#2	.4079	39.35	3.230	.0538	.1522	10.46

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123	.0026	62.94	.0262	.2014	2.582
#1	.0188	.0050	63.09	.0239	.2029	2.562
#2	.0057	.0002	62.78	.0284	.1999	2.602

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.169	16.23	3.9645	.0656	.06857	.70909
#1	3.158	16.59	3.9606	.0701	.06798	.71098
#2	3.179	15.87	3.9684	.0611	.06916	.70719

Int. Std.	Sc3572
Units	Cts/S
Avg	178.91
#1	178.55
#2	179.26

Method: 2010A Sample Name: K1007366-003S Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.01	.2395	.5371	2.5754	.04918	.6129
#1	62.61	.2460	.5209	2.5742	.04919	.6083
#2	63.40	.2329	.5533	2.5766	.04917	.6176

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0545	269.9	.3615	.5118	1.032	116.4
#1	.0540	268.4	.3570	.5102	1.031	115.7
#2	.0550	271.5	.3660	.5134	1.032	117.1

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8837	39.05	3.605	.5216	.6156	10.38
#1	.8653	38.86	3.599	.5136	.6118	10.38
#2	.9022	39.24	3.611	.5296	.6194	10.38

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4823	.0469	65.67	.0302	.6984	3.022
#1	.4848	.0485	66.08	.0188	.6947	3.000
#2	.4797	.0452	65.26	.0416	.7020	3.044

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.094	16.88	4.0171	.5235	.06967	.93212
#1	3.049	16.75	4.0193	.5377	.06972	.93493
#2	3.139	17.02	4.0149	.5094	.06962	.92932

Int. Std.	Sc3572
Units	Cts/S
Avg	179.03
#1	178.74
#2	179.32

Method: 2010A Sample Name: K1007366-004 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:18 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	61.98	.0387	.0669	.26949	.00104	.2153
#1	61.78	.0412	.0606	.26512	.00104	.2151
#2	62.18	.0361	.0732	.27386	.00105	.2155

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114	380.0	.2056	.0352	1.262	132.9
#1	.0112	377.7	.2000	.0359	1.267	131.4
#2	.0116	382.3	.2113	.0344	1.256	134.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4214	41.54	1.9226	.0292	.1498	13.41
#1	.4165	41.46	1.8997	.0300	.1455	13.43
#2	.4264	41.62	1.9455	.0284	.1541	13.40

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0236	-.0005	112.5	.0472	.2052	1.583
#1	.0314	.0000	111.1	.0485	.2016	1.556
#2	.0158	-.0010	113.9	.0458	.2087	1.611

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.824	27.89	3.5744	.0817	.07953	1.4675
#1	3.807	28.17	3.5123	.0786	.07968	1.4474
#2	3.841	27.60	3.6364	.0847	.07938	1.4876

Int. Std.	Sc3572
Units	Cts/S
Avg	171.03
#1	173.50
#2	168.57

Method: 2010A Sample Name: K1007366-005 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:21 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	63.36	.0486	.0444	.23872	.00107	.2120
#1	63.10	.0469	.0432	.23802	.00113	.2105
#2	63.62	.0502	.0456	.23942	.00101	.2135

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	135.5	.1866	.0318	.9911	106.3
#1	.0109	134.9	.1867	.0319	.9887	106.6
#2	.0107	136.2	.1866	.0318	.9935	106.0

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2650	41.91	1.2890	.0226	.1484	13.86
#1	.2602	41.77	1.2874	.0222	.1469	13.84
#2	.2698	42.04	1.2906	.0229	.1499	13.88

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247	.0005	110.5	.0372	.2044	1.261
#1	.0221	-.0007	110.6	.0377	.2047	1.262
#2	.0273	.0016	110.5	.0366	.2041	1.260

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.811	25.78	3.6206	.1029	.07651	.94186
#1	3.787	25.64	3.6209	.1203	.07694	.94188
#2	3.834	25.92	3.6203	.0855	.07609	.94184

Int. Std.	Sc3572
Units	Cts/S
Avg	177.55
#1	177.24
#2	177.86

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 16:24 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.326	.0036	-.0005	2.4511	.04986	.0012
Stddev	.078	.0094	.0041	.0132	.00002	.0012
%RSD	1.458	259.5	864.9	.53880	.04026	101.0
#1	5.381	-.0030	.0024	2.4417	.04985	.0020
#2	5.271	.0103	-.0034	2.4604	.04987	.0003
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.96	.0033	-.0008	.0009	25.40
Stddev	.0001	.00	.0002	.0010	.0006	.03
%RSD	6.446	.0022	6.198	122.6	69.45	.1142
#1	.0016	25.96	.0032	-.0015	.0004	25.38
#2	.0015	25.96	.0035	-.0001	.0013	25.42
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038	25.53	4.984	.0003	-.0018	10.07
Stddev	.0020	.02	.001	.0019	.0007	.03
%RSD	51.37	.0725	.0264	588.0	41.42	.3412
#1	.0024	25.52	4.983	-.0010	-.0013	10.10
#2	.0052	25.55	4.985	.0017	-.0023	10.05
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143	.0010	9.898	-.0010	.0053	.0029
Stddev	.0065	.0008	.020	.0012	.0030	.0007
%RSD	45.38	81.21	.2057	113.5	55.85	23.60
#1	.0097	.0004	9.913	-.0002	.0032	.0033
#2	.0189	.0016	9.884	-.0019	.0074	.0024
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Analysis Report

Sample Name: CCVB Run Time: 08/05/10 16:24

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.07	2.581	.00411	.0276	.49897	.50165
Stddev	.04	.027	.00036	.0012	.00077	.00059
%RSD	.3617	1.039	8.6677	4.499	.15489	.11701
#1	10.05	2.600	.00386	.0285	.49952	.50123
#2	10.10	2.562	.00436	.0267	.49843	.50206
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	181.22
Stddev	.10
%RSD	.05623
#1	181.29
#2	181.15

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 16:27 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5501	2.446	2.472	.44597	.50800	.4989
Stddev	.0076	.020	.008	.00097	.00238	.0004
%RSD	1.389	.8182	.3108	.21688	.46817	.0712
#1	.5555	2.432	2.467	.44665	.50968	.4991
#2	.5447	2.460	2.477	.44529	.50632	.4986
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4838	2.546	.4884	.4842	.5053	.5296
Stddev	.0014	.043	.0009	.0007	.0046	.0128
%RSD	.2851	1.690	.1838	.1474	.9195	2.409
#1	.4848	2.515	.4878	.4847	.5021	.5387
#2	.4828	2.576	.4891	.4837	.5086	.5206
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.392	2.0480	.96411	.9655	.4855	5.116
Stddev	.012	.0124	.00078	.0008	.0001	.017
%RSD	.5113	.60473	.08054	.0836	.0230	.3374
#1	2.400	2.0393	.96466	.9661	.4854	5.104
#2	2.383	2.0568	.96356	.9650	.4856	5.129
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.442	.4914	.5367	2.348	.4912	.4813
Stddev	.006	.0023	.0052	.012	.0021	.0001
%RSD	.2409	.4682	.9608	.5224	.4220	.0140
#1	2.446	.4930	.5330	2.339	.4898	.4813
#2	2.438	.4898	.5403	2.356	.4927	.4812
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 16:27

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0093	.3082	.48291	4.763	.50841	.48481
Stddev	.0064	.0052	.00035	.010	.00296	.00116
%RSD	68.10	1.700	.07342	.2162	.58291	.24012
#1	-.0048	.3119	.48266	4.756	.50632	.48563
#2	-.0138	.3045	.48316	4.771	.51051	.48399
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	187.54
Stddev	1.03
%RSD	.54795
#1	186.82
#2	188.27

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 16:30 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014	.0055	.0076	.00014	.00008	-.0032
Stddev	.0127	.0000	.0054	.00007	.00001	.0001
%RSD	907.7	.4619	70.63	51.788	9.5512	2.345
#1	.0104	.0055	.0038	.00009	.00007	-.0033
#2	-.0076	.0054	.0114	.00019	.00008	-.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0065	.0020	.0003	-.0031	-.0019
Stddev	.0004	.0016	.0001	.0002	.0010	.0012
%RSD	88.38	24.49	6.058	72.60	31.40	66.09
#1	-.0002	.0076	.0021	.0002	-.0024	-.0010
#2	-.0007	.0053	.0019	.0005	-.0038	-.0027
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.00891	.00026	.0037	.0001	-.0105
Stddev	.0088	.00022	.00024	.0010	.0004	.0088
%RSD	1463.	2.5074	91.810	26.20	482.4	83.55
#1	.0056	.00875	.00043	.0043	-.0002	-.0043
#2	-.0068	.00907	.00009	.0030	.0004	-.0167
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0007	.0027	.0021	.0000	.0002
Stddev	.0139	.0000	.0007	.0030	.0007	.0000
%RSD	425.4	.1141	23.76	140.5	3367.	12.78
#1	-.0066	.0007	.0032	.0042	-.0005	.0002
#2	.0131	.0007	.0023	.0000	.0005	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 16:30

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	.0055	.00098	.0148	-.00005	.00008
Stddev	.0075	.0039	.00181	.0087	.00012	.00001
%RSD	80.92	72.41	184.94	58.65	252.72	10.527
#1	.0040	.0082	.00226	.0210	-.00013	.00008
#2	.0145	.0027	-.00030	.0087	.00004	.00007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	183.90
Stddev	.08
%RSD	.04312
#1	183.84
#2	183.95

Method: 2010A Sample Name: K1007366-006 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:33 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.21	.2086	1.616	1.2294	.00216	.0686
#1	32.95	.2111	1.608	1.2320	.00213	.0673
#2	33.46	.2061	1.624	1.2268	.00219	.0699

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	435.5	.0899	.0879	2.031	87.67
#1	.0045	429.5	.0900	.0878	2.023	87.61
#2	.0050	441.4	.0899	.0880	2.039	87.73

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8902	24.93	4.325	.0680	.2550	6.287
#1	.8803	24.78	4.347	.0682	.2551	6.253
#2	.9000	25.08	4.302	.0678	.2550	6.320

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114	.0188	22.60	.0545	.0949	4.348
#1	.0127	.0166	22.68	.0569	.0946	4.334
#2	.0101	.0211	22.52	.0522	.0951	4.362

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.899	9.204	1.8717	.0626	.04250	2.8892
#1	1.855	9.197	1.8848	.0510	.04216	2.8976
#2	1.942	9.212	1.8586	.0742	.04284	2.8808

Int. Std.	Sc3572
Units	Cts/S
Avg	175.01
#1	173.67
#2	176.35

Method: 2010A Sample Name: K1007366-007 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:36 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	41.19	.0303	.0399	.38309	.00100	.1420
#1	41.11	.0349	.0347	.38364	.00102	.1418
#2	41.26	.0257	.0452	.38253	.00099	.1422

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070	599.0	.1375	.0227	.5781	75.59
#1	.0070	598.7	.1366	.0222	.5729	75.61
#2	.0071	599.2	.1385	.0232	.5833	75.57

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3442	29.58	1.5607	.0213	.0948	9.367
#1	.3438	29.52	1.5552	.0209	.0949	9.334
#2	.3446	29.65	1.5662	.0216	.0948	9.399

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0208	.0043	76.68	.0278	.1383	1.331
#1	.0136	.0051	76.46	.0308	.1404	1.333
#2	.0281	.0034	76.89	.0248	.1363	1.330

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.071	17.23	2.4883	.0818	.06160	2.3780
#1	3.061	17.33	2.4866	.0772	.06089	2.3751
#2	3.081	17.14	2.4900	.0863	.06231	2.3810

Int. Std.	Sc3572
Units	Cts/S
Avg	172.04
#1	171.72
#2	172.36

Method: 2010A Sample Name: K1007366-008 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:39 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	35.64	.0290	.0365	.13289	.00047	.0683
#1	35.73	.0361	.0444	.13242	.00040	.0693
#2	35.54	.0219	.0287	.13336	.00054	.0672

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	196.7	.1499	.0223	.5463	78.34
#1	.0043	196.3	.1486	.0212	.5464	77.86
#2	.0032	197.2	.1512	.0234	.5461	78.82

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5259	24.34	.86561	.0087	.1095	5.172
#1	.5204	24.29	.86146	.0082	.1099	5.196
#2	.5314	24.39	.86976	.0091	.1091	5.148

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0187	.0031	32.40	.0164	.1439	.7857
#1	.0200	.0007	32.27	.0226	.1427	.7824
#2	.0174	.0055	32.53	.0102	.1451	.7891

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.153	13.24	2.8128	.0396	.04544	1.3013
#1	2.156	14.01	2.8170	.0469	.04588	1.2995
#2	2.150	12.47	2.8086	.0324	.04500	1.3030

Int. Std.	Sc3572
Units	Cts/S
Avg	176.41
#1	176.49
#2	176.32

Method: 2010A Sample Name: K1007366-009 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:42 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	73.35	.0456	.0922	.27724	.00116	.2483
#1	73.12	.0473	.0924	.27700	.00121	.2464
#2	73.57	.0440	.0919	.27747	.00112	.2502

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0201	127.5	.2591	.0423	1.705	139.3
#1	.0202	126.4	.2594	.0430	1.713	139.0
#2	.0200	128.5	.2587	.0416	1.697	139.7

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7527	47.46	1.6111	.0269	.2167	14.85
#1	.7494	47.34	1.6189	.0267	.2135	14.86
#2	.7560	47.58	1.6033	.0272	.2200	14.84

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0418	.0031	107.3	.0678	.2508	2.454
#1	.0365	.0026	107.7	.0602	.2502	2.438
#2	.0471	.0035	106.8	.0754	.2515	2.471

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.277	27.47	4.3035	.1091	.08766	1.0829
#1	4.260	27.61	4.3076	.0992	.08824	1.0847
#2	4.294	27.32	4.2995	.1191	.08707	1.0812

Int. Std.	Sc3572
Units	Cts/S
Avg	176.71
#1	176.38
#2	177.04

Method: 2010A Sample Name: K1007366-010 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:45 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	78.53	.0632	.1502	.26941	.00130	.2023
#1	78.25	.0632	.1560	.26854	.00132	.2009
#2	78.80	.0632	.1444	.27027	.00129	.2036

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0153	90.69	.6338	.0586	2.763	207.5
#1	.0153	90.05	.6317	.0582	2.768	207.0
#2	.0152	91.32	.6358	.0591	2.758	208.0

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5374	47.43	1.9040	.0605	.6493	15.24
#1	.5306	47.29	1.8929	.0597	.6480	15.32
#2	.5443	47.57	1.9152	.0612	.6506	15.16

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0322	.0007	94.98	.0532	.2616	2.362
#1	.0322	.0019	95.75	.0535	.2595	2.354
#2	.0323	-.0005	94.20	.0528	.2637	2.369

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.756	26.72	4.5051	.0918	.09205	.61874
#1	3.731	27.40	4.5138	.0990	.09286	.62163
#2	3.780	26.03	4.4963	.0845	.09123	.61584

Int. Std.	Sc3572
Units	Cts/S
Avg	178.60
#1	178.12
#2	179.08

Method: 2010A Sample Name: K1007366-011 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:48 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.63	.0307	.0386	.17129	.00039	.1164
#1	26.61	.0345	.0407	.17047	.00038	.1160
#2	26.65	.0270	.0366	.17211	.00040	.1168

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075	887.1	.1560	.0156	.6748	53.99
#1	.0078	879.2	.1558	.0159	.6733	53.95
#2	.0071	894.9	.1562	.0152	.6764	54.02

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2171	25.44	1.0271	.0122	.0908	6.880
#1	.2138	25.40	1.0314	.0126	.0915	6.864
#2	.2203	25.49	1.0228	.0119	.0901	6.896

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0253	.0054	80.82	.0314	.0963	1.079
#1	.0194	.0067	80.77	.0342	.0967	1.076
#2	.0312	.0040	80.87	.0285	.0958	1.082

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.521	16.56	1.5546	.0541	.05203	>4.5000
#1	2.514	16.60	1.5548	.0514	.05140	>4.5000
#2	2.529	16.52	1.5544	.0569	.05267	>4.5000

Int. Std.	Sc3572
Units	Cts/S
Avg	169.46
#1	169.04
#2	169.87

Method: 2010A Sample Name: K1007366-012 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:51 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	62.31	.0424	.0651	.21378	.00102	.2080
#1	62.19	.0445	.0706	.21141	.00106	.2078
#2	62.43	.0403	.0596	.21615	.00098	.2082

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163	196.4	.2913	.0371	2.308	115.8
#1	.0163	195.9	.2887	.0363	2.314	115.2
#2	.0163	196.9	.2940	.0379	2.302	116.3

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4264	42.49	1.3383	.0272	.2276	12.77
#1	.4063	42.37	1.3265	.0272	.2243	12.77
#2	.4466	42.61	1.3500	.0271	.2309	12.77

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0299	.0055	92.55	.0406	.2199	2.146
#1	.0318	.0037	91.98	.0389	.2160	2.126
#2	.0280	.0072	93.13	.0423	.2238	2.166

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.495	21.73	3.6738	.0980	.08133	1.2961
#1	4.472	22.36	3.6521	.1001	.08145	1.2897
#2	4.517	21.10	3.6954	.0958	.08121	1.3025

Int. Std.	Sc3572
Units	Cts/S
Avg	176.41
#1	177.45
#2	175.36

Method: 2010A Sample Name: K1007366-013 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:54 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.76	.0234	.0501	.17402	.00068	.1762
#1	42.65	.0217	.0606	.17423	.00072	.1757
#2	42.87	.0251	.0396	.17381	.00064	.1767

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120	536.6	.1916	.0246	1.037	84.72
#1	.0121	534.1	.1918	.0253	1.032	84.36
#2	.0120	539.0	.1914	.0239	1.043	85.08

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3332	33.49	.97118	.0155	.1367	10.43
#1	.3296	33.38	.97062	.0144	.1376	10.39
#2	.3368	33.61	.97175	.0166	.1357	10.47

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0288	.0030	98.76	.0441	.1599	1.409
#1	.0222	.0048	98.39	.0454	.1591	1.407
#2	.0353	.0012	99.14	.0428	.1607	1.410

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.608	21.68	2.5739	.0783	.06510	3.5405
#1	3.579	21.88	2.5809	.0850	.06443	3.5459
#2	3.637	21.47	2.5669	.0717	.06576	3.5351

Int. Std.	Sc3572
Units	Cts/S
Avg	172.44
#1	171.82
#2	173.06

Method: 2010A Sample Name: K1007366-015 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 16:57 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.81	.0172	.0266	.16815	.00049	.1862
#1	37.91	.0117	.0266	.16838	.00044	.1849
#2	37.72	.0226	.0266	.16793	.00054	.1875

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	387.7	.3002	.0201	.8322	70.26
#1	.0092	384.5	.2999	.0198	.8338	70.01
#2	.0104	390.9	.3006	.0205	.8305	70.52

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4365	31.92	.77037	.0180	.1562	9.701
#1	.4353	31.88	.77118	.0174	.1544	9.738
#2	.4376	31.96	.76956	.0186	.1581	9.665

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0336	.0067	102.2	.0599	.1436	1.204
#1	.0355	.0065	102.5	.0670	.1460	1.196
#2	.0316	.0068	101.9	.0528	.1412	1.212

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.990	22.80	2.2433	.0810	.05385	2.3921
#1	2.991	23.43	2.2506	.0829	.05409	2.4036
#2	2.990	22.16	2.2360	.0791	.05361	2.3806

Int. Std.	Sc3572
Units	Cts/S
Avg	173.44
#1	173.23
#2	173.64

Method: 2010A Sample Name: K1007366-016 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:00 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	65.10	.0315	.0419	.24277	.00114	.2261
#1	64.99	.0365	.0451	.24224	.00114	.2254
#2	65.21	.0266	.0386	.24329	.00114	.2268

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139	259.9	.3424	.0316	.9521	116.6
#1	.0134	259.3	.3418	.0316	.9482	116.7
#2	.0145	260.6	.3430	.0316	.9560	116.4

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6344	44.11	1.3061	.0222	.1828	14.20
#1	.6171	44.07	1.3027	.0209	.1814	14.09
#2	.6518	44.16	1.3094	.0234	.1843	14.32

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0288	.0014	110.0	.0978	.2168	1.378
#1	.0413	.0013	109.5	.1023	.2123	1.376
#2	.0163	.0016	110.6	.0932	.2213	1.380

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.258	25.59	3.7090	.0869	.08289	2.0509
#1	4.232	25.80	3.7071	.0870	.08259	2.0443
#2	4.283	25.39	3.7109	.0869	.08320	2.0575

Int. Std.	Sc3572
Units	Cts/S
Avg	175.17
#1	175.16
#2	175.18

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 17:03 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.300	.0032	.0018	2.4024	.04916	.0003
Stddev	.004	.0041	.0017	.0021	.00003	.0001
%RSD	.0736	127.8	92.62	.08709	.05105	22.39
#1	5.303	.0003	.0030	2.4009	.04914	.0002
#2	5.297	.0061	.0006	2.4039	.04918	.0003
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	25.82	.0028	-.0004	.0000	24.87
Stddev	.0004	.16	.0003	.0009	.0006	.09
%RSD	20.78	.6038	10.49	234.1	7415.	.3523
#1	.0017	25.93	.0030	.0003	.0004	24.93
#2	.0023	25.71	.0026	-.0011	-.0004	24.80
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	25.49	4.940	.0003	-.0018	10.20
Stddev	.0036	.03	.021	.0004	.0001	.01
%RSD	642.5	.1280	.4348	174.1	7.932	.0588
#1	.0020	25.51	4.925	.0006	-.0017	10.20
#2	-.0031	25.47	4.956	-.0001	-.0019	10.21
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	.0013	9.801	.0016	.0030	.0025
Stddev	.0019	.0013	.062	.0061	.0031	.0002
%RSD	22.24	94.65	.6322	374.3	102.0	8.018
#1	.0097	.0022	9.844	-.0027	.0052	.0027
#2	.0070	.0004	9.757	.0059	.0008	.0024
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/05/10 17:03

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.04	2.577	.00344	.0236	.50480	.49717
Stddev	.04	.010	.00211	.0086	.00023	.00025
%RSD	.3765	.3992	61.481	36.58	.04635	.05122
#1	10.07	2.584	.00194	.0175	.50496	.49735
#2	10.02	2.570	.00493	.0297	.50463	.49699
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	184.05
Stddev	.22
%RSD	.11990
#1	183.89
#2	184.21

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 17:06 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5501	2.472	2.430	.45422	.52291	.5020
Stddev	.0136	.037	.017	.00219	.00398	.0019
%RSD	2.473	1.509	.6902	.48226	.76147	.3873
#1	.5598	2.445	2.419	.45577	.52572	.5006
#2	.5405	2.498	2.442	.45267	.52009	.5034
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4906	2.626	.4908	.4924	.4950	.5498
Stddev	.0011	.013	.0029	.0012	.0017	.0209
%RSD	.2153	.4930	.5858	.2388	.3388	3.807
#1	.4913	2.635	.4928	.4932	.4938	.5646
#2	.4898	2.617	.4887	.4916	.4962	.5350
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.457	2.0732	.97148	.9835	.4960	5.186
Stddev	.005	.0079	.00139	.0020	.0028	.054
%RSD	.2054	.37910	.14348	.2000	.5549	1.052
#1	2.453	2.0788	.97049	.9821	.4979	5.148
#2	2.460	2.0676	.97246	.9849	.4940	5.225
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.461	.4947	.5527	2.426	.5006	.4865
Stddev	.020	.0027	.0011	.012	.0057	.0027
%RSD	.7997	.5486	.2035	.4884	1.138	.5513
#1	2.447	.4966	.5535	2.417	.5046	.4884
#2	2.474	.4927	.5519	2.434	.4965	.4846
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 17:06

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0067	.3113	.49073	4.861	.51822	.49892
Stddev	.0052	.0034	.00437	.023	.00595	.00362
%RSD	77.69	1.104	.89114	.4812	1.1473	.72482
#1	-.0103	.3137	.49382	4.845	.51402	.50148
#2	-.0030	.3088	.48764	4.878	.52243	.49636
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	185.01
Stddev	1.51
%RSD	.81663
#1	183.94
#2	186.07

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 17:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	.0046	.0026	.00029	.00008	-.0038
Stddev	.0126	.0071	.0100	.00020	.00013	.0004
%RSD	91.60	153.6	377.1	68.838	167.94	9.976
#1	.0048	.0097	.0097	.00043	.00017	-.0035
#2	.0227	-.0004	-.0044	.00015	-.00001	-.0040
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0009	.0011	-.0002	.0017	.0013
Stddev	.0001	.0019	.0007	.0002	.0004	.0015
%RSD	73.55	204.0	66.91	68.92	22.65	118.3
#1	.0003	-.0023	.0016	-.0004	.0020	.0023
#2	.0001	.0004	.0006	-.0001	.0015	.0002
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.00892	.00056	.0037	.0007	-.0234
Stddev	.0014	.00024	.00045	.0034	.0003	.0010
%RSD	43.10	2.6782	80.060	92.53	46.17	4.290
#1	.0042	.00909	.00088	.0061	.0009	-.0241
#2	.0022	.00875	.00024	.0013	.0005	-.0226
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072	.0001	-.0011	.0100	.0046	-.0002
Stddev	.0065	.0025	.0025	.0020	.0013	.0000
%RSD	90.13	1698.	224.8	20.41	29.14	12.04
#1	.0026	-.0016	-.0029	.0086	.0056	-.0002
#2	.0118	.0019	.0007	.0115	.0037	-.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 17:09

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135	.0070	.00192	.0064	.00033	.00018
Stddev	.0130	.0071	.00129	.0140	.00023	.00003
%RSD	96.23	101.1	67.089	219.7	71.329	15.370
#1	.0043	.0121	.00101	-.0035	.00049	.00020
#2	.0227	.0020	.00283	.0163	.00016	.00016
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	179.75
Stddev	1.23
%RSD	.68561
#1	180.62
#2	178.88

Method: 2010A Sample Name: K1007366-017 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:17 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	58.88	.0274	.0507	.23402	.00091	.2251
#1	58.73	.0340	.0593	.23289	.00086	.2248
#2	59.03	.0207	.0420	.23514	.00096	.2253

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127	339.8	.2324	.0292	.9172	102.6
#1	.0125	336.5	.2304	.0285	.9171	101.8
#2	.0128	343.2	.2343	.0298	.9174	103.5

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4892	44.51	1.1366	.0214	.1657	14.59
#1	.4788	44.36	1.1301	.0206	.1626	14.59
#2	.4996	44.66	1.1432	.0221	.1688	14.59

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0177	.0023	117.0	.0433	.1990	1.488
#1	.0229	.0005	117.2	.0446	.1942	1.470
#2	.0125	.0041	116.8	.0421	.2038	1.506

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.317	23.95	3.5521	.0833	.08003	3.0502
#1	4.281	24.06	3.5577	.1002	.08009	3.0517
#2	4.352	23.84	3.5465	.0665	.07998	3.0488

Int. Std.	Sc3572
Units	Cts/S
Avg	172.14
#1	171.69
#2	172.59

Method: 2010A Sample Name: K1007366-018 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:20 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.41	.0218	.0177	.11459	.00017	.0582
#1	16.44	.0226	.0157	.11535	.00012	.0596
#2	16.37	.0209	.0198	.11383	.00022	.0567

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	712.9	.0521	.0104	5.347	44.24
#1	.0044	709.6	.0511	.0101	5.352	44.31
#2	.0041	716.3	.0532	.0108	5.343	44.17

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1551	19.48	.64912	.0026	.0658	3.244
#1	.1607	19.48	.64955	.0020	.0665	3.247
#2	.1495	19.49	.64869	.0033	.0651	3.240

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220	.0013	37.33	.0609	.0724	1.834
#1	.0194	.0007	37.66	.0635	.0742	1.834
#2	.0247	.0019	36.99	.0583	.0705	1.834

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.341	7.811	.90838	.0257	.03943	>4.5000
#1	1.330	8.143	.90907	.0305	.03955	>4.5000
#2	1.352	7.480	.90769	.0210	.03932	>4.5000

Int. Std.	Sc3572
Units	Cts/S
Avg	173.03
#1	172.31
#2	173.76

Method: 2010A Sample Name: K1007366-019 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:23 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	38.22	.0098	.0290	.22374	.00064	.0882
#1	38.08	.0069	.0278	.22306	.00057	.0877
#2	38.37	.0127	.0302	.22442	.00071	.0888

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066	262.9	.1210	.0259	4.382	78.03
#1	.0069	261.3	.1219	.0261	4.398	77.71
#2	.0063	264.5	.1202	.0258	4.367	78.35

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.322	28.67	1.1301	.0336	.1219	6.706
#1	2.318	28.60	1.1264	.0325	.1220	6.711
#2	2.325	28.74	1.1337	.0346	.1218	6.701

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0235	.0009	48.43	.0421	.1371	1.111
#1	.0201	.0043	48.63	.0416	.1363	1.108
#2	.0268	-.0025	48.23	.0425	.1380	1.114

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.423	16.95	2.4632	.0569	.05296	1.8721
#1	2.404	16.94	2.4646	.0485	.05285	1.8758
#2	2.442	16.97	2.4619	.0652	.05307	1.8684

Int. Std.	Sc3572
Units	Cts/S
Avg	175.97
#1	176.05
#2	175.89

Method: 2010A Sample Name: K1007366-020 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:26 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.10	.0189	.0296	1.0346	.00034	.0768
#1	22.99	.0198	.0243	1.0323	.00037	.0761
#2	23.20	.0181	.0349	1.0369	.00031	.0776

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101	600.6	.1238	.0142	1.096	58.22
#1	.0101	597.7	.1230	.0131	1.096	58.08
#2	.0101	603.5	.1246	.0153	1.096	58.37

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.783	20.10	.73766	.0152	.0717	4.097
#1	6.761	20.02	.72936	.0156	.0714	4.079
#2	6.805	20.18	.74596	.0148	.0719	4.114

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0286	-.0014	38.60	.0489	.0947	4.731
#1	.0338	-.0049	38.64	.0488	.0966	4.727
#2	.0233	.0020	38.57	.0490	.0927	4.736

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.322	11.67	1.5777	.0491	.04448	4.3866
#1	2.321	11.54	1.5764	.0585	.04413	4.3868
#2	2.322	11.80	1.5790	.0397	.04483	4.3863

Int. Std.	Sc3572
Units	Cts/S
Avg	172.54
#1	172.21
#2	172.88

Method: 2010A Sample Name: K1007366-021 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:29 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	37.30	.0322	.0594	.37135	.00069	.1627
#1	37.20	.0322	.0506	.37093	.00068	.1623
#2	37.41	.0322	.0682	.37176	.00071	.1630

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084	650.4	.1454	.0206	.7946	74.09
#1	.0086	651.4	.1452	.0203	.7888	74.05
#2	.0082	649.5	.1455	.0209	.8005	74.12

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3804	32.60	1.0538	.0214	.1267	9.043
#1	.3840	32.46	1.0484	.0218	.1272	9.056
#2	.3767	32.74	1.0591	.0210	.1261	9.030

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0245	.0014	78.66	.0360	.1475	1.830
#1	.0120	.0021	78.70	.0330	.1470	1.827
#2	.0370	.0006	78.61	.0391	.1480	1.833

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.365	22.25	2.1787	.0764	.05968	3.3911
#1	4.388	22.41	2.1803	.0737	.05921	3.3898
#2	4.343	22.10	2.1772	.0791	.06016	3.3925

Int. Std.	Sc3572
Units	Cts/S
Avg	175.36
#1	175.27
#2	175.44

Method: 2010A Sample Name: K1007366-MB Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:32 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0310	-.0121	.0012	-.00007	-.00001	.0037
#1	.0338	-.0146	.0003	-.00007	-.00008	.0034
#2	.0282	-.0096	.0021	-.00007	.00005	.0041

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0335	.0004	.0004	.0016	.0258
#1	-.0004	.0429	.0014	.0001	.0023	.0465
#2	-.0005	.0241	-.0007	.0007	.0009	.0051

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	.00181	-.00002	.0002	-.0005	.0061
#1	.0034	.00244	-.00003	.0002	-.0001	-.0071
#2	.0029	.00118	-.00002	.0002	-.0009	.0193

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0033	.0013	.0088	.0139	.0026	.0010
#1	.0039	.0028	.0105	.0224	.0025	.0012
#2	-.0105	-.0001	.0071	.0054	.0028	.0008

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0275	.0329	.00188	.0045	.00035	.00036
#1	.0317	.0523	.00242	.0037	.00026	.00048
#2	.0233	.0134	.00135	.0053	.00043	.00023

Int. Std.	Sc3572
Units	Cts/S
Avg	180.73
#1	179.53
#2	181.93

Method: 2010A Sample Name: K1007366-LCSS Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:35 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	42.39	.4995	.4434	2.1308	.29262	.5085
#1	42.24	.4940	.4383	2.1246	.29293	.5081
#2	42.53	.5049	.4484	2.1369	.29231	.5089

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4594	49.37	.7485	.9746	1.226	90.87
#1	.4585	48.88	.7462	.9734	1.223	90.34
#2	.4603	49.87	.7509	.9758	1.230	91.39

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5034	19.47	2.5798	.3067	.9972	20.53
#1	.5021	19.44	2.5884	.3053	.9920	20.54
#2	.5047	19.49	2.5712	.3082	1.002	20.51

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9872	.3973	3.246	.6851	.9151	1.514
#1	.9681	.3985	3.257	.6801	.9212	1.506
#2	1.006	.3960	3.236	.6901	.9091	1.522

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.285	10.52	2.2395	1.266	.04342	.65389
#1	4.284	10.59	2.2442	1.262	.04343	.65524
#2	4.287	10.45	2.2349	1.270	.04341	.65254

Int. Std.	Sc3572
Units	Cts/S
Avg	183.41
#1	183.09
#2	183.74

Method: 2010A Sample Name: K1007366-022 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:38 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.44	.0125	.0149	.07829	.00029	.0489
#1	21.38	.0258	.0172	.07924	.00024	.0479
#2	21.50	-.0008	.0125	.07734	.00033	.0500

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	770.8	.0731	.0138	.1818	41.24
#1	.0038	768.0	.0747	.0137	.1796	41.37
#2	.0036	773.6	.0715	.0139	.1840	41.10

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1848	20.77	.77456	.0048	.0764	3.692
#1	.1925	20.74	.77764	.0042	.0778	3.691
#2	.1771	20.81	.77147	.0055	.0751	3.693

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0255	.0011	35.98	.0193	.0864	.3999
#1	.0301	.0009	36.08	.0189	.0864	.4000
#2	.0209	.0012	35.88	.0196	.0864	.3997

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.148	8.557	1.3759	.0397	.04914	>4.5000
#1	2.133	8.486	1.3837	.0418	.04874	>4.5000
#2	2.164	8.628	1.3682	.0376	.04954	>4.5000

Int. Std.	Sc3572
Units	Cts/S
Avg	174.04
#1	172.96
#2	175.12

Method: 2010A Sample Name: K1007366-022L Operator:
Comment: 080510A 1/5
Run Time: 08/05/10 17:41 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.794	.0012	.0125	.02165	.00003	.0118
#1	5.782	-.0096	.0160	.02183	.00001	.0124
#2	5.806	.0120	.0090	.02146	.00004	.0112

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	190.2	.0193	.0041	.0458	10.95
#1	.0011	189.0	.0181	.0035	.0475	10.92
#2	.0013	191.3	.0204	.0047	.0440	10.98

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0452	5.2544	.19313	.0022	.0191	.9919
#1	.0471	5.2538	.19262	.0016	.0188	1.011
#2	.0433	5.2550	.19365	.0028	.0193	.9729

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0018	9.101	.0111	.0242	.1101
#1	.0063	.0040	9.094	.0154	.0234	.1101
#2	.0023	-.0004	9.109	.0068	.0250	.1102

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5493	2.787	.35896	.0210	.01344	1.6443
#1	.5426	2.788	.36101	.0085	.01317	1.6461
#2	.5560	2.785	.35692	.0336	.01372	1.6425

Int. Std.	Sc3572
Units	Cts/S
Avg	179.50
#1	179.14
#2	179.86

Method: 2010A Sample Name: K1007366-022D Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:44 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	26.81	.0154	.0144	.08248	.00030	.0500
#1	26.77	.0241	.0141	.08274	.00023	.0501
#2	26.85	.0067	.0147	.08223	.00036	.0499

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	731.7	.0730	.0173	.2273	48.65
#1	.0038	723.1	.0744	.0181	.2238	48.51
#2	.0035	740.4	.0715	.0166	.2308	48.78

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9144	22.88	.83788	.0023	.0838	4.193
#1	.9114	22.79	.83815	.0013	.0844	4.184
#2	.9175	22.97	.83762	.0032	.0832	4.202

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0216	-.0008	33.81	.0268	.0957	.3666
#1	.0072	.0019	33.93	.0283	.0972	.3648
#2	.0361	-.0035	33.69	.0253	.0943	.3683

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.176	10.84	1.6845	.0374	.05097	>4.5000
#1	2.157	11.06	1.6871	.0477	.05133	>4.5000
#2	2.196	10.63	1.6818	.0271	.05060	>4.5000

Int. Std.	Sc3572
Units	Cts/S
Avg	172.59
#1	171.99
#2	173.19

Method: 2010A Sample Name: K1007366-022S Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.68	.3148	.5038	2.1221	.05050	.5464
#1	25.69	.3119	.4967	2.1176	.05071	.5452
#2	25.67	.3178	.5108	2.1266	.05030	.5477

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0536	582.0	.2781	.5166	.4278	44.33
#1	.0543	578.0	.2785	.5180	.4272	44.36
#2	.0530	586.1	.2778	.5153	.4284	44.30

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6258	20.25	1.2630	.5103	.5777	3.896
#1	.6218	20.22	1.2659	.5078	.5765	3.889
#2	.6299	20.29	1.2601	.5128	.5789	3.903

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4901	.0472	37.55	.0177	.6172	.8546
#1	.4862	.0472	37.89	.0151	.6184	.8544
#2	.4941	.0472	37.21	.0204	.6161	.8548

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.181	11.18	1.5830	.5133	.04377	>4.5000
#1	2.167	11.49	1.5864	.5277	.04422	>4.5000
#2	2.195	10.87	1.5796	.4989	.04332	>4.5000

Int. Std.	Sc3572
Units	Cts/S
Avg	171.81
#1	170.73
#2	172.89

Method: 2010A Sample Name: K1007991-001 Operator:
Comment: 080510A 1/2
Run Time: 08/05/10 17:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.00	.0279	.0003	.07289	.00101	.0228
#1	24.93	.0245	-.0044	.07327	.00097	.0215
#2	25.06	.0312	.0051	.07251	.00106	.0241

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0065	35.23	.0426	.0705	.1619	188.2
#1	.0060	35.21	.0423	.0718	.1596	190.1
#2	.0069	35.24	.0429	.0692	.1641	186.3

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0164	27.95	1.7462	.0062	.1068	2.254
#1	.0139	27.86	1.7569	.0050	.1077	2.266
#2	.0190	28.04	1.7355	.0075	.1059	2.243

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	-.0054	4.704	.0104	.5063	.2378
#1	.0193	-.0062	4.732	.0155	.5117	.2403
#2	-.0189	-.0045	4.675	.0053	.5009	.2353

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.623	1.332	21.608	.0921	.01285	.17038
#1	7.621	1.416	21.755	.0937	.01290	.17134
#2	7.625	1.249	21.461	.0905	.01281	.16942

Int. Std.	Sc3572
Units	Cts/S
Avg	189.14
#1	187.77
#2	190.51

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 17:47 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.016	.0032	.0050	2.3980	.04830	-.0014
Stddev	.010	.0018	.0013	.0268	.00090	.0002
%RSD	.1964	54.40	25.52	1.1159	1.8642	11.79
#1	5.023	.0020	.0059	2.4169	.04893	-.0012
#2	5.010	.0045	.0041	2.3790	.04766	-.0015
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015	25.69	.0015	-.0009	-.0010	25.04
Stddev	.0005	.04	.0019	.0005	.0004	.30
%RSD	32.00	.1688	126.7	60.79	40.44	1.196
#1	.0019	25.66	.0028	-.0005	-.0012	25.26
#2	.0012	25.72	.0002	-.0013	-.0007	24.83
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	24.93	4.885	.0006	-.0038	9.895
Stddev	.0067	.00	.081	.0006	.0013	.005
%RSD	187.9	.0008	1.665	98.60	32.99	.0559
#1	.0083	24.93	4.942	.0011	-.0029	9.899
#2	-.0012	24.93	4.827	.0002	-.0047	9.891
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0175	.0016	9.608	.0006	.0053	.0004
Stddev	.0093	.0025	.206	.0002	.0024	.0007
%RSD	53.01	154.3	2.142	28.97	45.22	150.6
#1	.0241	.0034	9.753	.0007	.0071	.0000
#2	.0110	-.0001	9.462	.0005	.0036	.0009
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/05/10 17:47

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.977	2.512	.00203	.0396	.49142	.49097
Stddev	.088	.010	.00250	.0031	.00026	.00915
%RSD	.8826	.4069	122.74	7.772	.05280	1.8634
#1	9.915	2.519	.00380	.0374	.49161	.49744
#2	10.04	2.505	.00027	.0417	.49124	.48450
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	182.64
Stddev	2.93
%RSD	1.6031
#1	180.57
#2	184.71

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 17:49 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4895	2.452	2.449	.44536	.51216	.4943
Stddev	.0038	.018	.010	.00240	.00124	.0004
%RSD	.7784	.7135	.4058	.53994	.24226	.0736
#1	.4922	2.440	2.442	.44366	.51303	.4940
#2	.4868	2.465	2.456	.44706	.51128	.4945
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4867	2.481	.4906	.4861	.4986	.4773
Stddev	.0034	.017	.0018	.0012	.0040	.0126
%RSD	.6954	.6688	.3688	.2568	.8056	2.640
#1	.4843	2.470	.4893	.4870	.5014	.4862
#2	.4890	2.493	.4918	.4853	.4958	.4683
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.424	1.9701	.96207	.9714	.4868	5.073
Stddev	.011	.0007	.00916	.0029	.0048	.035
%RSD	.4422	.03538	.95175	.3029	.9918	.6893
#1	2.416	1.9697	.95559	.9693	.4834	5.049
#2	2.431	1.9706	.96854	.9734	.4902	5.098
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.447	.5000	.4602	2.355	.4938	.4882
Stddev	.020	.0006	.0011	.004	.0036	.0032
%RSD	.8129	.1195	.2473	.1476	.7243	.6505
#1	2.433	.5004	.4593	2.357	.4913	.4860
#2	2.461	.4995	.4610	2.352	.4964	.4905
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 17:49

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0045	.3011	.48101	4.791	.50770	.48578
Stddev	.0072	.0001	.00119	.069	.00240	.00078
%RSD	159.9	.0224	.24792	1.446	.47269	.15988
#1	-.0096	.3010	.48017	4.742	.50600	.48523
#2	.0006	.3011	.48185	4.840	.50939	.48633
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	186.33
Stddev	.19
%RSD	.10152
#1	186.20
#2	186.46

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 17:52 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220	.0071	.0023	.00010	.00011	-.0045
Stddev	.0010	.0047	.0062	.00033	.00001	.0006
%RSD	4.452	66.27	265.6	330.55	5.3124	14.13
#1	.0227	.0104	.0067	.00034	.00012	-.0041
#2	.0213	.0038	-.0021	-.00013	.00011	-.0050
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	.0127	.0005	.0005	.0009	.0013
Stddev	.0002	.0035	.0013	.0008	.0010	.0012
%RSD	41.45	27.37	272.2	163.8	109.0	89.20
#1	.0003	.0152	.0014	.0010	.0016	.0021
#2	.0005	.0103	-.0005	-.0001	.0002	.0005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041	.00818	.00055	.0027	-.0003	-.0061
Stddev	.0084	.00006	.00040	.0011	.0001	.0159
%RSD	202.1	.71833	73.273	39.68	25.82	260.7
#1	-.0018	.00823	.00083	.0035	-.0004	-.0173
#2	.0100	.00814	.00026	.0020	-.0003	.0051
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	-.0003	-.0007	.0060	.0025	.0002
Stddev	.0028	.0015	.0062	.0031	.0000	.0005
%RSD	60.54	496.1	935.1	52.69	.6450	221.4
#1	.0026	.0007	.0037	.0082	.0025	.0005
#2	.0066	-.0013	-.0050	.0037	.0025	-.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 17:52

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030	.0064	.00038	.0106	.00011	.00018
Stddev	.0016	.0047	.00120	.0076	.00008	.00005
%RSD	52.85	72.58	311.49	71.24	68.143	27.003
#1	.0019	.0097	-.00046	.0053	.00006	.00022
#2	.0042	.0031	.00123	.0160	.00017	.00015
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	181.96
Stddev	.53
%RSD	.29173
#1	182.33
#2	181.58

Method: 2010A Sample Name: K1007991-001 Operator:
Comment: 080510A 1/2 Reprint mmr 8/9/10
Run Time: ~~08/09/10 14:37~~ 8/5/10 1758 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.92	.0402	-.0064	.07358	.00104	.0055
#1	24.86	.0369	-.0112	.07396	.00100	.0042
#2	24.99	.0435	-.0016	.07320	.00108	.0068

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060	35.38	.0411	.0693	.1631	190.3
#1	.0055	35.36	.0408	.0705	.1609	192.2
#2	.0064	35.39	.0414	.0680	.1654	188.3

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104	27.87	1.7263	.0055	.1064	2.250
#1	.0079	27.78	1.7369	.0042	.1073	2.261
#2	.0130	27.96	1.7158	.0067	.1056	2.238

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0093	-.0066	4.747	.0112	.4907	.2325
#1	.0097	-.0074	4.776	.0162	.4960	.2351
#2	-.0283	-.0057	4.718	.0062	.4854	.2300

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.588	1.298	21.490	.1019	.01261	.17184
#1	7.586	1.380	21.636	.1036	.01266	.17281
#2	7.590	1.215	21.344	.1003	.01256	.17086

Int. Std.	Sc3572
Units	Cts/S
Avg	189.14
#1	187.77
#2	190.51

Method: 2010A Sample Name: K1007366-022S Operator:
Comment: 080510A 1/2 MMR 8/9/10
Run Time: ~~08/09/10 14:37~~ 8/5/10 1756 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.60	.3236	.5005	2.1402	.05076	.5283
#1	25.61	.3207	.4934	2.1357	.05097	.5271
#2	25.59	.3265	.5076	2.1448	.05056	.5296

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0532	584.6	.2769	.5123	.4317	44.80
#1	.0538	580.5	.2772	.5137	.4310	44.83
#2	.0526	588.6	.2766	.5110	.4323	44.76

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6118	20.20	1.2486	.5029	.5716	3.878
#1	.6078	20.16	1.2515	.5004	.5704	3.871
#2	.6158	20.23	1.2458	.5054	.5728	3.885

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4762	.0456	37.99	.0178	.5994	.8497
#1	.4723	.0456	38.33	.0153	.6005	.8496
#2	.4802	.0456	37.64	.0204	.5983	.8499

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.169	11.03	1.5738	.5204	.04342	>4.5000
#1	2.155	11.33	1.5772	.5348	.04387	>4.5000
#2	2.183	10.72	1.5705	.5061	.04297	>4.5000

Int. Std.	Sc3572
Units	Cts/S
Avg	171.81
#1	170.73
#2	172.89

Method: 2010A Sample Name: K1006922-MB Operator:
Comment: 080510A
Run Time: 08/05/10 18:01 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0283	-.0083	.0091	.00015	.00009	-.0026
#1	.0338	-.0104	.0079	-.00007	.00007	-.0026
#2	.0228	-.0063	.0103	.00036	.00010	-.0026

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.0326	.0007	.0001	.0008	.0809
#1	-.0007	.0228	-.0007	.0001	.0019	.1120
#2	.0002	.0425	.0021	.0001	-.0003	.0498

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064	.00506	.00034	.0004	-.0006	-.0036
#1	.0142	.00444	.00038	.0019	-.0004	-.0099
#2	-.0014	.00567	.00031	-.0011	-.0008	.0028

WS 6/6/10

Elem	Se1960	Ag3280	Na5895	Sr1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092	-.0010	.0104	-.0022	.0003	-.0001
#1	.0066	.0007	.0126	-.0020	.0005	-.0005
#2	.0118	-.0028	.0082	-.0024	.0001	.0002

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1687	.0058	.00598	.0192	.00032	.00047
#1	.1780	.0090	.00637	.0209	-.00001	.00038
#2	.1594	.0027	.00559	.0175	.00065	.00057

Int. Std.	Sc3572
Units	Cts/S
Avg	184.10
#1	184.18
#2	184.01

Method: 2010A Sample Name: K1006922-LCSW Operator:
Comment: 080510A
Run Time: 08/05/10 18:04 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.174	2.506	2.631	5.1381	.12521	1.014
#1	5.214	2.483	2.607	5.1206	.12522	1.014
#2	5.134	2.529	2.655	5.1556	.12520	1.015

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.279	12.87	.5206	1.273	.6327	2.486
#1	1.271	12.77	.5182	1.267	.6312	2.481
#2	1.286	12.97	.5229	1.279	.6341	2.491

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.577	12.79	1.2880	1.009	1.268	12.84
#1	2.573	12.77	1.2778	1.000	1.262	12.81
#2	2.582	12.82	1.2982	1.018	1.274	12.87

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.573	.6407	12.38	.0081	1.277	1.271
#1	2.578	.6447	12.39	.0020	1.279	1.263
#2	2.568	.6367	12.36	.0141	1.275	1.279

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1702	.0431	.00280	2.582	.00034	.00733
#1	.1784	.0440	.00136	2.575	.00011	.00726
#2	.1619	.0422	.00423	2.589	.00057	.00740

Int. Std.	Sc3572
Units	Cts/S
Avg	181.96
#1	181.83
#2	182.09

Method: 2010A Sample Name: K1006922-001 Operator:
Comment: 080510A Total
Run Time: 08/05/10 18:07 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0811	.0009	.0014	.03873	.00005	.3670
#1	.0866	-.0062	.0038	.03907	.00006	.3668
#2	.0756	.0079	-.0009	.03839	.00003	.3673

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005	97.65	.0024	.0001	.0048	1.511
#1	.0011	96.93	.0029	.0004	.0053	1.505
#2	.0000	98.36	.0018	-.0003	.0043	1.517

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	4.1760	.17046	.0026	.0005	3.681
#1	.0021	4.1604	.16963	.0039	.0010	3.710
#2	-.0006	4.1916	.17129	.0013	-.0001	3.651

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0204	.0006	9.497	.0016	.0051	.1400
#1	.0158	-.0001	9.583	-.0037	.0031	.1393
#2	.0250	.0013	9.410	.0070	.0071	.1408

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2481	3.250	.00377	.0067	.00532	.38900
#1	.2461	3.246	.00268	.0006	.00557	.39008
#2	.2502	3.253	.00486	.0128	.00507	.38793

Int. Std.	Sc3572
Units	Cts/S
Avg	184.61
#1	184.44
#2	184.79

Method: 2010A Sample Name: K1006922-001 Operator:
Comment: 080510A Dissolved
Run Time: 08/05/10 18:10 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101	.0054	.0020	.03775	-.00001	.3726
#1	.0054	.0063	.0049	.03884	-.00002	.3718
#2	.0149	.0046	-.0010	.03667	.00000	.3735

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	97.71	.0010	.0003	.0031	1.209
#1	.0004	97.08	.0009	.0012	.0036	1.231
#2	.0000	98.34	.0011	-.0006	.0026	1.188

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	4.1784	.17181	.0005	.0005	3.670
#1	.0071	4.1940	.17504	.0004	.0005	3.689
#2	-.0006	4.1629	.16858	.0007	.0006	3.651

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0024	9.676	.0001	.0042	.1368
#1	.0027	.0031	9.915	-.0009	.0048	.1380
#2	.0014	.0016	9.437	.0012	.0036	.1356

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2121	3.164	.00080	.0186	.00497	.40150
#1	.2104	3.173	-.00009	.0244	.00513	.41488
#2	.2137	3.156	.00170	.0127	.00481	.38812

Int. Std.	Sc3572
Units	Cts/S
Avg	180.82
#1	176.91
#2	184.73

Method: 2010A Sample Name: K1007395-001 Operator:
Comment: 080510A
Run Time: 08/05/10 18:13 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0681	.0047	.0176	.04695	-.00001	.0260
#1	.0530	.0005	.0223	.04711	-.00007	.0260
#2	.0833	.0088	.0129	.04679	.00005	.0261

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	199.1	.0019	.0014	-.0011	.0994
#1	.0003	197.6	.0018	.0014	-.0012	.1007
#2	.0005	200.6	.0020	.0013	-.0010	.0980

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022	22.47	.00198	.0063	-.0004	14.24
#1	.0034	22.41	.00197	.0054	.0002	14.20
#2	.0010	22.52	.00198	.0073	-.0009	14.27

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0151	.0007	58.96	.0051	.0056	.0055
#1	.0105	.0016	59.34	.0011	.0056	.0053
#2	.0197	-.0001	58.57	.0090	.0056	.0058

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1836	25.59	.00508	.0162	.14132	1.1898
#1	.1771	25.50	.00323	.0110	.14060	1.1970
#2	.1902	25.67	.00692	.0214	.14203	1.1827

Int. Std.	Sc3572
Units	Cts/S
Avg	181.08
#1	179.71
#2	182.45

Method: 2010A Sample Name: K1007395-002 Operator:
Comment: 080510A
Run Time: 08/05/10 18:16 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0771	.0049	.0062	.05652	-.00007	.0840
#1	.0942	.0024	.0159	.05688	-.00007	.0850
#2	.0600	.0074	-.0034	.05617	-.00007	.0830

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011	244.7	.0010	-.0012	.0007	.0655
#1	.0014	258.8	.0010	-.0005	.0015	.0648
#2	.0008	230.6	.0011	-.0019	-.0001	.0663

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	49.78	-.00001	.0199	.0021	15.84
#1	.0071	49.88	.00001	.0200	.0016	15.76
#2	-.0046	49.68	-.00004	.0199	.0026	15.91

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0138	.0042	53.89	.0043	.0061	.0061
#1	.0144	.0028	53.32	.0044	.0037	.0058
#2	.0131	.0055	54.47	.0042	.0085	.0065

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2347	17.73	.00475	.0392	.07062	1.7350
#1	.2361	17.79	.00311	.0535	.07004	1.7101
#2	.2333	17.67	.00639	.0250	.07119	1.7600

Int. Std.	Sc3572
Units	Cts/S
Avg	176.30
#1	177.89
#2	174.70

Method: 2010A Sample Name: K1007395-003 Operator:
Comment: 080510A
Run Time: 08/05/10 18:19 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0888	.0072	.0120	.02171	-.00004	.0882
#1	.0860	.0047	.0146	.02145	-.00007	.0883
#2	.0915	.0097	.0094	.02197	-.00001	.0880

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	284.5	.0009	.0012	.0004	.1038
#1	.0017	283.3	.0015	.0020	.0001	.1031
#2	.0015	285.8	.0002	.0005	.0006	.1046

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026	42.03	.00050	.0087	.0020	14.17
#1	.0026	41.91	.00033	.0101	.0027	14.27
#2	.0026	42.15	.00067	.0073	.0014	14.06

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0387	.0025	76.50	.0024	.0068	.0087
#1	.0446	.0040	77.12	.0019	.0097	.0078
#2	.0328	.0010	75.89	.0028	.0040	.0096

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2209	26.17	.00889	.0289	.20175	1.1013
#1	.2105	26.10	.00820	.0324	.20458	1.1035
#2	.2314	26.24	.00958	.0254	.19892	1.0992

Int. Std.	Sc3572
Units	Cts/S
Avg	179.99
#1	180.24
#2	179.74

Method: 2010A Sample Name: K1007395-004 Operator:
Comment: 080510A
Run Time: 08/05/10 18:22 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0716	.0068	.0197	.02272	-.00003	.0907
#1	.0723	.0014	.0206	.02291	.00002	.0906
#2	.0709	.0122	.0188	.02252	-.00008	.0908

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	294.5	.0012	.0013	.0011	.0885
#1	.0008	293.1	.0022	.0010	.0010	.0890
#2	.0010	295.9	.0002	.0016	.0012	.0880

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059	42.68	.00050	.0095	.0030	14.45
#1	.0059	42.68	.00044	.0109	.0040	14.54
#2	.0059	42.68	.00056	.0081	.0019	14.35

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0217	.0027	79.21	.0034	.0091	.0097
#1	.0184	.0016	79.51	.0065	.0079	.0092
#2	.0249	.0037	78.91	.0002	.0102	.0102

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2356	26.27	.00478	.0166	.20560	1.1451
#1	.2260	26.21	.00522	.0166	.20662	1.1461
#2	.2451	26.33	.00434	.0167	.20459	1.1440

Int. Std.	Sc3572
Units	Cts/S
Avg	177.88
#1	178.10
#2	177.66

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 18:25 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.036	.0037	.0046	2.3667	.04788	-.0013
Stddev	.060	.0023	.0017	.0142	.00004	.0001
%RSD	1.199	63.02	36.22	.59880	.08612	6.535
#1	4.993	.0020	.0034	2.3566	.04785	-.0014
#2	5.078	.0053	.0058	2.3767	.04791	-.0012
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016	25.41	.0017	-.0019	-.0002	24.43
Stddev	.0004	.03	.0018	.0001	.0009	.16
%RSD	23.68	.1268	108.7	6.651	422.2	.6403
#1	.0019	25.39	.0004	-.0020	.0004	24.32
#2	.0014	25.43	.0029	-.0018	-.0008	24.54
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	24.95	4.816	.0029	-.0032	9.976
Stddev	.0014	.04	.017	.0013	.0013	.002
%RSD	63.93	.1723	.3444	45.18	40.30	.0227
#1	.0031	24.92	4.804	.0038	-.0023	9.975
#2	.0012	24.98	4.827	.0020	-.0041	9.978
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096	-.0001	9.482	-.0004	.0048	.0013
Stddev	.0093	.0008	.007	.0081	.0015	.0002
%RSD	96.46	564.7	.0712	2111.	31.88	13.63
#1	.0031	-.0007	9.487	.0053	.0037	.0012
#2	.0162	.0004	9.478	-.0061	.0058	.0015
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/05/10 18:25

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.962	2.526	.00160	.0251	.49678	.48479
Stddev	.044	.006	.00163	.0134	.00076	.00003
%RSD	.4421	.2514	101.98	53.64	.15391	.00519
#1	9.930	2.531	.00275	.0346	.49733	.48480
#2	9.993	2.522	.00045	.0156	.49624	.48477
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	184.89
Stddev	.50
%RSD	.27231
#1	185.24
#2	184.53

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 18:28 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4881	2.466	2.406	.45185	.52319	.4950
Stddev	.0060	.039	.001	.00128	.00175	.0054
%RSD	1.226	1.594	.0350	.28325	.33533	1.094
#1	.4923	2.438	2.405	.45094	.52195	.4912
#2	.4838	2.493	2.406	.45275	.52443	.4989
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4894	2.528	.4907	.4927	.4933	.4883
Stddev	.0028	.008	.0020	.0061	.0011	.0124
%RSD	.5805	.3109	.4064	1.234	.2175	2.531
#1	.4873	2.523	.4893	.4884	.4925	.4971
#2	.4914	2.534	.4921	.4970	.4940	.4796
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.466	1.9854	.96680	.9863	.4971	5.176
Stddev	.019	.0061	.00342	.0080	.0024	.007
%RSD	.7579	.30593	.35367	.8158	.4874	.1452
#1	2.453	1.9897	.96922	.9806	.4954	5.170
#2	2.479	1.9812	.96439	.9920	.4988	5.181
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.457	.4971	.4685	2.438	.5066	.4871
Stddev	.035	.0038	.0029	.025	.0020	.0001
%RSD	1.403	.7566	.6287	1.018	.3982	.0294
#1	2.432	.4945	.4706	2.421	.5081	.4872
#2	2.481	.4998	.4664	2.456	.5052	.4870
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 18:28

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0282	.2989	.49062	4.775	.51520	.49865
Stddev	.0152	.0004	.00298	.045	.00238	.00388
%RSD	53.98	.1419	.60666	.9537	.46200	.77780
#1	-.0390	.2992	.48851	4.742	.51351	.49590
#2	-.0174	.2986	.49272	4.807	.51688	.50139
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	184.19
Stddev	.39
%RSD	.21094
#1	184.46
#2	183.91

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 18:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220	.0042	-.0044	.00036	.00006	-.0041
Stddev	.0107	.0147	.0091	.00010	.00007	.0004
%RSD	48.44	351.0	207.3	27.947	112.05	8.562
#1	.0145	.0146	-.0108	.00029	.00011	-.0043
#2	.0295	-.0062	.0020	.00043	.00001	-.0038
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	.0212	.0001	-.0004	.0016	.0052
Stddev	.0001	.0060	.0006	.0000	.0014	.0032
%RSD	365.8	28.32	426.4	11.47	85.85	62.34
#1	-.0001	.0255	.0005	-.0004	.0026	.0074
#2	.0001	.0170	-.0003	-.0004	.0006	.0029
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.00946	.00048	.0019	.0006	-.0060
Stddev	.0072	.00032	.00033	.0015	.0012	.0080
%RSD	336.3	3.4036	68.725	79.63	191.7	134.6
#1	.0072	.00969	.00071	.0030	-.0002	-.0003
#2	-.0030	.00923	.00025	.0008	.0014	-.0116
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.0024	.0026	.0000	.0051	.0005
Stddev	.0019	.0010	.0002	.010	.0030	.0007
%RSD	47.30	44.12	8.486	116900.	59.43	134.0
#1	.0026	.0016	.0025	.0073	.0030	.0000
#2	.0052	.0031	.0028	-.0073	.0073	.0010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 18:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0144	-.0001	.00021	.0088	.00007	.00040
Stddev	.0134	.0011	.00101	.0099	.00036	.00006
%RSD	92.67	1058.	490.33	113.5	544.68	15.573
#1	.0050	.0007	-.00051	.0017	.00032	.00044
#2	.0238	-.0009	.00092	.0158	-.00019	.00035
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	182.90
Stddev	.07
%RSD	.03936
#1	182.85
#2	182.95

Method: 2010A Sample Name: K1007395-005 Operator:
Comment: 080510A
Run Time: 08/05/10 18:34 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0434	-.0011	.0175	.02833	-.00008	.1306
#1	.0530	.0031	.0113	.02850	-.00008	.1306
#2	.0337	-.0053	.0236	.02816	-.00008	.1305

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008	326.7	-.0002	.0017	-.0018	.0459
#1	.0010	325.4	.0001	.0012	-.0026	.0501
#2	.0006	328.1	-.0005	.0021	-.0011	.0416

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	51.02	-.00068	.0085	.0053	17.39
#1	-.0058	51.02	-.00061	.0093	.0055	17.37
#2	.0031	51.03	-.00074	.0078	.0050	17.42

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0433	.0015	83.48	.0113	.0080	.0064
#1	.0459	.0010	83.80	.0087	.0083	.0062
#2	.0407	.0019	83.15	.0139	.0077	.0066

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2288	25.75	.00459	.0384	.19016	1.6205
#1	.2180	25.68	.00472	.0340	.18994	1.6283
#2	.2396	25.82	.00447	.0427	.19038	1.6127

Int. Std.	Sc3572
Units	Cts/S
Avg	176.90
#1	175.93
#2	177.88

Method: 2010A Sample Name: K1007395-005L Operator:
Comment: 080510A 1/5
Run Time: 08/05/10 18:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083	-.0033	-.0041	.00526	.00001	.0226
#1	.0268	-.0021	-.0047	.00510	.00001	.0230
#2	-.0103	-.0045	-.0035	.00543	.00002	.0222

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	62.40	.0007	.0000	-.0008	.0043
#1	.0000	62.22	.0011	.0000	.0001	.0057
#2	.0002	62.57	.0004	.0001	-.0016	.0030

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0054	10.16	-.00025	.0031	.0003	3.495
#1	-.0080	10.09	-.00023	.0018	.0002	3.503
#2	-.0029	10.23	-.00027	.0043	.0004	3.487

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033	.0012	16.32	.0006	.0045	.0009
#1	.0013	-.0013	16.26	.0055	.0029	.0007
#2	.0052	.0037	16.38	-.0043	.0061	.0010

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0591	4.833	.00141	.0217	.03860	.33475
#1	.0553	4.825	.00052	.0199	.03854	.33508
#2	.0629	4.842	.00230	.0234	.03865	.33443

Int. Std.	Sc3572
Units	Cts/S
Avg	185.22
#1	185.41
#2	185.02

Method: 2010A Sample Name: K1007395-005D Operator:
Comment: 080510A
Run Time: 08/05/10 18:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0482	-.0027	.0165	.02802	-.00002	.1298
#1	.0585	.0014	.0177	.02827	.00003	.1292
#2	.0378	-.0069	.0153	.02777	-.00007	.1303

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	329.0	-.0010	.0007	.0001	.0434
#1	.0014	326.7	-.0007	.0013	-.0015	.0453
#2	.0010	331.2	-.0013	.0001	.0017	.0416

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046	50.13	-.00068	.0095	.0053	16.94
#1	-.0026	50.22	-.00059	.0106	.0057	17.02
#2	.0118	50.03	-.00077	.0085	.0049	16.86

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0308	-.0006	80.54	.0081	.0091	.0058
#1	.0354	.0022	80.97	.0054	.0084	.0059
#2	.0262	-.0034	80.11	.0108	.0098	.0057

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2084	25.39	.00166	.0458	.18400	1.5510
#1	.2044	25.50	.00192	.0494	.18559	1.5544
#2	.2124	25.29	.00140	.0421	.18241	1.5475

Int. Std.	Sc3572
Units	Cts/S
Avg	179.80
#1	179.64
#2	179.96

Method: 2010A Sample Name: K1007395-005S Operator:
Comment: 080510A
Run Time: 08/05/10 18:43 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.085	.4882	.9267	2.0061	.04807	1.120
#1	2.077	.4859	.9246	1.9802	.04740	1.122
#2	2.093	.4905	.9287	2.0321	.04875	1.118

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0494	344.8	.1963	.4814	.2328	1.004
#1	.0483	343.4	.1942	.4756	.2333	.9953
#2	.0506	346.2	.1984	.4871	.2323	1.013

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5010	61.64	.45795	1.002	.4855	27.53
#1	.4985	61.82	.45312	.9880	.4810	27.66
#2	.5036	61.46	.46277	1.016	.4900	27.40

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9538	.0471	92.73	.0023	.5062	.4891
#1	.9624	.0498	92.42	.0053	.4985	.4836
#2	.9453	.0443	93.04	-.0006	.5139	.4947

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1952	25.96	.00493	.8867	.18745	1.6019
#1	.1979	26.08	.00462	.8714	.18939	1.5849
#2	.1924	25.85	.00523	.9020	.18550	1.6190

Int. Std.	Sc3572
Units	Cts/S
Avg	177.31
#1	178.93
#2	175.69

Method: 2010A Sample Name: K1007395-006 Operator:
Comment: 080510A
Run Time: 08/05/10 18:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	-.0086	.0065	.00046	.00001	-.0030
#1	.0062	-.0044	.0026	.00050	-.00001	-.0030
#2	.0035	-.0128	.0103	.00043	.00004	-.0029

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002	.1185	-.0001	-.0003	-.0004	-.0062
#1	.0002	.0639	.0001	-.0002	-.0011	-.0053
#2	.0002	.1731	-.0002	-.0003	.0002	-.0071

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.02314	.00001	.0047	.0014	.0226
#1	-.0048	.01178	-.00006	.0067	.0015	.0046
#2	.0037	.03450	.00007	.0026	.0013	.0406

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0039	-.0009	.0722	-.0020	.0026	.0018
#1	-.0013	.0002	.0545	-.0053	.0031	.0012
#2	-.0066	-.0019	.0900	.0013	.0020	.0024

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2671	.0156	.00076	.0129	.00040	.00091
#1	.2753	.0132	.00087	.0154	.00022	.00054
#2	.2588	.0181	.00065	.0104	.00058	.00128

Int. Std.	Sc3572
Units	Cts/S
Avg	185.39
#1	186.65
#2	184.12

Method: 2010A Sample Name: K1007395-007 Operator:
Comment: 080510A
Run Time: 08/05/10 18:50 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1513	-.0009	.0224	.03073	-.00002	.1224
#1	.1589	.0008	.0219	.03104	-.00003	.1228
#2	.1438	-.0025	.0230	.03041	-.00002	.1219

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	313.8	.0007	.0001	.0005	.1452
#1	.0013	312.0	.0013	.0005	.0016	.1481
#2	.0012	315.6	.0001	-.0003	-.0006	.1423

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105	50.62	.00068	.0210	.0023	16.54
#1	.0147	50.69	.00076	.0212	.0012	16.57
#2	.0063	50.55	.00061	.0207	.0035	16.50

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0230	.0018	80.57	.0103	.0091	.0045
#1	.0276	.0031	81.60	.0104	.0092	.0055
#2	.0184	.0004	79.53	.0102	.0091	.0034

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6012	26.01	.01051	.0548	.12083	1.4959
#1	.5935	26.14	.01116	.0455	.12093	1.5208
#2	.6088	25.87	.00986	.0640	.12073	1.4711

Int. Std.	Sc3572
Units	Cts/S
Avg	176.47
#1	174.00
#2	178.94

Method: 2010A Sample Name: K1007632-001 Operator:
Comment: 080510A
Run Time: 08/05/10 18:53 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0009	-.0008	.58336	.00003	.2713
#1	.0077	-.0003	-.0034	.57743	.00004	.2714
#2	.0008	.0022	.0018	.58930	.00002	.2711

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009	89.69	.0018	-.0002	.0209	3.495
#1	.0007	89.32	.0022	-.0003	.0214	3.472
#2	.0011	90.07	.0013	-.0001	.0204	3.518

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134	32.48	.24479	.0042	.0181	254.9
#1	.0195	32.50	.24278	.0041	.0188	254.6
#2	.0074	32.46	.24680	.0044	.0174	255.3

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0140	.0025	>180.0	-.0061	.0022	.0937
#1	.0160	.0031	>180.0	-.0075	.0022	.0923
#2	.0120	.0019	>180.0	-.0046	.0022	.0951

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2494	7.749	.00060	.0286	.01876	.25266
#1	.2364	7.740	-.00029	.0248	.01862	.25021
#2	.2624	7.757	.00148	.0323	.01889	.25511

Int. Std.	Sc3572
Units	Cts/S
Avg	180.92
#1	182.18
#2	179.66

Method: 2010A Sample Name: K1007632-002 Operator:
Comment: 080510A
Run Time: 08/05/10 18:56 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0341	-.0036	.0037	.69817	-.00010	.2702
#1	.0410	-.0036	.0107	.69669	-.00008	.2704
#2	.0272	-.0036	-.0034	.69964	-.00012	.2701

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004	87.30	.0010	.0005	-.0031	1.042
#1	.0008	86.85	.0008	.0003	-.0033	1.041
#2	.0000	87.74	.0013	.0007	-.0029	1.043

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	30.17	.37578	.0521	.0051	330.4
#1	.0060	30.17	.37597	.0518	.0040	331.1
#2	.0023	30.16	.37560	.0524	.0063	329.7

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040	-.0023	>180.0	.0020	.0045	.0052
#1	-.0065	-.0022	>180.0	-.0010	.0053	.0047
#2	.0145	-.0025	>180.0	.0050	.0037	.0058

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2703	6.908	.00102	.0194	.02103	.29502
#1	.2656	6.912	.00169	.0230	.02153	.29549
#2	.2750	6.903	.00035	.0157	.02053	.29454

Int. Std.	Sc3572
Units	Cts/S
Avg	177.35
#1	177.27
#2	177.43

Method: 2010A Sample Name: K1008002-002 Operator:
Comment: 080510A
Run Time: 08/05/10 18:59 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0943	-.0037	.0001	.06311	.00000	.1493
#1	.1026	-.0053	.0018	.06268	-.00001	.1485
#2	.0861	-.0020	-.0017	.06355	.00001	.1501

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000	14.24	.0007	.0005	.0439	.0221
#1	-.0005	14.12	.0008	.0009	.0427	.0222
#2	.0005	14.36	.0005	.0001	.0452	.0221

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0012	4.0684	.14400	.0030	.0052	10.40
#1	-.0045	4.0710	.14285	.0035	.0053	10.35
#2	.0021	4.0657	.14514	.0025	.0052	10.44

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020	.0034	40.68	-.0070	.0046	.2143
#1	.0013	.0028	40.51	-.0095	.0054	.2121
#2	.0026	.0040	40.85	-.0045	.0038	.2165

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.793	22.55	.00094	.0195	.00375	.09359
#1	3.781	22.45	-.00067	.0142	.00389	.09343
#2	3.804	22.64	.00255	.0248	.00362	.09375

Int. Std.	Sc3572
Units	Cts/S
Avg	184.39
#1	184.61
#2	184.18

Method: 2010A Sample Name: K1008003-001 Operator:
Comment: 080510A
Run Time: 08/05/10 19:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0634	-.0128	-.0009	.01788	.00004	.0013
#1	.0504	-.0145	-.0041	.01804	.00011	.0013
#2	.0765	-.0112	.0024	.01771	-.00003	.0014

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	8.100	.0009	.0000	-.0002	.1635
#1	-.0002	8.114	.0010	-.0001	.0013	.1630
#2	-.0002	8.087	.0009	.0001	-.0017	.1639

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	3.1555	.00444	.0030	-.0005	1.329
#1	.0098	3.1565	.00442	.0024	-.0009	1.302
#2	.0079	3.1546	.00445	.0036	-.0001	1.357

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098	.0015	7.811	-.0027	.0063	.0015
#1	.0131	.0028	7.774	-.0089	.0061	.0018
#2	.0066	.0001	7.848	.0035	.0065	.0012

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2874	18.12	.00252	.0115	.00096	.06227
#1	.2875	18.10	.00233	.0037	.00040	.06206
#2	.2873	18.15	.00270	.0193	.00153	.06249

Int. Std.	Sc3572
Units	Cts/S
Avg	185.91
#1	186.16
#2	185.67

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/05/10 19:05 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.038	.0070	.0058	2.3913	.04884	.0005
Stddev	.007	.0035	.0033	.0161	.00023	.0007
%RSD	.1389	50.41	57.28	.67456	.47281	144.7
#1	5.033	.0095	.0035	2.3799	.04867	.0000
#2	5.043	.0045	.0082	2.4027	.04900	.0010
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	25.24	.0012	-.0006	-.0004	24.42
Stddev	.0006	.23	.0001	.0001	.0002	.18
%RSD	42.24	.9012	10.36	17.43	46.02	.7190
#1	.0009	25.08	.0013	-.0007	-.0003	24.29
#2	.0017	25.40	.0011	-.0005	-.0006	24.54
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	25.02	4.926	.0006	-.0031	10.12
Stddev	.0033	.02	.017	.0003	.0010	.05
%RSD	121.0	.0701	.3401	53.98	32.48	.4687
#1	-.0004	25.03	4.914	.0004	-.0024	10.15
#2	-.0051	25.01	4.938	.0008	-.0038	10.08
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123	-.0003	9.525	-.0026	.0039	.0018
Stddev	.0037	.0019	.005	.0030	.0012	.0009
%RSD	30.23	632.5	.0527	115.7	30.65	48.57
#1	.0149	.0010	9.521	-.0048	.0030	.0012
#2	.0096	-.0016	9.528	-.0005	.0047	.0025
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/05/10 19:05

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.943	2.549	.00182	.0253	.49619	.49286
Stddev	.009	.008	.00082	.0086	.00540	.00009
%RSD	.0880	.2974	45.065	33.89	1.0876	.01799
#1	9.937	2.554	.00240	.0313	.50001	.49280
#2	9.949	2.543	.00124	.0192	.49238	.49292
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	183.53
Stddev	.79
%RSD	.42917
#1	184.09
#2	182.98

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/05/10 19:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4771	2.499	2.403	.45863	.52979	.4988
Stddev	.0022	.006	.006	.00588	.00660	.0023
%RSD	.4588	.2590	.2318	1.2819	1.2449	.4682
#1	.4787	2.503	2.407	.45447	.52513	.4971
#2	.4756	2.494	2.399	.46278	.53446	.5004
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4966	2.584	.4968	.4993	.4905	.4913
Stddev	.0076	.015	.0109	.0051	.0014	.0040
%RSD	1.539	.5975	2.204	1.031	.2792	.8071
#1	.4912	2.574	.4891	.4956	.4895	.4941
#2	.5020	2.595	.5046	.5029	.4914	.4885
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.500	2.0106	.97905	.9950	.5048	5.185
Stddev	.036	.0046	.01335	.0198	.0065	.007
%RSD	1.442	.23054	1.3641	1.986	1.280	.1298
#1	2.474	2.0074	.96961	.9811	.5002	5.190
#2	2.525	2.0139	.98850	1.009	.5094	5.180
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.469	.5068	.4731	2.486	.5103	.4955
Stddev	.016	.0077	.0016	.028	.0034	.0080
%RSD	.6566	1.527	.3466	1.106	.6636	1.605
#1	2.458	.5013	.4743	2.467	.5079	.4899
#2	2.481	.5123	.4720	2.506	.5127	.5012
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/05/10 19:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0142	.3050	.49408	4.882	.51289	.50503
Stddev	.0193	.0071	.00868	.075	.00043	.00654
%RSD	136.1	2.338	1.7564	1.533	.08312	1.2952
#1	-.0005	.3101	.48795	4.829	.51319	.50041
#2	-.0278	.3000	.50022	4.935	.51259	.50966
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	183.26
Stddev	2.26
%RSD	1.2334
#1	184.86
#2	181.66

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/05/10 19:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076	-.0037	.0003	.00038	.00022	-.0043
Stddev	.0175	.0012	.0008	.00009	.00008	.0008
%RSD	230.2	33.63	281.3	23.370	36.104	18.29
#1	-.0048	-.0028	.0009	.00031	.00027	-.0037
#2	.0200	-.0045	-.0003	.00044	.00016	-.0049
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0226	.0012	.0000	.0007	.0029
Stddev	.0006	.0035	.0005	.0006	.0019	.0019
%RSD	764.3	15.43	42.80	2308.	270.1	66.44
#1	-.0003	.0201	.0016	-.0004	-.0006	.0042
#2	.0005	.0250	.0008	.0005	.0020	.0015
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063	.01065	.00083	.0047	-.0004	.0237
Stddev	.0088	.00045	.00022	.0032	.0002	.0051
%RSD	138.1	4.2455	26.340	67.03	37.37	21.57
#1	.0125	.01097	.00098	.0070	-.0003	.0200
#2	.0001	.01033	.00068	.0025	-.0006	.0273
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	-.0007	.0056	.0031	-.0001	.0007
Stddev	.0148	.0004	.0028	.0065	.0013	.0004
%RSD	377.9	56.60	50.07	211.7	1085.	56.86
#1	.0144	-.0010	.0076	.0076	-.0010	.0004
#2	-.0066	-.0004	.0036	-.0015	.0008	.0010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/05/10 19:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069	.0026	.00002	.0129	.00043	.00038
Stddev	.0070	.0028	.00227	.0037	.00008	.00006
%RSD	101.4	107.8	12653.	29.03	18.996	16.344
#1	.0118	.0045	.00163	.0156	.00049	.00043
#2	.0019	.0006	-.00159	.0103	.00037	.00034
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	185.67
Stddev	.57
%RSD	.30919
#1	185.26
#2	186.08

Service Request # 7395
Instrument ID# K-ICP-AES-02

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
File Name: 80610A 080610A ICP02
Star Lims: 211669

Primary Review by WS Date 8/6/10

Secondary Review by [illegible] Date 8/6/10

Method: 2010A Sample Name: Blank Operator:
Comment:
Run Time: 08/06/10 10:48 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335
Line	237.312 {141}	206.833 {162}	189.042 {177}	233.527 {144}
Avg	.1095	-.0125	.0194	.00025
Stddev	.0255	.0020	.0176	.00015
%RSD	23.27	15.71	90.91	58.978
#1	.0915	-.0111	.0319	.00036
#2	.1275	-.0139	.0069	.00015

Elem	Be3130	B_2497	Cd2265	Ca2112
Line	313.042 {107}	249.773 {134}	226.502 {148}	211.276 {159}
Avg	-.00328	.9995	.0003	.3653
Stddev	.00001	.0275	.0002	.0186
%RSD	.24919	2.747	55.43	5.100
#1	-.00328	1.019	.0004	.3784
#2	-.00327	.9800	.0002	.3521

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	-.1549	-.0002	.0004	-.0221
Stddev	.0392	.0000	.0000	.0117
%RSD	25.29	22.87	9.201	53.00
#1	-.1272	-.0002	.0005	-.0304
#2	-.1826	-.0002	.0004	-.0138

Elem	Fe2599	Fe2714	Pb2203	Mg2025
Line	259.940 {129}	271.441 {124}	220.353 {152}	202.582 {166}
Avg	.0036	.0006	.0001	.1261
Stddev	.0025	.0002	.0002	.0020
%RSD	68.35	30.10	158.5	1.555
#1	.0054	.0005	.0003	.1275
#2	.0019	.0008	.0000	.1248

Elem	Mg2795	Mn2576	Mn2939	Mo2020
Line	279.553 {120}	257.610 {131}	293.930 {114}	202.030 {166}
Avg	.02074	.00112	-.0004	.0002
Stddev	.02932	.00013	.0002	.0001
%RSD	141.42	12.066	49.28	35.62
#1	.04147	.00121	-.0005	.0003
#2	.00000	.00102	-.0002	.0002

Elem	Ni2316	K_7664	Se1960	Ag3280
Line	231.604 {145}	766.490 { 44}	196.090 {171}	328.068 {102}
Avg	-.0003	.8989	.0097	.0221
Stddev	.0001	.0159	.0098	.0078
%RSD	46.01	1.773	101.0	35.33
#1	-.0003	.8877	.0166	.0276
#2	-.0002	.9102	.0028	.0166

Sample Name: Blank Run Time: 08/06/10 10:48

Elem	Na5895	Sn1899	V_3102	Zn2062
Line	589.592 { 57}	189.989 {176}	310.230 {108}	206.200 {163}
Avg	.0047	.0006	.0080	.0011
Stddev	.0006	.0000	.0002	.0001
%RSD	12.09	6.362	2.772	11.38
#1	.0051	.0006	.0078	.0012
#2	.0043	.0006	.0081	.0010

Elem	P_2149	Si2516	Ti3234	Tl1908
Line	214.914 {156}	251.612 {134}	323.452 {104}	190.864 {176}
Avg	.0333	.3535	.00363	.0001
Stddev	.0176	.0255	.00006	.0000
%RSD	53.03	7.211	1.5562	.2831
#1	.0457	.3715	.00359	.0001
#2	.0208	.3355	.00367	.0001

Elem	Li6707	Sr4077
Line	670.784 { 50}	407.771 { 82}
Avg	.25994	.00435
Stddev	.03137	.00000
%RSD	12.069	.00203
#1	.23776	.00435
#2	.28213	.00435

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	178.88
Stddev	.50
%RSD	.28181
#1	178.53
#2	179.24

8/9/10

Method: 2010A Sample Name: STDB ICP7-41-B Operator:
Comment:
Run Time: 08/06/10 10:51 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Al2373	Ba2335	Be3130	Ca2112
Line	237.312 {141}	233.527 {144}	313.042 {107}	211.276 {159}
Avg	20.65	3.3581	.52664	38.93
Stddev	.02	.0183	.00133	.13
%RSD	.0762	.54445	.25231	.3300
#1	20.64	3.3452	.52758	38.84
#2	20.66	3.3710	.52570	39.02

Elem	Fe2714	Mg2025	Mn2939	K_7664
Line	271.441 {124}	202.582 {166}	293.930 {114}	766.490 { 44}
Avg	.8514	59.78	.7471	200.0
Stddev	.0050	.12	.0025	1.1
%RSD	.5887	.2003	.3369	.5674
#1	.8479	59.69	.7453	200.8
#2	.8550	59.86	.7488	199.2

Elem	Na5895	P_2149	Si2516	Li6707
Line	589.592 { 57}	214.914 {156}	251.612 {134}	670.784 { 50}
Avg	4.584	46.90	99.06	382.40
Stddev	.003	.06	.26	1.17
%RSD	.0551	.1194	.2575	.30571
#1	4.582	46.86	98.87	383.22
#2	4.586	46.94	99.24	381.57

Elem	Sr4077
Line	407.771 { 82}
Avg	9.3005
Stddev	.0164
%RSD	.17671
#1	9.2889
#2	9.3121

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	176.26
Stddev	.45
%RSD	.25480
#1	176.58
#2	175.95

Method: 2010A Sample Name: STDA ICP7-6J-A Operator:
Comment:
Run Time: 08/06/10 10:54 Type: Std Mode: IR Corr.Fact: 1.000000

Elem	Sb2068	As1890	B_2497	Cd2265
Line	206.833 {162}	189.042 {177}	249.773 {134}	226.502 {148}
Avg	16.77	11.46	48.67	.3240
Stddev	.10	.05	.11	.0045
%RSD	.6148	.4349	.2285	1.380
#1	16.70	11.42	48.59	.3272
#2	16.85	11.49	48.75	.3209

Elem	Ca3179	Cr2677	Co2286	Cu3247
Line	317.933 {105}	267.716 {125}	228.616 {147}	324.754 {103}
Avg	32.22	.1311	.2111	19.12
Stddev	.08	.0014	.0032	.10
%RSD	.2606	1.072	1.539	.5013
#1	32.16	.1321	.2134	19.19
#2	32.27	.1301	.2088	19.05

Elem	Fe2599	Pb2203	Mg2795	Mn2576
Line	259.940 {129}	220.353 {152}	279.553 {120}	257.610 {131}
Avg	.4768	.0992	1439.0	3.4583
Stddev	.0226	.0013	1.0	.0474
%RSD	4.744	1.321	.06878	1.3699
#1	.4928	.1001	1439.7	3.4918
#2	.4608	.0983	1438.3	3.4248

Elem	Mo2020	Ni2316	Se1960	Ag3280
Line	202.030 {166}	231.604 {145}	196.090 {171}	328.068 {102}
Avg	.1701	.1926	10.78	18.99
Stddev	.0011	.0027	.04	.21
%RSD	.6476	1.396	.3708	1.091
#1	.1709	.1945	10.75	19.14
#2	.1694	.1907	10.81	18.84

Elem	Sn1899	V_3102	Zn2062	Ti3234
Line	189.989 {176}	310.230 {108}	206.200 {163}	323.452 {104}
Avg	.0962	.1684	.1660	.19410
Stddev	.0009	.0030	.0021	.00508
%RSD	.9302	1.766	1.250	2.6174
#1	.0968	.1705	.1675	.19770
#2	.0956	.1663	.1645	.19051

Elem	Tl1908
Line	190.864 {176}
Avg	.0860
Stddev	.0013
%RSD	1.541
#1	.0869
#2	.0850

Sample Name: STDA Run Time: 08/06/10 10:54

Int. Std.	Sc3572
Line	357.253 { 94}
Avg	179.59
Stddev	3.01
%RSD	1.6750
#1	177.46
#2	181.71

Method: 2010A Sample Name: ICV1 ICP7-64-C Operator:
Comment:
Run Time: 08/06/10 10:57 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.047	2.507	2.547	5.0329	.12319	-.0005
Stddev	.035	.002	.033	.0303	.00002	.0003
%RSD	.6831	.0584	1.281	.60179	.01500	68.07
#1	5.023	2.506	2.523	5.0115	.12320	-.0003
#2	5.072	2.509	2.570	5.0543	.12318	-.0007
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	5.000	2.500	2.500	5.0000	.12500	
Range	10.00%	10.00%	10.00%	10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.251	12.62	.5070	1.253	.6240	2.428
Stddev	.002	.16	.0010	.002	.0029	.003
%RSD	.1416	1.281	.1908	.1731	.4722	.1204
#1	1.252	12.50	.5063	1.251	.6261	2.426
#2	1.250	12.73	.5077	1.254	.6219	2.430
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.250	12.50	.5000	1.250	.6250	2.500
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.516	12.51	1.2680	2.001	1.243	12.67
Stddev	.005	.16	.0016	.014	.001	.02
%RSD	.1854	1.283	.12862	.6986	.1135	.1328
#1	2.519	12.40	1.2669	1.991	1.244	12.66
#2	2.513	12.62	1.2692	2.011	1.242	12.68
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.500	12.50	1.2500	2.000	1.250	12.50
Range	10.00%	10.00%	10.000%	10.00%	10.00%	10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.507	.6270	12.10	.0157	1.239	1.259
Stddev	.015	.0048	.04	.0109	.003	.003
%RSD	.5783	.7595	.3159	68.97	.2249	.2572
#1	2.517	.6236	12.13	.0234	1.237	1.257
#2	2.497	.6303	12.08	.0081	1.241	1.262
Check ?	QC Pass	QC Pass	QC Pass	None	QC Pass	QC Pass
Value	2.500	.6250	12.50		1.250	1.250
Range	10.00%	10.00%	10.00%		10.00%	10.00%

Sample Name: ICV1 Run Time: 08/06/10 10:57

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0157	-.1380	1.9975	2.499	.00058	.00671
Stddev	.0015	.0008	.0031	.013	.00033	.00017
%RSD	9.799	.6051	.15667	.5086	56.582	2.4602
#1	-.0146	-.1386	1.9953	2.508	.00035	.00683
#2	-.0168	-.1374	1.9997	2.490	.00081	.00660
Check ?	None	None	QC Pass	QC Pass	None	None
Value			2.0000	2.500		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	181.39
Stddev	.56
%RSD	.30760
#1	180.99
#2	181.78

Method: 2010A Sample Name: ICVB1 ICP7-74-A Operator:
Comment:
Run Time: 08/06/10 11:00 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.008	.0197	-.0024	.00421	.00019	2.045
Stddev	.007	.0006	.0030	.00063	.00004	.013
%RSD	.6659	3.195	123.5	14.890	20.231	.6438
#1	1.003	.0201	-.0046	.00466	.00022	2.036
#2	1.013	.0192	-.0003	.00377	.00016	2.054
Check ?	None	None	None	None	None	QC Pass
Value						2.000
Range						10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012	5.129	.0032	.0011	-.0007	9.687
Stddev	.0010	.061	.0006	.0002	.0002	.005
%RSD	83.04	1.195	17.35	23.11	29.84	.0536
#1	.0019	5.086	.0036	.0012	-.0005	9.684
#2	.0005	5.173	.0028	.0009	-.0008	9.691
Check ?	None	QC Pass	None	None	None	QC Pass
Value		5.000				10.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2795	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024	5.0008	9.940	.0077	.0018	.0493
Stddev	.0042	.0309	.007	.0028	.0003	.0206
%RSD	177.4	.61758	.0701	36.55	15.13	41.86
#1	-.0006	4.9789	9.945	.0097	.0020	.0639
#2	.0054	5.0226	9.935	.0057	.0016	.0347
Check ?	None	QC Pass	QC Pass	None	None	None
Value		5.0000	10.00			
Range		10.000%	10.00%			

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0058	.0004	8.009	4.811	.0013	.0022
Stddev	.0045	.0010	.051	.032	.0029	.0009
%RSD	78.57	233.9	.6351	.6653	220.1	41.18
#1	-.0026	.0012	8.045	4.789	-.0007	.0016
#2	-.0090	-.0003	7.973	4.834	.0033	.0028
Check ?	None	None	None	QC Pass	None	None
Value				5.000		
Range				10.00%		

Sample Name: ICVB1 Run Time: 08/06/10 11:00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.075	5.187	.00049	.0335	2.0380	1.9354
Stddev	.032	.030	.00146	.0270	.0116	.0025
%RSD	.6376	.5796	299.78	80.77	.57025	.12915
#1	5.052	5.166	.00152	.0144	2.0462	1.9372
#2	5.098	5.208	-.00055	.0526	2.0297	1.9337
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	5.000	5.000			2.0000	2.0000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	184.09
Stddev	1.17
%RSD	.63497
#1	183.26
#2	184.92

Method: 2010A Sample Name: ICB Operator:
Comment:
Run Time: 08/06/10 11:03 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067	.0029	.0058	-.00018	.00000	-.0040
Stddev	.0010	.0011	.0099	.00004	.00005	.0010
%RSD	14.32	39.58	171.2	19.866	1683.6	23.89
#1	.0074	.0021	-.0012	-.00015	.00004	-.0034
#2	.0061	.0037	.0127	-.00020	-.00003	-.0047
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0006	.0013	-.0004	.0000	.0013	.0017
Stddev	.0002	.0012	.0003	.0001	.0029	.0070
%RSD	27.42	93.86	79.80	1224.	220.6	400.5
#1	-.0005	.0021	-.0002	-.0001	.0033	.0067
#2	-.0007	.0004	-.0006	.0001	-.0007	-.0032
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0030	.00017	.00222	-.0003	.0007	.0112
Stddev	.0006	.00017	.00177	.0015	.0004	.0049
%RSD	18.43	100.54	79.910	516.3	60.63	43.85
#1	-.0026	.00030	.00347	.0008	.0004	.0077
#2	-.0034	.00005	.00097	-.0013	.0011	.0147
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0180	-.0016	-.0018	.0029	-.0042	-.0011
Stddev	.0027	.0019	.0029	.0032	.0018	.0004
%RSD	15.14	115.8	156.9	109.1	42.23	37.54
#1	-.0161	-.0003	-.0039	.0052	-.0029	-.0013
#2	-.0199	-.0029	.0002	.0007	-.0054	-.0008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: ICB Run Time: 08/06/10 11:03

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0087	-.0041	-.00128	-.0002	.00036	.00024
Stddev	.0102	.0009	.00039	.0025	.00028	.00012
%RSD	117.9	22.30	30.216	1048.	78.589	50.557
#1	.0014	-.0035	-.00155	-.0020	.00056	.00033
#2	.0159	-.0048	-.00101	.0015	.00016	.00015
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	182.73
Stddev	.65
%RSD	.35670
#1	182.27
#2	183.19

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/06/10 11:06 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.979	.0200	.0016	2.3787	.04881	.0019
Stddev	.040	.0058	.0030	.0005	.00018	.0004
%RSD	.8065	29.04	187.9	.02263	.37148	24.13
#1	4.951	.0241	-.0005	2.3783	.04868	.0022
#2	5.008	.0159	.0038	2.3791	.04894	.0015
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007	25.13	.0022	-.0012	-.0031	24.54
Stddev	.0000	.17	.0003	.0002	.0010	.11
%RSD	5.894	.6629	14.46	17.57	32.68	.4357
#1	.0007	25.01	.0020	-.0013	-.0024	24.46
#2	.0007	25.25	.0024	-.0010	-.0038	24.61
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0118	24.99	4.889	-.0003	-.0019	10.02
Stddev	.0025	.17	.043	.0004	.0003	.02
%RSD	20.70	.6972	.8707	162.2	14.37	.1504
#1	-.0101	24.87	4.859	.0000	-.0017	10.03
#2	-.0136	25.11	4.919	-.0006	-.0021	10.01
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0162	-.0004	9.649	.0024	.0035	.0007
Stddev	.0300	.0006	.020	.0034	.0008	.0002
%RSD	184.9	141.3	.2119	141.3	23.98	27.52
#1	-.0375	-.0009	9.664	.0048	.0029	.0006
#2	.0050	.0000	9.635	.0000	.0040	.0009
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/06/10 11:06

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.995	2.499	-.00121	.0308	.49906	.49091
Stddev	.039	.013	.00103	.0038	.00239	.00064
%RSD	.3928	.5028	85.230	12.42	.47852	.13053
#1	9.967	2.490	-.00193	.0281	.50075	.49046
#2	10.02	2.508	-.00048	.0336	.49737	.49136
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	181.17
Stddev	.06
%RSD	.03465
#1	181.21
#2	181.12

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/06/10 11:09 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4864	2.483	2.453	.44508	.51897	.4971
Stddev	.0124	.009	.003	.00361	.00148	.0029
%RSD	2.551	.3499	.1326	.81055	.28460	.5795
#1	.4952	2.477	2.451	.44252	.51793	.4950
#2	.4776	2.489	2.455	.44763	.52002	.4991
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4879	2.504	.4887	.4907	.4959	.4889
Stddev	.0042	.018	.0037	.0058	.0004	.0153
%RSD	.8508	.7234	.7587	1.184	.0829	3.129
#1	.4849	2.491	.4861	.4866	.4956	.4997
#2	.4908	2.517	.4914	.4948	.4962	.4781
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.458	1.9866	.96403	.9719	.4897	5.141
Stddev	.013	.0060	.00574	.0097	.0047	.024
%RSD	.5331	.30354	.59532	.9959	.9510	.4702
#1	2.449	1.9823	.95998	.9651	.4864	5.158
#2	2.468	1.9909	.96809	.9787	.4930	5.123
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.448	.4997	.4695	2.395	.4843	.4885
Stddev	.017	.0021	.0014	.021	.0078	.0083
%RSD	.6994	.4132	.3084	.8757	1.602	1.703
#1	2.436	.4982	.4705	2.380	.4789	.4826
#2	2.461	.5011	.4685	2.409	.4898	.4944
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/06/10 11:09

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0326	.2906	.48309	4.813	.51474	.49022
Stddev	.0055	.0021	.00036	.019	.00038	.00136
%RSD	16.71	.7260	.07470	.3980	.07377	.27652
#1	-.0365	.2921	.48284	4.799	.51501	.48927
#2	-.0288	.2891	.48335	4.826	.51447	.49118
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	185.01
Stddev	.13
%RSD	.07207
#1	185.10
#2	184.91

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/06/10 11:12 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074	.0099	-.0015	-.00013	.00002	-.0059
Stddev	.0134	.0029	.0030	.00032	.00006	.0002
%RSD	181.2	29.62	196.8	240.20	293.16	2.693
#1	.0169	.0120	-.0036	.00009	.00006	-.0060
#2	-.0021	.0078	.0006	-.00035	-.00002	-.0057
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000	.0000
Range	±.0500	±.0500	±.1000	±.00500	±.00500	±.0500

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001	.0028	.0003	-.0008	.0026	-.0040
Stddev	.0003	.0027	.0009	.0001	.0018	.0013
%RSD	479.4	97.52	345.8	18.10	70.75	33.98
#1	.0003	.0047	-.0004	-.0009	.0039	-.0030
#2	-.0001	.0009	.0009	-.0007	.0013	-.0049
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.0050	±.0500	±.0050	±.0100	±.0100	±.0200

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039	.00013	.00030	.0022	.0006	-.0014
Stddev	.0054	.00003	.00023	.0009	.0011	.0142
%RSD	137.0	24.286	73.792	41.90	180.4	1008.
#1	.0001	.00016	.00046	.0029	.0014	.0086
#2	.0077	.00011	.00015	.0016	-.0002	-.0114
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.00000	.0000	.0000	.0000
Range	±.0500	±.02000	±.00500	±.0100	±.0200	±.4000

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0058	-.0029	-.0046	.0022	-.0012	-.0002
Stddev	.0018	.0025	.0033	.0030	.0000	.0010
%RSD	31.43	84.91	72.18	140.3	3.566	482.5
#1	-.0045	-.0012	-.0022	.0043	-.0011	.0005
#2	-.0071	-.0047	-.0069	.0000	-.0012	-.0009
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000	.0000
Range	±.1000	±.0100	±.2000	±.0500	±.0100	±.0100

Sample Name: CCB Run Time: 08/06/10 11:12

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0031	-.0081	-.00139	-.0020	.00004	.00003
Stddev	.0106	.0008	.00068	.0050	.00028	.00004
%RSD	347.2	10.41	48.959	254.9	766.89	158.74
#1	.0044	-.0075	-.00091	-.0055	-.00016	.00005
#2	-.0106	-.0087	-.00187	.0016	.00023	.00000
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	181.41
Stddev	1.12
%RSD	.61894
#1	180.62
#2	182.21

Method: 2010A Sample Name: CRI ICP-763 Operator:
Comment:
Run Time: 08/06/10 11:15 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0534	.0457	.0764	.00395	.00447	.0424
Stddev	.0076	.0070	.0000	.00032	.00012	.0005
%RSD	14.31	15.27	.0031	8.0131	2.7292	1.219
#1	.0480	.0407	.0764	.00417	.00438	.0420
#2	.0588	.0506	.0764	.00372	.00456	.0427
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.0500	.1000	.00500	.00500	.0500
Range	30.00%	100.0%	100.0%	100.00%	100.00%	100.0%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043	.0384	.0050	.0089	.0084	.0136
Stddev	.0004	.0024	.0001	.0004	.0045	.0002
%RSD	9.399	6.295	1.478	4.613	53.65	1.148
#1	.0046	.0367	.0050	.0086	.0052	.0135
#2	.0040	.0402	.0051	.0092	.0116	.0137
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0050	.0500	.0050	.0100	.0100	.0200
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0520	.01627	.00465	.0084	.0205	.3845
Stddev	.0001	.00030	.00004	.0005	.0006	.0083
%RSD	.2442	1.8296	.90998	5.658	2.765	2.166
#1	.0521	.01606	.00468	.0081	.0209	.3904
#2	.0519	.01648	.00462	.0088	.0201	.3786
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0500	.02000	.00500	.0100	.0200	.4000
Range	100.0%	100.00%	100.00%	100.0%	100.0%	100.0%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0695	.0092	.1736	.0318	.0068	.0081
Stddev	.0045	.0002	.0034	.0015	.0016	.0013
%RSD	6.543	2.295	1.946	4.809	23.61	15.55
#1	.0727	.0090	.1712	.0329	.0057	.0090
#2	.0663	.0093	.1759	.0307	.0080	.0072
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.1000	.0100	.2000	.0500	.0100	.0100
Range	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Sample Name: CRI Run Time: 08/06/10 11:15

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1719	.3899	.00608	.0856	.01028	.00898
Stddev	.0016	.0014	.00239	.0072	.00006	.00009
%RSD	.9469	.3593	39.314	8.443	.61991	.95023
#1	.1708	.3908	.00777	.0805	.01033	.00904
#2	.1731	.3889	.00439	.0907	.01024	.00892
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.2000	.4000	.01000	.1000	.01000	.01000
Range	100.0%	100.0%	100.00%	100.0%	100.00%	100.00%

Int. Std.	Sc3572
Units	Cts/S
Avg	184.17
Stddev	.41
%RSD	.22085
#1	183.88
#2	184.45

Method: 2010A Sample Name: ICSA ICP7-648 Operator:
Comment:
Run Time: 08/06/10 11:18 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	499.0	.0805	-.0219	-.00073	.00010	-.0078
Stddev	1.3	.0006	.0074	.00007	.00003	.0009
%RSD	.2680	.7722	33.76	9.6553	32.899	11.09
#1	498.1	.0809	-.0167	-.00078	.00008	-.0072
#2	500.0	.0801	-.0271	-.00068	.00013	-.0084
Check ?	QC Pass	None	None	None	None	None
Value	500.0					
Range	20.00%					

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	487.1	-.0014	.0009	-.0012	195.3
Stddev	.0018	4.6	.0015	.0007	.0018	1.8
%RSD	20.13	.9380	106.8	71.66	155.6	.9188
#1	.0076	483.9	-.0025	.0014	.0001	194.1
#2	.0101	490.3	-.0003	.0005	-.0024	196.6
Check ?	None	QC Pass	None	None	None	QC Pass
Value		500.0				200.0
Range		20.00%				20.00%

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032	514.8	.00399	.0027	-.0014	.0052
Stddev	.0049	1.4	.00001	.0016	.0022	.0065
%RSD	152.7	.2785	.24250	59.69	151.5	124.4
#1	-.0003	513.8	.00399	.0038	-.0029	.0098
#2	.0066	515.8	.00398	.0015	.0001	.0006
Check ?	None	QC Pass	None	None	None	None
Value		500.0				
Range		20.00%				

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0025	.0975	-.0189	-.0027	.0052
Stddev	.0029	.0031	.0027	.0062	.0011	.0008
%RSD	164.0	125.0	2.728	32.58	43.17	15.42
#1	-.0003	.0047	.0956	-.0233	-.0035	.0057
#2	.0038	.0003	.0993	-.0145	-.0018	.0046
Check ?	None	None	None	None	None	None
Value						
Range						

Sample Name: ICSA Run Time: 08/06/10 11:18

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170	-.0195	.00943	.1129	.01195	.01546
Stddev	.0053	.0015	.00048	.0131	.00002	.00050
%RSD	30.94	7.731	5.0929	11.60	.14665	3.2098
#1	.0207	-.0185	.00909	.1222	.01196	.01582
#2	.0133	-.0206	.00977	.1037	.01194	.01511
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	168.28
Stddev	.02
%RSD	.01203
#1	168.26
#2	168.29

Method: 2010A Sample Name: ICSAB ICP7-75-F Operator:
Comment:
Run Time: 08/06/10 11:22 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	496.2	1.039	-.0015	.45326	.51459	-.0129
Stddev	.6	.001	.0134	.00035	.00150	.0005
%RSD	.1279	.0528	914.1	.07671	.29140	4.118
#1	495.8	1.039	.0080	.45350	.51565	-.0126
#2	496.6	1.040	-.0109	.45301	.51353	-.0133
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9704	492.8	.4896	.4784	.4824	196.5
Stddev	.0038	3.7	.0058	.0022	.0008	.2
%RSD	.3889	.7498	1.180	.4648	.1577	.1227
#1	.9730	490.2	.4937	.4799	.4829	196.4
#2	.9677	495.4	.4856	.4768	.4818	196.7
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9833	506.6	.45584	.0017	.9354	-.0663
Stddev	.0017	3.1	.00258	.0032	.0032	.0081
%RSD	.1725	.6148	.56496	191.1	.3408	12.15
#1	.9845	504.4	.45766	.0039	.9377	-.0606
#2	.9821	508.8	.45402	-.0006	.9332	-.0720
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0084	.9772	.0368	-.0166	.4851	.9516
Stddev	.0090	.0075	.0024	.0079	.0026	.0031
%RSD	107.8	.7689	6.524	47.44	.5417	.3213
#1	-.0020	.9719	.0351	-.0222	.4833	.9494
#2	-.0148	.9826	.0385	-.0110	.4870	.9537
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 08/06/10 11:22

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0009	-.0151	.01153	.1193	.01082	.01754
Stddev	.0234	.0011	.00008	.0393	.00017	.00038
%RSD	2670.	7.028	.72693	32.98	1.5952	2.1640
#1	-.0174	-.0144	.01159	.0915	.01070	.01780
#2	.0157	-.0159	.01147	.1471	.01095	.01727
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	168.38
Stddev	1.11
%RSD	.66109
#1	167.59
#2	169.16

Method: 2010A Sample Name: ICSAB Operator:
Comment:
Run Time: 08/06/10 11:25 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	494.9	1.041	.0073	.45745	.51695	-.0150
Stddev	2.6	.017	.0037	.00057	.00077	.0011
%RSD	.5258	1.613	50.82	.12508	.14951	7.103
#1	493.0	1.029	.0047	.45705	.51640	-.0143
#2	496.7	1.053	.0099	.45786	.51750	-.0158
Check ?	None	QC Pass	None	QC Pass	QC Pass	None
Value		1.000		.50000	.50000	
Range		20.00%		20.000%	20.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9778	491.7	.4958	.4783	.4791	198.5
Stddev	.0008	1.0	.0010	.0005	.0007	.7
%RSD	.0805	.1941	.1916	.1043	.1521	.3391
#1	.9772	491.0	.4951	.4787	.4796	198.0
#2	.9783	492.4	.4965	.4780	.4786	199.0
Check ?	QC Pass	None	QC Pass	QC Pass	QC Pass	None
Value	1.000		.5000	.5000	.5000	
Range	20.00%		20.00%	20.00%	20.00%	

Elem	Pb2203	Mg2025	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9773	507.2	.46013	.0021	.9438	-.0702
Stddev	.0148	2.2	.00031	.0028	.0063	.0206
%RSD	1.511	.4379	.06708	132.8	.6680	29.39
#1	.9878	505.6	.45991	.0041	.9394	-.0848
#2	.9669	508.8	.46035	.0001	.9483	-.0556
Check ?	QC Pass	None	QC Pass	None	QC Pass	None
Value	1.000		.50000		1.000	
Range	20.00%		20.000%		20.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0225	.9764	.0379	-.0188	.4860	.9638
Stddev	.0129	.0055	.0029	.0217	.0010	.0067
%RSD	57.43	.5635	7.764	115.0	.2108	.7001
#1	.0134	.9725	.0358	-.0035	.4853	.9590
#2	.0317	.9803	.0400	-.0342	.4868	.9686
Check ?	None	QC Pass	None	None	QC Pass	QC Pass
Value		1.000			.5000	1.000
Range		20.00%			20.00%	20.00%

Sample Name: ICSAB Run Time: 08/06/10 11:25

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110	-.0160	.01211	.1307	.01123	.01861
Stddev	.0145	.0006	.00052	.0057	.00006	.00006
%RSD	131.1	3.929	4.3227	4.377	.50758	.32255
#1	.0213	-.0156	.01248	.1266	.01127	.01857
#2	.0008	-.0165	.01174	.1347	.01119	.01865
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Sc3572
Units	Cts/S
Avg	167.59
Stddev	.17
%RSD	.10114
#1	167.47
#2	167.71

WS 8/6/10

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/06/10 11:28 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.140	.0179	.0026	2.4123	.04845	-.0048
Stddev	.043	.0157	.0137	.0021	.00008	.0002
%RSD	.8382	87.55	520.4	.08522	.16666	5.216
#1	5.170	.0068	-.0071	2.4137	.04851	-.0049
#2	5.109	.0290	.0123	2.4108	.04839	-.0046
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021	26.18	.0023	-.0004	-.0017	25.35
Stddev	.0001	.05	.0010	.0003	.0003	.14
%RSD	5.619	.1974	45.75	76.63	17.48	.5395
#1	.0022	26.14	.0030	-.0002	-.0019	25.45
#2	.0020	26.22	.0015	-.0007	-.0015	25.26
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0072	25.23	4.860	-.0017	-.0028	9.922
Stddev	.0041	.01	.010	.0004	.0006	.006
%RSD	56.52	.0467	.2011	22.81	23.13	.0597
#1	-.0101	25.24	4.853	-.0019	-.0033	9.926
#2	-.0043	25.22	4.867	-.0014	-.0023	9.918
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0085	-.0013	9.665	-.0047	-.0013	.0012
Stddev	.0009	.0035	.040	.0026	.0008	.0005
%RSD	10.87	267.0	.4134	55.07	60.96	43.59
#1	-.0078	-.0038	9.693	-.0029	-.0007	.0015
#2	-.0091	.0012	9.637	-.0065	-.0018	.0008
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/06/10 11:28

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.04	2.487	-.00075	.0166	.49179	.48177
Stddev	.03	.004	.00018	.0087	.00302	.00027
%RSD	.2825	.1744	24.246	52.32	.61322	.05695
#1	10.02	2.484	-.00088	.0105	.49392	.48157
#2	10.06	2.490	-.00062	.0228	.48966	.48196
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	182.20
Stddev	.44
%RSD	.24092
#1	181.89
#2	182.51

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/06/10 11:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4973	2.477	2.552	.45286	.51311	.4935
Stddev	.0161	.023	.019	.00113	.00107	.0014
%RSD	3.236	.9143	.7620	.24966	.20898	.2751
#1	.4859	2.461	2.539	.45206	.51235	.4926
#2	.5086	2.493	2.566	.45366	.51387	.4945
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4998	2.514	.4989	.4944	.5132	.4938
Stddev	.0015	.016	.0021	.0024	.0006	.0166
%RSD	.3046	.6313	.4197	.4854	.1125	3.369
#1	.4988	2.525	.4975	.4927	.5128	.5055
#2	.5009	2.502	.5004	.4961	.5136	.4820
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.430	1.9906	.97787	.9835	.4986	5.058
Stddev	.012	.0092	.00641	.0057	.0017	.042
%RSD	.4853	.46236	.65568	.5825	.3445	.8202
#1	2.422	1.9971	.97334	.9794	.4974	5.029
#2	2.438	1.9841	.98240	.9875	.4998	5.087
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.443	.4979	.4659	2.383	.4855	.5005
Stddev	.007	.0037	.0008	.001	.0010	.0012
%RSD	.2878	.7385	.1655	.0393	.2154	.2373
#1	2.448	.4953	.4653	2.382	.4848	.4997
#2	2.438	.5005	.4664	2.383	.4862	.5014
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/06/10 11:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0165	.2922	.48580	4.952	.50026	.48114
Stddev	.0071	.0010	.00205	.003	.00542	.00005
%RSD	42.83	.3443	.42235	.0692	1.0834	.00982
#1	-.0115	.2915	.48435	4.955	.49643	.48117
#2	-.0215	.2930	.48725	4.950	.50409	.48110
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	184.98
Stddev	.54
%RSD	.29024
#1	184.60
#2	185.36

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/06/10 11:34 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0027	.0119	.0091	-.00002	.00006
Stddev	.0124	.0128	.0026	.00013	.00002
%RSD	459.4	107.2	28.27	698.83	28.323
#1	-.0115	.0210	.0109	.00007	.00007
#2	.0061	.0029	.0073	-.00011	.00005
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0090	.0001	.0055	.0005	-.0001
Stddev	.0002	.0003	.0048	.0003	.0003
%RSD	2.311	441.5	87.28	53.01	417.8
#1	-.0091	-.0001	.0021	.0003	-.0003
#2	-.0088	.0003	.0090	.0006	.0001
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0015	-.0025	.0027	.00035	.00031
Stddev	.0011	.0009	.0011	.00010	.00018
%RSD	73.81	37.45	42.24	29.921	58.171
#1	-.0007	-.0018	.0035	.00042	.00043
#2	-.0023	-.0031	.0019	.00027	.00018
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0021	.0012	.0014	-.0206	.0006
Stddev	.0013	.0002	.0039	.0009	.0004
%RSD	64.11	20.99	276.6	4.416	70.52
#1	.0031	.0010	-.0013	-.0212	.0009
#2	.0011	.0014	.0041	-.0199	.0003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 08/06/10 11:34

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0047	.0006	-.0021	-.0008	.0005
Stddev	.0012	.0002	.0006	.0001	.0093
%RSD	25.46	30.06	30.64	16.45	2041.
#1	-.0056	.0007	-.0025	-.0009	.0070
#2	-.0039	.0005	-.0016	-.0007	-.0061
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0066	-.00145	.0024	.00026	.00001
Stddev	.0007	.00156	.0138	.00015	.00002
%RSD	10.09	108.03	576.7	56.357	141.43
#1	-.0061	-.00034	.0121	.00037	.00000
#2	-.0071	-.00255	-.0073	.00016	.00003
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	183.76
Stddev	1.04
%RSD	.56659
#1	183.02
#2	184.50

Method: 2010A Sample Name: K1006992-MB Operator: MMR
Comment: 080610A
Run Time: 08/06/10 11:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	.0102	.0036	-.00038	.00004	-.0072
#1	-.0021	.0053	.0054	-.00045	.00003	-.0072
#2	.0196	.0152	.0018	-.00031	.00006	-.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0049	.0002	-.0002	-.0017	-.0047
#1	-.0005	.0021	.0004	-.0009	-.0022	-.0044
#2	.0001	.0077	.0000	.0005	-.0012	-.0049

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0044	-.00009	-.00012	-.0011	.0012	.0026
#1	-.0068	-.00003	.00002	-.0018	.0013	.0139
#2	-.0019	-.00014	-.00026	-.0004	.0012	-.0086

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0142	.0003	.0020	-.0015	-.0034	-.0014
#1	-.0071	.0017	.0022	-.0075	-.0033	-.0018
#2	-.0212	-.0012	.0017	.0044	-.0036	-.0011

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1642	-.0075	-.00044	-.0003	.00018	-.00001
#1	.1671	-.0056	-.00072	-.0021	.00043	.00000
#2	.1614	-.0093	-.00016	.0014	-.00007	-.00002

Int. Std.	Sc3572
Units	Cts/S
Avg	184.66
#1	185.15
#2	184.16

Method: 2010A Sample Name: CCVB Operator:
Comment:
Run Time: 08/06/10 12:08 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.039	.0175	.0035	2.3607	.04698	-.0026
Stddev	.021	.0000	.0039	.0017	.00040	.0001
%RSD	.4144	.0587	111.4	.07026	.85550	2.296
#1	5.024	.0175	.0007	2.3618	.04669	-.0027
#2	5.054	.0175	.0062	2.3595	.04726	-.0026
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	26.73	.0008	-.0020	-.0019	24.80
Stddev	.0001	.06	.0012	.0006	.0009	.16
%RSD	3.829	.2411	151.4	29.15	48.34	.6319
#1	.0013	26.78	.0016	-.0024	-.0012	24.69
#2	.0014	26.69	-.0001	-.0016	-.0025	24.91
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0077	25.19	4.739	-.0002	-.0009	9.791
Stddev	.0016	.01	.051	.0003	.0014	.052
%RSD	20.57	.0237	1.083	164.1	162.7	.5282
#1	-.0066	25.20	4.703	.0000	.0001	9.754
#2	-.0088	25.19	4.775	-.0005	-.0019	9.827
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0053	-.0003	9.523	-.0030	-.0030	.0117
Stddev	.0091	.0045	.052	.0074	.0031	.0065
%RSD	171.9	1549.	.5449	243.5	101.2	55.25
#1	.0011	-.0035	9.560	.0022	-.0052	.0163
#2	-.0117	.0029	9.487	-.0083	-.0009	.0072
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/06/10 12:08

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.15	2.510	.00135	.0655	.48171	.46640
Stddev	.01	.009	.00192	.0298	.00056	.00429
%RSD	.0624	.3758	142.30	45.48	.11598	.92052
#1	10.16	2.517	.00271	.0866	.48211	.46337
#2	10.15	2.503	-.00001	.0444	.48132	.46944
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	188.28
Stddev	1.37
%RSD	.72924
#1	189.25
#2	187.30

Method: 2010A Sample Name: CCVA Operator:
Comment:
Run Time: 08/06/10 12:11 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4829	2.486	2.508	.44766	.50738	.4916
Stddev	.0287	.003	.001	.00274	.00191	.0016
%RSD	5.942	.1171	.0320	.61294	.37654	.3157
#1	.5032	2.488	2.507	.44960	.50873	.4905
#2	.4626	2.484	2.508	.44572	.50603	.4927
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4946	2.530	.4931	.4895	.5139	.4941
Stddev	.0006	.011	.0051	.0046	.0032	.0218
%RSD	.1227	.4398	1.033	.9311	.6143	4.416
#1	.4950	2.538	.4967	.4927	.5161	.5095
#2	.4941	2.522	.4895	.4862	.5116	.4787
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.409	1.9903	.97016	.9764	.4915	5.051
Stddev	.009	.0036	.01195	.0002	.0000	.022
%RSD	.3512	.18250	1.2322	.0155	.0021	.4452
#1	2.403	1.9929	.97862	.9763	.4915	5.035
#2	2.415	1.9878	.96171	.9765	.4915	5.067
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.408	.4943	.5152	2.359	.4752	.4966
Stddev	.025	.0010	.0053	.015	.0006	.0025
%RSD	1.018	.2102	1.035	.6582	.1160	.5046
#1	2.391	.4936	.5190	2.370	.4756	.4984
#2	2.425	.4950	.5115	2.348	.4748	.4948
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/06/10 12:11

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0146	.2893	.47827	4.822	.49747	.47617
Stddev	.0032	.0014	.00185	.017	.00229	.00159
%RSD	21.68	.4738	.38649	.3579	.46057	.33453
#1	-.0124	.2903	.47696	4.834	.49585	.47730
#2	-.0169	.2884	.47958	4.810	.49909	.47505
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	186.19
Stddev	.76
%RSD	.40615
#1	185.65
#2	186.72

Method: 2010A Sample Name: CCB Operator:
Comment:
Run Time: 08/06/10 12:14 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0014	.0058	.0009	-.00037	.00012
Stddev	.0143	.0006	.0004	.00009	.00006
%RSD	1035.	9.843	47.02	25.232	46.403
#1	-.0115	.0054	.0006	-.00030	.00016
#2	.0087	.0062	.0012	-.00043	.00008
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0089	.0000	.0000	-.0001	-.0003
Stddev	.0002	.000	.001	.0005	.0005
%RSD	2.598	229.0	12560.	441.9	162.7
#1	-.0087	.0000	-.0004	-.0005	.0000
#2	-.0090	-.0001	.0004	.0002	-.0006
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0004	-.0015	.0047	.00183	.00055
Stddev	.0018	.0006	.0084	.00023	.00016
%RSD	426.1	39.73	177.8	12.458	29.810
#1	.0017	-.0011	-.0012	.00167	.00067
#2	-.0009	-.0019	.0107	.00199	.00044
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0022	.0005	.0018	-.0090	.0013
Stddev	.0003	.0016	.0025	.0045	.0002
%RSD	14.60	294.8	137.5	50.50	15.56
#1	.0024	.0017	.0001	-.0122	.0012
#2	.0020	-.0006	.0036	-.0058	.0015
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 08/06/10 12:14

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0216	.0027	-.0019	.0003	-.0103
Stddev	.0013	.0046	.0013	.0009	.0019
%RSD	5.861	172.9	67.81	324.1	18.84
#1	.0225	.0060	-.0028	-.0004	-.0117
#2	.0207	-.0006	-.0010	.0009	-.0090
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0066	-.00078	-.0030	.00002	.00011
Stddev	.0004	.00053	.0110	.00038	.00002
%RSD	6.608	67.159	362.5	1726.4	17.152
#1	-.0063	-.00115	.0048	.00029	.00012
#2	-.0069	-.00041	-.0108	-.00025	.00010
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	185.03
Stddev	2.03
%RSD	1.0974
#1	186.46
#2	183.59

Method: 2010A Sample Name: K1006992-MB Operator: MMR
Comment: 080610A Rerun
Run Time: 08/06/10 11:37 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0088	.0102	.0036	-.00038	.00004	-.0072
#1	-.0021	.0053	.0054	-.00045	.00003	-.0072
#2	.0196	.0152	.0018	-.00031	.00006	-.0073

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0002	.0049	.0002	-.0002	-.0017	-.0047
#1	-.0005	.0021	.0004	-.0009	-.0022	-.0044
#2	.0001	.0077	.0000	.0005	-.0012	-.0049

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0044	-.00009	-.00012	-.0011	.0012	.0026
#1	-.0068	-.00003	.00002	-.0018	.0013	.0139
#2	-.0019	-.00014	-.00026	-.0004	.0012	-.0086

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0142	.0003	.0020	-.0015	-.0034	-.0014
#1	-.0071	.0017	.0022	-.0075	-.0033	-.0018
#2	-.0212	-.0012	.0017	.0044	-.0036	-.0011

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1642	-.0075	-.00044	-.0003	.00018	-.00001
#1	.1671	-.0056	-.00072	-.0021	.00043	.00000
#2	.1614	-.0093	-.00016	.0014	-.00007	-.00002

Int. Std.	Sc3572
Units	Cts/S
Avg	184.66
#1	185.15
#2	184.16

Method: 2010A Sample Name: K1007907-MBE Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 11:40 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0155	.0156	-.0058	.11669	-.00004	.0086
#1	.0169	.0136	-.0030	.11537	-.00003	.0083
#2	.0142	.0176	-.0085	.11800	-.00005	.0089

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0005	.0438	.0009	.0000	.0004	.0058
#1	-.0003	.0444	-.0001	-.0004	.0010	.0066
#2	-.0008	.0431	.0019	.0003	-.0003	.0050

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0003	.00654	.00057	-.0001	.0029	.3277
#1	.0022	.00649	.00051	.0006	.0037	.3112
#2	-.0028	.00658	.00063	-.0007	.0021	.3441

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0045	.0004	>180.0	-.0035	-.0032	.0324
#1	-.0161	.0009	>180.0	-.0038	-.0020	.0324
#2	.0071	.0000	>180.0	-.0031	-.0044	.0325

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042	.0366	-.00047	.5798	-.00076	.00653
#1	.0054	.0370	-.00065	.5470	-.00027	.00656
#2	.0029	.0362	-.00029	.6125	-.00125	.00650

Int. Std.	Sc3572
Units	Cts/S
Avg	170.89
#1	170.21
#2	171.56

Method: 2010A Sample Name: K1007907-001 Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 11:46 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3266	.0512	-.0100	1.3040	-.00012	1.989
#1	.2938	.0520	-.0108	1.2992	-.00014	1.980
#2	.3594	.0504	-.0093	1.3087	-.00010	1.998

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1078	214.8	.0166	.1155	.0023	233.9
#1	.1068	213.3	.0184	.1155	.0016	232.9
#2	.1087	216.4	.0148	.1156	.0030	234.8

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3246	60.85	5.847	.0010	.7079	10.10
#1	.3223	60.60	5.826	.0012	.7030	10.09
#2	.3269	61.11	5.868	.0008	.7129	10.11

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108	-.0001	>180.0	-.0096	.0029	>90.00
#1	.0255	.0012	>180.0	-.0085	.0038	>90.00
#2	-.0039	-.0015	>180.0	-.0107	.0021	>90.00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1619	8.357	.00443	.5640	.16105	1.3081
#1	.1750	8.314	.00492	.5364	.16125	1.3069
#2	.1489	8.400	.00394	.5915	.16084	1.3093

Int. Std.	Sc3572
Units	Cts/S
Avg	164.92
#1	164.58
#2	165.25

Method: 2010A Sample Name: K1007907-001D Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 11:49 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3260	.0606	-.0235	1.2898	-.00006	1.968
#1	.3207	.0536	-.0282	1.2790	-.00008	1.959
#2	.3313	.0676	-.0187	1.3006	-.00004	1.978

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1064	209.9	.0144	.1140	.0030	230.8
#1	.1060	207.6	.0145	.1133	.0040	229.4
#2	.1067	212.1	.0143	.1146	.0020	232.2

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3134	59.87	5.803	-.0001	.7040	9.981
#1	.3057	59.54	5.794	-.0011	.6991	9.971
#2	.3211	60.20	5.813	.0010	.7089	9.990

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048	-.0016	>180.0	-.0064	.0022	>90.00
#1	.0060	-.0023	>180.0	-.0029	.0021	>90.00
#2	.0036	-.0009	>180.0	-.0098	.0024	>90.00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1613	8.261	.00428	.5603	.16005	1.3032
#1	.1578	8.215	.00430	.5343	.15989	1.3023
#2	.1647	8.308	.00425	.5862	.16020	1.3041

Int. Std.	Sc3572
Units	Cts/S
Avg	164.35
#1	164.37
#2	164.32

Method: 2010A Sample Name: K1007907-001S Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 11:52 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3339	.0546	4.854	10.723	-.00014	1.965
#1	.3081	.0570	4.835	10.681	-.00010	1.955
#2	.3598	.0521	4.872	10.765	-.00017	1.976

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.023	208.8	4.825	.1069	.0048	226.4
#1	1.023	206.8	4.827	.1079	.0049	227.5
#2	1.022	210.8	4.822	.1058	.0048	225.3

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.964	59.34	5.725	.0023	.6888	9.909
#1	4.986	58.96	5.743	.0014	.6881	9.926
#2	4.942	59.72	5.708	.0031	.6895	9.893

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.008	.9114	>180.0	-.0068	.0058	>90.00
#1	1.006	.9115	>180.0	-.0029	.0050	>90.00
#2	1.010	.9112	>180.0	-.0107	.0066	>90.00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1730	8.189	.00607	.7240	.15937	1.2905
#1	.1751	8.153	.00730	.7182	.16004	1.2963
#2	.1708	8.224	.00485	.7299	.15871	1.2847

Int. Std.	Sc3572
Units	Cts/S
Avg	165.15
#1	164.01
#2	166.28

Method: 2010A Sample Name: K1007908-001 Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 11:55 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4517	.0425	-.0157	1.2214	-.00008	1.666
#1	.4625	.0370	-.0223	1.2087	-.00003	1.656
#2	.4408	.0479	-.0092	1.2341	-.00014	1.676

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1335	254.7	.0285	.1046	.0010	212.5
#1	.1332	239.6	.0294	.1039	.0008	210.5
#2	.1339	269.8	.0276	.1053	.0013	214.6

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2471	20.15	5.448	.0004	.7223	10.16
#1	.2436	20.00	5.429	-.0008	.7139	10.20
#2	.2506	20.30	5.466	.0016	.7308	10.13

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018	.0012	>180.0	-.0058	.0003	>90.00
#1	.0088	.0026	>180.0	-.0070	.0007	>90.00
#2	-.0052	-.0003	>180.0	-.0046	.0000	>90.00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1338	10.68	.00326	.5209	.13499	1.2112
#1	.1268	10.63	.00419	.5053	.13516	1.2169
#2	.1409	10.73	.00234	.5364	.13482	1.2055

Int. Std.	Sc3572
Units	Cts/S
Avg	167.08
#1	167.13
#2	167.04

Method: 2010A Sample Name: K1007910-001 Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 11:58 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4161	.0566	-.0188	1.3116	-.00015	2.012
#1	.4238	.0406	-.0191	1.3133	-.00017	2.004
#2	.4085	.0726	-.0186	1.3098	-.00012	2.020

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.191	232.6	.0258	.1152	.0032	259.6
#1	1.194	229.5	.0254	.1137	.0046	260.2
#2	1.188	235.8	.0263	.1168	.0017	259.0

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2578	22.60	6.372	.0043	.6888	10.16
#1	.2670	22.52	6.419	.0055	.6884	10.21
#2	.2485	22.68	6.324	.0031	.6892	10.11

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0044	.0007	>180.0	-.0089	-.0021	>90.00
#1	-.0127	.0017	>180.0	-.0062	.0020	>90.00
#2	.0039	-.0003	>180.0	-.0117	-.0061	>90.00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1841	10.76	.00414	.6106	.16028	1.3630
#1	.1780	10.73	.00388	.5698	.16178	1.3822
#2	.1901	10.78	.00440	.6513	.15877	1.3438

Int. Std.	Sc3572
Units	Cts/S
Avg	167.59
#1	165.72
#2	169.46

Method: 2010A Sample Name: K1007911-001 Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 12:02 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3763	.0512	-.0239	.59752	-.00008	1.484
#1	.3791	.0529	-.0209	.59291	-.00012	1.482
#2	.3736	.0496	-.0269	.60212	-.00004	1.486

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1216	353.9	.0200	.0999	.0014	227.0
#1	.1199	348.6	.0184	.0983	.0033	223.8
#2	.1232	359.2	.0216	.1014	-.0005	230.2

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2179	19.71	5.725	.0051	.6729	9.407
#1	.2230	19.64	5.724	.0065	.6675	9.405
#2	.2129	19.77	5.726	.0036	.6783	9.408

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149	-.0026	>180.0	.0025	-.0016	>90.00
#1	.0172	-.0058	>180.0	.0043	-.0005	>90.00
#2	.0125	.0006	>180.0	.0006	-.0026	>90.00

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1516	12.30	.00328	.6313	.12094	1.4848
#1	.1490	12.27	.00420	.6117	.12150	1.4839
#2	.1542	12.33	.00235	.6509	.12039	1.4858

Int. Std.	Sc3572
Units	Cts/S
Avg	167.68
#1	167.34
#2	168.01

Method: 2010A Sample Name: K1007933-001 Operator: MMR
Comment: 080610A TCLP
Run Time: 08/06/10 12:05 Type: Unk Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7612	.0079	-.0036	.50054	.00001	.1313
#1	.7565	.0026	-.0118	.49964	.00000	.1312
#2	.7660	.0133	.0046	.50145	.00003	.1314

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036	66.72	.0808	.0113	1.231	12.74
#1	.0032	66.16	.0798	.0117	1.228	12.76
#2	.0040	67.28	.0817	.0108	1.234	12.72

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0231	2.3370	.51470	.0147	.0224	2.631
#1	.0265	2.3298	.51622	.0137	.0218	2.630
#2	.0196	2.3442	.51317	.0157	.0230	2.632

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0004	.0019	>180.0	.0079	-.0008	1.379
#1	-.0011	.0014	>180.0	.0074	.0004	1.379
#2	.0002	.0023	>180.0	.0084	-.0020	1.380

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0720	5.855	.01998	.6193	.01045	.11666
#1	.0697	5.842	.02023	.6087	.00990	.11689
#2	.0743	5.868	.01972	.6299	.01101	.11642

Int. Std.	Sc3572
Units	Cts/S
Avg	174.70
#1	174.31
#2	175.09

Method: 2010A Sample Name: CCVB Operator:
Comment: 8/6/10 1208 Reprint mmm 8/9/10
Run Time: ~~08/09/10 14:31~~ Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.104	.0188	-.0024	2.4125	.04845	-.0112
Stddev	.021	.0000	.0038	.0017	.00041	.0001
%RSD	.4159	.0557	157.9	.07025	.85419	.5500
#1	5.089	.0188	-.0051	2.4137	.04815	-.0113
#2	5.119	.0188	.0003	2.4113	.04874	-.0112
Check ?	QC Pass	None	None	QC Pass	QC Pass	None
Value	5.000			2.5000	.05000	
Range	10.00%			10.000%	10.000%	

Elem	Cd2265	Ca2112	Cr2677	Co2286	Cu3247	Fe2714
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013	26.18	-.0004	-.0026	-.0013	24.65
Stddev	.0001	.06	.0012	.0006	.0009	.16
%RSD	3.923	.2411	271.6	22.07	70.09	.6325
#1	.0012	26.22	.0004	-.0030	-.0006	24.54
#2	.0013	26.13	-.0013	-.0022	-.0019	24.76
Check ?	None	QC Pass	None	None	None	QC Pass
Value		25.00				25.00
Range		10.00%				10.00%

Elem	Pb2203	Mg2025	Mn2939	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0089	25.30	4.895	.0002	-.0011	9.912
Stddev	.0016	.01	.053	.0003	.0015	.052
%RSD	17.95	.0237	1.083	197.1	132.3	.5277
#1	-.0078	25.30	4.858	.0004	-.0001	9.875
#2	-.0101	25.29	4.933	-.0001	-.0021	9.949
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		25.00	5.000			10.00
Range		10.00%	10.00%			10.00%

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037	.0001	9.570	-.0001	-.0031	.0069
Stddev	.0092	.0046	.052	.0076	.0031	.0064
%RSD	246.1	3149.	.5455	5417.	100.4	93.29
#1	.0102	-.0031	9.607	.0053	-.0053	.0114
#2	-.0028	.0034	9.533	-.0055	-.0009	.0023
Check ?	None	None	QC Pass	None	None	None
Value			10.00			
Range			10.00%			

Sample Name: CCVB Run Time: 08/09/10 14:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.17	2.549	.00224	.0802	.48652	.48806
Stddev	.01	.010	.00193	.0295	.00056	.00449
%RSD	.0623	.3754	86.413	36.83	.11597	.92001
#1	10.18	2.555	.00360	.1011	.48692	.48489
#2	10.17	2.542	.00087	.0593	.48612	.49124
Check ?	QC Pass	QC Pass	None	None	QC Pass	QC Pass
Value	10.00	2.500			.50000	.50000
Range	10.00%	10.00%			10.000%	10.000%

Int. Std.	Sc3572
Units	Cts/S
Avg	188.28
Stddev	1.37
%RSD	.72924
#1	189.25
#2	187.30

Method: 2010A Sample Name: CCVA Operator:
Comment: 8/6/10 1211 Reprint mme 8/9/10
Run Time: ~~08/09/10 14:31~~ Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130	B_2497
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4718	2.488	2.437	.45780	.52248	.4835
Stddev	.0292	.003	.001	.00280	.00197	.0016
%RSD	6.184	.1171	.0321	.61244	.37649	.3217
#1	.4924	2.490	2.437	.45978	.52387	.4824
#2	.4511	2.486	2.438	.45581	.52109	.4846
Check ?	None	QC Pass	QC Pass	None	None	QC Pass
Value		2.500	2.500			.5000
Range		10.00%	10.00%			10.00%

Elem	Cd2265	Ca3179	Cr2677	Co2286	Cu3247	Fe2599
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4882	2.570	.4888	.4898	.5025	.4912
Stddev	.0006	.011	.0051	.0046	.0031	.0229
%RSD	.1227	.4403	1.035	.9323	.6137	4.661
#1	.4886	2.578	.4924	.4931	.5047	.5074
#2	.4878	2.562	.4852	.4866	.5003	.4750
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.5000	2.500	.5000	.5000	.5000	.5000
Range	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Elem	Pb2203	Mg2795	Mn2576	Mo2020	Ni2316	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.435	2.0131	.95672	.9782	.4938	5.118
Stddev	.009	.0037	.01179	.0002	.0000	.023
%RSD	.3514	.18251	1.2325	.0155	.0021	.4443
#1	2.429	2.0157	.96505	.9781	.4938	5.102
#2	2.441	2.0105	.94838	.9783	.4938	5.134
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	None
Value	2.500	2.0000	1.0000	1.000	.5000	
Range	10.00%	10.000%	10.000%	10.00%	10.00%	

Elem	Se1960	Ag3280	Na5895	Sn1899	V_3102	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.444	.4976	.5083	2.432	.4856	.4868
Stddev	.025	.0010	.0054	.016	.0006	.0025
%RSD	1.014	.2100	1.055	.6574	.1160	.5095
#1	2.427	.4969	.5121	2.443	.4860	.4886
#2	2.462	.4983	.5045	2.421	.4852	.4851
Check ?	QC Pass	QC Pass	None	QC Pass	QC Pass	QC Pass
Value	2.500	.5000		2.500	.5000	.5000
Range	10.00%	10.00%		10.00%	10.00%	10.00%

Sample Name: CCVA Run Time: 08/09/10 14:31

Elem	P_2149	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.0136	.2963	.48123	4.796	.50244	.49810
Stddev	.0032	.0014	.00186	.017	.00231	.00167
%RSD	23.39	.4685	.38579	.3567	.46054	.33452
#1	-.0113	.2973	.47991	4.808	.50080	.49928
#2	-.0158	.2954	.48254	4.784	.50407	.49692
Check ?	None	None	QC Pass	QC Pass	None	None
Value			.50000	5.000		
Range			10.000%	10.00%		

Int. Std.	Sc3572
Units	Cts/S
Avg	186.19
Stddev	.76
%RSD	.40615
#1	185.65
#2	186.72

Method: 2010A Sample Name: CCB Operator:
Comment: 8/10/10 1214 MMK 8/9/10
Run Time: 08/09/10 14:31 Type: QC Mode: CONC Corr.Fact: 1.000000

Elem	Al2373	Sb2068	As1890	Ba2335	Be3130
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0206	.0070	-.0050	.00000	.00020
Stddev	.0145	.0006	.0004	.0001	.00006
%RSD	70.51	8.102	8.242	2571.4	28.272
#1	-.0309	.0066	-.0053	.00006	.00024
#2	-.0103	.0074	-.0047	-.00007	.00016
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0500	±.0500	±.1000	±.00500	±.00500

Elem	B_2497	Cd2265	Ca3179	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0176	-.0001	-.0030	-.0013	-.0009
Stddev	.0002	.0001	.0006	.0005	.0005
%RSD	1.311	168.1	20.55	39.01	50.22
#1	-.0174	.0000	-.0035	-.0016	-.0006
#2	-.0178	-.0001	-.0026	-.0009	-.0012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0500	±.0050	±.0500	±.0050	±.0100

Elem	Cu3247	Fe2599	Pb2203	Mg2795	Mn2576
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0010	Q -.0288	.0036	.00174	.00034
Stddev	.0018	.0006	.0085	.00023	.00016
%RSD	182.2	2.122	233.5	13.238	48.233
#1	.0023	-.0284	-.0024	.00158	.00045
#2	-.0003	-.0293	.0096	.00190	.00022
Check ?	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.00000	.00000
Range	±.0100	±.0200	±.0500	±.02000	±.00500

Elem	Mo2020	Ni2316	K_7664	Se1960	Ag3280
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0026	.0004	.0117	.0000	.0018
Stddev	.0003	.0016	.0025	.005	.0002
%RSD	12.46	450.3	21.79	95440.	11.68
#1	.0028	.0015	.0099	-.0033	.0016
#2	.0023	-.0008	.0135	.0032	.0019
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.0100	±.0200	±.4000	±.1000	±.0100

Sample Name: CCB Run Time: 08/09/10 14:31

Elem	Na5895	Sn1899	V_3102	Zn2062	P_2149
Units	ppm	ppm	ppm	ppm	ppm
Avg	.0117	.0058	-.0020	-.0045	-.0082
Stddev	.0013	.0048	.0013	.0009	.0020
%RSD	10.88	82.39	67.01	19.44	23.77
#1	.0126	.0092	-.0029	-.0051	-.0096
#2	.0108	.0024	-.0010	-.0039	-.0068
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.0000	.0000	.0000	.0000
Range	±.2000	±.0500	±.0100	±.0100	±.2000

Elem	Si2516	Ti3234	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm
Avg	-.0043	.00009	.0122	.00006	.00013
Stddev	.0004	.00053	.0109	.00038	.00002
%RSD	10.33	573.66	89.65	654.34	14.981
#1	-.0040	-.00028	.0199	.00033	.00015
#2	-.0046	.00047	.0045	-.00021	.00012
Check ?	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.0000	.00000	.0000	.00000	.00000
Range	±.2000	±.01000	±.2000	±.01000	±.01000

Int. Std.	Sc3572
Units	Cts/S
Avg	185.03
Stddev	2.03
%RSD	1.0974
#1	186.46
#2	183.59

Service Request # __K1007395_____
Calibration __080510BMS03_____
QC in calibration__080510BMS03_____
QC Service Request # ___K1007395_____
STARLIMS run # __211454_____

ICP-MS Data Review Form

	Yes	No	NA
1. Appropriate standardization completed	X		
2. ICV within 10 % of true value	X		
3. CCV's in control	X		
4. CCB's and/or ICB's below MRL	X		
5. Method blank below MRL	X		
6. LCS in control	X		
7. Spike and duplicate in control	X		
8. All analytes within instrument linear range	X		
9. Adequate rinse out time allowed	X		
10. Internal standards in control	X		
11. Interferences checked	X		
12. Se over MRL		X	
13. CRA run	X		
14. Cd Correction Applied		X	
15. ICSA and ICSAB in control	X		
16. Serial dilution run	X		
17. Post spike in control	X		

Comments:

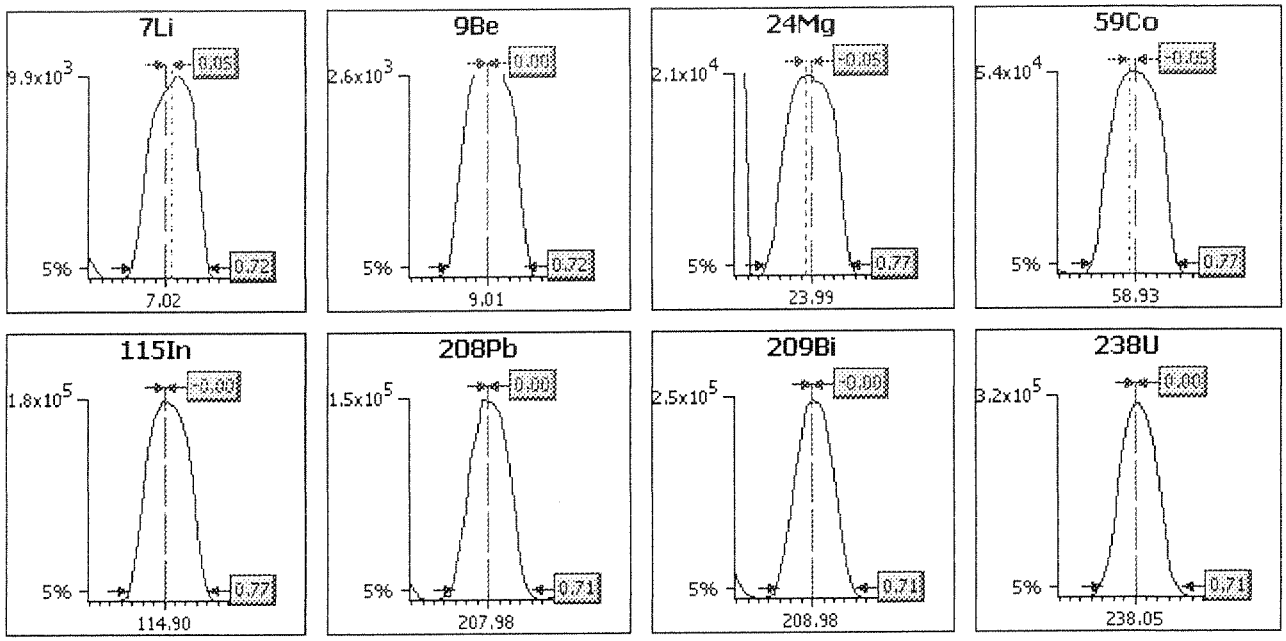
Primary Review by JDB Date 8/5/10
Secondary Review by _____ Date 8/5/10
R:\icp\misc\data review forms\icpms review form

Performance Report

Sample details
Acquired at : 08/05/2010 09:02:39 AM
Report name : Kelso Performance Report 2 [01/23/2008 04:49:11 PM]

Mass Calibration verification

Acquisition parameters
Sweeps : 100
Dwell : 1.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.90	0.60	0.10	0.72	0.05
9Be	0.90	0.60	0.10	0.72	0.00
24Mg	0.90	0.60	0.10	0.77	-0.05
59Co	0.90	0.60	0.10	0.77	-0.05
115In	0.90	0.60	0.10	0.77	-0.00
208Pb	0.90	0.60	0.10	0.71	0.00
209Bi	0.90	0.60	0.10	0.71	-0.00
238U	0.90	0.60	0.10	0.71	0.00

Sample details
Acquired at : 08/05/2010 09:02:39 AM
Report name : Kelso Performance Report 2 [01/23/2008 04:49:11 PM]

Tune conditions

Major	
Extraction	-176
Lens 1	2.9
Focus	17.1
D1	-42.4
Pole Bias	1.0
Hexapole Bias	1.0
Nebuliser	0.72
Sampling Depth	50

Minor	
Lens 2	-17.3
Lens 3	-182.7
Forward power	1247
Horizontal	115
Vertical	365
D2	-158
DA	-25.1
Cool	13.0
Auxiliary	0.80

Global	
Standard resolution	115
High resolution	110
Analogue Detector	2000
PC Detector	3853

Add. Gases

Sensitivity and stability results

Acquisition parameters
Sweeps : 400

Run	Time	5Bkg	7Li	9Be	24Mg	59Co	115In	140Ce	156Ce O	208Pb
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	5.0%	-	-	5.0%
	Countrate	-	>1000	>1000	>1000	>1000	>1000	-	-	>1000
1	09:03:14 AM	0.750	9486.948	2852.197	21047.086	56235.397	187280.40	214861.70	1607.892	162181.11
2	09:04:27 AM	0.000	9535.999	2815.936	21096.701	56608.200	188259.82	215124.81	1602.391	162611.70
3	09:05:42 AM	0.000	9540.003	2839.443	20991.708	56396.138	187660.11	214463.97	1591.639	162170.93
4	09:06:55 AM	0.750	9426.885	2923.220	21158.845	56489.716	188448.93	215258.68	1668.903	163452.32
5	09:08:08 AM	0.000	9500.962	2836.192	21094.696	56579.774	187989.82	215026.79	1614.643	162894.19
x		0.300	9498.159	2853.398	21077.807	56461.845	187927.82	214947.19	1617.094	162662.05
σ		0.41	45.82	41.14	62.38	151.41	468.09	306.48	30.16	537.00
%RSD		136.931	0.482	1.442	0.296	0.268	0.249	0.143	1.865	0.330

Run	Time	209Bi	220Bkg	238U
Dwell (mSecs)		10.0	10.0	10.0
Limits	%RSD	5.0%	-	5.0%
	Countrate	>1000	-	>1000
1	09:03:14 AM	252337.39	0.500	318410.21
2	09:04:27 AM	253437.88	0.000	319626.28
3	09:05:42 AM	252126.15	0.000	319089.15
4	09:06:55 AM	253603.65	0.000	320132.12
5	09:08:08 AM	253598.51	0.250	319724.91
x		253020.72	0.150	319396.53
σ		727.13	0.22	665.03
%RSD		0.287	149.071	0.208

Ratio results

Run	Time	156Ce O/140Ce
	Ratio limits	<0.0200
1	09:03:14 AM	0.007
2	09:04:27 AM	0.007
3	09:05:42 AM	0.007
4	09:06:55 AM	0.008
5	09:08:08 AM	0.008
x		0.0075
σ		0.00
%RSD		1.7647

Result : The performance report passed.

Sample List

No	Label	Type	Weight	Rack	Row	Col	Height
1	Cal. Blk	Blank	1.000	0	1	1	150
2	Cal. Stn	Fully Quant Standard	1.000	0	1	2	150
3	ICV1	Unknown	1.000	0	1	3	150
4	CCV1	Unknown	1.000	0	1	2	150
5	ICB1	Unknown	1.000	0	1	1	150
6	CCB1	Unknown	1.000	0	1	1	150
7	CRA	Unknown	1.000	0	1	4	150
8	ICSA	Unknown	1.000	0	1	5	150
9	ICSAB	Unknown	1.000	0	1	6	150
10	K1006963-MB	Unknown	1.000	1	1	1	150
11	LCSW	Unknown	1.000	1	1	2	150
12	K1006963-003	Unknown	1.000	1	1	3	150
13	K1006963-003D	Unknown	1.000	1	1	4	150
14	K1006963-003 1/5L	Unknown	1.000	1	1	5	150
15	K1006963-003A	Unknown	1.000	1	1	6	150
16	K1006963-003S	Unknown	1.000	1	1	7	150
17	CCV2	Unknown	1.000	0	1	2	150
18	CCB2	Unknown	1.000	0	1	1	150
19	K1006741-001	Unknown	1.000	1	1	8	150
20	K1007279-010	Unknown	1.000	1	1	9	150
21	K1006922-001	Unknown	1.000	1	1	10	150
22	K1006922-001 DISS	Unknown	1.000	1	1	11	150
23	K1006948-001	Unknown	1.000	1	1	12	150
24	K1006949-001	Unknown	1.000	1	2	1	150
25	K1006966-001	Unknown	1.000	1	2	2	150
26	K1006999-001	Unknown	1.000	1	2	3	150
27	K1007003-001	Unknown	1.000	1	2	4	150
28	K1007004-001	Unknown	1.000	1	2	5	150
29	CCV3	Unknown	1.000	0	1	2	150
30	CCB3	Unknown	1.000	0	1	1	150
31	K1007632-001	Unknown	1.000	1	2	6	150
32	K1007632-002	Unknown	1.000	1	2	7	150
33	K1007395-005	Unknown	1.000	1	2	8	150
34	K1007395-005D	Unknown	1.000	1	2	9	150
35	K1007395-005S	Unknown	1.000	1	2	10	150
36	K1007395-001	Unknown	1.000	1	2	11	150
37	K1007395-002	Unknown	1.000	1	2	12	150
38	K1007395-003	Unknown	1.000	1	3	1	150
39	K1007395-004	Unknown	1.000	1	3	2	150
40	K1007395-006	Unknown	1.000	1	3	3	150
41	CCV4	Unknown	1.000	0	1	2	150
42	CCB4	Unknown	1.000	0	1	1	150
43	K1007395-007	Unknown	1.000	1	3	4	150
44	K1006963-MB	Unknown	1.000	1	1	1	150
45	K1006741-001A	Unknown	1.000	1	5	12	150
46	50ppb Mo Std	Unknown	1.000	0	1	7	150
47	CCV5	Unknown	1.000	0	1	2	150
48	CCB5	Unknown	1.000	0	1	1	150

Dilution Corrected Concentrations

Cal. Blk 08/05/2010 10:59:15 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:15	0.0025	-0.0043	100.4%	0.0073	0.0037	-0.0097	0.0012	-0.0000
2	11:00:15	0.0001	0.0000	98.7%	0.0033	0.0009	-0.0230	0.0009	-0.0003
3	11:01:15	-0.0026	0.0043	100.8%	-0.0106	-0.0046	0.0326	-0.0021	0.0003
x		0.0000	0.0000	100.0%	-0.0000	0.0000	-0.0000	0.0000	0.0000
σ		0.0026	0.0043	1.1%	0.0094	0.0042	0.0290	0.0018	0.0003
%RSD		0.0000	0.0000	1.1	0.0000	0.0000	0.0000	0.0000	0.0000

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:15	0.0025	-0.3177	-0.0606	0.0008	-0.0020	-0.0046	-0.0405	0.0027
2	11:00:15	-0.0010	0.2448	0.1355	-0.0101	0.0068	-0.0034	0.0190	-0.0027
3	11:01:15	-0.0015	0.0729	-0.0749	0.0093	-0.0048	0.0080	0.0215	-0.0000
x		0.0000	0.0000	0.0000	-0.0000	-0.0000	0.0000	-0.0000	-0.0000
σ		0.0022	0.2882	0.1175	0.0097	0.0061	0.0070	0.0351	0.0027
%RSD		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:15	100.4%	-0.0163	0.0229	-0.2444	-0.0406	99.8%	-0.0035	0.0009
2	11:00:15	98.2%	-0.0161	-0.0026	-0.0127	-0.0621	99.5%	-0.0012	0.0001
3	11:01:15	101.3%	0.0324	-0.0203	0.2571	0.1027	100.8%	0.0046	-0.0010
x		100.0%	0.0000	-0.0000	0.0000	-0.0000	100.0%	-0.0000	-0.0000
σ		1.6%	0.0281	0.0217	0.2510	0.0896	0.7%	0.0042	0.0009
%RSD		1.6	0.0000	0.0000	0.0000	0.0000	0.7	0.0000	0.0000

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:15	0.0014	100.2%	0.0003	-0.0010	-0.0002	0.0015	0.0014	99.6%
2	11:00:15	-0.0008	99.3%	0.0012	0.0011	-0.0015	0.0035	0.0008	99.6%
3	11:01:15	-0.0006	100.5%	-0.0015	-0.0001	0.0017	-0.0050	-0.0022	100.8%
x		0.0000	100.0%	-0.0000	0.0000	-0.0000	-0.0000	0.0000	100.0%
σ		0.0012	0.7%	0.0014	0.0010	0.0016	0.0045	0.0019	0.7%
%RSD		0.0000	0.7	0.0000	0.0000	0.0000	0.0000	0.0000	0.7

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:15	-0.0008	0.0002	-0.0070	-0.0001	0.0030	100.1%	-0.0003	0.0003
2	11:00:15	0.0011	0.0011	0.0044	-0.0006	-0.0011	98.9%	-0.0007	-0.0001
3	11:01:15	-0.0003	-0.0014	0.0025	0.0008	-0.0019	100.9%	0.0010	-0.0002
x		0.0000	0.0000	0.0000	-0.0000	0.0000	100.0%	0.0000	0.0000
σ		0.0010	0.0013	0.0061	0.0007	0.0026	1.0%	0.0009	0.0003
%RSD		0.0000	0.0000	0.0000	0.0000	0.0000	1.0	0.0000	0.0000

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	10:59:15	-0.0002	-0.0002	-0.0004	99.3%	-0.0007
2	11:00:15	0.0028	0.0018	0.0012	99.5%	0.0003
3	11:01:15	-0.0026	-0.0016	-0.0008	101.2%	0.0003
x		-0.0000	0.0000	-0.0000	100.0%	-0.0000
σ		0.0027	0.0017	0.0010	1.0%	0.0006
%RSD		0.0000	0.0000	0.0000	1.0	0.0000

Cal. Stn 08/05/2010 11:03:53 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:53	25.2141	25.1407	99.8%	25.1204	25.1475	25.1831	24.8457	24.8620
2	11:04:53	24.9551	25.0459	98.9%	24.7347	24.9989	25.3303	24.9394	25.0309
3	11:05:53	24.8308	24.8133	97.9%	25.1448	24.8537	24.4866	25.2148	25.1071
x		25.0000	25.0000	98.9%	25.0000	25.0000	25.0000	25.0000	25.0000
σ		0.1955	0.1685	1.0%	0.2300	0.1469	0.4507	0.1919	0.1254
%RSD		0.7821	0.6738	1.0	0.9202	0.5876	1.8027	0.7675	0.5018

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:53	25.1214	25.4710	25.0013	25.1599	25.0658	25.1173	25.4401	24.9676
2	11:04:53	24.7324	24.5755	24.8207	24.8970	24.8827	25.0216	24.7717	24.8253
3	11:05:53	25.1462	24.9535	25.1781	24.9431	25.0515	24.8611	24.7881	25.2071
x		25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000	25.0000
σ		0.2321	0.4495	0.1787	0.1404	0.1019	0.1295	0.3813	0.1930
%RSD		0.9282	1.7982	0.7148	0.5615	0.4074	0.5179	1.5251	0.7719

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:53	99.9%	24.7432	25.3606	24.5757	25.1453	100.0%	24.7701	24.8520
2	11:04:53	99.2%	24.9186	24.3951	25.1971	24.3742	99.2%	25.0158	24.7973
3	11:05:53	99.0%	25.3381	25.2443	25.2272	25.4805	99.5%	25.2141	25.3507
x		99.4%	25.0000	25.0000	25.0000	25.0000	99.6%	25.0000	25.0000
σ		0.5%	0.3057	0.5270	0.3678	0.5673	0.4%	0.2224	0.3050
%RSD		0.5	1.2228	2.1081	1.4712	2.2691	0.4	0.8896	1.2198

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:53	24.9290	100.5%	24.9717	24.8613	25.1001	24.9624	24.9844	101.0%
2	11:04:53	24.9362	99.8%	24.9119	24.9910	24.8517	24.9145	24.9108	102.1%
3	11:05:53	25.1348	99.4%	25.1164	25.1477	25.0482	25.1231	25.1048	101.8%
x		25.0000	99.9%	25.0000	25.0000	25.0000	25.0000	25.0000	101.7%
σ		0.1168	0.6%	0.1051	0.1434	0.1310	0.1093	0.0979	0.6%
%RSD		0.4673	0.6	0.4205	0.5738	0.5240	0.4372	0.3918	0.6

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:03:53	25.0684	25.0384	25.1930	24.9538	25.0014	99.4%	25.0283	24.9063
2	11:04:53	24.9424	24.9126	24.8452	25.0374	24.9299	101.1%	24.9909	25.1709
3	11:05:53	24.9892	25.0490	24.9618	25.0089	25.0687	101.4%	24.9808	24.9228
x		25.0000	25.0000	25.0000	25.0000	25.0000	100.6%	25.0000	25.0000
σ		0.0637	0.0759	0.1770	0.0425	0.0694	1.1%	0.0250	0.1482
%RSD		0.2547	0.3036	0.7080	0.1700	0.2776	1.1	0.1002	0.5929

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:03:53	24.9982	25.0121	25.0042	100.5%	25.0218
2	11:04:53	25.0145	24.8833	24.9423	102.0%	25.1037
3	11:05:53	24.9872	25.1046	25.0535	103.1%	24.8745
x		25.0000	25.0000	25.0000	101.9%	25.0000
σ		0.0137	0.1111	0.0557	1.3%	0.1161
%RSD		0.0549	0.4444	0.2229	1.3	0.4644

ICV1 08/05/2010 11:09:25 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:25	2.5164	97.4476	99.0%	25.0013	9.8801	9.7213	24.8738	24.6601
2	11:10:25	2.5158	95.6724	99.6%	24.6055	9.5766	9.5885	24.4829	24.0133
3	11:11:25	2.5713	96.9790	98.5%	24.9068	9.7632	9.5421	24.9129	24.3915
x		2.5345	96.6997	99.0%	24.8379	9.7400	9.6173	24.7565	24.3549
σ		0.0318	0.9200	0.5%	0.2067	0.1531	0.0930	0.2378	0.3249
%RSD		1.2563	0.9514	0.6	0.8321	1.5714	0.9667	0.9604	1.3341

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:25	24.7810	24.0311	24.0152	12.1107	12.1674	23.6860	25.6042	25.5510
2	11:10:25	24.1328	24.2237	24.1348	11.9643	11.9744	23.2804	25.7470	25.0937
3	11:11:25	24.4264	24.3876	24.3408	12.0870	12.1277	23.8318	25.6066	25.2849
x		24.4467	24.2141	24.1636	12.0540	12.0899	23.5994	25.6526	25.3099
σ		0.3246	0.1784	0.1647	0.0786	0.1019	0.2857	0.0818	0.2297
%RSD		1.3277	0.7369	0.6817	0.6519	0.8432	1.2106	0.3188	0.9075

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:25	99.9%	25.0232	24.9831	24.1389	26.2444	99.6%	24.8965	24.6066
2	11:10:25	100.9%	24.1463	24.4647	25.0042	24.2122	101.2%	24.6907	24.6076
3	11:11:25	100.1%	24.2484	24.8550	24.2404	24.3806	100.0%	25.1008	24.5007
x		100.3%	24.4726	24.7676	24.4612	24.9458	100.3%	24.8960	24.5716
σ		0.5%	0.4795	0.2701	0.4730	1.1278	0.8%	0.2050	0.0614
%RSD		0.5	1.9594	1.0904	1.9337	4.5212	0.8	0.8236	0.2499

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:25	24.8376	99.7%	12.6467	12.7532	12.5423	11.9620	12.2782	99.2%
2	11:10:25	24.6648	101.3%	12.4703	12.4496	12.4066	11.8020	12.0938	101.2%
3	11:11:25	24.9203	100.0%	12.7142	12.6772	12.6659	11.9270	12.3124	100.2%
x		24.8076	100.4%	12.6104	12.6266	12.5383	11.8970	12.2281	100.2%
σ		0.1304	0.9%	0.1259	0.1580	0.1297	0.0841	0.1176	1.0%
%RSD		0.5257	0.9	0.9986	1.2511	1.0342	0.7071	0.9616	1.0

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:09:25	24.4925	24.4282	102.7262	102.4146	105.5762	100.9%	24.7945	24.7197
2	11:10:25	24.3515	24.1751	100.6958	101.1396	104.6136	102.9%	24.7496	24.5333
3	11:11:25	24.7337	24.3992	101.8167	102.5690	105.1942	102.1%	24.8397	24.7215
x		24.5259	24.3342	101.7462	102.0411	105.1280	102.0%	24.7946	24.6581
σ		0.1933	0.1386	1.0170	0.7845	0.4847	1.0%	0.0450	0.1081
%RSD		0.7881	0.5694	0.9996	0.7688	0.4611	1.0	0.1816	0.4386

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:09:25	23.2072	25.7756	24.6252	101.0%	25.1212
2	11:10:25	22.8076	25.4812	24.3130	103.2%	24.9075
3	11:11:25	23.0658	25.8398	24.5999	103.5%	24.9457
x		23.0269	25.6989	24.5127	102.6%	24.9915
σ		0.2027	0.1912	0.1734	1.4%	0.1140
%RSD		0.8801	0.7440	0.7074	1.3	0.4560

CCV1 08/05/2010 11:15:02 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:02	25.0251	25.2665	97.3%	24.8293	24.8834	24.8016	25.0409	24.7257
2	11:16:02	25.1483	25.0585	95.9%	24.8378	24.8560	25.0172	24.9946	24.7787
3	11:17:02	25.4904	25.0269	95.4%	24.9153	25.0332	24.7457	25.0195	24.4321
X		25.2213	25.1173	96.2%	24.8608	24.9242	24.8548	25.0184	24.6455
σ		0.2411	0.1302	1.0%	0.0474	0.0954	0.1434	0.0232	0.1867
%RSD		0.9559	0.5183	1.0	0.1906	0.3829	0.5769	0.0927	0.7575

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:02	25.3018	24.7611	25.1452	24.7489	24.6344	25.0095	24.6564	24.7445
2	11:16:02	24.7566	24.9781	24.8503	24.5792	24.2349	24.7285	24.7090	24.3317
3	11:17:02	24.9186	24.4039	25.3443	24.3943	24.5062	24.5815	24.8871	24.3404
X		24.9923	24.7144	25.1133	24.5741	24.4585	24.7732	24.7509	24.4722
σ		0.2800	0.2899	0.2485	0.1774	0.2040	0.2175	0.1209	0.2359
%RSD		1.1203	1.1731	0.9897	0.7218	0.8341	0.8778	0.4884	0.9639

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:02	97.5%	25.7360	24.1244	24.6553	26.2358	97.1%	25.1250	24.8868
2	11:16:02	98.4%	25.2488	24.4411	24.4380	26.1755	98.0%	25.0497	24.8187
3	11:17:02	98.5%	24.1877	25.0262	24.6299	24.5551	97.9%	25.2141	24.5923
X		98.1%	25.0575	24.5306	24.5744	25.6555	97.7%	25.1296	24.7659
σ		0.6%	0.7917	0.4575	0.1188	0.9534	0.5%	0.0823	0.1541
%RSD		0.6	3.1594	1.8651	0.4835	3.7163	0.5	0.3275	0.6224

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:02	25.0259	97.0%	25.1129	25.0666	25.0929	25.0712	25.2867	98.5%
2	11:16:02	24.9815	98.0%	24.9265	24.9210	25.2186	24.8175	24.9677	100.3%
3	11:17:02	25.0516	97.8%	24.9392	24.9104	24.7603	25.1741	24.9830	100.2%
X		25.0197	97.6%	24.9929	24.9660	25.0239	25.0209	25.0792	99.7%
σ		0.0355	0.5%	0.1042	0.0873	0.2368	0.1835	0.1799	1.0%
%RSD		0.1419	0.5	0.4169	0.3495	0.9463	0.7334	0.7174	1.0

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:02	25.0731	25.1634	24.9178	25.0779	25.1335	99.2%	25.0965	24.9983
2	11:16:02	25.1315	25.0427	24.4115	25.3325	25.0312	100.5%	24.8898	24.7459
3	11:17:02	25.0851	25.1663	24.6711	24.9631	25.0149	100.1%	25.0604	25.0536
X		25.0966	25.1241	24.6668	25.1245	25.0599	100.0%	25.0156	24.9326
σ		0.0308	0.0705	0.2532	0.1890	0.0643	0.7%	0.1104	0.1640
%RSD		0.1229	0.2807	1.0264	0.7524	0.2565	0.7	0.4413	0.6578

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:15:02	25.0505	24.9184	24.9401	99.8%	24.9503
2	11:16:02	24.9531	24.8621	24.8789	101.8%	24.8620
3	11:17:02	25.0907	25.1836	25.0290	101.9%	25.0036
X		25.0314	24.9880	24.9493	101.2%	24.9386
σ		0.0708	0.1717	0.0755	1.2%	0.0715
%RSD		0.2827	0.6872	0.3025	1.2	0.2867

ICB1 08/05/2010 11:20:51 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:51	0.0004	-0.0001	95.1%	-0.0003	-0.0126	0.0317	0.0002	0.0032
2	11:21:51	0.0044	0.0028	95.4%	0.0007	-0.0110	0.0038	0.0025	0.0034
3	11:22:51	0.0004	0.0071	95.2%	-0.0027	-0.0340	-0.0146	-0.0015	0.0074
x		0.0017	0.0033	95.2%	-0.0008	-0.0192	0.0070	0.0004	0.0047
σ		0.0023	0.0036	0.1%	0.0018	0.0128	0.0233	0.0020	0.0024
%RSD		134.4195	110.5325	0.1	229.7099	66.8740	335.3418	508.3772	50.6488

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:51	-0.0033	0.2151	-0.0330	-0.0525	-0.0170	-0.0127	-0.0164	-0.0161
2	11:21:51	0.0109	0.1789	0.0193	-0.0108	-0.0073	0.0083	-0.0334	0.0044
3	11:22:51	0.0078	-0.1300	0.1068	-0.0043	0.0038	-0.0072	-0.0389	-0.0037
x		0.0051	0.0880	0.0310	-0.0225	-0.0068	-0.0038	-0.0296	-0.0051
σ		0.0074	0.1897	0.0706	0.0261	0.0104	0.0109	0.0117	0.0103
%RSD		145.3621	215.5688	227.4574	116.0547	151.6797	283.8535	39.6576	200.8853

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:51	95.2%	-0.0170	0.0614	-0.5692	-0.0228	95.9%	0.1301	0.1523
2	11:21:51	96.3%	-0.0477	0.0880	-0.2575	-0.0968	96.8%	0.1430	0.1482
3	11:22:51	96.3%	0.0459	-0.0570	-0.6259	0.0950	96.4%	0.0895	0.1063
x		95.9%	-0.0063	0.0308	-0.4842	-0.0082	96.4%	0.1209	0.1356
σ		0.7%	0.0477	0.0772	0.1984	0.0967	0.4%	0.0279	0.0254
%RSD		0.7	761.8101	250.7083	40.9678	1178.6392	0.4	23.0865	18.7648

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:51	0.1082	95.5%	0.0067	0.0079	0.0033	-0.0081	0.0017	95.6%
2	11:21:51	0.1346	97.2%	0.0131	0.0141	0.0046	-0.0096	0.0029	96.7%
3	11:22:51	0.1178	95.5%	0.0063	0.0091	0.0053	-0.0026	0.0020	96.9%
x		0.1202	96.1%	0.0087	0.0104	0.0044	-0.0067	0.0022	96.4%
σ		0.0133	1.0%	0.0038	0.0033	0.0010	0.0037	0.0006	0.7%
%RSD		11.0894	1.0	44.2851	31.4110	22.5027	54.3674	27.8716	0.7

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:20:51	0.0121	0.0055	-0.0023	0.0032	0.0023	96.4%	0.0054	0.0074
2	11:21:51	0.0072	0.0082	0.0030	0.0081	0.0073	98.8%	0.0063	0.0090
3	11:22:51	0.0073	0.0093	-0.0015	0.0081	0.0041	98.8%	0.0036	0.0069
x		0.0089	0.0077	-0.0003	0.0064	0.0046	98.0%	0.0051	0.0078
σ		0.0028	0.0019	0.0028	0.0028	0.0025	1.4%	0.0013	0.0011
%RSD		31.2425	25.1635	1034.7795	44.0838	54.7275	1.4	26.4007	14.1640

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:20:51	0.0011	0.0017	0.0029	97.6%	0.0013
2	11:21:51	0.0035	0.0043	0.0032	99.5%	0.0046
3	11:22:51	0.0011	0.0028	0.0026	99.5%	0.0031
x		0.0019	0.0029	0.0029	98.8%	0.0030
σ		0.0014	0.0013	0.0003	1.1%	0.0016
%RSD		72.7103	43.0122	10.4596	1.1	54.5239

CCB1 08/05/2010 11:25:28 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:28	0.0030	0.0073	96.2%	-0.0075	-0.0019	0.0151	0.0047	0.0003
2	11:26:28	-0.0010	0.0117	96.3%	-0.0029	-0.0294	-0.0057	-0.0011	0.0041
3	11:27:28	-0.0023	-0.0076	95.7%	-0.0031	-0.0276	0.0089	-0.0039	0.0030
x		-0.0001	0.0038	96.1%	-0.0045	-0.0196	0.0061	-0.0001	0.0025
σ		0.0028	0.0101	0.3%	0.0026	0.0154	0.0107	0.0044	0.0019
%RSD		2012.3119	264.4568	0.3	57.6839	78.3767	175.6195	5311.9077	77.5750

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:28	-0.0015	0.1492	0.0057	-0.0291	-0.0134	0.0055	-0.0009	0.0159
2	11:26:28	0.0096	-0.2067	0.2676	-0.0267	-0.0124	-0.0179	-0.0391	0.0028
3	11:27:28	0.0014	0.0749	0.3835	-0.0089	-0.0123	-0.0206	-0.0178	-0.0091
x		0.0032	0.0058	0.2189	-0.0216	-0.0127	-0.0110	-0.0193	0.0032
σ		0.0057	0.1877	0.1935	0.0110	0.0006	0.0144	0.0192	0.0125
%RSD		181.5458	3226.3021	88.3926	51.0469	5.0110	130.7680	99.5224	391.1807

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:28	96.5%	-0.0699	-0.0861	-1.1158	-0.3422	96.2%	0.0535	0.0742
2	11:26:28	96.9%	-0.0094	0.0865	0.1241	0.0417	97.3%	0.0580	0.0849
3	11:27:28	97.7%	-0.0009	-0.1157	0.0694	-0.1372	97.5%	0.0360	0.0410
x		97.0%	-0.0267	-0.0384	-0.3075	-0.1459	97.0%	0.0492	0.0667
σ		0.6%	0.0376	0.1092	0.7006	0.1921	0.7%	0.0116	0.0229
%RSD		0.6	140.7503	284.2305	227.8564	131.6337	0.7	23.6559	34.3156

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:28	0.0470	97.1%	0.0012	0.0043	0.0012	-0.0076	0.0002	96.5%
2	11:26:28	0.0639	97.7%	0.0040	0.0068	0.0012	-0.0081	0.0003	97.7%
3	11:27:28	0.0610	97.2%	0.0030	0.0049	0.0005	-0.0074	0.0017	97.6%
x		0.0573	97.3%	0.0028	0.0053	0.0010	-0.0077	0.0007	97.3%
σ		0.0090	0.3%	0.0014	0.0013	0.0004	0.0004	0.0008	0.7%
%RSD		15.7679	0.3	51.9125	24.6660	39.5683	4.6258	117.1068	0.7

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:28	0.0067	0.0029	0.0022	0.0066	-0.0014	97.1%	0.0026	0.0038
2	11:26:28	0.0048	0.0069	-0.0016	0.0044	0.0020	99.4%	0.0026	0.0048
3	11:27:28	0.0055	0.0060	-0.0016	0.0040	0.0007	98.9%	0.0028	0.0033
x		0.0057	0.0053	-0.0003	0.0050	0.0004	98.4%	0.0027	0.0039
σ		0.0010	0.0021	0.0022	0.0014	0.0017	1.2%	0.0001	0.0007
%RSD		17.1774	39.7942	659.8569	28.5130	419.7111	1.2	4.4276	18.6146

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:25:28	0.0017	0.0013	0.0008	97.9%	0.0001
2	11:26:28	-0.0002	0.0009	0.0015	99.6%	0.0009
3	11:27:28	0.0015	-0.0004	0.0014	100.7%	0.0011
x		0.0010	0.0006	0.0012	99.4%	0.0007
σ		0.0010	0.0009	0.0004	1.4%	0.0005
%RSD		100.3909	152.7791	29.7680	1.4	72.4795

CRA 08/05/2010 11:30:05 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:05	0.0124	2.0598	95.7%	0.1771	0.1930	0.1950	0.0964	0.0155
2	11:31:05	0.0149	2.0382	96.8%	0.2069	0.1678	0.1608	0.0964	0.0205
3	11:32:05	0.0191	2.1134	95.7%	0.1969	0.1785	0.1886	0.0975	0.0170
x		0.0155	2.0705	96.1%	0.1937	0.1798	0.1815	0.0968	0.0177
σ		0.0034	0.0387	0.6%	0.0152	0.0126	0.0182	0.0006	0.0026
%RSD		21.9540	1.8704	0.7	7.8263	7.0277	10.0295	0.6643	14.4844

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:05	0.2431	0.2632	0.2136	0.1019	0.0815	0.4705	0.3753	0.4535
2	11:31:05	0.2537	0.4219	0.4641	0.0734	0.1059	0.4958	0.4742	0.5127
3	11:32:05	0.2205	0.2397	0.4818	0.1227	0.1104	0.4416	0.3585	0.4913
x		0.2391	0.3082	0.3865	0.0993	0.0992	0.4693	0.4027	0.4859
σ		0.0170	0.0991	0.1500	0.0248	0.0156	0.0271	0.0625	0.0300
%RSD		7.0993	32.1505	38.8172	24.9316	15.6792	5.7823	15.5241	6.1695

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:05	96.5%	0.5716	0.9323	0.0802	0.9291	95.7%	0.0683	0.0792
2	11:31:05	97.2%	0.4982	0.7752	0.6985	0.8516	97.8%	0.0720	0.0649
3	11:32:05	96.6%	0.5668	0.7227	0.5288	0.8664	97.4%	0.0656	0.0722
x		96.8%	0.5455	0.8101	0.4358	0.8824	97.0%	0.0686	0.0721
σ		0.4%	0.0411	0.1091	0.3194	0.0411	1.1%	0.0032	0.0072
%RSD		0.4	7.5322	13.4648	73.2947	4.6584	1.1	4.6520	9.9650

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:05	0.0650	96.5%	0.0148	0.0188	0.0174	0.0085	0.0165	95.8%
2	11:31:05	0.0811	98.8%	0.0182	0.0211	0.0163	0.0094	0.0140	97.9%
3	11:32:05	0.0663	98.2%	0.0151	0.0202	0.0138	0.0112	0.0117	97.5%
x		0.0708	97.8%	0.0161	0.0200	0.0158	0.0097	0.0140	97.0%
σ		0.0089	1.2%	0.0019	0.0011	0.0019	0.0014	0.0024	1.1%
%RSD		12.6276	1.2	11.6982	5.6214	11.8831	14.2055	17.1620	1.1

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:30:05	0.0540	0.0526	0.0438	0.0507	0.0479	97.2%	0.0157	0.0187
2	11:31:05	0.0446	0.0510	0.0348	0.0491	0.0456	98.9%	0.0169	0.0182
3	11:32:05	0.0457	0.0552	0.0401	0.0451	0.0510	99.7%	0.0173	0.0188
x		0.0481	0.0530	0.0396	0.0483	0.0482	98.6%	0.0166	0.0185
σ		0.0051	0.0021	0.0046	0.0029	0.0027	1.3%	0.0008	0.0003
%RSD		10.6836	4.0386	11.5046	6.0207	5.6395	1.3	4.9794	1.8568

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:30:05	0.0142	0.0208	0.0189	98.9%	0.0152
2	11:31:05	0.0218	0.0174	0.0189	99.9%	0.0161
3	11:32:05	0.0180	0.0106	0.0164	99.4%	0.0154
x		0.0180	0.0163	0.0181	99.4%	0.0156
σ		0.0038	0.0052	0.0015	0.5%	0.0005
%RSD		21.2730	31.8032	8.0652	0.5	3.0364

ICSA 08/05/2010 11:34:45 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:45	0.0015	19476.2970	83.4%	-0.0413	0.4545	2.4289	1.9456	0.7695
2	11:35:45	0.0062	19192.2360	83.3%	0.0229	0.4701	1.7501	1.9110	0.7509
3	11:36:45	0.0048	19257.4990	82.4%	-0.0245	0.4519	1.6742	1.9608	0.7490
x		0.0042	19308.6770	83.0%	-0.0143	0.4588	1.9510	1.9391	0.7565
σ		0.0024	148.7856	0.6%	0.0333	0.0099	0.4156	0.0255	0.0113
%RSD		57.3562	0.7706	0.7	233.1290	2.1533	21.2994	1.3174	1.4997

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:45	1.1050	10.3096	7.0800	0.8925	0.5254	0.4488	0.9577	0.3876
2	11:35:45	1.0825	8.3278	8.7948	0.9522	0.4949	0.4833	1.0570	0.3956
3	11:36:45	1.0275	8.3435	9.7253	1.0402	0.5004	0.4649	0.9150	0.3506
x		1.0717	8.9936	8.5334	0.9616	0.5069	0.4657	0.9765	0.3779
σ		0.0399	1.1397	1.3419	0.0743	0.0163	0.0173	0.0728	0.0240
%RSD		3.7224	12.6722	15.7254	7.7305	3.2130	3.7133	7.4588	6.3567

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:45	85.0%	0.0022	1.4356	-0.7407	-0.2955	85.5%	49.5713	49.3779
2	11:35:45	86.1%	-0.0774	1.5661	-0.7772	-0.1495	85.8%	49.6564	49.8066
3	11:36:45	85.8%	-0.0896	1.3416	-0.4932	-0.4488	86.0%	50.0448	49.8916
x		85.6%	-0.0549	1.4477	-0.6703	-0.2979	85.8%	49.7575	49.6920
σ		0.6%	0.0498	0.1128	0.1545	0.1496	0.3%	0.2524	0.2754
%RSD		0.7	90.7307	7.7880	23.0528	50.2259	0.3	0.5073	0.5542

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:45	49.7544	84.0%	0.1167	0.1040	0.2965	0.2483	0.2862	85.8%
2	11:35:45	49.9064	84.3%	0.1086	0.1066	0.2830	0.2426	0.2630	88.0%
3	11:36:45	50.2072	84.5%	0.1136	0.1050	0.2960	0.2541	0.2605	87.7%
x		49.9560	84.2%	0.1129	0.1052	0.2919	0.2483	0.2699	87.2%
σ		0.2304	0.3%	0.0041	0.0013	0.0077	0.0057	0.0142	1.2%
%RSD		0.4612	0.3	3.6061	1.2418	2.6348	2.3106	5.2585	1.4

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:34:45	0.0328	0.0313	0.2312	0.2529	0.2486	91.3%	0.0377	0.0371
2	11:35:45	0.0283	0.0344	0.2447	0.2564	0.2455	93.4%	0.0348	0.0344
3	11:36:45	0.0290	0.0285	0.2401	0.2345	0.2499	92.7%	0.0292	0.0314
x		0.0300	0.0314	0.2387	0.2479	0.2480	92.5%	0.0339	0.0343
σ		0.0024	0.0030	0.0068	0.0117	0.0023	1.1%	0.0043	0.0028
%RSD		7.9734	9.4078	2.8642	4.7308	0.9086	1.2	12.6980	8.2399

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:34:45	0.0525	0.0704	0.0603	94.2%	-0.0029
2	11:35:45	0.0589	0.0679	0.0631	96.0%	-0.0028
3	11:36:45	0.0560	0.0632	0.0597	95.6%	-0.0031
x		0.0558	0.0671	0.0611	95.3%	-0.0029
σ		0.0032	0.0037	0.0018	1.0%	0.0001
%RSD		5.8096	5.4703	3.0061	1.0	5.0853

ICSAB 08/05/2010 11:41:00 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:00	-0.0031	19251.1910	83.6%	48.9403	48.9796	49.2929	50.9648	48.2017
2	11:42:00	0.0016	19141.4370	82.6%	48.8623	48.5326	48.4224	50.3687	47.4921
3	11:43:00	-0.0046	19071.1730	81.6%	48.9910	48.9231	49.0175	50.8929	48.0312
x		-0.0020	19154.6000	82.6%	48.9312	48.8118	48.9109	50.7421	47.9083
σ		0.0032	90.7283	1.0%	0.0648	0.2434	0.4449	0.3254	0.3704
%RSD		160.2578	0.4737	1.2	0.1325	0.4986	0.9096	0.6412	0.7731

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:00	48.1601	56.6176	60.0722	46.9678	46.4430	22.8933	23.2266	22.0559
2	11:42:00	47.4765	56.7002	60.2332	46.9719	46.2095	22.8326	22.7344	21.9835
3	11:43:00	47.2104	56.6063	59.9746	46.4634	45.6825	22.6421	22.5924	21.6743
x		47.6157	56.6414	60.0933	46.8011	46.1116	22.7894	22.8512	21.9046
σ		0.4899	0.0512	0.1306	0.2924	0.3896	0.1311	0.3328	0.2027
%RSD		1.0288	0.0904	0.2173	0.6248	0.8449	0.5751	1.4565	0.9252

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:00	85.8%	24.5796	23.9016	24.3828	23.4602	84.9%	50.3596	50.2172
2	11:42:00	85.2%	24.2233	24.9863	23.5175	23.5020	85.9%	50.8268	50.7102
3	11:43:00	85.1%	23.5225	25.0595	23.1831	22.5185	85.8%	50.6288	50.2501
x		85.4%	24.1085	24.6491	23.6945	23.1602	85.5%	50.6050	50.3925
σ		0.4%	0.5378	0.6484	0.6191	0.5561	0.6%	0.2345	0.2757
%RSD		0.4	2.2307	2.6306	2.6129	2.4013	0.6	0.4634	0.5470

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:00	50.5228	84.2%	11.6078	11.7005	24.8522	23.5005	24.0202	87.1%
2	11:42:00	50.8060	83.6%	11.7545	11.8188	24.8729	23.4354	24.0029	88.1%
3	11:43:00	50.6237	84.9%	11.6631	11.6923	24.9900	23.5436	24.1669	86.4%
x		50.6509	84.2%	11.6751	11.7372	24.9050	23.4932	24.0633	87.2%
σ		0.1435	0.6%	0.0741	0.0707	0.0743	0.0545	0.0901	0.8%
%RSD		0.2834	0.7	0.6343	0.6028	0.2985	0.2319	0.3744	1.0

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:41:00	0.0478	0.0425	0.2176	0.2371	0.2486	91.6%	0.0280	0.0290
2	11:42:00	0.0460	0.0389	0.2479	0.2430	0.2544	92.9%	0.0277	0.0308
3	11:43:00	0.0490	0.0393	0.2321	0.2483	0.2569	91.3%	0.0260	0.0283
x		0.0476	0.0402	0.2325	0.2428	0.2533	91.9%	0.0272	0.0294
σ		0.0015	0.0020	0.0152	0.0056	0.0043	0.9%	0.0011	0.0013
%RSD		3.1354	4.8541	6.5290	2.3010	1.6939	0.9	3.8841	4.3229

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:41:00	0.0568	0.0618	0.0617	94.3%	0.0008
2	11:42:00	0.0593	0.0569	0.0597	95.1%	-0.0003
3	11:43:00	0.0520	0.0643	0.0592	95.0%	0.0009
x		0.0561	0.0610	0.0602	94.8%	0.0005
σ		0.0037	0.0038	0.0013	0.5%	0.0007
%RSD		6.6420	6.1764	2.1784	0.5	141.9321

K1006963-MB 08/05/2010 11:47:31 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:31	-0.0035	1.7161	91.7%	-0.0015	0.0026	0.0300	-0.0036	-0.0032
2	11:48:31	-0.0035	5.5768	91.2%	0.0115	0.0011	-0.0002	0.0022	0.0065
3	11:49:31	-0.0049	2.4420	91.0%	0.0094	0.0022	-0.0107	-0.0017	-0.0008
x		-0.0040	3.2450	91.3%	0.0065	0.0020	0.0064	-0.0010	0.0009
σ		0.0008	2.0518	0.4%	0.0070	0.0008	0.0211	0.0029	0.0050
%RSD		20.2957	63.2299	0.4	107.5124	40.6381	332.0369	285.8200	583.9927

JB 8/5/10

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:31	0.0049	-0.0701	4.5960	0.0804	-0.0092	-0.0271	-0.0257	-0.0144
2	11:48:31	0.0069	-0.0549	5.0640	0.0832	-0.0097	-0.0141	-0.0431	-0.0077
3	11:49:31	0.0133	0.1535	5.2452	0.0983	-0.0202	-0.0230	-0.0261	-0.0113
x		0.0083	0.0095	4.9684	0.0873	-0.0130	-0.0214	-0.0316	-0.0111
σ		0.0044	0.1249	0.3350	0.0096	0.0062	0.0067	0.0100	0.0034
%RSD		52.5704	1316.3906	6.7430	10.9974	47.8742	31.2542	31.4785	30.3252

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:31	91.9%	-0.0556	0.0396	-0.5452	-0.2163	91.4%	0.1585	0.1232
2	11:48:31	93.1%	0.0245	0.0071	-0.0927	0.0751	92.4%	0.1750	0.1776
3	11:49:31	93.0%	-0.0125	-0.0087	-0.3616	-0.0900	93.8%	0.1431	0.1455
x		92.7%	-0.0145	0.0127	-0.3331	-0.0771	92.6%	0.1588	0.1487
σ		0.7%	0.0401	0.0246	0.2276	0.1461	1.2%	0.0160	0.0274
%RSD		0.7	275.9736	193.9599	68.3199	189.5325	1.3	10.0590	18.3908

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:31	0.1404	91.9%	-0.0044	-0.0030	-0.0013	-0.0085	-0.0052	91.7%
2	11:48:31	0.1684	95.0%	0.0003	-0.0029	0.0014	-0.0044	0.0031	93.7%
3	11:49:31	0.1244	94.0%	-0.0026	-0.0018	0.0014	-0.0030	0.0000	93.5%
x		0.1444	93.6%	-0.0022	-0.0026	0.0005	-0.0053	-0.0007	93.0%
σ		0.0223	1.6%	0.0024	0.0007	0.0016	0.0028	0.0042	1.1%
%RSD		15.4386	1.7	106.8600	26.3924	327.9887	53.9482	599.0520	1.2

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:47:31	-0.0011	-0.0009	-0.0086	-0.0035	-0.0043	94.0%	-0.0079	-0.0066
2	11:48:31	-0.0006	-0.0005	-0.0086	-0.0051	-0.0057	95.4%	-0.0080	-0.0065
3	11:49:31	-0.0006	-0.0021	-0.0049	-0.0040	-0.0088	95.2%	-0.0082	-0.0068
x		-0.0008	-0.0011	-0.0073	-0.0042	-0.0063	94.9%	-0.0080	-0.0066
σ		0.0003	0.0009	0.0021	0.0008	0.0023	0.8%	0.0002	0.0002
%RSD		36.8447	75.2835	28.9591	19.5471	36.9420	0.8	1.9528	2.4582

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:47:31	-0.0085	-0.0084	-0.0071	94.9%	-0.0041
2	11:48:31	-0.0072	-0.0084	-0.0071	96.7%	-0.0038
3	11:49:31	-0.0062	-0.0080	-0.0069	97.0%	-0.0042
x		-0.0073	-0.0083	-0.0070	96.2%	-0.0040
σ		0.0012	0.0002	0.0001	1.2%	0.0002
%RSD		15.7673	2.5303	2.1229	1.2	4.6258

LCSW 08/05/2010 11:52:08 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:08	19.7530	20.9869	93.7%	19.9651	20.0005	19.7760	19.9174	19.9049
2	11:53:08	19.8445	21.2980	93.5%	20.0631	20.1731	20.0647	20.1224	20.1426
3	11:54:08	19.5723	20.7784	93.5%	20.0426	20.0786	19.6024	19.8751	19.9565
X		19.7233	21.0211	93.5%	20.0236	20.0840	19.8143	19.9716	20.0014
σ		0.1385	0.2615	0.1%	0.0517	0.0864	0.2335	0.1323	0.1250
%RSD		0.7025	1.2441	0.1	0.2583	0.4303	1.1786	0.6624	0.6251

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:08	20.1852	19.9574	25.8030	20.4966	20.0863	19.7135	19.0283	19.5709
2	11:53:08	20.0036	20.6253	26.7051	20.1402	19.7008	19.4486	19.9660	19.7061
3	11:54:08	19.9606	19.4421	26.4364	19.7765	19.6195	19.5552	19.2926	19.2690
X		20.0498	20.0083	26.3148	20.1378	19.8022	19.5724	19.4290	19.5153
σ		0.1192	0.5932	0.4632	0.3601	0.2494	0.1333	0.4835	0.2238
%RSD		0.5945	2.9650	1.7602	1.7881	1.2593	0.6810	2.4885	1.1467

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:08	94.6%	19.9996	18.8616	19.6941	20.0587	94.6%	20.1390	19.8565
2	11:53:08	94.9%	19.6376	19.6309	19.4784	19.7735	94.6%	20.0588	19.5670
3	11:54:08	95.8%	19.5456	19.1063	19.8499	19.6510	95.6%	20.2509	20.1993
X		95.1%	19.7276	19.1996	19.6742	19.8277	95.0%	20.1496	19.8743
σ		0.7%	0.2400	0.3930	0.1865	0.2092	0.6%	0.0965	0.3165
%RSD		0.7	1.2167	2.0471	0.9482	1.0551	0.6	0.4789	1.5927

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:08	20.1279	94.9%	20.1615	20.4070	19.9207	19.1723	19.7451	94.5%
2	11:53:08	19.9526	96.8%	19.9326	19.9922	20.5280	19.0857	19.8316	95.4%
3	11:54:08	20.0811	96.1%	19.9898	19.9796	20.4061	19.2086	20.0154	95.6%
X		20.0539	95.9%	20.0280	20.1262	20.2849	19.1555	19.8640	95.2%
σ		0.0908	1.0%	0.1191	0.2432	0.3213	0.0631	0.1381	0.6%
%RSD		0.4527	1.0	0.5948	1.2084	1.5839	0.3295	0.6950	0.6

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:08	20.2486	20.2112	20.3039	19.9557	20.2787	95.8%	20.1093	19.9048
2	11:53:08	20.1642	20.0528	19.9621	20.0591	20.1660	97.8%	19.9391	19.7981
3	11:54:08	20.2977	20.2534	20.3898	20.3864	20.3722	99.1%	19.9716	19.8825
X		20.2368	20.1725	20.2186	20.1337	20.2723	97.5%	20.0067	19.8618
σ		0.0676	0.1058	0.2263	0.2248	0.1032	1.7%	0.0904	0.0563
%RSD		0.3339	0.5243	1.1190	1.1167	0.5093	1.7	0.4516	0.2833

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:52:08	19.8925	19.9079	19.9487	97.2%	20.0929
2	11:53:08	19.9075	19.9325	19.8880	99.3%	20.0027
3	11:54:08	19.8479	19.7619	19.7633	100.7%	19.9382
X		19.8826	19.8674	19.8667	99.1%	20.0113
σ		0.0310	0.0922	0.0945	1.8%	0.0777
%RSD		0.1560	0.4641	0.4757	1.8	0.3882

K1006963-003 08/05/2010 11:57:38 AM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:38	0.0127	2.8898	100.8%	0.2614	0.0993	0.7223	931.5455	1.9190
2	11:58:38	0.0184	2.8919	98.4%	0.1987	0.0761	0.8578	925.3376	1.9078
3	11:59:38	0.0285	2.8192	95.9%	0.2712	0.0969	0.7210	937.8069	1.9274
x		0.0199	2.8670	98.4%	0.2438	0.0908	0.7670	931.5634	1.9180
σ		0.0080	0.0414	2.5%	0.0393	0.0128	0.0786	6.2347	0.0098
%RSD		40.2659	1.4432	2.5	16.1282	14.0820	10.2498	0.6693	0.5135

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:38	2.6617	18.1705	11.5464	0.9935	0.5111	3.2164	8.8245	7.4261
2	11:58:38	2.4635	15.0360	12.0748	0.9878	0.5052	3.2601	8.8075	7.3092
3	11:59:38	2.5163	14.0582	12.0092	1.0837	0.5232	3.1967	8.5538	7.2224
x		2.5472	15.7549	11.8768	1.0217	0.5132	3.2244	8.7286	7.3192
σ		0.1026	2.1483	0.2880	0.0538	0.0092	0.0324	0.1516	0.1022
%RSD		4.0299	13.6360	2.4248	5.2679	1.7917	1.0053	1.7368	1.3969

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:38	96.2%	0.2625	1.0295	-0.0342	0.1263	97.4%	0.5676	0.6143
2	11:58:38	94.5%	0.2140	0.9578	0.1967	-0.0547	96.9%	0.6075	0.5737
3	11:59:38	93.0%	0.1987	1.1125	-0.1399	-0.1221	94.9%	0.5966	0.6275
x		94.6%	0.2251	1.0333	0.0075	-0.0169	96.4%	0.5906	0.6052
σ		1.6%	0.0333	0.0774	0.1722	0.1284	1.4%	0.0206	0.0281
%RSD		1.7	14.8019	7.4930	2287.9397	762.2648	1.4	3.4960	4.6363

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:38	0.5683	94.5%	0.0007	0.0034	0.0013	-0.0073	-0.0033	95.5%
2	11:58:38	0.6113	94.1%	0.0065	0.0104	0.0075	-0.0086	-0.0035	95.0%
3	11:59:38	0.5640	92.7%	0.0088	0.0086	0.0049	-0.0129	-0.0045	94.0%
x		0.5812	93.8%	0.0053	0.0075	0.0046	-0.0096	-0.0038	94.8%
σ		0.0261	0.9%	0.0042	0.0037	0.0031	0.0029	0.0007	0.7%
%RSD		4.4964	1.0	78.8374	49.0480	68.0212	30.1718	17.7987	0.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:57:38	0.1312	0.1322	164.1183	165.0485	174.0323	98.6%	0.0065	0.0073
2	11:58:38	0.1292	0.1265	164.1904	164.5862	173.4990	99.0%	0.0071	0.0079
3	11:59:38	0.1260	0.1201	165.1452	166.2242	173.5764	98.7%	0.0075	0.0090
x		0.1288	0.1263	164.4846	165.2863	173.7026	98.8%	0.0070	0.0081
σ		0.0026	0.0061	0.5732	0.8445	0.2882	0.2%	0.0005	0.0009
%RSD		2.0256	4.7943	0.3485	0.5109	0.1659	0.2	7.2172	10.8586

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	11:57:38	0.1178	0.1312	0.1293	98.7%	0.4838
2	11:58:38	0.1192	0.1341	0.1296	100.8%	0.4822
3	11:59:38	0.1200	0.1376	0.1322	100.0%	0.4790
x		0.1190	0.1343	0.1304	99.9%	0.4817
σ		0.0011	0.0032	0.0016	1.1%	0.0025
%RSD		0.9538	2.3917	1.2105	1.1	0.5130

K1006963-003D 08/05/2010 12:02:16 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:16	0.0136	2.8219	96.4%	0.2278	0.0803	0.7035	934.1912	1.9909
2	12:03:16	0.0232	2.8754	95.7%	0.2316	0.0881	0.7940	924.9175	1.9117
3	12:04:16	0.0259	2.8309	95.5%	0.2161	0.0838	0.8480	917.4779	1.8723
x		0.0209	2.8427	95.9%	0.2252	0.0841	0.7818	925.5289	1.9250
σ		0.0065	0.0286	0.5%	0.0081	0.0039	0.0730	8.3734	0.0604
%RSD		30.9114	1.0070	0.5	3.6052	4.6491	9.3387	0.9047	3.1383

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:16	2.5808	17.2604	10.3525	0.9341	0.5521	3.1335	8.1487	7.1403
2	12:03:16	2.5862	16.7959	10.2375	0.9443	0.5027	3.1436	8.2733	7.0863
3	12:04:16	2.6117	14.7647	9.6522	0.9126	0.5295	3.0716	8.3898	7.0469
x		2.5929	16.2737	10.0808	0.9303	0.5281	3.1163	8.2706	7.0912
σ		0.0165	1.3273	0.3755	0.0162	0.0247	0.0390	0.1206	0.0469
%RSD		0.6362	8.1559	3.7253	1.7398	4.6813	1.2512	1.4580	0.6610

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:16	93.6%	0.3635	1.0679	-0.3277	0.5353	93.6%	0.5221	0.5511
2	12:03:16	92.6%	0.3341	0.9827	-0.3191	0.3813	94.4%	0.5515	0.5282
3	12:04:16	93.1%	0.3211	1.1910	-0.1631	0.4701	93.8%	0.5401	0.4873
x		93.1%	0.3395	1.0805	-0.2699	0.4622	93.9%	0.5379	0.5222
σ		0.5%	0.0217	0.1047	0.0926	0.0773	0.4%	0.0148	0.0323
%RSD		0.5	6.3947	9.6943	34.3199	16.7255	0.4	2.7528	6.1891

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:16	0.5002	92.9%	-0.0022	-0.0016	0.0000	-0.0083	-0.0041	92.9%
2	12:03:16	0.5331	92.8%	-0.0012	0.0006	0.0035	-0.0097	-0.0053	93.6%
3	12:04:16	0.5446	91.7%	0.0007	0.0027	-0.0006	-0.0131	-0.0013	92.9%
x		0.5259	92.5%	-0.0009	0.0006	0.0010	-0.0104	-0.0036	93.1%
σ		0.0230	0.7%	0.0015	0.0021	0.0022	0.0024	0.0021	0.4%
%RSD		4.3817	0.7	161.2910	368.8008	230.6773	23.5771	57.7215	0.4

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:02:16	0.1298	0.1251	164.0152	164.1050	172.3023	96.3%	0.0055	0.0053
2	12:03:16	0.1219	0.1331	162.6420	163.0040	171.1371	97.6%	0.0022	0.0066
3	12:04:16	0.1339	0.1261	164.6272	163.8258	172.0313	97.7%	0.0044	0.0056
x		0.1285	0.1281	163.7615	163.6449	171.8235	97.2%	0.0040	0.0058
σ		0.0061	0.0044	1.0166	0.5724	0.6098	0.8%	0.0017	0.0007
%RSD		4.7589	3.3952	0.6208	0.3498	0.3549	0.8	41.8754	11.3526

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:02:16	0.1056	0.1192	0.1129	97.5%	0.4763
2	12:03:16	0.1110	0.1223	0.1197	99.5%	0.4781
3	12:04:16	0.1044	0.1253	0.1168	99.4%	0.4796
x		0.1070	0.1223	0.1164	98.8%	0.4780
σ		0.0035	0.0031	0.0034	1.1%	0.0017
%RSD		3.2979	2.4961	2.9138	1.1	0.3503

K1006963-003 1/5L 08/05/2010 12:06:55 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:55	-0.0039	0.6735	100.0%	0.0375	0.0177	0.2291	188.0627	0.3778
2	12:07:55	-0.0013	0.6531	99.5%	0.0223	0.0062	0.2277	187.4173	0.3784
3	12:08:55	0.0001	0.6887	98.8%	0.0475	0.0249	0.2070	188.1721	0.3780
x		-0.0017	0.6717	99.4%	0.0358	0.0163	0.2213	187.8840	0.3781
σ		0.0020	0.0179	0.6%	0.0127	0.0094	0.0123	0.4079	0.0003
%RSD		119.8810	2.6584	0.6	35.5089	58.1056	5.5806	0.2171	0.0870

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:55	0.4867	4.0398	4.6702	0.1970	0.1134	1.6926	2.7605	2.5223
2	12:07:55	0.5469	3.3705	4.1494	0.1919	0.1178	1.6519	3.0749	2.4351
3	12:08:55	0.5685	2.6680	4.2531	0.1892	0.1447	1.6037	2.6634	2.4853
x		0.5341	3.3594	4.3575	0.1927	0.1253	1.6494	2.8329	2.4809
σ		0.0424	0.6859	0.2757	0.0040	0.0170	0.0445	0.2151	0.0438
%RSD		7.9385	20.4187	6.3258	2.0508	13.5408	2.6980	7.5917	1.7636

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:55	99.3%	0.0349	0.2214	-0.2800	-0.0410	99.7%	0.1127	0.1069
2	12:07:55	99.9%	-0.0203	0.1909	-0.6454	-0.2348	100.6%	0.1272	0.0999
3	12:08:55	98.7%	0.0461	0.2076	-0.4395	-0.0302	100.7%	0.1074	0.0994
x		99.3%	0.0202	0.2066	-0.4550	-0.1020	100.3%	0.1158	0.1021
σ		0.6%	0.0355	0.0153	0.1832	0.1151	0.5%	0.0103	0.0042
%RSD		0.6	175.4621	7.3887	40.2669	112.8833	0.5	8.8590	4.1282

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:55	0.0944	99.5%	-0.0050	-0.0028	-0.0021	-0.0182	-0.0089	98.5%
2	12:07:55	0.1054	99.1%	-0.0040	-0.0023	-0.0021	-0.0189	-0.0095	100.0%
3	12:08:55	0.1077	99.8%	-0.0040	-0.0022	-0.0015	-0.0196	-0.0064	100.4%
x		0.1025	99.4%	-0.0043	-0.0024	-0.0019	-0.0189	-0.0082	99.6%
σ		0.0071	0.4%	0.0006	0.0003	0.0004	0.0007	0.0017	1.1%
%RSD		6.9688	0.4	13.3073	14.0818	18.9496	3.5743	20.2151	1.1

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:55	0.0288	0.0301	32.3493	32.6634	32.6742	99.0%	-0.0045	-0.0040
2	12:07:55	0.0305	0.0307	32.0205	32.1568	32.5121	101.1%	-0.0059	-0.0040
3	12:08:55	0.0370	0.0281	32.5635	32.3950	32.4938	101.5%	-0.0027	-0.0035
x		0.0321	0.0296	32.3111	32.4051	32.5601	100.5%	-0.0043	-0.0038
σ		0.0043	0.0014	0.2735	0.2535	0.0993	1.3%	0.0016	0.0003
%RSD		13.4455	4.5743	0.8466	0.7821	0.3050	1.3	36.6748	6.5874

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:06:55	0.0467	0.0503	0.0516	99.4%	0.0906
2	12:07:55	0.0427	0.0486	0.0493	102.3%	0.0900
3	12:08:55	0.0473	0.0529	0.0501	102.9%	0.0923
x		0.0455	0.0506	0.0503	101.5%	0.0910
σ		0.0025	0.0022	0.0012	1.9%	0.0012
%RSD		5.5321	4.3338	2.3229	1.9	1.3091

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:33	20.5632	22.5772	96.5%	20.5684	20.1993	20.9646	938.1709	22.0177
2	12:12:33	20.3064	22.6737	96.4%	20.9915	20.1365	20.5065	933.9563	21.8575
3	12:13:33	20.7122	22.4434	94.6%	20.5443	20.0320	21.0419	938.1226	21.8270
x		20.5273	22.5648	95.8%	20.7014	20.1226	20.8376	936.7499	21.9007
σ		0.2053	0.1156	1.1%	0.2515	0.0845	0.2894	2.4195	0.1024
%RSD		1.0001	0.5125	1.1	1.2151	0.4200	1.3888	0.2583	0.4677

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:33	22.7422	36.7094	27.1419	20.9195	20.5520	23.7772	28.5744	28.1055
2	12:12:33	22.4428	34.5837	27.4556	20.6678	20.4992	23.7213	28.9643	27.6821
3	12:13:33	22.6359	36.0861	27.5529	20.5026	20.2610	23.8874	29.1491	27.1979
x		22.6069	35.7931	27.3835	20.6966	20.4374	23.7953	28.8959	27.6618
σ		0.1518	1.0927	0.2148	0.2099	0.1550	0.0845	0.2934	0.4542
%RSD		0.6714	3.0529	0.7845	1.0143	0.7585	0.3552	1.0153	1.6419

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:33	93.0%	21.4220	21.8748	20.2267	21.3677	94.1%	21.8617	21.6064
2	12:12:33	92.2%	21.0491	20.7196	20.0424	19.6383	93.6%	21.6594	21.8403
3	12:13:33	92.8%	21.1447	20.8738	19.9820	21.0917	94.0%	21.7216	21.8120
x		92.7%	21.2053	21.1560	20.0837	20.6992	93.9%	21.7476	21.7529
σ		0.4%	0.1937	0.6272	0.1274	0.9291	0.3%	0.1036	0.1277
%RSD		0.5	0.9135	2.9646	0.6346	4.4886	0.3	0.4763	0.5868

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:33	21.6636	92.2%	9.7965	9.7563	20.5125	20.2742	20.4968	95.3%
2	12:12:33	21.7393	92.0%	9.7219	9.7245	20.3246	20.1294	20.1833	95.6%
3	12:13:33	22.0413	91.5%	9.6996	9.7403	20.3978	20.1706	20.1830	96.0%
x		21.8147	91.9%	9.7394	9.7404	20.4116	20.1914	20.2877	95.6%
σ		0.1998	0.4%	0.0507	0.0159	0.0947	0.0746	0.1811	0.4%
%RSD		0.9160	0.4	0.5210	0.1631	0.4639	0.3696	0.8926	0.4

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:11:33	21.2572	20.9913	180.4283	182.0269	192.1131	96.2%	20.0682	19.9448
2	12:12:33	21.2273	20.9412	180.3721	180.9190	190.1347	97.7%	20.0385	19.8195
3	12:13:33	21.2247	21.0825	179.9119	179.7868	190.5564	98.8%	20.0192	19.8025
x		21.2364	21.0050	180.2374	180.9109	190.9347	97.5%	20.0420	19.8556
σ		0.0181	0.0716	0.2833	1.1201	1.0421	1.3%	0.0247	0.0778
%RSD		0.0851	0.3411	0.1572	0.6191	0.5458	1.4	0.1232	0.3916

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:11:33	20.3129	20.3504	20.2659	98.8%	21.1152
2	12:12:33	20.1310	20.1995	20.1414	101.0%	20.7910
3	12:13:33	19.9851	20.1264	20.0520	100.9%	20.9990
x		20.1430	20.2254	20.1531	100.3%	20.9684
σ		0.1642	0.1142	0.1075	1.2%	0.1642
%RSD		0.8152	0.5647	0.5332	1.2	0.7833

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:56	19.7049	22.1734	97.6%	19.6759	19.5490	20.5068	938.7496	21.4635
2	12:17:56	19.4163	21.9952	96.4%	19.6034	19.3889	20.1330	932.9727	20.9601
3	12:18:56	20.0004	22.0533	95.4%	19.6819	19.5200	20.6080	939.4799	21.1654
x		19.7072	22.0740	96.5%	19.6538	19.4860	20.4159	937.0674	21.1963
σ		0.2920	0.0909	1.1%	0.0437	0.0853	0.2502	3.5649	0.2531
%RSD		1.4819	0.4118	1.1	0.2224	0.4377	1.2254	0.3804	1.1942

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:56	21.7497	34.3255	26.1655	20.1234	19.9348	22.2588	28.3778	26.6220
2	12:17:56	21.8940	34.1788	25.7856	19.9991	19.3514	22.3153	27.9702	26.2839
3	12:18:56	21.9341	35.7950	26.4179	19.9824	19.4416	22.3350	27.7780	26.0493
x		21.8592	34.7664	26.1230	20.0350	19.5759	22.3030	28.0420	26.3184
σ		0.0970	0.8938	0.3183	0.0770	0.3140	0.0395	0.3063	0.2879
%RSD		0.4437	2.5708	1.2186	0.3845	1.6042	0.1773	1.0921	1.0939

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:56	93.2%	20.5072	20.9794	19.5765	20.5493	94.5%	21.3064	20.7852
2	12:17:56	93.7%	20.3131	20.7501	19.4689	20.0598	94.7%	21.2074	21.0285
3	12:18:56	93.0%	20.9303	20.1927	19.5464	20.9123	94.8%	20.8936	20.8117
x		93.3%	20.5835	20.6408	19.5306	20.5072	94.7%	21.1358	20.8751
σ		0.3%	0.3156	0.4046	0.0555	0.4278	0.2%	0.2155	0.1335
%RSD		0.4	1.5335	1.9603	0.2842	2.0862	0.2	1.0195	0.6394

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:56	21.0156	92.0%	19.9170	20.0519	19.8692	18.9456	19.3550	94.0%
2	12:17:56	21.3036	92.4%	19.7846	19.7984	20.0728	18.8921	19.4395	94.7%
3	12:18:56	21.1089	92.5%	19.6216	19.6449	19.9147	18.7462	19.4236	95.2%
x		21.1427	92.3%	19.7744	19.8317	19.9522	18.8613	19.4060	94.6%
σ		0.1470	0.3%	0.1480	0.2055	0.1068	0.1032	0.0449	0.6%
%RSD		0.6952	0.3	0.7483	1.0365	0.5354	0.5473	0.2312	0.6

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:16:56	20.4341	20.3173	182.1600	182.5248	193.0731	96.6%	19.5840	19.5015
2	12:17:56	20.6300	20.3753	183.0585	183.4423	193.4641	97.7%	19.7133	19.7547
3	12:18:56	20.4800	20.1831	182.8502	184.0104	194.2043	98.4%	19.7671	19.5479
x		20.5147	20.2919	182.6895	183.3258	193.5805	97.6%	19.6881	19.6013
σ		0.1024	0.0986	0.4703	0.7496	0.5745	0.9%	0.0941	0.1348
%RSD		0.4993	0.4859	0.2574	0.4089	0.2968	0.9	0.4778	0.6877

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:16:56	19.4931	19.6386	19.5466	97.6%	20.4425
2	12:17:56	19.7128	19.7424	19.7124	99.1%	20.5244
3	12:18:56	19.5621	19.8094	19.6798	100.0%	20.6873
x		19.5893	19.7301	19.6463	98.9%	20.5514
σ		0.1123	0.0861	0.0878	1.2%	0.1246
%RSD		0.5735	0.4363	0.4470	1.2	0.6065

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:22:31	25.6636	25.2100	98.9%	25.1071	25.0870	24.8413	24.8706	24.9071
2	12:23:31	25.6652	25.0531	97.8%	24.9838	25.1382	25.3996	25.2642	25.1987
3	12:24:31	25.4102	25.1030	96.3%	25.0149	24.8576	24.6077	25.1192	24.8384
x		25.5796	25.1221	97.7%	25.0353	25.0276	24.9495	25.0846	24.9814
σ		0.1467	0.0802	1.3%	0.0641	0.1494	0.4069	0.1990	0.1913
%RSD		0.5737	0.3191	1.3	0.2562	0.5971	1.6308	0.7935	0.7656

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:22:31	25.3936	25.6118	26.4459	24.9398	24.7581	24.8737	25.0598	24.5290
2	12:23:31	25.1970	26.1338	26.1558	25.2099	24.6755	24.8810	25.3289	24.5633
3	12:24:31	25.0478	23.9731	26.3973	24.8805	24.9479	24.9092	24.8680	24.9487
x		25.2128	25.2395	26.3330	25.0101	24.7938	24.8880	25.0856	24.6804
σ		0.1735	1.1274	0.1554	0.1756	0.1397	0.0187	0.2315	0.2331
%RSD		0.6880	4.4669	0.5900	0.7020	0.5634	0.0753	0.9230	0.9443

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:22:31	98.8%	25.3669	25.3539	24.8289	24.8302	97.5%	25.2142	25.0839
2	12:23:31	98.4%	24.7787	25.2833	23.9261	25.3695	98.3%	24.8881	24.9330
3	12:24:31	98.2%	25.1351	24.7885	24.9935	25.2107	98.3%	25.2017	24.5735
x		98.5%	25.0936	25.1419	24.5828	25.1368	98.0%	25.1013	24.8634
σ		0.3%	0.2963	0.3081	0.5747	0.2771	0.5%	0.1848	0.2622
%RSD		0.3	1.1807	1.2254	2.3378	1.1026	0.5	0.7362	1.0545

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:22:31	25.1013	98.7%	24.9550	25.2690	25.0427	24.9391	25.1169	99.3%
2	12:23:31	24.8129	99.3%	24.9191	25.0511	25.0571	24.9686	25.0722	100.1%
3	12:24:31	25.1108	99.2%	24.8459	24.9059	24.7108	24.8080	25.1167	100.5%
x		25.0083	99.1%	24.9067	25.0753	24.9369	24.9052	25.1019	100.0%
σ		0.1693	0.4%	0.0556	0.1827	0.1959	0.0855	0.0258	0.6%
%RSD		0.6770	0.4	0.2231	0.7287	0.7857	0.3432	0.1027	0.6

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:22:31	25.1273	24.9593	25.1251	24.8035	25.2146	98.1%	25.1340	25.0468
2	12:23:31	24.8795	24.8600	24.8544	24.9385	25.0344	99.8%	25.1604	25.2132
3	12:24:31	25.0561	25.0219	24.6546	24.8226	24.9483	99.4%	24.9580	24.9691
x		25.0210	24.9471	24.8780	24.8549	25.0657	99.1%	25.0841	25.0764
σ		0.1276	0.0816	0.2362	0.0731	0.1359	0.9%	0.1100	0.1247
%RSD		0.5100	0.3272	0.9493	0.2940	0.5421	0.9	0.4386	0.4972

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:22:31	25.0617	25.1226	25.1295	99.4%	25.2576
2	12:23:31	25.1251	25.1772	25.0739	100.9%	25.1800
3	12:24:31	25.0526	25.1397	25.0329	101.5%	25.0122
x		25.0798	25.1465	25.0788	100.6%	25.1500
σ		0.0395	0.0279	0.0485	1.1%	0.1254
%RSD		0.1575	0.1111	0.1933	1.1	0.4988

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:57	0.0001	0.0106	98.7%	-0.0163	0.0294	0.1838	0.0250	0.0024
2	12:33:57	-0.0038	0.0062	99.1%	0.0068	-0.0001	0.0921	0.0222	0.0036
3	12:34:57	-0.0012	0.0234	99.1%	-0.0031	0.0095	0.1160	0.0251	0.0009
x		-0.0017	0.0134	99.0%	-0.0042	0.0129	0.1306	0.0241	0.0023
σ		0.0020	0.0089	0.2%	0.0116	0.0151	0.0475	0.0017	0.0013
%RSD		120.6000	66.6171	0.2	276.8075	116.6573	36.3853	6.8675	58.2166

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:57	0.0001	-0.1629	0.1497	-0.1287	-0.0223	-0.0168	-0.0343	0.0043
2	12:33:57	0.0078	-0.0010	0.3302	-0.0954	-0.0112	-0.0096	0.0025	0.0207
3	12:34:57	0.0028	0.1046	0.1699	-0.0786	-0.0114	-0.0105	-0.0347	0.0217
x		0.0036	-0.0198	0.2166	-0.1009	-0.0149	-0.0123	-0.0222	0.0155
σ		0.0039	0.1348	0.0989	0.0255	0.0064	0.0039	0.0214	0.0098
%RSD		109.9288	681.3239	45.6616	25.3068	42.6052	31.5898	96.3115	62.9185

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:57	98.0%	-0.0088	0.0562	-0.6662	-0.0112	97.1%	0.0689	0.0543
2	12:33:57	99.0%	-0.0465	0.0255	-0.4499	-0.2081	98.5%	0.0790	0.0848
3	12:34:57	99.1%	-0.0693	0.0249	-0.3683	-0.2799	99.0%	0.0417	0.0660
x		98.7%	-0.0415	0.0355	-0.4948	-0.1664	98.2%	0.0632	0.0684
σ		0.6%	0.0306	0.0179	0.1539	0.1391	1.0%	0.0193	0.0154
%RSD		0.6	73.6225	50.3222	31.1129	83.6150	1.0	30.5283	22.5659

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:57	0.0600	97.5%	0.0053	0.0074	0.0046	-0.0079	0.0026	96.6%
2	12:33:57	0.0733	98.4%	0.0092	0.0078	0.0025	-0.0042	0.0002	98.1%
3	12:34:57	0.0590	99.2%	0.0045	0.0093	0.0063	-0.0058	-0.0045	99.8%
x		0.0641	98.3%	0.0063	0.0082	0.0045	-0.0060	-0.0005	98.2%
σ		0.0080	0.9%	0.0025	0.0010	0.0019	0.0019	0.0036	1.6%
%RSD		12.4988	0.9	39.5549	12.4480	42.8781	30.8775	662.5547	1.7

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:32:57	0.0054	0.0029	0.0040	0.0031	0.0037	97.0%	0.0051	0.0060
2	12:33:57	0.0049	0.0046	-0.0016	0.0044	0.0077	98.6%	0.0061	0.0088
3	12:34:57	0.0057	0.0025	0.0106	0.0093	0.0019	98.7%	0.0062	0.0068
x		0.0053	0.0033	0.0043	0.0056	0.0044	98.1%	0.0058	0.0072
σ		0.0004	0.0011	0.0061	0.0033	0.0030	1.0%	0.0006	0.0015
%RSD		7.0377	34.1187	140.9941	58.2043	66.7911	1.0	10.8665	20.1940

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:32:57	0.0012	0.0000	0.0014	97.7%	0.0018
2	12:33:57	0.0020	0.0001	0.0023	99.0%	0.0025
3	12:34:57	-0.0002	0.0023	0.0021	100.6%	0.0022
x		0.0010	0.0008	0.0020	99.1%	0.0022
σ		0.0011	0.0013	0.0005	1.5%	0.0003
%RSD		109.7683	165.8293	25.9173	1.5	16.0109

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:35	-0.0025	0.8208	99.1%	0.0026	0.2782	0.3335	0.1452	-0.0027
2	12:38:35	-0.0038	0.8909	99.1%	0.0027	0.2688	0.3355	0.1574	0.0009
3	12:39:35	-0.0012	0.8796	98.6%	0.0120	0.2775	0.3166	0.1545	-0.0026
x		-0.0025	0.8638	99.0%	0.0058	0.2748	0.3285	0.1524	-0.0015
σ		0.0013	0.0376	0.3%	0.0054	0.0052	0.0104	0.0064	0.0021
%RSD		52.0891	4.3575	0.3	93.5174	1.9062	3.1589	4.1809	140.3401

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:35	0.3280	0.4429	0.1208	0.4398	0.5229	31.7809	30.4452	30.7410
2	12:38:35	0.3114	0.3622	0.4840	0.4052	0.5600	31.3482	29.7744	30.4826
3	12:39:35	0.3164	0.0409	0.4162	0.4094	0.4909	31.4222	30.2349	30.5089
x		0.3186	0.2820	0.3403	0.4181	0.5246	31.5171	30.1515	30.5775
σ		0.0085	0.2127	0.1931	0.0189	0.0345	0.2314	0.3431	0.1422
%RSD		2.6818	75.4060	56.7489	4.5256	6.5857	0.7343	1.1379	0.4650

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:35	97.7%	-0.0910	-0.0013	-0.5958	-0.3672	98.2%	0.0754	0.0913
2	12:38:35	99.0%	-0.0476	-0.0455	-0.1737	-0.2388	98.7%	0.0822	0.0736
3	12:39:35	99.3%	-0.1278	-0.0460	-0.2862	-0.5372	99.4%	0.0599	0.0841
x		98.7%	-0.0888	-0.0309	-0.3519	-0.3811	98.8%	0.0725	0.0830
σ		0.9%	0.0402	0.0257	0.2186	0.1497	0.6%	0.0114	0.0089
%RSD		0.9	45.2425	82.9964	62.1178	39.2763	0.6	15.7659	10.7222

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:35	0.0784	98.1%	-0.0039	-0.0037	-0.0028	-0.0077	-0.0021	97.0%
2	12:38:35	0.0715	99.7%	-0.0015	-0.0021	-0.0028	-0.0108	-0.0017	98.7%
3	12:39:35	0.0797	99.1%	-0.0016	-0.0021	-0.0015	-0.0069	-0.0046	98.6%
x		0.0766	98.9%	-0.0023	-0.0026	-0.0023	-0.0085	-0.0028	98.1%
σ		0.0044	0.8%	0.0014	0.0009	0.0008	0.0021	0.0016	1.0%
%RSD		5.7459	0.8	59.1345	33.3795	32.0886	24.4791	56.7877	1.0

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:37:35	0.0014	0.0001	0.0792	0.0726	0.0739	97.4%	-0.0042	-0.0040
2	12:38:35	0.0028	0.0019	0.0699	0.0749	0.0751	98.3%	-0.0046	-0.0038
3	12:39:35	0.0036	0.0018	0.0740	0.0830	0.0704	99.7%	-0.0043	-0.0028
x		0.0026	0.0013	0.0744	0.0768	0.0732	98.5%	-0.0044	-0.0035
σ		0.0011	0.0010	0.0047	0.0055	0.0024	1.2%	0.0002	0.0006
%RSD		42.6303	78.6336	6.2611	7.1289	3.3302	1.2	4.3920	17.6752

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:37:35	-0.0037	-0.0047	-0.0027	97.8%	-0.0042
2	12:38:35	-0.0022	-0.0013	-0.0019	99.7%	-0.0037
3	12:39:35	-0.0038	-0.0023	-0.0028	100.3%	-0.0036
x		-0.0032	-0.0027	-0.0025	99.3%	-0.0039
σ		0.0009	0.0018	0.0005	1.3%	0.0003
%RSD		27.3307	64.1536	21.5606	1.3	7.1229

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:14	-0.0051	0.7209	97.5%	0.0012	0.5083	0.5502	0.0469	-0.0054
2	12:43:14	-0.0051	0.7079	97.1%	0.0322	0.5081	0.4838	0.0527	-0.0046
3	12:44:14	-0.0038	0.7261	97.7%	0.0051	0.4710	0.5124	0.0460	-0.0064
x		-0.0046	0.7183	97.4%	0.0128	0.4958	0.5154	0.0485	-0.0054
σ		0.0008	0.0094	0.3%	0.0169	0.0215	0.0333	0.0036	0.0009
%RSD		16.2309	1.3084	0.3	131.8100	4.3300	6.4700	7.4494	17.3210

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:14	0.0014	0.4692	-0.0472	-0.1056	-0.0013	0.2395	0.2544	0.2584
2	12:43:14	0.0052	-0.0477	-0.2675	-0.0753	0.0300	0.2608	0.2228	0.2878
3	12:44:14	0.0001	-0.0547	-0.2192	-0.0497	0.0283	0.2619	0.2055	0.2317
x		0.0022	0.1222	-0.1780	-0.0769	0.0190	0.2540	0.2276	0.2593
σ		0.0027	0.3005	0.1158	0.0280	0.0176	0.0126	0.0248	0.0281
%RSD		119.4787	245.8174	65.0795	36.4597	92.6713	4.9649	10.8844	10.8240

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:14	96.5%	0.0112	0.0154	-0.5758	0.0416	96.5%	0.0101	0.0164
2	12:43:14	98.3%	0.0824	-0.1015	-0.3140	0.2309	97.4%	0.0114	0.0204
3	12:44:14	98.6%	0.0637	-0.0733	-1.1282	0.1675	97.7%	0.0210	0.0257
x		97.8%	0.0524	-0.0531	-0.6727	0.1466	97.2%	0.0142	0.0208
σ		1.1%	0.0369	0.0610	0.4157	0.0963	0.6%	0.0060	0.0047
%RSD		1.2	70.4000	114.8218	61.7905	65.7011	0.6	42.1525	22.4840

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:14	0.0170	97.7%	-0.0044	-0.0026	-0.0028	-0.0112	-0.0031	96.1%
2	12:43:14	0.0189	99.0%	-0.0021	-0.0025	-0.0034	-0.0040	-0.0025	98.7%
3	12:44:14	0.0251	98.4%	-0.0023	-0.0016	-0.0015	-0.0031	-0.0029	97.3%
x		0.0203	98.4%	-0.0029	-0.0022	-0.0026	-0.0061	-0.0028	97.4%
σ		0.0043	0.6%	0.0013	0.0006	0.0010	0.0044	0.0003	1.3%
%RSD		20.9773	0.7	44.3251	25.1859	39.5368	72.0350	10.1638	1.3

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:14	0.0000	-0.0022	0.0077	0.0211	0.0165	95.4%	-0.0045	-0.0043
2	12:43:14	0.0026	0.0010	0.0116	0.0139	0.0221	98.2%	-0.0059	-0.0039
3	12:44:14	-0.0009	-0.0008	0.0208	0.0177	0.0178	98.0%	-0.0053	-0.0035
x		0.0006	-0.0007	0.0134	0.0176	0.0188	97.2%	-0.0052	-0.0039
σ		0.0018	0.0016	0.0067	0.0036	0.0029	1.6%	0.0007	0.0004
%RSD		321.8084	231.7763	50.1851	20.5471	15.5466	1.6	13.6754	10.2048

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:42:14	0.0056	0.0047	0.0063	96.3%	-0.0037
2	12:43:14	0.0049	0.0029	0.0049	98.4%	-0.0035
3	12:44:14	0.0062	0.0060	0.0068	99.1%	-0.0039
x		0.0055	0.0045	0.0060	97.9%	-0.0037
σ		0.0006	0.0016	0.0010	1.4%	0.0002
%RSD		11.0883	34.3825	16.7171	1.5	4.9084

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:03	-0.0022	56.7150	93.1%	0.2760	0.2496	0.3095	189.8976	0.2518
2	12:48:03	-0.0022	56.7417	92.9%	0.2918	0.2093	0.2269	188.8786	0.2398
3	12:49:03	-0.0035	56.5851	92.2%	0.2553	0.2309	0.3381	189.3255	0.2416
x		-0.0026	56.6806	92.7%	0.2744	0.2299	0.2915	189.3672	0.2444
σ		0.0008	0.0838	0.4%	0.0183	0.0202	0.0577	0.5108	0.0065
%RSD		29.5334	0.1478	0.5	6.6827	8.7873	19.8021	0.2697	2.6593

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:03	2.1011	15.1766	5.2080	3.4350	3.5614	140.7847	133.9533	137.9923
2	12:48:03	1.8809	14.4514	7.4578	3.4997	3.4152	139.5630	133.7601	136.3597
3	12:49:03	1.9891	13.8203	8.4629	3.5260	3.4005	139.7825	134.2580	137.7115
x		1.9903	14.4827	7.0429	3.4869	3.4590	140.0434	133.9905	137.3545
σ		0.1101	0.6787	1.6666	0.0468	0.0890	0.6513	0.2510	0.8729
%RSD		5.5328	4.6863	23.6640	1.3433	2.5716	0.4651	0.1873	0.6355

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:03	91.9%	1.0763	0.4180	-0.8524	-0.0472	93.0%	0.3448	0.3107
2	12:48:03	91.9%	0.8968	0.8277	-0.5716	-0.1138	92.9%	0.3278	0.3339
3	12:49:03	92.0%	0.9857	0.5533	-0.7635	0.0305	93.3%	0.3198	0.3176
x		91.9%	0.9863	0.5997	-0.7292	-0.0435	93.1%	0.3308	0.3207
σ		0.0%	0.0897	0.2088	0.1435	0.0723	0.2%	0.0128	0.0119
%RSD		0.1	9.0989	34.8170	19.6843	166.0524	0.2	3.8609	3.7101

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:03	0.3340	90.6%	0.0013	0.0003	0.1799	0.1779	0.1739	92.3%
2	12:48:03	0.3493	91.7%	0.0014	0.0003	0.1834	0.1600	0.1755	94.4%
3	12:49:03	0.3348	91.6%	-0.0008	-0.0010	0.2006	0.1650	0.1695	95.0%
x		0.3394	91.3%	0.0006	-0.0001	0.1879	0.1676	0.1729	93.9%
σ		0.0086	0.6%	0.0012	0.0008	0.0111	0.0092	0.0031	1.4%
%RSD		2.5311	0.6	199.7905	530.0903	5.9165	5.5081	1.7913	1.5

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:03	0.3581	0.3629	43.7867	43.8206	44.0219	96.0%	-0.0001	-0.0013
2	12:48:03	0.3637	0.3694	42.9174	43.1009	43.6877	98.0%	0.0006	0.0014
3	12:49:03	0.3669	0.3535	43.5829	43.0652	43.6895	98.0%	-0.0027	-0.0002
x		0.3629	0.3619	43.4290	43.3289	43.7997	97.3%	-0.0007	-0.0000
σ		0.0044	0.0080	0.4546	0.4262	0.1924	1.2%	0.0017	0.0014
%RSD		1.2243	2.2095	1.0468	0.9836	0.4394	1.2	240.8084	3977.0834

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:47:03	0.2563	0.2816	0.2740	96.5%	0.0948
2	12:48:03	0.2553	0.2799	0.2718	100.1%	0.0962
3	12:49:03	0.2542	0.2766	0.2741	100.1%	0.0929
x		0.2553	0.2794	0.2733	98.9%	0.0946
σ		0.0010	0.0025	0.0013	2.1%	0.0017
%RSD		0.4035	0.9122	0.4712	2.1	1.7779

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:44	-0.0009	12.6147	94.3%	0.1479	0.2169	0.2140	190.4704	0.6645
2	12:52:44	-0.0050	13.7336	94.5%	0.1398	0.1832	0.2175	189.8159	0.6488
3	12:53:43	-0.0009	12.3497	94.0%	0.1273	0.1836	0.2232	186.7554	0.6424
x		-0.0023	12.8993	94.3%	0.1383	0.1946	0.2182	189.0139	0.6519
σ		0.0024	0.7345	0.3%	0.0104	0.0193	0.0046	1.9831	0.0114
%RSD		104.9536	5.6943	0.3	7.5228	9.9352	2.1244	1.0492	1.7496

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:44	2.0284	17.2164	8.8358	2.4462	2.3929	135.9414	132.1514	133.6138
2	12:52:44	2.0306	14.4555	9.7953	2.4597	2.3159	135.1105	130.1694	132.2578
3	12:53:43	1.9314	16.8363	9.8465	2.5255	2.2755	134.4372	130.8207	132.6730
x		1.9968	16.1694	9.4925	2.4771	2.3281	135.1630	131.0472	132.8482
σ		0.0567	1.4964	0.5694	0.0424	0.0597	0.7535	1.0102	0.6947
%RSD		2.8386	9.2544	5.9979	1.7117	2.5636	0.5575	0.7709	0.5230

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:44	93.9%	0.7015	0.5708	-0.9751	0.0634	94.3%	0.3542	0.3311
2	12:52:44	94.1%	0.5859	0.5528	-1.1197	-0.2728	95.1%	0.3474	0.3139
3	12:53:43	94.1%	0.7034	0.5525	-0.6946	-0.0665	95.2%	0.3444	0.3241
x		94.0%	0.6636	0.5587	-0.9298	-0.0920	94.9%	0.3487	0.3230
σ		0.1%	0.0673	0.0105	0.2161	0.1696	0.5%	0.0050	0.0086
%RSD		0.1	10.1365	1.8782	23.2427	184.3712	0.6	1.4463	2.6776

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:44	0.3392	92.8%	-0.0031	-0.0040	0.1649	0.1447	0.1520	94.8%
2	12:52:44	0.3330	93.0%	-0.0035	-0.0023	0.1657	0.1520	0.1560	95.8%
3	12:53:43	0.3348	93.2%	-0.0032	-0.0013	0.1799	0.1455	0.1622	96.4%
x		0.3357	93.0%	-0.0033	-0.0025	0.1702	0.1474	0.1567	95.7%
σ		0.0031	0.2%	0.0002	0.0013	0.0084	0.0040	0.0051	0.8%
%RSD		0.9384	0.2	6.2536	53.4252	4.9470	2.7372	3.2704	0.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:51:44	0.3913	0.3833	43.3403	43.0292	43.4997	97.5%	-0.0020	-0.0010
2	12:52:44	0.3949	0.3886	42.8616	42.7863	43.7683	99.9%	-0.0029	-0.0011
3	12:53:43	0.4026	0.3853	43.0087	43.0225	43.4480	99.5%	-0.0035	0.0004
x		0.3963	0.3857	43.0702	42.9460	43.5720	99.0%	-0.0028	-0.0005
σ		0.0058	0.0027	0.2452	0.1384	0.1719	1.3%	0.0008	0.0008
%RSD		1.4578	0.6959	0.5694	0.3222	0.3946	1.3	27.7865	153.4979

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:51:44	0.0221	0.0231	0.0232	99.4%	0.0900
2	12:52:44	0.0191	0.0216	0.0228	100.4%	0.0943
3	12:53:43	0.0223	0.0240	0.0224	101.6%	0.0909
x		0.0212	0.0229	0.0228	100.5%	0.0917
σ		0.0018	0.0012	0.0004	1.1%	0.0022
%RSD		8.4893	5.2689	1.7211	1.1	2.4517

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:25	-0.0077	19.5403	93.4%	4.1210	0.0985	0.3692	20.9249	0.7714
2	12:57:25	0.0007	18.0044	92.1%	4.1322	0.1064	0.3316	21.1583	0.7736
3	12:58:25	-0.0021	18.4453	91.4%	4.1097	0.0781	0.3081	20.8596	0.7660
x		-0.0030	18.6633	92.3%	4.1210	0.0944	0.3363	20.9809	0.7703
σ		0.0043	0.7908	1.0%	0.0112	0.0146	0.0308	0.1570	0.0039
%RSD		139.9176	4.2373	1.1	0.2727	15.4554	9.1633	0.7484	0.5076

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:25	0.7338	6.9108	4.2445	0.8526	0.7175	1.3561	3.9058	3.1714
2	12:57:25	0.7347	6.6688	4.9538	0.8512	0.6956	1.4133	3.6065	3.1447
3	12:58:25	0.7433	6.7638	5.5720	0.8692	0.6365	1.3750	3.8356	2.9463
x		0.7372	6.7811	4.9234	0.8577	0.6832	1.3815	3.7826	3.0875
σ		0.0053	0.1219	0.6643	0.0100	0.0419	0.0291	0.1565	0.1230
%RSD		0.7149	1.7979	13.4923	1.1707	6.1348	2.1086	4.1380	3.9824

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:25	92.4%	3.3017	0.4315	-0.5537	0.1082	92.6%	3.8117	3.6925
2	12:57:25	90.9%	3.3279	0.4704	-0.5947	0.3336	91.8%	3.8009	3.9312
3	12:58:25	89.7%	3.2730	0.3998	-0.3772	0.3588	91.3%	3.8162	3.7800
x		91.0%	3.3008	0.4339	-0.5085	0.2668	91.9%	3.8096	3.8012
σ		1.4%	0.0275	0.0353	0.1155	0.1380	0.7%	0.0078	0.1207
%RSD		1.5	0.8330	8.1464	22.7223	51.7175	0.7	0.2056	3.1760

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:25	3.8150	91.4%	-0.0040	-0.0025	0.0036	-0.0058	-0.0027	92.8%
2	12:57:25	3.8743	91.0%	-0.0047	-0.0017	0.0042	-0.0110	-0.0025	93.5%
3	12:58:25	3.8237	89.3%	-0.0036	-0.0030	0.0008	-0.0085	-0.0021	92.9%
x		3.8377	90.6%	-0.0041	-0.0024	0.0029	-0.0085	-0.0024	93.1%
σ		0.0320	1.1%	0.0006	0.0006	0.0018	0.0026	0.0003	0.4%
%RSD		0.8348	1.2	13.7542	26.5174	63.7618	30.9790	12.0401	0.4

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:56:25	0.1853	0.1821	74.1175	73.4462	74.8672	96.6%	-0.0003	0.0016
2	12:57:25	0.1731	0.1681	73.2956	72.8797	74.7712	98.3%	0.0000	0.0004
3	12:58:25	0.1710	0.1710	72.8882	73.3814	74.6029	97.5%	-0.0006	-0.0001
x		0.1765	0.1737	73.4338	73.2358	74.7471	97.5%	-0.0003	0.0007
σ		0.0077	0.0074	0.6262	0.3100	0.1338	0.9%	0.0003	0.0009
%RSD		4.3908	4.2577	0.8528	0.4234	0.1790	0.9	111.2415	131.7994

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	12:56:25	0.0214	0.0284	0.0270	98.8%	1.9766
2	12:57:25	0.0221	0.0230	0.0243	99.1%	1.9957
3	12:58:25	0.0249	0.0254	0.0245	99.0%	1.9876
x		0.0228	0.0256	0.0253	99.0%	1.9866
σ		0.0019	0.0027	0.0015	0.1%	0.0096
%RSD		8.1586	10.4829	6.0359	0.1	0.4830

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:07	-0.0021	18.2420	91.9%	3.4867	0.1940	0.3203	14.2492	0.8385
2	13:02:07	0.0008	18.7779	90.4%	3.3632	0.1744	0.3314	14.3028	0.8242
3	13:03:06	0.0037	20.0232	89.8%	3.3592	0.1664	0.3503	14.1791	0.8133
x		0.0008	19.0144	90.7%	3.4030	0.1783	0.3340	14.2437	0.8253
σ		0.0029	0.9138	1.1%	0.0725	0.0142	0.0152	0.0620	0.0126
%RSD		361.5917	4.8061	1.2	2.1300	7.9528	4.5399	0.4355	1.5283

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:07	0.9492	6.2825	5.2840	1.0114	0.8260	0.8633	3.1829	2.4744
2	13:02:07	0.8169	6.4721	5.6689	1.0191	0.8141	0.8921	2.7211	2.3646
3	13:03:06	0.8931	5.2801	6.3586	1.0148	0.8313	0.8390	2.8349	2.2899
x		0.8864	6.0116	5.7705	1.0151	0.8238	0.8648	2.9130	2.3763
σ		0.0664	0.6405	0.5445	0.0039	0.0088	0.0266	0.2406	0.0928
%RSD		7.4929	10.6549	9.4354	0.3837	1.0646	3.0754	8.2593	3.9070

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:07	89.2%	1.8661	0.5590	-1.1407	-0.0039	90.8%	3.5722	3.5277
2	13:02:07	89.6%	1.9561	0.4784	-0.8734	0.4616	91.1%	3.4438	3.4710
3	13:03:06	90.3%	1.9136	0.5386	-0.7054	0.3145	90.5%	3.4573	3.4653
x		89.7%	1.9119	0.5254	-0.9065	0.2574	90.8%	3.4911	3.4880
σ		0.5%	0.0450	0.0419	0.2196	0.2380	0.3%	0.0706	0.0345
%RSD		0.6	2.3559	7.9746	24.2203	92.4513	0.3	2.0217	0.9890

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:07	3.5668	89.1%	-0.0051	-0.0037	0.0045	-0.0047	-0.0007	90.7%
2	13:02:07	3.5723	90.4%	-0.0036	-0.0028	-0.0020	-0.0094	-0.0032	91.7%
3	13:03:06	3.6167	89.8%	-0.0038	-0.0026	0.0037	-0.0122	-0.0034	91.7%
x		3.5852	89.8%	-0.0042	-0.0030	0.0020	-0.0088	-0.0024	91.3%
σ		0.0273	0.7%	0.0008	0.0006	0.0035	0.0038	0.0015	0.6%
%RSD		0.7628	0.7	19.0377	19.4837	174.1736	43.4207	61.2751	0.7

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:01:07	0.1579	0.1482	62.9279	62.8389	63.8876	95.0%	0.0013	0.0029
2	13:02:07	0.1548	0.1546	62.1393	62.3088	63.7225	96.8%	0.0006	0.0008
3	13:03:06	0.1568	0.1487	62.4393	62.3592	63.5447	95.7%	0.0027	0.0019
x		0.1565	0.1505	62.5022	62.5023	63.7183	95.8%	0.0015	0.0019
σ		0.0015	0.0036	0.3981	0.2926	0.1715	0.9%	0.0010	0.0011
%RSD		0.9801	2.3656	0.6369	0.4681	0.2692	0.9	68.3907	57.1782

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:01:07	0.0284	0.0257	0.0275	96.5%	1.7556
2	13:02:07	0.0391	0.0236	0.0298	99.0%	1.7289
3	13:03:06	0.0242	0.0254	0.0249	98.5%	1.7309
x		0.0306	0.0249	0.0274	98.0%	1.7385
σ		0.0077	0.0011	0.0025	1.3%	0.0148
%RSD		25.1962	4.5491	8.9937	1.3	0.8538

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:46	0.0022	19.8851	90.9%	4.2447	0.1645	0.3696	9.8525	0.7976
2	13:06:46	-0.0035	19.8459	90.8%	4.1821	0.1333	0.3810	9.7027	0.7778
3	13:07:45	0.0023	19.8985	89.9%	4.1030	0.1122	0.3899	9.6651	0.7914
x		0.0003	19.8765	90.5%	4.1766	0.1367	0.3802	9.7401	0.7889
σ		0.0033	0.0273	0.6%	0.0710	0.0263	0.0101	0.0992	0.0101
%RSD		982.3823	0.1374	0.6	1.7011	19.2471	2.6671	1.0181	1.2794

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:46	0.7822	6.1700	5.8096	0.8748	0.6737	0.9148	3.1457	2.6859
2	13:06:46	0.7236	6.6985	5.8931	0.8989	0.6430	0.8279	2.8501	2.5858
3	13:07:45	0.7340	5.9258	6.0834	0.8953	0.6863	0.8815	3.1800	2.6347
x		0.7466	6.2648	5.9287	0.8897	0.6677	0.8747	3.0586	2.6355
σ		0.0313	0.3950	0.1403	0.0130	0.0223	0.0438	0.1814	0.0500
%RSD		4.1880	6.3049	2.3669	1.4621	3.3342	5.0113	5.9304	1.8989

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:46	89.2%	3.3254	0.2320	-0.6570	-0.0729	90.3%	3.7793	3.7675
2	13:06:46	90.4%	3.3731	0.4447	-0.7077	0.3819	90.7%	3.8879	3.6426
3	13:07:45	90.0%	3.1942	0.3674	-0.7281	0.0079	91.4%	3.7729	3.7836
x		89.9%	3.2976	0.3480	-0.6976	0.1056	90.8%	3.8133	3.7312
σ		0.6%	0.0926	0.1077	0.0366	0.2426	0.6%	0.0646	0.0772
%RSD		0.7	2.8094	30.9325	5.2528	229.6858	0.6	1.6947	2.0685

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:46	3.7075	89.3%	-0.0040	-0.0033	0.0030	-0.0058	-0.0025	90.7%
2	13:06:46	3.7856	90.0%	-0.0045	-0.0037	0.0022	-0.0074	-0.0023	91.9%
3	13:07:45	3.8034	90.0%	-0.0032	-0.0037	-0.0006	-0.0127	-0.0007	93.0%
x		3.7655	89.7%	-0.0039	-0.0036	0.0015	-0.0086	-0.0018	91.9%
σ		0.0510	0.4%	0.0006	0.0002	0.0019	0.0036	0.0010	1.2%
%RSD		1.3547	0.4	16.2625	6.3296	124.7498	42.1833	52.7040	1.3

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:46	0.2003	0.1793	74.6831	74.4312	75.8759	94.3%	-0.0041	-0.0000
2	13:06:46	0.1792	0.1771	74.0436	74.4401	75.9195	96.5%	-0.0028	-0.0002
3	13:07:45	0.1901	0.1822	73.5683	73.0422	74.7872	96.7%	-0.0018	0.0009
x		0.1899	0.1796	74.0983	73.9712	75.5275	95.8%	-0.0029	0.0002
σ		0.0105	0.0025	0.5594	0.8045	0.6415	1.3%	0.0012	0.0006
%RSD		5.5504	1.4097	0.7549	1.0876	0.8494	1.4	39.8179	255.5044

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:05:46	0.0223	0.0280	0.0253	97.0%	2.0005
2	13:06:46	0.0288	0.0306	0.0302	98.2%	2.0174
3	13:07:45	0.0261	0.0257	0.0266	98.8%	2.0033
x		0.0257	0.0281	0.0274	98.0%	2.0071
σ		0.0033	0.0024	0.0025	0.9%	0.0091
%RSD		12.6362	8.6181	9.2494	0.9	0.4525

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:10:23	0.0036	26.1641	91.2%	4.4703	0.1334	0.4286	4.5412	0.7726
2	13:11:23	-0.0034	26.7785	89.6%	4.4603	0.1046	0.3847	4.5507	0.7624
3	13:12:23	-0.0020	24.3166	89.6%	4.3848	0.1245	0.3941	4.5536	0.7331
x		-0.0006	25.7531	90.1%	4.4385	0.1208	0.4025	4.5485	0.7561
σ		0.0037	1.2814	0.9%	0.0467	0.0148	0.0231	0.0065	0.0205
%RSD		604.4633	4.9755	1.0	1.0521	12.2352	5.7477	0.1428	2.7091

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:10:23	0.8322	6.0490	5.9992	0.8678	0.6653	0.8122	3.2263	2.8038
2	13:11:23	0.7207	6.3609	6.0880	0.8916	0.6242	0.8030	3.1820	2.5822
3	13:12:23	0.7809	6.3830	5.8926	0.8581	0.6409	0.8079	3.2005	2.5931
x		0.7780	6.2643	5.9932	0.8725	0.6435	0.8077	3.2030	2.6597
σ		0.0558	0.1868	0.0978	0.0172	0.0207	0.0046	0.0223	0.1249
%RSD		7.1730	2.9819	1.6325	1.9742	3.2144	0.5697	0.6947	4.6976

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:10:23	88.7%	3.2407	0.3274	-0.7639	0.2931	90.5%	3.9043	3.7298
2	13:11:23	88.7%	3.0910	0.5945	-1.1934	-0.1532	90.4%	3.8814	3.7966
3	13:12:23	89.6%	3.3103	0.5256	-0.7919	0.1894	90.9%	3.8737	3.8455
x		89.0%	3.2140	0.4825	-0.9164	0.1098	90.6%	3.8865	3.7906
σ		0.5%	0.1121	0.1386	0.2403	0.2336	0.3%	0.0159	0.0581
%RSD		0.6	3.4866	28.7318	26.2211	212.7888	0.3	0.4102	1.5332

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:10:23	3.8836	88.7%	-0.0047	-0.0047	0.0045	-0.0068	-0.0042	90.8%
2	13:11:23	3.8911	89.1%	-0.0043	-0.0032	-0.0013	-0.0098	-0.0009	91.8%
3	13:12:23	3.8604	88.6%	-0.0041	-0.0041	0.0016	-0.0157	-0.0069	91.4%
x		3.8784	88.8%	-0.0044	-0.0040	0.0016	-0.0107	-0.0040	91.3%
σ		0.0160	0.2%	0.0003	0.0008	0.0029	0.0045	0.0030	0.5%
%RSD		0.4124	0.3	6.4083	19.0617	183.5247	42.0164	75.6478	0.5

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:10:23	0.1873	0.2019	77.6029	77.8495	79.7823	94.8%	-0.0028	-0.0019
2	13:11:23	0.1795	0.1900	77.3735	77.0016	79.2285	97.0%	-0.0034	-0.0025
3	13:12:23	0.1971	0.1832	77.0397	76.7788	78.5669	97.2%	-0.0021	-0.0009
x		0.1880	0.1917	77.3387	77.2100	79.1926	96.3%	-0.0028	-0.0018
σ		0.0088	0.0095	0.2832	0.5650	0.6085	1.3%	0.0006	0.0008
%RSD		4.6945	4.9359	0.3662	0.7317	0.7684	1.4	23.0907	44.6328

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:10:23	0.0364	0.0393	0.0387	96.6%	2.1485
2	13:11:23	0.0356	0.0347	0.0332	99.3%	2.1283
3	13:12:23	0.0347	0.0341	0.0352	99.4%	2.1344
x		0.0356	0.0360	0.0357	98.4%	2.1370
σ		0.0009	0.0028	0.0028	1.6%	0.0104
%RSD		2.4831	7.9002	7.8169	1.6	0.4866

K1007003-001 08/05/2010 01:15:06 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:06	-0.0049	16.1469	91.8%	3.9003	0.1457	0.3643	7.1821	0.7936
2	13:16:06	-0.0005	15.6327	89.7%	3.9615	0.1432	0.4023	7.3418	0.7962
3	13:17:05	0.0052	16.6358	89.5%	3.9387	0.1192	0.3449	7.2392	0.7893
x		-0.0001	16.1385	90.3%	3.9335	0.1360	0.3705	7.2544	0.7930
σ		0.0051	0.5016	1.3%	0.0310	0.0147	0.0292	0.0809	0.0035
%RSD		5804.3159	3.1084	1.4	0.7872	10.7723	7.8795	1.1153	0.4402

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:06	0.6977	5.2063	4.8200	0.8277	0.5951	0.8466	2.9401	2.5974
2	13:16:06	0.7175	5.7091	4.5910	0.8148	0.5523	0.7593	2.8611	2.4533
3	13:17:05	0.7302	6.1887	4.9300	0.8647	0.6182	0.8234	2.9887	2.5468
x		0.7151	5.7014	4.7803	0.8357	0.5885	0.8098	2.9300	2.5325
σ		0.0164	0.4912	0.1729	0.0259	0.0334	0.0453	0.0644	0.0731
%RSD		2.2889	8.6156	3.6176	3.0957	5.6777	5.5890	2.1971	2.8861

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:06	90.1%	3.3362	0.4620	-1.1814	0.0076	90.5%	3.7825	3.7428
2	13:16:06	89.8%	3.2890	0.3684	-0.9661	0.0870	91.4%	3.7992	3.7918
3	13:17:05	88.8%	3.4499	0.6255	-0.7989	0.2823	90.2%	3.8087	3.7054
x		89.5%	3.3584	0.4853	-0.9821	0.1256	90.7%	3.7968	3.7467
σ		0.7%	0.0827	0.1301	0.1917	0.1414	0.6%	0.0133	0.0433
%RSD		0.7	2.4638	26.8078	19.5240	112.5279	0.7	0.3499	1.1568

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:06	3.7682	88.9%	-0.0043	-0.0039	0.0052	-0.0103	-0.0015	90.0%
2	13:16:06	3.7567	90.2%	-0.0051	-0.0041	0.0015	-0.0141	-0.0041	92.7%
3	13:17:05	3.8557	89.4%	-0.0052	-0.0035	0.0044	-0.0070	-0.0040	91.7%
x		3.7935	89.5%	-0.0049	-0.0039	0.0037	-0.0104	-0.0032	91.5%
σ		0.0541	0.6%	0.0005	0.0003	0.0020	0.0036	0.0015	1.4%
%RSD		1.4270	0.7	10.1534	7.5127	52.9832	34.0694	45.7396	1.5

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:15:06	0.1786	0.1782	73.6483	73.1674	74.7560	94.8%	-0.0016	-0.0015
2	13:16:06	0.1694	0.1787	72.0970	71.4688	73.2343	96.4%	-0.0004	-0.0005
3	13:17:05	0.1614	0.1719	72.1121	72.2934	73.9976	96.7%	-0.0029	0.0006
x		0.1698	0.1763	72.6191	72.3099	73.9960	96.0%	-0.0016	-0.0005
σ		0.0086	0.0038	0.8913	0.8494	0.7608	1.0%	0.0012	0.0010
%RSD		5.0922	2.1619	1.2274	1.1747	1.0282	1.0	73.9934	223.8509

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:15:06	0.0214	0.0195	0.0226	96.3%	1.9751
2	13:16:06	0.0219	0.0232	0.0232	97.8%	1.9841
3	13:17:05	0.0242	0.0265	0.0254	99.7%	1.9688
x		0.0225	0.0231	0.0237	98.0%	1.9760
σ		0.0015	0.0035	0.0015	1.7%	0.0077
%RSD		6.7352	15.1428	6.2816	1.8	0.3901

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:45	-0.0063	16.6935	90.2%	3.6828	0.0973	0.3883	32.0328	0.9466
2	13:20:45	-0.0005	16.3768	88.8%	3.7333	0.0956	0.3600	32.2463	0.9511
3	13:21:45	-0.0033	16.5677	87.6%	3.6456	0.0978	0.3466	32.0039	0.9742
x		-0.0034	16.5460	88.8%	3.6872	0.0969	0.3650	32.0943	0.9573
σ		0.0029	0.1595	1.3%	0.0441	0.0012	0.0213	0.1324	0.0148
%RSD		86.5313	0.9639	1.4	1.1950	1.1873	5.8374	0.4125	1.5481

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:45	0.7312	7.2459	4.4756	0.8307	0.5999	1.0042	3.4962	2.8024
2	13:20:45	0.7443	6.5290	4.4752	0.8864	0.5905	1.0701	3.2334	2.8191
3	13:21:45	0.7028	5.5318	4.6913	0.8614	0.6426	0.9429	3.2034	2.7247
x		0.7261	6.4356	4.5474	0.8595	0.6110	1.0057	3.3110	2.7821
σ		0.0212	0.8609	0.1246	0.0279	0.0277	0.0636	0.1611	0.0504
%RSD		2.9215	13.3764	2.7406	3.2447	4.5402	6.3268	4.8650	1.8123

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:45	89.1%	3.1797	0.4993	-0.9588	-0.2104	89.9%	4.1610	4.1268
2	13:20:45	88.3%	3.2247	0.3141	-0.6025	0.0186	89.9%	4.1705	4.1802
3	13:21:45	88.3%	3.2726	0.3465	-0.7297	0.2727	89.4%	4.1727	4.0513
x		88.6%	3.2256	0.3866	-0.7637	0.0270	89.7%	4.1681	4.1194
σ		0.4%	0.0465	0.0989	0.1805	0.2417	0.3%	0.0062	0.0648
%RSD		0.5	1.4409	25.5812	23.6384	895.7412	0.4	0.1481	1.5723

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:45	4.1233	88.6%	-0.0047	-0.0032	0.0123	-0.0072	0.0012	91.2%
2	13:20:45	4.0600	89.0%	-0.0051	-0.0041	0.0037	-0.0056	0.0020	92.2%
3	13:21:45	4.1722	88.0%	-0.0043	-0.0033	0.0145	-0.0062	-0.0002	91.5%
x		4.1185	88.5%	-0.0047	-0.0035	0.0101	-0.0063	0.0010	91.6%
σ		0.0563	0.5%	0.0004	0.0005	0.0057	0.0008	0.0011	0.5%
%RSD		1.3668	0.6	8.0038	14.2932	56.4006	12.8121	112.8591	0.6

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:19:45	0.1757	0.1752	74.3646	74.2242	75.4991	95.4%	-0.0018	-0.0016
2	13:20:45	0.1673	0.1770	73.8487	73.0460	75.6333	96.9%	-0.0019	0.0009
3	13:21:45	0.1826	0.1669	73.9223	74.0640	75.3346	95.8%	-0.0014	-0.0012
x		0.1752	0.1731	74.0452	73.7781	75.4890	96.0%	-0.0017	-0.0006
σ		0.0076	0.0054	0.2790	0.6390	0.1496	0.8%	0.0003	0.0014
%RSD		4.3654	3.1175	0.3768	0.8662	0.1982	0.8	16.3764	211.2070

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:19:45	0.0262	0.0268	0.0252	96.5%	1.8816
2	13:20:45	0.0184	0.0215	0.0227	98.5%	1.8922
3	13:21:45	0.0247	0.0253	0.0258	99.2%	1.8929
x		0.0231	0.0245	0.0246	98.1%	1.8889
σ		0.0041	0.0027	0.0017	1.4%	0.0063
%RSD		17.8696	11.1876	6.8094	1.4	0.3345

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:25	25.1664	25.0798	94.2%	24.9332	24.9547	25.0073	25.0352	24.8420
2	13:25:23	25.3395	24.8568	94.3%	25.3177	25.0546	24.7649	25.3073	24.5371
3	13:26:23	25.3071	24.7170	94.8%	24.8441	24.9104	25.0691	25.1173	24.6755
x		25.2710	24.8845	94.4%	25.0317	24.9732	24.9471	25.1533	24.6849
σ		0.0920	0.1830	0.3%	0.2517	0.0739	0.1607	0.1395	0.1527
%RSD		0.3642	0.7354	0.4	1.0055	0.2958	0.6443	0.5547	0.6184

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:25	24.9253	25.0555	26.3221	24.7827	24.5360	25.0331	24.8670	24.5471
2	13:25:23	24.8255	24.7747	25.8693	24.7615	24.3341	25.1679	24.7665	24.5378
3	13:26:23	24.4979	23.8083	25.7936	24.4704	24.5470	24.9531	24.1887	25.0297
x		24.7496	24.5462	25.9950	24.6715	24.4724	25.0513	24.6074	24.7049
σ		0.2236	0.6543	0.2858	0.1745	0.1199	0.1085	0.3661	0.2814
%RSD		0.9034	2.6655	1.0995	0.7074	0.4897	0.4332	1.4876	1.1389

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:25	96.2%	24.7815	24.8388	24.8060	24.5469	96.7%	24.9092	24.7266
2	13:25:23	96.8%	24.9824	25.1549	24.9246	25.8596	96.9%	24.9632	24.6697
3	13:26:23	97.1%	24.9618	25.2366	24.9193	26.2030	97.3%	25.2954	24.8966
x		96.7%	24.9086	25.0767	24.8833	25.5365	96.9%	25.0559	24.7643
σ		0.5%	0.1106	0.2101	0.0670	0.8740	0.3%	0.2091	0.1180
%RSD		0.5	0.4438	0.8379	0.2693	3.4227	0.3	0.8346	0.4767

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:25	24.7360	97.2%	25.0749	25.1256	25.2456	25.0946	25.0463	98.7%
2	13:25:23	24.8557	97.9%	24.8951	24.8290	25.2005	25.0479	24.7854	100.1%
3	13:26:23	25.0805	97.6%	25.0798	24.9294	25.0983	25.1097	25.1324	101.1%
x		24.8908	97.6%	25.0166	24.9613	25.1815	25.0841	24.9880	100.0%
σ		0.1749	0.4%	0.1052	0.1509	0.0755	0.0322	0.1807	1.2%
%RSD		0.7027	0.4	0.4207	0.6044	0.2996	0.1284	0.7231	1.2

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:24:25	25.2241	25.0848	24.6173	24.9626	25.1617	98.3%	24.9820	24.7881
2	13:25:23	24.9652	25.0906	25.0788	24.8621	24.9861	100.7%	24.9513	24.9196
3	13:26:23	24.8323	25.0910	24.7472	24.8952	25.0429	101.6%	24.9191	24.9155
x		25.0072	25.0888	24.8144	24.9066	25.0636	100.2%	24.9508	24.8744
σ		0.1993	0.0035	0.2380	0.0512	0.0896	1.7%	0.0315	0.0748
%RSD		0.7968	0.0138	0.9592	0.2058	0.3575	1.7	0.1261	0.3005

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:24:25	25.0818	25.0054	25.0434	99.9%	24.9857
2	13:25:23	25.1841	25.0004	25.0821	101.3%	25.2998
3	13:26:23	25.0415	25.1601	25.0778	102.4%	25.2266
x		25.1025	25.0553	25.0677	101.2%	25.1707
σ		0.0735	0.0908	0.0212	1.3%	0.1644
%RSD		0.2928	0.3625	0.0846	1.2	0.6530

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:57	0.0061	0.0367	92.8%	0.0112	0.0066	0.0920	0.0070	0.0060
2	13:30:57	0.0031	0.0298	94.9%	0.0001	-0.0004	0.0664	0.0106	0.0023
3	13:31:57	0.0128	0.0284	94.0%	0.0053	0.0028	0.0471	0.0096	0.0011
x		0.0073	0.0317	93.9%	0.0055	0.0030	0.0685	0.0091	0.0031
σ		0.0049	0.0045	1.1%	0.0056	0.0035	0.0225	0.0018	0.0025
%RSD		67.3801	14.0803	1.2	100.8274	116.0738	32.8742	20.3206	81.1302

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:57	0.0125	0.2986	-1.2409	-0.0198	-0.0009	-0.0064	-0.0217	-0.0018
2	13:30:57	0.0078	-0.4395	-1.0644	-0.0350	-0.0200	0.0031	-0.0116	0.0148
3	13:31:57	0.0069	0.0767	-1.2002	-0.0460	-0.0116	0.0146	0.0269	0.0267
x		0.0091	-0.0214	-1.1685	-0.0336	-0.0108	0.0038	-0.0022	0.0132
σ		0.0030	0.3787	0.0924	0.0131	0.0096	0.0105	0.0256	0.0143
%RSD		32.9804	1768.9046	7.9114	39.1385	88.3945	276.8459	1187.8597	107.9647

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:57	95.2%	-0.0378	0.0034	-0.5078	-0.1642	94.5%	0.1210	0.1101
2	13:30:57	96.5%	-0.1238	0.0439	-0.9618	-0.4989	97.2%	0.1266	0.1265
3	13:31:57	96.3%	-0.0509	0.1595	-0.1739	-0.1064	97.7%	0.1127	0.1035
x		96.0%	-0.0708	0.0689	-0.5478	-0.2565	96.5%	0.1201	0.1134
σ		0.7%	0.0463	0.0810	0.3955	0.2119	1.7%	0.0070	0.0119
%RSD		0.7	65.4425	117.4537	72.1844	82.5944	1.8	5.8054	10.4695

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:57	0.1163	95.5%	0.0106	0.0077	0.0047	-0.0051	-0.0008	96.0%
2	13:30:57	0.1177	97.5%	0.0117	0.0143	0.0039	0.0011	-0.0008	97.4%
3	13:31:57	0.0825	97.3%	0.0081	0.0073	0.0005	-0.0067	-0.0016	97.7%
x		0.1055	96.7%	0.0102	0.0098	0.0030	-0.0036	-0.0011	97.0%
σ		0.0199	1.1%	0.0018	0.0039	0.0022	0.0042	0.0005	0.9%
%RSD		18.9096	1.1	17.9981	40.0016	72.4444	116.4677	42.9513	0.9

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:57	0.0053	0.0080	0.0068	0.0083	0.0038	96.3%	0.0025	0.0040
2	13:30:57	0.0046	0.0076	0.0073	0.0085	0.0086	99.0%	0.0015	0.0029
3	13:31:57	0.0062	0.0062	0.0073	0.0095	0.0078	99.0%	0.0027	0.0030
x		0.0054	0.0073	0.0071	0.0087	0.0067	98.1%	0.0022	0.0033
σ		0.0008	0.0010	0.0003	0.0006	0.0025	1.5%	0.0007	0.0006
%RSD		14.8218	13.0178	4.4731	7.3992	37.7181	1.5	29.5609	19.4459

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:29:57	0.0044	-0.0007	0.0023	97.7%	0.0047
2	13:30:57	0.0024	0.0042	0.0034	99.8%	0.0037
3	13:31:57	0.0055	0.0041	0.0043	99.0%	0.0041
x		0.0041	0.0025	0.0033	98.8%	0.0042
σ		0.0016	0.0028	0.0010	1.0%	0.0005
%RSD		38.9121	110.7603	29.6582	1.1	12.0594

K1007632-001 08/05/2010 01:34:37 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:37	0.0012	6.0666	86.8%	0.2821	0.4001	6.8856	283.6480	0.6759
2	13:35:37	0.0012	5.9743	86.2%	0.2880	0.4163	6.1361	286.2051	0.6799
3	13:36:37	0.0084	5.9154	87.5%	0.2811	0.4167	5.7083	282.5754	0.6587
x		0.0036	5.9854	86.8%	0.2838	0.4110	6.2433	284.1428	0.6715
σ		0.0042	0.0762	0.6%	0.0037	0.0095	0.5960	1.8648	0.0113
%RSD		115.6962	1.2729	0.7	1.3171	2.3035	9.5456	0.6563	1.6770

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:37	21.0800	36.8682	46.0343	41.1545	36.9599	94.9688	112.6020	108.6266
2	13:35:37	20.5807	34.7185	67.6019	42.3903	37.2019	95.0572	113.0192	108.3810
3	13:36:37	20.5176	34.4671	85.0444	42.0894	36.2199	93.4857	110.0536	106.4607
x		20.7261	35.3512	66.2268	41.8781	36.7939	94.5039	111.8916	107.8228
σ		0.3081	1.3197	19.5414	0.6444	0.5116	0.8829	1.6054	1.1860
%RSD		1.4867	3.7332	29.5067	1.5389	1.3904	0.9342	1.4348	1.0999

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:37	83.3%	4.3750	4.7896	6.1598	11.7235	85.5%	5.8825	5.6361
2	13:35:37	83.7%	3.8770	4.3833	10.2259	9.8215	87.0%	6.1546	5.9540
3	13:36:37	85.3%	3.8814	4.3557	13.6272	10.9245	88.1%	6.2693	5.8945
x		84.1%	4.0445	4.5095	10.0043	10.8231	86.9%	6.1022	5.8282
σ		1.1%	0.2862	0.2429	3.7386	0.9550	1.3%	0.1987	0.1690
%RSD		1.3	7.0774	5.3871	37.3701	8.8241	1.5	3.2561	2.8995

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:37	5.6521	81.2%	0.0020	0.0001	0.0621	0.0512	0.0676	85.3%
2	13:35:37	5.6363	82.6%	0.0050	0.0066	0.0722	0.0561	0.0716	87.0%
3	13:36:37	5.9045	81.1%	0.0050	0.0043	0.0568	0.0637	0.0655	86.7%
x		5.7310	81.6%	0.0040	0.0036	0.0637	0.0570	0.0682	86.3%
σ		0.1505	0.8%	0.0017	0.0033	0.0078	0.0063	0.0031	0.9%
%RSD		2.6261	1.0	42.9639	90.8259	12.2882	11.1085	4.4894	1.1

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:37	0.3153	0.3235	705.6044	715.1546	735.1768	91.5%	0.0246	0.0266
2	13:35:37	0.3212	0.3050	704.5451	711.5035	726.4923	93.7%	0.0276	0.0318
3	13:36:37	0.3234	0.3024	707.2305	714.7987	732.9398	94.7%	0.0260	0.0322
x		0.3200	0.3103	705.7933	713.8189	731.5363	93.3%	0.0261	0.0302
σ		0.0042	0.0115	1.3526	2.0131	4.5092	1.6%	0.0015	0.0032
%RSD		1.3199	3.7109	0.1916	0.2820	0.6164	1.7	5.7332	10.4469

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:34:37	18.8185	21.1315	20.2331	92.9%	0.8464
2	13:35:37	18.8925	21.1572	20.2458	94.7%	0.8276
3	13:36:37	18.5661	20.9229	19.9901	94.8%	0.8374
x		18.7590	21.0705	20.1563	94.1%	0.8371
σ		0.1712	0.1285	0.1441	1.1%	0.0094
%RSD		0.9124	0.6098	0.7151	1.1	1.1236

K1007632-002 08/05/2010 01:39:26 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:26	0.0008	20.8801	90.9%	1.6670	0.4610	6.0010	433.5783	0.8162
2	13:40:26	0.0007	20.7315	91.6%	1.7268	0.4327	5.4339	431.6305	0.8188
3	13:41:25	-0.0022	20.7682	93.3%	1.7339	0.4546	5.4534	432.7910	0.8031
x		-0.0002	20.7933	91.9%	1.7092	0.4494	5.6294	432.6666	0.8127
σ		0.0017	0.0774	1.2%	0.0367	0.0149	0.3219	0.9799	0.0085
%RSD		689.6168	0.3722	1.3	2.1495	3.3108	5.7179	0.2265	1.0408

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:26	5.5408	20.4861	114.8183	9.6628	1.0454	5.0069	29.5846	23.4137
2	13:40:26	5.3334	19.2586	125.2353	10.1110	1.1321	5.0399	29.0307	22.3505
3	13:41:25	5.4562	18.7117	131.9964	10.1528	1.0942	5.0238	29.2488	22.7109
x		5.4435	19.4855	124.0167	9.9755	1.0906	5.0235	29.2880	22.8250
σ		0.1043	0.9087	8.6537	0.2717	0.0435	0.0165	0.2790	0.5407
%RSD		1.9155	4.6635	6.9778	2.7232	3.9850	0.3287	0.9526	2.3688

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:26	90.2%	5.2985	4.2813	24.5982	12.9948	90.1%	61.4413	60.4607
2	13:40:26	91.5%	5.4956	3.6388	28.1593	13.1896	92.3%	60.8021	60.6547
3	13:41:25	93.0%	5.2468	4.0012	31.0347	12.4556	92.7%	61.5849	61.2676
x		91.6%	5.3470	3.9738	27.9307	12.8800	91.7%	61.2761	60.7943
σ		1.4%	0.1313	0.3221	3.2243	0.3802	1.4%	0.4168	0.4212
%RSD		1.5	2.4555	8.1055	11.5440	2.9521	1.5	0.6801	0.6928

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:26	61.0978	83.6%	-0.0027	-0.0011	0.0331	0.0066	0.0086	88.3%
2	13:40:26	60.3433	86.0%	-0.0022	-0.0023	0.0264	0.0080	0.0072	90.5%
3	13:41:25	60.7240	87.2%	0.0002	-0.0012	0.0332	0.0094	0.0105	91.4%
x		60.7217	85.6%	-0.0016	-0.0016	0.0309	0.0080	0.0088	90.1%
σ		0.3773	1.8%	0.0015	0.0007	0.0039	0.0014	0.0016	1.6%
%RSD		0.6213	2.1	97.9134	44.2382	12.7282	17.5420	18.7359	1.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:39:26	0.4152	0.4429	831.7970	837.9435	855.8582	93.5%	0.0154	0.0149
2	13:40:26	0.4019	0.4083	822.4189	833.0828	844.9944	96.4%	0.0127	0.0180
3	13:41:25	0.4050	0.4226	822.5293	838.0450	846.0584	96.8%	0.0158	0.0158
x		0.4074	0.4246	825.5817	836.3571	848.9703	95.6%	0.0147	0.0162
σ		0.0069	0.0174	5.3829	2.8361	5.9887	1.8%	0.0017	0.0016
%RSD		1.7033	4.0881	0.6520	0.3391	0.7054	1.9	11.4579	9.9903

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:39:26	1.8732	2.0401	1.9785	93.4%	0.8735
2	13:40:26	1.8716	2.0614	1.9944	96.7%	0.8516
3	13:41:25	1.8740	2.1037	2.0089	96.4%	0.8581
x		1.8729	2.0684	1.9939	95.5%	0.8611
σ		0.0012	0.0324	0.0152	1.8%	0.0112
%RSD		0.0644	1.5659	0.7618	1.9	1.3024

Cl Correction = -0.0006

K1007395-005 08/05/2010 01:46:15 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:15	-0.0037	18.5873	95.1%	3.9930	0.3293	3.3044	1.0138	1.0302
2	13:47:15	-0.0009	17.1118	94.4%	3.8605	0.3207	3.5960	1.0041	0.9972
3	13:48:15	0.0018	18.0730	94.2%	3.9384	0.3041	3.5064	0.9544	0.9609
x		-0.0009	17.9240	94.6%	3.9306	0.3180	3.4689	0.9908	0.9961
σ		0.0027	0.7490	0.5%	0.0666	0.0128	0.1494	0.0319	0.0347
%RSD		300.9785	4.1785	0.5	1.6942	4.0316	4.3067	3.2188	3.4790

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:15	7.8478	55.1966	40.3058	3.3147	1.7258	5.8915	6.9572	6.3439
2	13:47:15	7.6937	48.9475	32.1239	2.9955	1.7150	5.8173	6.3524	6.3165
3	13:48:15	7.6570	49.0325	25.8299	2.7014	1.6605	5.8198	7.0388	6.3604
x		7.7328	51.0589	32.7532	3.0039	1.7004	5.8428	6.7828	6.3403
σ		0.1012	3.5836	7.2584	0.3067	0.0350	0.0421	0.3749	0.0222
%RSD		1.3090	7.0185	22.1610	10.2105	2.0610	0.7208	5.5277	0.3502

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:15	87.5%	11.3884	18.8217	20.1518	18.1072	90.2%	8.8727	8.7648
2	13:47:15	88.0%	10.8028	19.2469	17.7682	16.9413	91.3%	8.8356	8.7013
3	13:48:15	87.6%	10.9249	19.7421	16.8952	17.2233	91.2%	8.7033	8.8354
x		87.7%	11.0387	19.2703	18.2717	17.4240	90.9%	8.8039	8.7672
σ		0.3%	0.3089	0.4607	1.6857	0.6083	0.6%	0.0891	0.0671
%RSD		0.3	2.7987	2.3905	9.2256	3.4912	0.6	1.0116	0.7655

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:15	8.8379	85.8%	-0.0014	-0.0019	0.0194	0.0120	0.0173	89.1%
2	13:47:15	8.7457	86.9%	0.0000	-0.0014	0.0197	0.0037	0.0154	90.5%
3	13:48:15	8.7366	86.6%	-0.0003	-0.0014	0.0184	0.0002	0.0141	89.9%
x		8.7734	86.4%	-0.0006	-0.0016	0.0192	0.0053	0.0156	89.8%
σ		0.0560	0.6%	0.0008	0.0003	0.0007	0.0061	0.0016	0.7%
%RSD		0.6382	0.7	131.7941	19.8176	3.5703	114.4771	10.3840	0.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:15	0.1409	0.1480	32.7909	32.9520	33.1183	95.5%	0.0052	0.0013
2	13:47:15	0.1457	0.1405	32.7351	33.0193	33.1050	98.2%	0.0033	0.0026
3	13:48:15	0.1492	0.1497	32.9260	32.8471	33.1439	98.0%	0.0054	0.0025
x		0.1453	0.1460	32.8173	32.9395	33.1224	97.2%	0.0046	0.0021
σ		0.0041	0.0049	0.0981	0.0868	0.0198	1.5%	0.0011	0.0007
%RSD		2.8545	3.3514	0.2990	0.2635	0.0597	1.5	24.7557	34.1225

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:46:15	0.1269	0.1457	0.1379	95.0%	9.9533
2	13:47:15	0.1304	0.1418	0.1410	97.7%	9.9079
3	13:48:15	0.1294	0.1555	0.1403	97.4%	9.9987
x		0.1289	0.1477	0.1397	96.7%	9.9533
σ		0.0018	0.0071	0.0016	1.5%	0.0454
%RSD		1.4064	4.7844	1.1401	1.5	0.4562

K1007395-005D 08/05/2010 01:51:24 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:24	0.0018	16.8560	94.4%	4.0616	0.3117	3.4907	0.8581	0.9747
2	13:52:25	-0.0063	17.3141	92.1%	3.8448	0.3016	3.9023	0.8945	0.9741
3	13:53:25	-0.0049	16.6482	91.2%	3.8718	0.2859	3.8945	0.9245	0.9873
x		-0.0031	16.9394	92.5%	3.9261	0.2997	3.7625	0.8924	0.9787
σ		0.0043	0.3407	1.7%	0.1182	0.0130	0.2354	0.0332	0.0074
%RSD		138.6487	2.0112	1.8	3.0099	4.3453	6.2567	3.7236	0.7608

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:24	7.6373	52.8118	17.7829	2.3791	1.7378	4.8834	5.3552	5.4429
2	13:52:25	7.7515	47.0179	16.9629	2.2855	1.7195	4.8134	5.4785	5.3176
3	13:53:25	7.4465	45.2906	15.6839	2.2533	1.7192	4.7250	5.6845	5.4950
x		7.6118	48.3734	16.8099	2.3059	1.7255	4.8073	5.5061	5.4185
σ		0.1541	3.9396	1.0578	0.0654	0.0107	0.0793	0.1663	0.0912
%RSD		2.0242	8.1441	6.2928	2.8348	0.6182	1.6504	3.0211	1.6830

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:24	87.7%	11.5188	18.9437	16.8377	18.3734	90.7%	8.6241	8.6920
2	13:52:25	88.0%	10.9814	19.1792	16.2559	16.5351	91.5%	8.5392	8.5847
3	13:53:25	86.4%	10.8065	19.7137	15.2376	17.0969	90.5%	8.3609	8.5106
x		87.3%	11.1022	19.2788	16.1104	17.3351	90.9%	8.5080	8.5957
σ		0.9%	0.3712	0.3945	0.8099	0.9420	0.5%	0.1343	0.0912
%RSD		1.0	3.3434	2.0465	5.0271	5.4339	0.5	1.5787	1.0608

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:24	8.7040	85.6%	0.0003	-0.0027	0.0296	0.0087	0.0160	89.4%
2	13:52:25	8.6753	85.9%	-0.0033	-0.0002	0.0176	0.0044	0.0150	90.8%
3	13:53:25	8.7470	84.5%	-0.0006	-0.0019	0.0200	0.0060	0.0125	90.6%
x		8.7088	85.4%	-0.0012	-0.0016	0.0224	0.0063	0.0145	90.3%
σ		0.0361	0.7%	0.0019	0.0013	0.0063	0.0022	0.0018	0.7%
%RSD		0.4147	0.8	154.4401	78.0006	28.3662	34.3357	12.4791	0.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:51:24	0.1391	0.1418	33.1328	32.8866	33.1161	97.7%	0.0033	0.0011
2	13:52:25	0.1443	0.1465	32.8928	32.4405	32.9043	99.6%	0.0032	0.0032
3	13:53:25	0.1548	0.1502	32.8672	32.5289	32.6361	98.0%	0.0037	0.0030
x		0.1461	0.1462	32.9643	32.6187	32.8855	98.4%	0.0034	0.0024
σ		0.0080	0.0042	0.1465	0.2362	0.2406	1.1%	0.0003	0.0012
%RSD		5.4833	2.8494	0.4444	0.7240	0.7316	1.1	7.7699	48.5516

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:51:24	0.1273	0.1495	0.1394	96.8%	9.9287
2	13:52:25	0.1220	0.1555	0.1455	99.0%	9.8088
3	13:53:25	0.1281	0.1365	0.1373	99.3%	9.7754
x		0.1258	0.1472	0.1407	98.4%	9.8377
σ		0.0033	0.0097	0.0043	1.4%	0.0806
%RSD		2.6477	6.6219	3.0216	1.4	0.8193

K1007395-005S 08/05/2010 01:56:25 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:25	19.0809	34.6709	90.1%	23.1414	18.9757	22.1361	20.1425	19.7205
2	13:57:25	18.7794	34.3892	88.7%	22.5737	18.7001	22.4481	20.0030	19.1999
3	13:58:25	18.5171	33.7341	88.1%	22.3531	18.6628	22.0394	20.0780	19.3179
X		18.7925	34.2647	89.0%	22.6894	18.7795	22.2079	20.0745	19.4128
σ		0.2821	0.4807	1.1%	0.4067	0.1709	0.2136	0.0698	0.2729
%RSD		1.5011	1.4028	1.2	1.7924	0.9100	0.9617	0.3477	1.4059

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:25	26.2546	71.9614	31.4325	20.5652	19.6962	22.8373	23.0084	23.4136
2	13:57:25	25.1000	66.3888	30.2064	19.9922	19.4239	22.7281	24.0006	23.0409
3	13:58:25	25.3947	71.8164	30.6904	20.0277	19.4146	22.3620	23.4709	23.1691
X		25.5831	70.0555	30.7764	20.1950	19.5115	22.6424	23.4933	23.2078
σ		0.5999	3.1763	0.6176	0.3211	0.1599	0.2490	0.4965	0.1894
%RSD		2.3450	4.5340	2.0067	1.5897	0.8198	1.0996	2.1132	0.8160

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:25	84.6%	30.2561	39.1727	35.7708	35.9862	88.5%	29.1623	28.8796
2	13:57:25	85.2%	29.9708	38.5370	35.1464	35.2502	88.9%	28.7798	28.8729
3	13:58:25	85.0%	30.7888	36.3810	34.8201	35.5586	88.5%	28.7669	29.0733
X		84.9%	30.3385	38.0302	35.2458	35.5983	88.6%	28.9030	28.9419
σ		0.3%	0.4152	1.4632	0.4831	0.3696	0.2%	0.2246	0.1138
%RSD		0.4	1.3686	3.8476	1.3706	1.0383	0.2	0.7772	0.3933

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:25	29.5114	84.3%	19.4165	19.5067	19.7902	18.6543	19.1931	89.0%
2	13:57:25	29.4035	84.6%	19.2349	19.1802	19.7074	18.5538	19.0661	89.3%
3	13:58:25	29.4217	83.8%	19.2852	19.1639	19.9897	18.7849	19.1611	88.8%
X		29.4455	84.2%	19.3122	19.2836	19.8291	18.6643	19.1401	89.0%
σ		0.0578	0.4%	0.0938	0.1934	0.1451	0.1159	0.0661	0.3%
%RSD		0.1962	0.5	0.4855	1.0030	0.7318	0.6210	0.3451	0.3

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:56:25	20.5115	20.5480	52.7172	52.4491	53.0522	96.6%	19.2019	19.0606
2	13:57:25	20.3487	20.2114	52.0662	51.8811	52.7138	98.3%	18.9570	18.8922
3	13:58:25	20.5858	20.3633	52.1787	52.1029	52.8202	98.4%	19.0385	18.8791
X		20.4820	20.3742	52.3207	52.1444	52.8621	97.8%	19.0658	18.9440
σ		0.1213	0.1686	0.3479	0.2863	0.1730	1.0%	0.1247	0.1012
%RSD		0.5922	0.8274	0.6650	0.5490	0.3273	1.0	0.6542	0.5343

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	13:56:25	19.0344	19.0420	19.1130	98.5%	30.0433
2	13:57:25	18.8984	18.9471	18.9415	99.4%	29.6807
3	13:58:25	18.9451	19.0678	19.0229	99.1%	29.9859
X		18.9593	19.0190	19.0258	99.0%	29.9033
σ		0.0691	0.0636	0.0858	0.5%	0.1949
%RSD		0.3644	0.3343	0.4508	0.5	0.6519

K1007395-001 08/05/2010 02:02:17 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:17	-0.0019	33.3295	88.0%	3.2363	2.0763	4.9503	2.6339	1.7016
2	14:03:17	0.0028	33.4991	85.9%	3.2888	2.1497	4.9932	2.6398	1.6892
3	14:04:17	0.0013	30.2221	85.6%	3.3037	2.1185	4.8576	2.7270	1.6971
x		0.0007	32.3502	86.5%	3.2763	2.1148	4.9337	2.6669	1.6960
σ		0.0024	1.8450	1.3%	0.0354	0.0369	0.0693	0.0521	0.0063
%RSD		326.2351	5.7031	1.5	1.0812	1.7427	1.4051	1.9549	0.3690

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:17	1.4377	31.3980	3.7535	1.5616	1.3035	5.1928	6.8642	6.3980
2	14:03:17	1.4766	27.7326	4.3901	1.6707	1.2757	5.3393	6.4629	6.2922
3	14:04:17	1.3701	24.1915	4.0682	1.5952	1.3040	5.3104	6.8360	6.1440
x		1.4281	27.7740	4.0706	1.6092	1.2944	5.2808	6.7210	6.2781
σ		0.0539	3.6035	0.3183	0.0559	0.0162	0.0776	0.2240	0.1276
%RSD		3.7722	12.9742	7.8201	3.4742	1.2497	1.4693	3.3330	2.0325

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:17	84.0%	4.6385	2.5311	-0.1414	1.1578	86.5%	4.4522	4.5268
2	14:03:17	83.1%	4.7738	1.9175	0.3409	1.5824	86.7%	4.4317	4.4092
3	14:04:17	82.6%	4.6927	2.2386	-0.3214	1.3941	85.4%	4.4137	4.4099
x		83.2%	4.7017	2.2290	-0.0406	1.3781	86.2%	4.4325	4.4486
σ		0.7%	0.0681	0.3069	0.3425	0.2127	0.7%	0.0193	0.0677
%RSD		0.9	1.4479	13.7694	842.5302	15.4363	0.9	0.4344	1.5215

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:17	4.5413	83.3%	-0.0013	-0.0013	0.0124	-0.0023	0.0028	87.1%
2	14:03:17	4.4911	83.6%	0.0004	-0.0003	0.0131	-0.0009	0.0019	87.2%
3	14:04:17	4.4867	82.1%	0.0015	0.0038	0.0139	-0.0008	0.0043	87.4%
x		4.5064	83.0%	0.0002	0.0008	0.0131	-0.0013	0.0030	87.2%
σ		0.0303	0.8%	0.0014	0.0027	0.0008	0.0009	0.0012	0.2%
%RSD		0.6732	1.0	642.9989	353.2552	5.9058	64.8137	40.2189	0.2

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:02:17	0.1937	0.1947	54.4539	53.9111	54.4468	93.7%	0.0157	0.0138
2	14:03:17	0.1860	0.1857	53.7607	53.9063	54.6728	96.0%	0.0164	0.0141
3	14:04:17	0.1824	0.1936	53.3683	53.3274	54.2606	95.3%	0.0157	0.0139
x		0.1873	0.1913	53.8609	53.7149	54.4600	95.0%	0.0159	0.0139
σ		0.0058	0.0049	0.5497	0.3356	0.2064	1.1%	0.0004	0.0002
%RSD		3.0767	2.5809	1.0206	0.6248	0.3790	1.2	2.4585	1.2737

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:02:17	0.0882	0.1028	0.0966	96.0%	7.3754
2	14:03:17	0.0852	0.0883	0.0932	98.1%	7.3954
3	14:04:17	0.0878	0.1039	0.0967	97.8%	7.3372
x		0.0871	0.0983	0.0955	97.3%	7.3694
σ		0.0016	0.0087	0.0020	1.1%	0.0296
%RSD		1.8778	8.8584	2.0687	1.1	0.4011

K1007395-002 08/05/2010 02:07:02 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:02	0.0041	34.4455	86.8%	3.0053	0.2586	4.5129	1.9067	0.3104
2	14:08:02	-0.0017	36.7396	86.0%	3.0317	0.2232	4.7035	1.9336	0.2912
3	14:09:02	0.0088	36.8159	85.7%	3.0166	0.2504	4.8838	1.8983	0.2814
x		0.0037	36.0003	86.2%	3.0179	0.2441	4.7001	1.9129	0.2943
σ		0.0053	1.3470	0.6%	0.0132	0.0185	0.1855	0.0185	0.0148
%RSD		141.5206	3.7418	0.6	0.4387	7.5798	3.9465	0.9647	5.0116
Run	**Time**	**60Ni**	**61Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:02	3.8244	36.5881	4.9866	4.3409	3.9902	7.7758	9.4382	9.2032
2	14:08:02	3.6479	36.7590	5.4811	4.2407	3.8962	7.7673	9.5044	8.9891
3	14:09:02	3.7364	32.7354	5.7684	4.2763	3.9779	7.7724	9.2162	9.0186
x		3.7362	35.3609	5.4120	4.2860	3.9548	7.7718	9.3863	9.0703
σ		0.0883	2.2753	0.3955	0.0508	0.0511	0.0043	0.1510	0.1160
%RSD		2.3620	6.4345	7.3070	1.1843	1.2920	0.0548	1.6086	1.2793
Run	**Time**	**71Ga**	**75As**	**77Se**	**78Se**	**82Se**	**89Y**	**95Mo**	**97Mo**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:02	84.4%	4.8096	3.4572	-0.4951	0.9553	87.9%	19.7771	19.7328
2	14:08:02	84.2%	5.0382	3.2663	-0.1019	2.0782	89.3%	19.8005	20.1538
3	14:09:02	83.1%	5.0004	2.5006	-0.3042	1.1733	88.3%	19.8511	19.9287
x		83.9%	4.9494	3.0747	-0.3004	1.4023	88.5%	19.8096	19.9384
σ		0.7%	0.1226	0.5063	0.1966	0.5955	0.7%	0.0378	0.2107
%RSD		0.9	2.4761	16.4662	65.4562	42.4658	0.8	0.1910	1.0566
Run	**Time**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**112Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:02	20.1445	83.7%	0.0059	0.0035	0.0481	0.0228	0.0377	88.2%
2	14:08:02	20.1050	83.9%	0.0083	0.0050	0.0462	0.0250	0.0352	89.1%
3	14:09:02	20.0660	83.7%	0.0076	0.0083	0.0425	0.0282	0.0331	89.1%
x		20.1052	83.8%	0.0072	0.0056	0.0456	0.0253	0.0353	88.8%
σ		0.0393	0.1%	0.0013	0.0025	0.0028	0.0027	0.0023	0.5%
%RSD		0.1953	0.1	17.4150	44.5834	6.1863	10.8570	6.5743	0.6
Run	**Time**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**138Ba**	**175Lu**	**203Tl**	**205Tl**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:02	0.2493	0.2570	64.1923	63.9077	65.0601	95.1%	0.0090	0.0071
2	14:08:02	0.2638	0.2518	63.8437	63.9673	64.8849	97.5%	0.0092	0.0076
3	14:09:02	0.2547	0.2588	63.9885	63.8849	64.9103	98.0%	0.0089	0.0066
x		0.2559	0.2558	64.0082	63.9200	64.9518	96.9%	0.0090	0.0071
σ		0.0073	0.0036	0.1751	0.0426	0.0947	1.5%	0.0002	0.0005
%RSD		2.8652	1.4248	0.2736	0.0666	0.1458	1.6	1.6790	6.8820
Run	**Time**	**206Pb**	**207Pb**	**208Pb**	**232Th**	**238U**			
		ppb	ppb	ppb	ppb	ppb			
1	14:07:02	0.1487	0.1530	0.1542	97.6%	39.6974			
2	14:08:02	0.1482	0.1598	0.1558	98.9%	39.6536			
3	14:09:02	0.1541	0.1557	0.1549	100.1%	39.5405			
x		0.1504	0.1562	0.1550	98.9%	39.6305			
σ		0.0033	0.0035	0.0008	1.3%	0.0810			
%RSD		2.1650	2.2126	0.4950	1.3	0.2043			

Cl Correction = 0.0354

K1007395-003 08/05/2010 02:12:40 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:40	0.0028	43.3705	85.2%	4.1977	0.2358	3.7183	1.8520	1.1881
2	14:13:40	0.0063	43.1454	82.6%	4.1606	0.2809	3.9732	1.8014	1.1756
3	14:14:40	0.0047	43.8457	82.6%	4.1204	0.2452	3.9661	1.8280	1.1581
x		0.0046	43.4538	83.4%	4.1596	0.2539	3.8859	1.8271	1.1739
σ		0.0017	0.3575	1.5%	0.0387	0.0238	0.1451	0.0253	0.0151
%RSD		37.2730	0.8227	1.8	0.9305	9.3748	3.7351	1.3845	1.2836

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:40	4.4301	40.5141	6.8724	3.3285	2.8504	8.2879	8.2531	8.6535
2	14:13:40	4.2410	42.4719	7.7033	3.2376	2.8685	8.0906	8.1571	8.5670
3	14:14:40	4.2566	36.7905	8.7399	3.3209	2.8189	8.1287	8.6734	8.6741
x		4.3093	39.9255	7.7719	3.2957	2.8459	8.1691	8.3612	8.6315
σ		0.1050	2.8860	0.9357	0.0504	0.0251	0.1046	0.2746	0.0568
%RSD		2.4360	7.2286	12.0393	1.5303	0.8818	1.2808	3.2841	0.6586

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:40	79.5%	11.2351	11.4406	8.1233	9.6183	83.7%	7.6287	7.5769
2	14:13:40	80.7%	11.2591	10.9460	7.5792	9.6918	83.8%	7.7328	7.7915
3	14:14:40	79.8%	11.1182	10.4075	7.6747	8.7975	83.8%	7.6237	7.6870
x		80.0%	11.2041	10.9313	7.7924	9.3692	83.8%	7.6617	7.6852
σ		0.6%	0.0754	0.5167	0.2905	0.4965	0.1%	0.0616	0.1073
%RSD		0.8	0.6730	4.7268	3.7284	5.2989	0.1	0.8041	1.3966

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:40	7.7634	80.1%	-0.0021	-0.0024	0.0074	-0.0005	0.0067	84.8%
2	14:13:40	7.8043	80.3%	-0.0014	-0.0026	0.0096	-0.0021	0.0105	86.9%
3	14:14:40	7.7102	80.4%	-0.0020	-0.0042	0.0119	-0.0046	0.0092	86.3%
x		7.7593	80.3%	-0.0018	-0.0031	0.0096	-0.0024	0.0088	86.0%
σ		0.0472	0.1%	0.0004	0.0010	0.0022	0.0021	0.0019	1.1%
%RSD		0.6085	0.2	21.9976	33.1204	23.2263	86.1106	22.1315	1.2

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:12:40	0.1472	0.1558	25.5027	25.3095	25.3596	93.5%	0.0041	0.0038
2	14:13:40	0.1550	0.1632	25.1837	24.9731	25.0752	96.6%	0.0027	0.0037
3	14:14:40	0.1570	0.1720	25.0563	25.0148	25.3113	96.3%	0.0044	0.0028
x		0.1531	0.1637	25.2476	25.0991	25.2487	95.5%	0.0037	0.0034
σ		0.0052	0.0081	0.2299	0.1833	0.1522	1.7%	0.0009	0.0005
%RSD		3.3999	4.9365	0.9107	0.7304	0.6027	1.8	23.5136	15.3697

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:12:40	0.1896	0.2247	0.2053	95.7%	13.9932
2	14:13:40	0.1893	0.1948	0.1970	98.2%	13.9630
3	14:14:40	0.1820	0.2050	0.1955	98.7%	13.9518
x		0.1870	0.2081	0.1993	97.6%	13.9694
σ		0.0043	0.0152	0.0053	1.6%	0.0214
%RSD		2.2940	7.3019	2.6584	1.6	0.1533

K1007395-004 08/05/2010 02:17:27 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:27	0.0001	30.8236	82.5%	4.1453	0.4076	3.8822	1.7500	1.1625
2	14:18:27	0.0016	30.6105	82.7%	4.1504	0.4172	4.0182	1.7178	1.1612
3	14:19:27	0.0049	30.3853	81.8%	4.1363	0.3875	3.8742	1.7399	1.1408
x		0.0022	30.6065	82.3%	4.1440	0.4041	3.9249	1.7359	1.1549
σ		0.0024	0.2192	0.5%	0.0072	0.0152	0.0810	0.0164	0.0122
%RSD		111.8733	0.7162	0.6	0.1726	3.7492	2.0630	0.9472	1.0557
Run	**Time**	**60Ni**	**61Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:27	4.8934	40.4304	9.7756	3.5120	2.8708	8.6332	8.4519	8.7385
2	14:18:27	4.6649	38.5061	10.8897	3.4338	2.8995	8.3888	8.8164	8.7674
3	14:19:27	4.5846	38.7944	11.3869	3.4785	2.8617	8.5190	8.9626	8.7602
x		4.7143	39.2436	10.6840	3.4747	2.8773	8.5137	8.7436	8.7554
σ		0.1602	1.0378	0.8251	0.0393	0.0197	0.1223	0.2630	0.0150
%RSD		3.3986	2.6445	7.7226	1.1297	0.6857	1.4365	3.0082	0.1717
Run	**Time**	**71Ga**	**75As**	**77Se**	**78Se**	**82Se**	**89Y**	**95Mo**	**97Mo**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:27	79.1%	11.3521	11.5521	7.7501	8.6123	83.2%	7.5524	7.7280
2	14:18:27	79.8%	11.2452	10.4689	7.8757	9.6049	84.4%	7.7044	7.7272
3	14:19:27	79.7%	11.2766	11.4497	7.7966	9.6998	83.5%	7.6596	7.6817
x		79.5%	11.2913	11.1569	7.8075	9.3057	83.7%	7.6388	7.7123
σ		0.3%	0.0550	0.5980	0.0635	0.6023	0.6%	0.0781	0.0265
%RSD		0.4	0.4870	5.3601	0.8137	6.4725	0.8	1.0222	0.3439
Run	**Time**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**112Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:27	7.6941	80.0%	-0.0028	-0.0028	0.0137	-0.0047	0.0083	84.7%
2	14:18:27	7.8005	79.9%	-0.0048	-0.0034	0.0120	-0.0022	0.0056	85.8%
3	14:19:27	7.8034	79.5%	-0.0036	-0.0020	0.0112	-0.0007	-0.0012	85.9%
x		7.7660	79.8%	-0.0037	-0.0027	0.0123	-0.0025	0.0042	85.5%
σ		0.0623	0.2%	0.0010	0.0007	0.0013	0.0020	0.0049	0.7%
%RSD		0.8017	0.3	27.6823	26.7119	10.1795	79.8034	116.4994	0.8
Run	**Time**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**138Ba**	**175Lu**	**203Tl**	**205Tl**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:17:27	0.1745	0.1755	25.2926	25.0018	25.3882	94.0%	0.0042	0.0026
2	14:18:27	0.1748	0.1860	25.0033	24.9571	25.1767	95.8%	0.0045	0.0032
3	14:19:27	0.1702	0.1541	25.1351	25.0984	25.1605	95.8%	0.0054	0.0023
x		0.1732	0.1719	25.1437	25.0191	25.2418	95.2%	0.0047	0.0027
σ		0.0026	0.0163	0.1448	0.0722	0.1271	1.1%	0.0006	0.0005
%RSD		1.4773	9.4592	0.5760	0.2886	0.5034	1.1	12.6284	16.5681
Run	**Time**	**206Pb**	**207Pb**	**208Pb**	**232Th**	**238U**			
		ppb	ppb	ppb	ppb	ppb			
1	14:17:27	0.1874	0.2041	0.1997	96.5%	13.7953			
2	14:18:27	0.1957	0.2146	0.2072	97.7%	13.9002			
3	14:19:27	0.1870	0.2067	0.2007	98.3%	13.8978			
x		0.1901	0.2085	0.2025	97.5%	13.8644			
σ		0.0049	0.0055	0.0041	0.9%	0.0599			
%RSD		2.5950	2.6284	2.0230	0.9	0.4317			

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:14	-0.0014	0.6590	101.2%	0.0342	0.1179	0.3966	0.1232	-0.0038
2	14:23:14	-0.0053	0.6571	105.6%	0.0266	0.1075	0.2882	0.1367	-0.0050
3	14:24:15	-0.0053	0.6155	105.9%	0.0211	0.1185	0.2853	0.1364	-0.0024
x		-0.0040	0.6439	104.2%	0.0273	0.1146	0.3234	0.1321	-0.0037
σ		0.0023	0.0246	2.6%	0.0066	0.0062	0.0634	0.0077	0.0013
%RSD		56.8881	3.8166	2.5	24.2049	5.4175	19.6168	5.8179	34.9400

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:14	0.7039	0.5332	5.3895	0.4166	0.2644	2.6325	2.3330	2.6414
2	14:23:14	0.7676	0.7714	5.7939	0.4641	0.2140	2.6422	2.4773	2.5513
3	14:24:15	0.6983	0.7089	5.8967	0.4691	0.2177	2.6242	2.5679	2.5807
x		0.7232	0.6712	5.6934	0.4499	0.2320	2.6330	2.4594	2.5911
σ		0.0385	0.1235	0.2681	0.0290	0.0281	0.0090	0.1185	0.0460
%RSD		5.3234	18.4044	4.7097	6.4470	12.0953	0.3419	4.8189	1.7736

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:14	102.9%	-0.1134	0.0579	-0.2084	-0.4729	104.3%	0.0710	0.0966
2	14:23:14	108.6%	-0.0491	0.1241	-0.2991	-0.1935	109.5%	0.0937	0.0722
3	14:24:15	110.3%	-0.0758	-0.0321	-0.1012	-0.4220	111.1%	0.0698	0.0824
x		107.3%	-0.0794	0.0500	-0.2029	-0.3628	108.3%	0.0782	0.0837
σ		3.9%	0.0323	0.0784	0.0991	0.1488	3.5%	0.0135	0.0123
%RSD		3.6	40.6882	156.8426	48.8489	41.0202	3.2	17.2457	14.6442

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:14	0.0841	104.1%	-0.0048	-0.0046	0.0003	-0.0128	-0.0046	105.3%
2	14:23:14	0.0943	109.8%	-0.0045	-0.0041	-0.0011	-0.0091	-0.0044	112.3%
3	14:24:15	0.0819	111.4%	-0.0049	-0.0038	-0.0023	-0.0095	-0.0064	113.1%
x		0.0868	108.4%	-0.0047	-0.0042	-0.0011	-0.0105	-0.0051	110.2%
σ		0.0066	3.9%	0.0002	0.0004	0.0013	0.0020	0.0011	4.3%
%RSD		7.5987	3.6	5.2576	8.7328	121.3327	19.0555	20.5406	3.9

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:14	-0.0015	-0.0004	0.5887	0.5931	0.5773	105.5%	-0.0073	-0.0052
2	14:23:14	-0.0010	-0.0012	0.5841	0.5818	0.5937	110.6%	-0.0074	-0.0053
3	14:24:15	-0.0013	-0.0013	0.6237	0.5633	0.5889	111.6%	-0.0060	-0.0052
x		-0.0012	-0.0010	0.5988	0.5794	0.5866	109.2%	-0.0069	-0.0052
σ		0.0002	0.0005	0.0217	0.0150	0.0084	3.3%	0.0008	0.0001
%RSD		20.2094	49.0942	3.6222	2.5961	1.4299	3.0	10.8578	1.2836

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:22:14	0.0378	0.0456	0.0418	105.2%	-0.0018
2	14:23:14	0.0391	0.0450	0.0420	109.8%	-0.0019
3	14:24:15	0.0326	0.0479	0.0403	110.9%	-0.0014
x		0.0365	0.0461	0.0414	108.6%	-0.0017
σ		0.0035	0.0015	0.0009	3.0%	0.0002
%RSD		9.4609	3.3104	2.2642	2.8	13.3532

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:45	25.6389	24.7352	103.0%	24.6214	24.7859	24.8229	24.9305	24.4127
2	14:34:45	25.4809	24.7362	102.7%	24.7616	24.6881	24.8237	25.0586	24.4469
3	14:35:45	25.7911	24.9117	102.0%	24.7931	24.6200	24.6965	25.2959	24.5873
x		25.6370	24.7944	102.6%	24.7254	24.6980	24.7810	25.0950	24.4823
σ		0.1551	0.1016	0.5%	0.0914	0.0834	0.0732	0.1854	0.0925
%RSD		0.6051	0.4097	0.5	0.3697	0.3376	0.2953	0.7387	0.3777
Run	**Time**	**60Ni**	**61Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:45	24.8370	25.1747	31.1528	24.5345	24.1234	24.4438	24.0998	23.9869
2	14:34:45	24.6439	24.1385	31.9104	24.8864	24.3535	24.6965	24.1046	24.5588
3	14:35:45	24.5350	24.6200	32.0902	24.6247	24.1922	24.7263	24.6552	24.3654
x		24.6720	24.6444	31.7178	24.6819	24.2231	24.6222	24.2866	24.3037
σ		0.1529	0.5185	0.4975	0.1828	0.1181	0.1552	0.3193	0.2909
%RSD		0.6199	2.1039	1.5685	0.7405	0.4876	0.6304	1.3146	1.1970
Run	**Time**	**71Ga**	**75As**	**77Se**	**78Se**	**82Se**	**89Y**	**95Mo**	**97Mo**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:45	106.4%	24.3437	24.2340	24.4748	23.9270	107.0%	25.0392	24.7230
2	14:34:45	106.6%	24.7929	24.7398	25.5178	25.0472	108.3%	25.1051	25.0581
3	14:35:45	106.6%	24.6311	25.0109	24.9711	24.8852	107.9%	25.2006	24.9191
x		106.5%	24.5892	24.6616	24.9879	24.6198	107.7%	25.1150	24.9001
σ		0.1%	0.2275	0.3943	0.5217	0.6054	0.7%	0.0811	0.1684
%RSD		0.1	0.9252	1.5988	2.0880	2.4590	0.6	0.3231	0.6762
Run	**Time**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**112Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:45	24.7630	107.1%	24.7850	24.7206	24.7071	24.6414	24.6618	111.5%
2	14:34:45	25.1388	107.6%	24.9740	24.9461	24.8060	24.8133	25.0525	112.1%
3	14:35:45	24.9878	107.8%	25.0521	24.9411	25.2974	24.9932	25.1322	113.0%
x		24.9632	107.5%	24.9370	24.8693	24.9369	24.8160	24.9488	112.2%
σ		0.1891	0.4%	0.1373	0.1288	0.3162	0.1759	0.2518	0.8%
%RSD		0.7576	0.3	0.5507	0.5179	1.2679	0.7090	1.0091	0.7
Run	**Time**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**138Ba**	**175Lu**	**203Tl**	**205Tl**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:45	24.7194	24.7691	24.7233	24.7408	24.8252	108.6%	24.8882	24.7353
2	14:34:45	24.9882	25.0488	24.9862	24.8665	24.9227	110.2%	24.8208	24.7700
3	14:35:45	24.9591	24.8556	24.9593	24.8213	25.0139	110.7%	25.0752	24.8744
x		24.8889	24.8912	24.8896	24.8095	24.9206	109.8%	24.9281	24.7932
σ		0.1475	0.1432	0.1446	0.0637	0.0944	1.1%	0.1318	0.0724
%RSD		0.5926	0.5754	0.5812	0.2566	0.3788	1.0	0.5287	0.2919
Run	**Time**	**206Pb**	**207Pb**	**208Pb**	**232Th**	**238U**			
		ppb	ppb	ppb	ppb	ppb			
1	14:33:45	24.9318	24.9582	24.9452	108.0%	24.9031			
2	14:34:45	24.8467	25.0846	24.9179	110.3%	24.9176			
3	14:35:45	25.0117	24.9020	24.9869	110.2%	25.0570			
x		24.9301	24.9816	24.9500	109.5%	24.9593			
σ		0.0826	0.0935	0.0348	1.3%	0.0850			
%RSD		0.3311	0.3744	0.1393	1.2	0.3405			

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:25	0.0037	0.0464	100.9%	-0.0052	0.0148	0.2540	0.0098	0.0034
2	14:40:25	0.0024	0.0532	102.1%	0.0237	0.0366	0.1473	0.0070	0.0031
3	14:41:25	0.0036	0.0324	102.1%	0.0063	-0.0007	0.1644	0.0092	0.0033
x		0.0032	0.0440	101.7%	0.0083	0.0169	0.1886	0.0087	0.0033
σ		0.0008	0.0106	0.7%	0.0146	0.0188	0.0573	0.0015	0.0001
%RSD		23.7845	24.0885	0.7	176.1128	110.9816	30.4123	16.9638	4.2161

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:25	0.0108	0.1026	7.3584	0.2785	-0.0152	0.0227	0.0204	0.0377
2	14:40:25	0.0035	0.2080	7.4964	0.2888	0.0207	-0.0056	0.0227	0.0103
3	14:41:25	-0.0013	-0.1599	7.2623	0.3316	-0.0194	0.0092	0.0076	-0.0089
x		0.0043	0.0502	7.3723	0.2996	-0.0046	0.0088	0.0169	0.0130
σ		0.0061	0.1895	0.1177	0.0282	0.0220	0.0142	0.0082	0.0234
%RSD		140.2130	377.2513	1.5964	9.4082	474.6646	161.9216	48.3638	179.8300

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:25	102.6%	-0.0422	0.0590	-0.5917	-0.1374	103.5%	0.1519	0.1503
2	14:40:25	105.8%	-0.0979	0.1055	-0.0514	-0.3358	106.4%	0.1512	0.1882
3	14:41:25	106.1%	0.0067	0.0254	0.0218	0.0128	107.2%	0.1350	0.1403
x		104.8%	-0.0445	0.0633	-0.2071	-0.1535	105.7%	0.1461	0.1596
σ		2.0%	0.0524	0.0402	0.3351	0.1748	1.9%	0.0096	0.0253
%RSD		1.9	117.7826	63.5175	161.7866	113.9047	1.8	6.5432	15.8467

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:25	0.1541	103.5%	0.0082	0.0073	0.0009	-0.0024	0.0034	105.4%
2	14:40:25	0.1530	106.0%	0.0145	0.0094	0.0020	-0.0065	-0.0026	108.2%
3	14:41:25	0.1339	107.7%	0.0083	0.0092	0.0013	-0.0081	-0.0003	109.0%
x		0.1470	105.8%	0.0103	0.0087	0.0014	-0.0057	0.0001	107.5%
σ		0.0114	2.1%	0.0036	0.0012	0.0006	0.0029	0.0030	1.9%
%RSD		7.7230	2.0	35.1053	13.3370	39.5977	51.6400	2262.9000	1.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:25	0.0060	0.0030	0.0069	0.0047	0.0001	105.0%	0.0011	0.0022
2	14:40:25	0.0056	0.0048	-0.0040	0.0058	0.0022	108.3%	0.0016	0.0039
3	14:41:25	0.0063	0.0029	0.0032	0.0085	0.0048	107.8%	0.0017	0.0038
x		0.0060	0.0036	0.0020	0.0063	0.0024	107.0%	0.0014	0.0033
σ		0.0004	0.0011	0.0056	0.0019	0.0023	1.8%	0.0003	0.0009
%RSD		6.2124	30.4205	273.1151	30.6227	99.5355	1.6	22.7427	27.6755

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:39:25	-0.0013	0.0014	0.0012	104.4%	0.0023
2	14:40:25	-0.0005	-0.0011	0.0009	107.1%	0.0032
3	14:41:25	0.0023	0.0014	0.0024	107.2%	0.0032
x		0.0002	0.0006	0.0015	106.2%	0.0029
σ		0.0019	0.0015	0.0008	1.6%	0.0005
%RSD		1069.4910	262.0468	52.3886	1.5	18.3243

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User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:04	0.0011	91.2702	87.7%	5.5363	0.1979	4.4265	2.0781	0.5434
2	14:45:04	0.0131	90.9736	86.6%	5.4323	0.1564	4.7419	2.0631	0.4938
3	14:46:04	0.0119	91.4094	85.0%	5.5827	0.2092	4.3822	2.0819	0.5125
x		0.0087	91.2177	86.4%	5.5171	0.1878	4.5169	2.0744	0.5166
σ		0.0066	0.2226	1.4%	0.0770	0.0278	0.1961	0.0099	0.0251
%RSD		76.1565	0.2441	1.6	1.3956	14.7831	4.3419	0.4791	4.8524

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:04	4.0816	45.6152	15.7353	3.1451	2.3199	6.2173	7.1691	6.8498
2	14:45:04	4.0614	39.1284	16.1091	3.0445	2.1885	6.0816	7.0316	6.6485
3	14:46:04	3.8728	39.9813	16.6035	3.0393	2.1952	5.9946	6.3886	6.7460
x		4.0053	41.5750	16.1493	3.0763	2.2345	6.0978	6.8631	6.7481
σ		0.1152	3.5249	0.4355	0.0596	0.0740	0.1122	0.4166	0.1007
%RSD		2.8752	8.4784	2.6966	1.9390	3.3139	1.8404	6.0708	1.4919

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:04	83.1%	20.5809	3.2859	-0.8544	0.4487	87.5%	18.7088	19.0915
2	14:45:04	82.9%	20.3393	2.6186	-0.4612	0.5658	88.4%	18.5275	18.8262
3	14:46:04	82.8%	20.5337	2.4764	-0.9971	1.0577	88.1%	18.7485	19.0696
x		82.9%	20.4846	2.7936	-0.7709	0.6907	88.0%	18.6616	18.9958
σ		0.2%	0.1281	0.4322	0.2775	0.3231	0.4%	0.1178	0.1473
%RSD		0.2	0.6253	15.4696	36.0043	46.7820	0.5	0.6312	0.7753

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:04	19.1497	82.3%	0.0011	0.0008	0.0464	0.0088	0.0216	87.5%
2	14:45:04	18.8952	82.9%	0.0044	0.0072	0.0309	0.0190	0.0228	88.8%
3	14:46:04	18.9272	81.7%	0.0029	0.0042	0.0259	0.0127	0.0213	88.2%
x		18.9907	82.3%	0.0028	0.0041	0.0344	0.0135	0.0219	88.1%
σ		0.1386	0.6%	0.0016	0.0032	0.0107	0.0051	0.0008	0.7%
%RSD		0.7300	0.7	58.5538	79.7761	31.0481	37.9980	3.7643	0.8

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:44:04	0.1387	0.1442	34.6269	34.2357	34.7791	97.6%	0.0059	0.0077
2	14:45:04	0.1419	0.1432	34.0961	33.6295	34.1790	99.5%	0.0050	0.0076
3	14:46:04	0.1370	0.1401	34.0097	34.0738	34.1005	99.2%	0.0048	0.0048
x		0.1392	0.1425	34.2442	33.9797	34.3529	98.8%	0.0052	0.0067
σ		0.0025	0.0021	0.3342	0.3139	0.3712	1.0%	0.0006	0.0016
%RSD		1.7912	1.4920	0.9759	0.9237	1.0806	1.0	11.0639	24.5253

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:44:04	0.1683	0.1933	0.1853	98.1%	30.3110
2	14:45:04	0.1668	0.1940	0.1821	100.9%	29.7334
3	14:46:04	0.1661	0.1844	0.1820	100.6%	29.8407
x		0.1670	0.1906	0.1831	99.9%	29.9617
σ		0.0011	0.0054	0.0018	1.5%	0.3072
%RSD		0.6843	2.8132	1.0099	1.5	1.0253

Cd Correction = 0.0248

K1006963-MB 08/05/2010 02:49:29 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:29	-0.0065	0.4339	103.4%	-0.0043	0.0268	0.3131	0.0232	-0.0062
2	14:50:29	-0.0053	0.4301	106.6%	0.0012	0.0139	0.1966	0.0267	-0.0058
3	14:51:29	-0.0042	0.4517	108.6%	-0.0057	0.0275	0.2092	0.0257	-0.0051
x		-0.0053	0.4386	106.2%	-0.0029	0.0228	0.2396	0.0252	-0.0057
σ		0.0012	0.0116	2.6%	0.0036	0.0077	0.0639	0.0018	0.0006
%RSD		21.7189	2.6372	2.5	123.4137	33.6822	26.6881	7.1218	10.1324

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:29	0.0210	-0.0267	8.1951	0.3682	0.0188	0.0724	0.0271	0.0608
2	14:50:29	0.0194	-0.1187	8.1287	0.3329	0.0215	0.0861	0.0612	0.0712
3	14:51:29	0.0144	-0.2514	7.6213	0.3370	0.0022	0.0717	0.0503	0.1151
x		0.0183	-0.1323	7.9817	0.3461	0.0142	0.0768	0.0462	0.0824
σ		0.0034	0.1130	0.3139	0.0193	0.0104	0.0081	0.0174	0.0288
%RSD		18.8084	85.4051	3.9325	5.5746	73.6359	10.5474	37.7029	34.9916

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:29	106.3%	-0.0300	0.0643	-0.2138	-0.1312	107.5%	0.0958	0.1169
2	14:50:29	110.8%	0.0212	0.0559	-0.1369	0.0416	111.2%	0.1198	0.1174
3	14:51:29	111.9%	-0.0506	0.0536	0.2742	-0.2328	112.5%	0.1121	0.1154
x		109.6%	-0.0198	0.0579	-0.0255	-0.1075	110.4%	0.1092	0.1166
σ		2.9%	0.0370	0.0056	0.2624	0.1388	2.6%	0.0122	0.0010
%RSD		2.7	186.9871	9.7483	1029.8878	129.1205	2.4	11.2078	0.8767

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:29	0.1118	107.7%	-0.0043	-0.0039	-0.0016	-0.0113	-0.0070	108.1%
2	14:50:29	0.1189	112.2%	-0.0039	-0.0038	-0.0006	-0.0079	-0.0052	113.6%
3	14:51:29	0.0953	114.0%	-0.0039	-0.0033	-0.0017	-0.0100	-0.0062	114.6%
x		0.1087	111.3%	-0.0040	-0.0037	-0.0013	-0.0098	-0.0062	112.1%
σ		0.0122	3.3%	0.0002	0.0004	0.0006	0.0017	0.0009	3.5%
%RSD		11.1836	2.9	5.1953	9.9806	48.5672	17.4851	14.7638	3.2

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:49:29	-0.0023	-0.0034	-0.0056	0.0018	-0.0022	106.3%	-0.0062	-0.0044
2	14:50:29	-0.0019	-0.0022	0.0019	0.0063	0.0045	110.2%	-0.0063	-0.0039
3	14:51:29	-0.0016	-0.0025	0.0026	0.0057	0.0009	112.4%	-0.0049	-0.0051
x		-0.0019	-0.0027	-0.0004	0.0046	0.0010	109.6%	-0.0058	-0.0044
σ		0.0003	0.0006	0.0045	0.0024	0.0034	3.1%	0.0008	0.0006
%RSD		17.7361	22.7078	1251.1462	53.6167	320.4793	2.8	13.1355	13.3701

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:49:29	-0.0018	-0.0017	-0.0010	105.6%	-0.0024
2	14:50:29	-0.0013	-0.0013	-0.0007	109.5%	0.0051
3	14:51:29	-0.0016	-0.0019	-0.0003	110.6%	0.0020
x		-0.0016	-0.0016	-0.0007	108.6%	0.0016
σ		0.0003	0.0003	0.0004	2.6%	0.0038
%RSD		16.3583	18.9582	53.9689	2.4	241.1851

K1006741-001A 08/05/2010 02:54:08 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:54:08	21.1980	21.1638	104.4%	20.8853	20.8482	20.7159	21.0829	20.6210
2	14:55:06	21.3194	21.2721	104.1%	20.5620	20.9522	21.1144	21.1180	20.2788
3	14:56:07	21.3332	21.3201	102.6%	20.6605	20.7298	20.6526	20.9720	20.2447
x		21.2835	21.2520	103.7%	20.7026	20.8434	20.8276	21.0576	20.3815
σ		0.0744	0.0801	0.9%	0.1657	0.1113	0.2504	0.0762	0.2081
%RSD		0.3495	0.3768	0.9	0.8006	0.5338	1.2020	0.3620	1.0210

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:54:08	21.0235	20.6836	28.7527	21.5902	20.9916	51.6993	50.0633	50.1335
2	14:55:06	21.1535	21.2059	29.0232	21.2145	20.8742	51.1431	49.7071	50.0271
3	14:56:07	20.6869	20.0494	28.9941	21.2773	20.6770	51.3403	47.7796	50.0797
x		20.9546	20.6463	28.9233	21.3607	20.8476	51.3943	49.1833	50.0801
σ		0.2408	0.5791	0.1485	0.2013	0.1590	0.2820	1.2286	0.0532
%RSD		1.1492	2.8050	0.5134	0.9422	0.7625	0.5487	2.4981	0.1063

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:54:08	107.6%	20.4892	20.4922	20.7462	20.3385	108.8%	20.9783	20.9225
2	14:55:06	108.1%	19.8662	21.0051	20.5407	19.4548	109.4%	20.7853	20.8688
3	14:56:07	106.9%	20.2257	20.8535	19.6258	20.7432	108.7%	20.8098	20.8375
x		107.6%	20.1937	20.7836	20.3043	20.1789	109.0%	20.8578	20.8763
σ		0.6%	0.3127	0.2635	0.5965	0.6589	0.4%	0.1051	0.0430
%RSD		0.6	1.5485	1.2679	2.9377	3.2653	0.3	0.5039	0.2058

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:54:08	20.6475	109.9%	0.0022	0.0019	20.8104	20.9169	20.7991	109.9%
2	14:55:06	20.8097	110.2%	0.0012	0.0040	20.9810	20.9540	20.8802	111.7%
3	14:56:07	20.8320	109.2%	0.0031	0.0025	20.7064	20.6953	20.8585	112.1%
x		20.7630	109.8%	0.0022	0.0028	20.8326	20.8554	20.8459	111.2%
σ		0.1007	0.5%	0.0009	0.0011	0.1386	0.1399	0.0420	1.1%
%RSD		0.4849	0.5	42.6248	38.3759	0.6655	0.6707	0.2016	1.0

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:54:08	21.0779	20.9954	20.9462	20.8593	21.1198	108.1%	20.9399	20.8104
2	14:55:06	21.1141	20.9430	21.0551	21.0313	20.9033	111.5%	20.7873	20.7086
3	14:56:07	20.8583	20.6700	20.7652	20.8816	20.8703	110.4%	20.7479	20.7328
x		21.0168	20.8695	20.9222	20.9241	20.9645	110.0%	20.8250	20.7506
σ		0.1384	0.1747	0.1464	0.0935	0.1356	1.7%	0.1014	0.0532
%RSD		0.6587	0.8373	0.6998	0.4468	0.6466	1.6	0.4870	0.2564

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	14:54:08	20.9283	20.9400	20.8915	108.1%	20.8042
2	14:55:06	20.7374	20.7918	20.7919	110.1%	20.7504
3	14:56:07	20.7352	20.6742	20.7592	110.9%	20.6340
x		20.8003	20.8020	20.8142	109.7%	20.7295
σ		0.1109	0.1332	0.0689	1.4%	0.0870
%RSD		0.5329	0.6405	0.3311	1.3	0.4197

50ppb Mo Std 08/05/2010 02:58:44 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:44	-0.0013	1.0938	100.3%	0.0092	0.0548	0.2161	0.0166	-0.0029
2	14:59:44	0.0037	1.0627	101.5%	0.0211	0.0365	0.1702	0.0266	0.0060
3	15:00:44	-0.0001	1.0691	101.1%	0.0359	0.0462	0.1256	0.0326	0.0049
X		0.0008	1.0752	101.0%	0.0221	0.0458	0.1706	0.0253	0.0026
σ		0.0026	0.0164	0.6%	0.0134	0.0091	0.0453	0.0081	0.0049
%RSD		341.4636	1.5246	0.6	60.7279	19.9570	26.5207	32.0286	184.0984
Run	**Time**	**60Ni**	**61Ni**	**62Ni**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:44	0.0300	-0.2100	8.2606	0.3346	0.0060	0.1998	0.1124	0.2078
2	14:59:44	0.0244	-0.0072	7.7774	0.3495	0.0451	0.1590	0.0936	0.1585
3	15:00:44	0.0260	0.0230	7.6129	0.3039	0.0105	0.1433	0.1760	0.1495
X		0.0268	-0.0647	7.8836	0.3293	0.0205	0.1673	0.1273	0.1719
σ		0.0029	0.1267	0.3367	0.0233	0.0214	0.0292	0.0432	0.0314
%RSD		10.8255	195.7676	4.2709	7.0704	103.9890	17.4282	33.9171	18.2566
Run	**Time**	**71Ga**	**75As**	**77Se**	**78Se**	**82Se**	**89Y**	**95Mo**	**97Mo**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:44	103.0%	-0.0152	0.1528	-0.7643	0.0119	104.2%	55.3168	55.3121
2	14:59:44	105.2%	-0.0432	0.0136	-0.4194	-0.2394	106.5%	54.5079	54.5951
3	15:00:44	106.8%	0.0752	-0.0012	-0.3657	0.2057	106.4%	55.8714	55.5821
X		105.0%	0.0056	0.0551	-0.5165	-0.0073	105.7%	55.2321	55.1631
σ		1.9%	0.0619	0.0849	0.2163	0.2231	1.3%	0.6857	0.5101
%RSD		1.8	1107.7615	154.2205	41.8815	3071.8652	1.2	1.2415	0.9247
Run	**Time**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**112Cd**	**114Cd**	**115In**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:44	55.6179	104.7%	-0.0034	-0.0026	0.0223	0.0861	0.0646	105.7%
2	14:59:44	54.7283	107.7%	-0.0021	-0.0017	0.0312	0.0749	0.0619	108.6%
3	15:00:44	55.5078	107.8%	-0.0032	-0.0024	0.0315	0.0696	0.0630	109.9%
X		55.2846	106.7%	-0.0029	-0.0023	0.0284	0.0769	0.0632	108.1%
σ		0.4850	1.8%	0.0007	0.0005	0.0052	0.0084	0.0014	2.1%
%RSD		0.8772	1.7	24.0205	20.1738	18.3642	10.9332	2.2204	2.0
Run	**Time**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**138Ba**	**175Lu**	**203Tl**	**205Tl**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:58:44	0.0101	0.0080	0.0151	0.0248	0.0141	105.0%	0.0018	0.0075
2	14:59:44	0.0171	0.0124	0.0225	0.0181	0.0256	107.6%	0.0121	0.0133
3	15:00:44	0.0124	0.0082	0.0126	0.0224	0.0209	108.4%	0.0064	0.0083
X		0.0132	0.0095	0.0168	0.0218	0.0202	107.0%	0.0068	0.0097
σ		0.0036	0.0025	0.0051	0.0034	0.0058	1.8%	0.0052	0.0031
%RSD		27.0875	26.2377	30.6698	15.5848	28.6894	1.7	76.3872	31.9572
Run	**Time**	**206Pb**	**207Pb**	**208Pb**	**232Th**	**238U**			
		ppb	ppb	ppb	ppb	ppb			
1	14:58:44	0.0065	0.0057	0.0069	105.0%	0.0000			
2	14:59:44	0.0127	0.0092	0.0130	107.7%	0.0103			
3	15:00:44	0.0083	0.0105	0.0107	107.3%	0.0044			
X		0.0092	0.0085	0.0102	106.7%	0.0049			
σ		0.0032	0.0025	0.0031	1.5%	0.0051			
%RSD		34.7850	29.4676	30.2646	1.4	104.8352			

$$\frac{Cd^{111}\ 0.0284}{Mo^{95}\ 55.2321} = 0.000514$$

CCV5 08/05/2010 03:05:48 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:48	25.7095	24.9959	98.7%	24.9110	24.8356	24.6387	25.1771	24.8341
2	15:06:48	25.8470	24.7153	99.0%	24.8371	24.6196	24.7732	25.2579	24.6541
3	15:07:47	26.0309	25.1404	98.0%	25.1191	24.8888	24.7548	25.3722	24.5293
x		25.8625	24.9506	98.6%	24.9557	24.7813	24.7222	25.2691	24.6725
σ		0.1612	0.2161	0.5%	0.1462	0.1425	0.0729	0.0980	0.1532
%RSD		0.6234	0.8662	0.5	0.5860	0.5752	0.2950	0.3880	0.6211

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:48	25.0209	24.2144	31.7217	24.8175	24.5825	24.8779	24.5596	24.5492
2	15:06:48	24.6219	23.6240	31.6511	24.5114	23.9200	24.6248	24.0878	24.4304
3	15:07:47	24.7086	24.0757	31.9270	24.6150	24.4573	24.8841	24.4718	24.6819
x		24.7838	23.9714	31.7666	24.6480	24.3199	24.7956	24.3731	24.5538
σ		0.2098	0.3087	0.1433	0.1557	0.3520	0.1480	0.2509	0.1258
%RSD		0.8467	1.2877	0.4512	0.6317	1.4473	0.5968	1.0295	0.5123

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:48	101.6%	25.3205	24.4603	25.0675	25.1532	101.6%	25.0568	24.8284
2	15:06:48	103.1%	24.9589	23.6435	25.4534	24.4920	103.8%	25.2446	25.0439
3	15:07:47	101.6%	24.7166	24.8911	25.8230	24.4963	103.8%	25.2513	25.3200
x		102.1%	24.9987	24.3316	25.4480	24.7138	103.1%	25.1842	25.0641
σ		0.9%	0.3039	0.6337	0.3778	0.3805	1.2%	0.1104	0.2464
%RSD		0.8	1.2156	2.6045	1.4847	1.5397	1.2	0.4383	0.9832

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:48	25.0387	102.5%	25.1919	25.1641	25.2648	25.0606	25.0967	105.7%
2	15:06:48	25.0350	104.0%	25.0460	24.8930	25.0846	25.1469	25.2548	108.0%
3	15:07:47	25.2902	103.7%	25.1990	25.0779	25.5288	25.2428	25.1990	107.8%
x		25.1213	103.4%	25.1457	25.0450	25.2928	25.1501	25.1835	107.2%
σ		0.1463	0.8%	0.0863	0.1385	0.2234	0.0911	0.0802	1.3%
%RSD		0.5823	0.8	0.3433	0.5531	0.8833	0.3624	0.3184	1.2

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:05:48	25.0004	25.0413	25.1322	25.2422	25.1155	105.4%	24.9189	24.9164
2	15:06:48	25.1121	25.0958	25.0036	24.9417	25.1913	107.8%	24.9758	24.8484
3	15:07:47	25.0399	25.1725	25.0588	24.9181	25.1194	107.7%	25.1698	25.0460
x		25.0508	25.1032	25.0649	25.0340	25.1421	107.0%	25.0215	24.9369
σ		0.0566	0.0659	0.0645	0.1807	0.0427	1.4%	0.1315	0.1004
%RSD		0.2260	0.2626	0.2574	0.7218	0.1697	1.3	0.5257	0.4026

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	15:05:48	24.9293	25.0117	25.0108	105.8%	25.1435
2	15:06:48	24.8928	25.0727	24.9767	108.0%	25.0442
3	15:07:47	25.2297	25.3297	25.2409	107.4%	25.2857
x		25.0173	25.1381	25.0762	107.1%	25.1578
σ		0.1849	0.1688	0.1437	1.2%	0.1214
%RSD		0.7391	0.6714	0.5732	1.1	0.4825

CCB5 08/05/2010 03:11:43 PM

User Pre-dilution: 1.000

Run	Time	9Be	27Al	45Sc	51V	52Cr	53Cr	55Mn	59Co
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:43	0.0082	0.0567	96.6%	0.0223	0.0230	0.1494	0.0051	0.0035
2	15:12:43	-0.0011	0.0540	96.9%	0.0142	0.0146	0.1367	0.0074	0.0036
3	15:13:43	-0.0051	0.0510	97.7%	-0.0098	0.0159	0.1734	0.0037	0.0031
x		0.0007	0.0539	97.1%	0.0089	0.0178	0.1532	0.0054	0.0034
σ		0.0068	0.0029	0.5%	0.0167	0.0045	0.0186	0.0019	0.0002
%RSD		988.4962	5.3075	0.6	188.1723	25.4671	12.1587	34.2850	7.1517

Run	Time	60Ni	61Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:43	-0.0038	0.1446	5.8259	0.2315	-0.0070	-0.0253	-0.0078	-0.0097
2	15:12:43	0.0067	-0.1785	5.3529	0.2697	-0.0167	-0.0128	0.0013	0.0149
3	15:13:43	0.0027	-0.2016	5.6866	0.2551	-0.0197	-0.0111	-0.0143	-0.0007
x		0.0019	-0.0785	5.6218	0.2521	-0.0145	-0.0164	-0.0069	0.0015
σ		0.0053	0.1936	0.2430	0.0193	0.0066	0.0078	0.0078	0.0124
%RSD		283.9946	246.5846	4.3233	7.6361	45.8346	47.1890	113.1424	827.6571

Run	Time	71Ga	75As	77Se	78Se	82Se	89Y	95Mo	97Mo
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:43	98.8%	-0.0391	-0.0171	-0.1871	-0.1762	99.0%	0.1524	0.1692
2	15:12:43	101.2%	-0.0128	0.0347	-0.2782	-0.0900	101.7%	0.1779	0.1757
3	15:13:43	100.9%	0.0255	0.0068	-0.2013	0.0920	102.7%	0.1362	0.1643
x		100.3%	-0.0088	0.0081	-0.2222	-0.0581	101.1%	0.1555	0.1698
σ		1.3%	0.0325	0.0259	0.0490	0.1370	1.9%	0.0210	0.0057
%RSD		1.3	368.8372	318.6508	22.0754	235.8350	1.9	13.5122	3.3714

Run	Time	98Mo	103Rh	107Ag	109Ag	111Cd	112Cd	114Cd	115In
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:43	0.1682	99.9%	0.0059	0.0090	0.0023	-0.0064	0.0001	101.4%
2	15:12:43	0.1734	102.9%	0.0086	0.0115	0.0059	-0.0016	-0.0028	104.3%
3	15:13:43	0.1345	102.6%	0.0067	0.0067	0.0034	-0.0040	-0.0009	103.5%
x		0.1587	101.8%	0.0071	0.0091	0.0039	-0.0040	-0.0012	103.1%
σ		0.0211	1.7%	0.0014	0.0024	0.0018	0.0024	0.0015	1.5%
%RSD		13.3094	1.6	19.5515	26.8849	46.9598	59.5453	120.7260	1.5

Run	Time	121Sb	123Sb	135Ba	137Ba	138Ba	175Lu	203Tl	205Tl
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:43	0.0060	0.0056	0.0016	0.0036	0.0025	102.0%	0.0034	0.0037
2	15:12:43	0.0047	0.0047	0.0045	0.0052	0.0022	105.8%	0.0018	0.0040
3	15:13:43	0.0046	0.0026	-0.0054	0.0029	0.0002	105.4%	0.0023	0.0023
x		0.0051	0.0043	0.0002	0.0039	0.0016	104.4%	0.0025	0.0033
σ		0.0008	0.0015	0.0051	0.0012	0.0013	2.1%	0.0008	0.0009
%RSD		15.0553	35.5514	2389.9518	29.9922	76.8299	2.0	31.5727	28.0894

Run	Time	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb
1	15:11:43	0.0030	0.0013	0.0016	101.9%	0.0014
2	15:12:43	0.0010	0.0020	0.0018	105.4%	0.0025
3	15:13:43	-0.0014	-0.0007	-0.0003	104.8%	0.0016
x		0.0009	0.0009	0.0010	104.0%	0.0018
σ		0.0022	0.0014	0.0012	1.9%	0.0006
%RSD		256.6782	164.7682	113.8424	1.8	33.3301

Subcontract Laboratory Results

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

August 10, 2010

Report to:
Lynda Huckestein
Columbia Analytical Services
1317 S. 13th Ave.
Kelso, WA 98626

Bill to:
Accounts Payable
Columbia Analytical Services
1317 South 13th Ave.
Kelso, WA 98626

cc: Columbia Analytical Services, Inc.

Project ID: K1007395
ACZ Project ID: L83363

Lynda Huckestein:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 21, 2010. This project has been assigned to ACZ's project number, L83363. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L83363. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after September 10, 2010. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-06-3
Locator:

ACZ Sample ID: ***L83363-01***
Date Sampled: *07/16/10 12:05*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total — Prep Method:
M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:31		3.5	2.7	2.5	pCi/L		tcd
Gross Beta	08/06/10 9:31		12	3.9	4.5	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes — Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:42		0.11	0.09	0.37	pCi/L	*	tcd

Radium 228, total — Prep Method:
M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 14:04		0.88	0.48	1.2	pCi/L		jjg

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-06-1
Locator:

ACZ Sample ID: ***L83363-02***
Date Sampled: *07/17/10 12:30*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total — Prep Method:
M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:33		21	6.9	3.8	pCi/L		tcd
Gross Beta	08/06/10 9:33		21	5.6	6.8	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes — Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:44		0.17	0.1	0.37	pCi/L	*	tcd

Radium 228, total — Prep Method:
M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 14:04		0.01	0.4	1.2	pCi/L		jjg

** Please refer to Qualifier Reports for details.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-02-3
Locator:

ACZ Sample ID: ***L83363-03***
Date Sampled: *07/17/10 16:00*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total
M9310
Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:34		16	6.3	3.9	pCi/L		tcd
Gross Beta	08/06/10 9:34		16	5.5	6.7	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes
M9315
Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:45		0.12	0.1	0.37	pCi/L	*	tcd

Radium 228, total
M9320
Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 14:04		1.2	0.49	1.3	pCi/L		jjg

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-82-3
Locator:

ACZ Sample ID: ***L83363-04***
Date Sampled: *07/17/10 16:40*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total — Prep Method:
M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:36		12	5.8	3.9	pCi/L		tcd
Gross Beta	08/06/10 9:36		14	5.3	6.7	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes — Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:47		0.13	0.1	0.37	pCi/L	*	tcd

Radium 228, total — Prep Method:
M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 14:04		0.32	0.43	1.3	pCi/L		jjg

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-06-2
Locator:

ACZ Sample ID: ***L83363-05***
Date Sampled: *07/18/10 10:50*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total — Prep Method:
M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:37		9.1	5.1	3.9	pCi/L		tcd
Gross Beta	08/06/10 9:37		22	6	6.7	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes — Prep Method:
M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:48		0.06	0.09	0.37	pCi/L	*	tcd

Radium 228, total — Prep Method:
M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 14:04		0.96	0.47	1.2	pCi/L		jjg

** Please refer to Qualifier Reports for details.*

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-60-12
Locator:

ACZ Sample ID: ***L83363-06***
Date Sampled: *07/18/10 13:45*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total
M9310

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:38		-0.32	1.1	1.4	pCi/L		tcd
Gross Beta	08/06/10 9:38		-0.77	2.4	4	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes
M9315

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:50		0.06	0.08	0.39	pCi/L	*	tcd

Radium 228, total
M9320

Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 14:04		0.43	0.43	1.2	pCi/L		jjg

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

RadioChemistry Analytical Results

Columbia Analytical Services
Project ID: K1007395
Sample ID: MW-02-4
Locator:

ACZ Sample ID: ***L83363-07***
Date Sampled: *07/18/10 16:35*
Date Received: *07/21/10*
Sample Matrix: *Ground Water*

Gross Alpha & Beta, total
M9310
Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha	08/06/10 9:40		14	6.5	4.5	pCi/L		tcd
Gross Beta	08/06/10 9:40		22	6.5	8	pCi/L		tcd

Radium 226 + Alpha Emitting Radium Isotopes
M9315
Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/04/10 10:51		0.12	0.1	0.35	pCi/L	*	tcd

Radium 228, total
M9320
Prep Method:

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/03/10 15:54		0.3	0.43	1.4	pCi/L		jjg

** Please refer to Qualifier Reports for details.*

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Matrix Spikes	Determines sample matrix interferences, if any.

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

(1) Solid matrices are reported on a dry weight basis.

(2) Preparation method: "Method" indicates preparation defined in analytical method.

(3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

Columbia Analytical Services ACZ Project ID: ***L83363***

Project ID: K1007395

Alpha M9310 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287527																
WG287173PBW	PBW	08/06/10						.85	1.4	1.4			2.8			
WG287173LCSW	LCSW	08/06/10	RC091218-1	81.06				99	8.5	1.4	122.1	63	146			
L83332-08DUP	DUP-RER	08/06/10			17	4.7	2.2	14	4.2	2.2				0.48	2	
L83363-05DUP	DUP-RER	08/06/10			9.1	5.1	3.9	3	2.7	2.3				1.06	2	
L83332-10MS	MS	08/06/10	RC091218-1	81.06	0.17	1.2	1.4	97	8.4	1.4	119.5	63	146			

Beta M9310 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287527																
WG287173PBW	PBW	08/06/10						.27	2.5	4			8			
WG287173LCSW	LCSW	08/06/10	PCN30843	100				98	6.6	4	98	61	123			
L83332-08DUP	DUP-RER	08/06/10			12	3.3	4.1	5	3	4				1.57	2	
L83363-05DUP	DUP-RER	08/06/10			22	6	6.7	8.3	3.2	4				2.01	2	
L83376-03MS	MS	08/06/10	PCN30843	100	2.8	2.7	4	76	5.9	4	73.2	61	123			

Radium 226 + Alpha Emitting Radium M9315 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287395																
WG286986PBW	PBW	08/04/10						.02	0.09	0.47			0.94			
WG286986LCSW	LCSW	08/04/10	RC100624-2	23.92				17	0.87	0.38	71.1	71	121			
L83363-05DUP	DUP-RER	08/04/10			0.06	0.09	0.37	.09	0.09	0.37				0.23	2	
L83501-02DUP	DUP-RER	08/04/10			0.22	0.12	0.38	.33	0.14	0.37				0.6	2	
L83363-01MS	MS	08/04/10	RC100624-2	23.92	0.11	0.09	0.37	17	0.85	0.37	70.6	71	121			M2

Radium 228, total M9320 pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG287287																
WG286993LCSW	LCSW	08/03/10	RC100325-1	12.38				11	0.92	1.2	88.8	49	132			
WG286993PBW	PBW	08/03/10						.32	0.21	0.63			1.26			
L83363-07MS	MS	08/03/10	RC100325-1	12.38	0.3	0.43	1.4	7.2	0.74	1.3	55.7	49	132			
L83364-01DUP	DUP-RER	08/03/10			1.4	0.3	0.67	1.2	0.28	0.65				0.49	2	
L83501-03DUP	DUP-RER	08/03/10			1.1	0.49	1.3	.15	0.43	1.3				1.46	2	

Columbia Analytical Services

ACZ Project ID: ***L83363***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L83363-01	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83363-02	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83363-03	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83363-04	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83363-05	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83363-06	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83363-07	WG287395	Radium 226 + Alpha Emitting Radium Isotopes	M9315	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1007395

ACZ Project ID: L83363
Date Received: 07/21/2010 08:56
Received By: gac
Date Printed: 7/22/2010

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Is the trip blank for Cyanide present?			X
12) Is the trip blank for VOA present?			X
13) Are samples requiring no headspace, headspace free?			X
14) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
NA11274, Na11276	3.1, 1.2	13, 12
NA11278, Na11275	0.2, 4.1	12, 13
NA11273	2	13
NA11277	1.8	12

Client must contact ACZ Project Manager if analysis should not proceed for samples received outside of thermal preservation acceptance criteria.

Notes

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Columbia Analytical Services
K1007395

ACZ Project ID: L83363
Date Received: 07/21/2010 08:56
Received By: gac
Date Printed: 7/22/2010

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y< 2	YG< 2	B< 2	O < 2	T >12	N/A	RAD	ID
L83363-01	MW-06-3	Y										
L83363-02	MW-06-1	Y										
L83363-03	MW-02-3	Y										
L83363-04	MW-82-3	Y										
L83363-05	MW-06-2	Y										
L83363-06	MW-60-12	Y										
L83363-07	MW-02-4	Y										

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Hydrochloric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: _____

L83363

Columbia Analytical Services, Inc. Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

CAS Contact: Lynda Huckestein

Project Number: K1007395
Project Manager: Lynda Huckestein

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	MISC_OUT_1 None	MISC_OUT_2 None
K1007395-001	MW-06-3	2 - Cubi	Water	7/16/10	1205	ACZ	✓	✓
K1007395-002	MW-06-1	2 -	Water	7/17/10	1230	ACZ	✓	✓
K1007395-003	MW-02-3	2 -	Water	7/17/10	1600	ACZ	✓	✓
K1007395-004	MW-82-3	2 -	Water	7/17/10	1640	ACZ	✓	✓
K1007395-005	MW-06-2	6 -	Water	7/18/10	1050	ACZ	✓	✓
K1007395-006	MW-60-12	2 -	Water	7/18/10	1345	ACZ	✓	✓
K1007395-007	MW-02-4	2 -	Water	7/18/10	1635	ACZ	✓	✓

Test Comments

MISC_OUT_1 - None K1007395-001,2,3,4,5,6,7
MISC_OUT_2 - None K1007395-001,2,3,4,5,6,7

Radium 226 and 228 9315/9320
Gross Alpha and Beta Method 9310

Folder Comments:

~~Report organics to the MDL and genchem/metals to the MRL. REPORT METALS UNITS AS MG/L~~

QC ON -005/Extra bottles rec'd

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
Please provide the electronic (PDF and EDD) report to the following e-mail address: kelso_data@caslab.com Barr / Rhodia Groundwater QAPP	___ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ✓ STANDARD Requested FAX Date: ___ Requested Report Date: 08/02/10	___ I. Results Only ___ II. Results + QC Summaries ___ III. Results + QC and Calibration Summaries X IV. Data Validation Report with Raw Data PQL/MDL/J N EDD	PO# K1007395 Bill to

Relinquished By: [signature] 7/20/10 1500 Received By: [signature] 7-21-10 Airbill Number: ___

Parameter List [illegible]

Table 5-5
Groundwater Parameter Lists
Comprehensive Groundwater Monitoring Plan
RFI - Silver Bow Plant

Site-Specific Parameters	Method
Elemental Phosphorus	7580 mod.
Total Phosphorus	EPA 365.3
Fluoride 300.0	~~[illegible]~~

Metal Parameters	Method
Antimony	6020
Arsenic	6020
Barium	6020
Beryllium	6020
Cadmium	6020
Chromium	6020
Cobalt	6020
Copper	6020
Lead	6020
Mercury	7470
Nickel	6020
Selenium	6020
Silver	6020
Thallium	6020
Uranium	6020
Vanadium	6020
Zinc	6020

Parameter Group	Method
VOCs	8260
SVOCs	8270
PCBs	8082

General Parameters	Method
Ammonia	EPA 350.1
Calcium	6010
Iron	6010
Magnesium	6010
Manganese	~~6010~~ 6020
Potassium	6010
Sodium	6010
Bicarbonate	~~EPA 310.1~~/SM 2320B
Carbonate	~~EPA 310.1~~/SM 2320B
Chloride	EPA 300
Nitrate/Nitrite	EPA 353.2/~~SW 9050~~
Sulfate	EPA 300

Radiological Parameters	Method
Gross Alpha/Beta	9310
Ra-226	9315
Ra-228	9320

Note:
Common List includes Site-Specific, Metals, VOCs, SVOCs, General, and Radiological Parameters

P:\Mpls\26 MT\46\2646006\WorkFiles\RFI\RFI Workplan\RFI Work Plan_Working\Tables\Table 5-5

Table 1-3
ACZ Labratories Inc. - Steamboat Springs, Colorado
Analytical Parameters, Method and Quantitation Limits for Groundwater and Surface Water Samples
Rhodia Silver Bow Plant
Butte, Montana

Parameter	Matrix	Method	Unit	PQL [1]	Tap Water Screening Level [2]
Groundwater					
Radiological Parameters					
Gross Alpha	Water	EPA9310/[illegible]	pCi/L	2 to 4	1.5
Gross Beta	Water	EPA9310/[illegible]	pCi/L	2 to 4	--
Radium 226	Water	[illegible]/9315	pCi/L	1.0	0.12
Radium 228	Water	EPA9320/[illegible]	pCi/L	1.5/1.0	0.046
Surface Water					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	1.5
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	0.12
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	0.046
Field Blank Parameters Associated with Aqueous Matrix Project Samples					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	--
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	--
Field Blank Parameters Associated with Solid Matrix Project Samples					
Radiological Parameters					
Gross Alpha	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Gross Beta	Water	EPA9310/900.0 Mod	pCi/L	2 to 4	--
Radium 226	Water	EPA903.1 Mod	pCi/L	1.0	--
Radium 228	Water	EPA9320/904.0 Mod	pCi/L	1.5/1.0	--
Lead 210	Water	Elchrom OTW01	pCi/L	1	--
Thorium 230	Water	ESM 4506	pCi/L	0.6	--
Uranium 234	Water	Elchrom Mod	pCi/L	1.0	--
Uranium 238	Water	Elchrom Mod	pCi/L	1.0	--
Parameter	Matrix	Method	Unit	PQL [1]	Residential Soil Screening Level [3]
Sediment Associated with Surface Water Locations, Native Soil and Tailings Basin Solids					
Radiological Parameters					
Gross Alpha	Soil	EPA9310 Mod	pCi/g	1 to 2	--
Gross Beta	Soil	EPA9310 Mod	pCi/g	1 to 2	--
Radium 226	Soil	EPA9315 Mod	pCi/g	1.0	0.013
Radium 228	Soil	EPA9320 Mod	pCi/g	1.5	0.046
Solid					
Radiological Parameters					
Radium 226	Soil	EPA9315 Mod	pCi/g	1.0	0.013
Lead 210	Soil	EICHROM	pCi/g	10.0	0.45
Thorium 230	Soil	ESM4506	pCi/g	0.60	3.8
Uranium 234	Soil	EICHROM Mod	pCi/g	0.40	5
Uranium 238	Soil	EICHROM Mod	pCi/g	0.4	0.78

Notes:

(1) PQL may vary based on level of moisture present (dry weight correction), initial volume and possible matrix interferences.

(2) Tap Water Screening Level (EPA Region 9 PRG, HQ = 0.1)

(3) Residential Soil Screening Level (RAIS Residential PRGs)

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ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83363

Radiochemistry

WG287287 **ra228**

Sample	Date	SCN	RADIUM 228
WG286993LCSW	08/03/10 14:04		X
L83334-04	08/03/10 14:04		
L83363-01	08/03/10 14:04		X
L83363-02	08/03/10 14:04		X
L83363-03	08/03/10 14:04		X
L83363-04	08/03/10 14:04		X
L83363-05	08/03/10 14:04		X
L83363-06	08/03/10 14:04		X
WG286993PBW	08/03/10 14:04		X
L83363-07	08/03/10 15:54		X
L83501-02	08/03/10 15:54		X
L83501-01	08/03/10 15:54		X
L83480-01	08/03/10 15:54		X
L83376-03	08/03/10 15:54		X
L83376-02	08/03/10 15:54		X
L83364-01	08/03/10 15:54		
L83501-03	08/03/10 15:54		X
L83376-01	08/03/10 15:54		X
L83364-01DUP	08/03/10 17:25		X
L83363-07MS	08/03/10 17:25		X
L83501-03DUP	08/03/10 17:25		X
L83528-04	08/03/10 17:25		X
L83528-03	08/03/10 17:25		X
L83528-05	08/03/10 17:25		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83363

Radiochemistry

WG287395 **ra226**

Sample	Date	SCN	MITTING RADIUM I
WG286986PBW	08/04/10 10:40		X
WG286986LCSW	08/04/10 10:41		X
L83363-01	08/04/10 10:42		X
L83363-02	08/04/10 10:44		X
L83363-03	08/04/10 10:45		X
L83363-04	08/04/10 10:47		X
L83363-05	08/04/10 10:48		X
L83363-06	08/04/10 10:50		X
L83363-07	08/04/10 10:51		X
L83435-01	08/04/10 10:52		X
L83435-02	08/04/10 10:54		X
L83435-03	08/04/10 10:55		X
L83435-04	08/04/10 10:57		X
L83480-01	08/04/10 10:58		X
L83501-01	08/04/10 11:00		X
L83501-02	08/04/10 11:01		X
L83501-03	08/04/10 11:03		X
L83528-03	08/04/10 11:04		X
L83528-04	08/04/10 11:05		X
L83528-05	08/04/10 11:07		X
L83363-05DUP	08/04/10 11:08		X
L83501-02DUP	08/04/10 11:10		X
L83363-01MS	08/04/10 11:11		X

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83363

Radiochemistry

WG287527 **gab**

Sample	Date	SCN	ALPHA	BETA
WG287173PBW	08/06/10 09:13		X	X
WG287173LCSW	08/06/10 09:14		X	
WG287173LCSW	08/06/10 09:15			X
L83332-01	08/06/10 09:17		X	
L83332-02	08/06/10 09:18		X	
L83332-03	08/06/10 09:20		X	
L83332-04	08/06/10 09:21		X	
L83332-05	08/06/10 09:23		X	
L83332-06	08/06/10 09:24		X	
L83332-07	08/06/10 09:25		X	
L83332-08	08/06/10 09:27		X	
L83332-09	08/06/10 09:28		X	
L83332-10	08/06/10 09:30		X	
L83363-01	08/06/10 09:31		X	X
L83363-02	08/06/10 09:33		X	X
L83363-03	08/06/10 09:34		X	X
L83363-04	08/06/10 09:36		X	X
L83363-05	08/06/10 09:37		X	X
L83363-06	08/06/10 09:38		X	X
L83363-07	08/06/10 09:40		X	X
L83376-01	08/06/10 09:41		X	X
L83376-02	08/06/10 09:43		X	X
L83376-03	08/06/10 09:44		X	X
L83332-08DUP	08/06/10 09:46		X	X
L83363-05DUP	08/06/10 09:47		X	X
L83332-10MS	08/06/10 09:49		X	

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Run Log by Workgroup

Columbia Analytical Services

Project ID: L83363

Radiochemistry

WG287527 **gab**

Sample	Date	SCN	ALPHA	BETA
L83376-03MS	08/06/10 09:50			X

ACZ Laboratories, Inc.
Radium 228 in Water
EPA 904/9320

WG287287

wg287287 8/4/2010 12:51 PM

Project: _____

SOP # SOPRC014

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-228-904
List Function: ANALYTICAL

Analyst: jjg
Dept: 55
Prep Date: 7/30/2010
Analysis Date: 8/3/2010
Start Time:
End Time:
Approved: JJG 8/4/10
Approved: MDB 8-5-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Y Planchett Weight g	Y Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)	Ba Planchett Weight g	Ba Gross Ba Gross g	Radium 228 Total pCi/L	Error (+ -)	LLD pCi/L
1	WG286993PBW		2000	9.0215	9.0411	**0.0196**	**0.9800**	8.9904	9.0413	**0.32**	**0.21**	**0.63**
2	WG286993LCSW	rc100325-1	1000	9.043	9.0636	**0.0206**	**1.0300**	9.01	9.069	**11.44**	**0.92**	**1.23**
3	L83334-04	175499-100718	2000	9.0559	9.075	**0.0191**	**0.9550**	9.0669	9.1247	**9.44**	**0.52**	**0.56**
4	L83363-01	MW-06-3	1000	9.0296	9.0514	**0.0218**	**1.0900**	9.1007	9.1607	**0.88**	**0.48**	**1.24**
5	L83363-02	MW-06-1	1000	9.0862	9.1083	**0.0221**	**1.1050**	9.0616	9.1155	**0.01**	**0.40**	**1.21**
6	L83363-03	MW-02-3	1000	9.0272	9.0502	**0.0230**	**1.1500**	9.0148	9.0732	**1.24**	**0.49**	**1.28**
7	L83363-04	MW-82-3	1000	8.9503	8.9719	**0.0216**	**1.0800**	9.0531	9.1065	**0.32**	**0.43**	**1.26**
8	L83363-05	MW-06-2	1000	9.0725	9.0937	**0.0212**	**1.0600**	9.083	9.141	**0.96**	**0.47**	**1.24**
9	L83363-06	MW-60-12	1000	9.0284	9.0492	**0.0208**	**1.0400**	9.0966	9.1554	**0.43**	**0.43**	**1.17**
10	L83363-07	MW-02-4	1000	8.9354	8.9564	**0.0210**	**1.0500**	9.0392	9.0942	**0.30**	**0.43**	**1.38**
11	L83364-01	SLP4	2000	9.03	9.0516	**0.0216**	**1.0800**	9.0528	9.1098	**1.38**	**0.30**	**0.67**
12	L83376-01	RESE-1003163	1000	8.9815	9.0023	**0.0208**	**1.0400**	9.1025	9.1488	**0.41**	**0.41**	**1.24**
13	L83376-02	RESE-1003164	1000	9.0071	9.0271	**0.0200**	**1.0000**	9.0139	9.0714	**0.28**	**0.47**	**1.34**
14	L83376-03	RESE-1003165	1000	8.993	9.0137	**0.0207**	**1.0350**	9.0762	9.1202	**0.25**	**0.45**	**1.32**
15	L83480-01	QNT	1000	9.0257	9.0468	**0.0211**	**1.0550**	9.1021	9.1537	**0.33**	**0.45**	**1.39**
16	L83501-01	CPR 1-2	1000	9.0063	9.027	**0.0207**	**1.0350**	9.0533	9.1123	**0.63**	**0.49**	**1.37**
17	L83501-02	PP 2B	1000	8.9743	8.9958	**0.0215**	**1.0750**	9.0891	9.1296	**0.52**	**0.46**	**1.36**
18	L83501-03	P-61	1000	8.9787	8.9997	**0.0210**	**1.0500**	9.0662	9.1027	**1.12**	**0.49**	**1.29**
19	L83528-03	P-10	1000	8.9904	9.0084	**0.0180**	**0.9000**	9.1007	9.1552	**0.61**	**0.43**	**1.34**
20	L83528-04	SHUMWAY@HAUL RD N	250	9.0568	9.0708	**0.0140**	**0.7000**	9.1131	9.1634	**3.76**	**1.71**	**5.10**
21	L83528-06	P-11	1000	9.0146	9.0314	**0.0168**	**0.8400**	9.0784	9.1217	**-0.14**	**0.35**	**1.17**
22	L83364-01DUP		2000	9.0549	9.0724	**0.0175**	**0.8750**	9.0812	9.1315	**1.22**	**0.28**	**0.65**
23	L83501-03DUP		1000	9.0718	9.087	**0.0152**	**0.7600**	9.082	9.125	**0.15**	**0.43**	**1.26**
24	L83363-07MS	rc100325-1	1000	9.0085	9.0255	**0.0170**	**0.8500**	9.0304	9.0871	**7.22**	**0.74**	**1.34**
25												

Comments:

Decay Equation for Ra228:	rc060823-2
Standard Preparation Date	8/1/2006
Initial True Value (pCi/mL)	20.07
Decayed Value (pCi/mL)	12.38

Sr89 Calibration performed with PCN 33545(Sr89) and Yttrium SCN RC090928-1

Daily performance check with SR-Y PCN 22287

Template: ra-228-904-lb770-2

MDB 8/5/10

ACZ Sample No.	GR CPM Beta	Back-grnd Beta	NET CPM Beta	Ingrow	Decay	Analysis Time	Ingrow Time min.	Decay Time min.	Y Yield	Ba Weight	Ba Yield	Total Yield	Efficiency Beta	alculation A	Det. B	Det. C	Det. D	Det. (1-10)
WG286993R	1.5560	1.226	0.33	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.86	0.05	0.93	0.80	**0.4630**	**0.16053**	**1.08717**	**1.00004**	**1.44123**	2
WG286993L	8.8000	1.301	7.50	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.91	0.06	1.07	0.97	**0.4758**	**7.09875**	**1.08717**	**1.00004**	**1.44123**	3
L83334-04	13.7200	1.357	12.36	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.84	0.06	1.05	0.88	**0.5232**	**5.32172**	**1.08717**	**1.00004**	**1.44123**	4
L83363-01	2.2220	1.606	0.62	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.96	0.06	1.09	1.05	**0.4723**	**0.58744**	**1.08717**	**1.00004**	**1.44123**	5
L83363-02	1.5890	1.583	0.01	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.97	0.05	0.98	0.95	**0.4829**	**0.00560**	**1.08717**	**1.00004**	**1.44123**	6
L83363-03	2.1670	1.306	0.86	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	1.01	0.06	1.06	1.07	**0.4563**	**0.84994**	**1.08717**	**1.00004**	**1.44123**	7
L83363-04	1.6670	1.471	0.20	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.95	0.05	0.97	0.92	**0.4640**	**0.19026**	**1.08717**	**1.00004**	**1.44123**	8
L83363-05	2.0890	1.456	0.63	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.93	0.06	1.05	0.98	**0.4715**	**0.60479**	**1.08717**	**1.00004**	**1.44123**	9
L83363-06	1.9330	1.638	0.30	7/30/2010 16:50	8/3/2010 11:35	8/3/2010 14:04	5445.00	194	0.92	0.06	1.07	0.98	**0.4971**	**0.26733**	**1.08717**	**1.00004**	**1.44123**	10
L83363-07	1.3890	1.226	0.16	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.92	0.06	1.00	0.92	**0.4612**	**0.15919**	**1.08717**	**1.00003**	**1.57764**	2
L83364-01	2.9670	1.301	1.67	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.95	0.06	1.04	0.98	**0.4739**	**0.79173**	**1.08717**	**1.00003**	**1.57764**	3
L83376-01	1.5670	1.357	0.21	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.92	0.05	0.84	0.77	**0.5160**	**0.18332**	**1.08717**	**1.00003**	**1.57764**	4
L83376-02	1.7670	1.606	0.16	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.88	0.06	1.05	0.92	**0.4763**	**0.15226**	**1.08717**	**1.00003**	**1.57764**	5
L83376-03	1.6980	1.583	0.12	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.91	0.04	0.80	0.73	**0.4855**	**0.10670**	**1.08717**	**1.00003**	**1.57764**	6
L83480-01	1.4780	1.306	0.17	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.93	0.05	0.94	0.87	**0.4588**	**0.16886**	**1.08717**	**1.00003**	**1.57764**	7
L83501-01	1.8440	1.471	0.37	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.91	0.06	1.07	0.98	**0.4652**	**0.36118**	**1.08717**	**1.00003**	**1.57764**	8
L83501-02	1.6780	1.456	0.22	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.95	0.04	0.74	0.70	**0.4707**	**0.21245**	**1.08717**	**1.00003**	**1.57764**	9
L83501-03	2.0780	1.638	0.44	7/30/2010 16:50	8/3/2010 12:37	8/3/2010 15:54	5507.00	242	0.92	0.04	0.66	0.61	**0.4964**	**0.39924**	**1.08717**	**1.00003**	**1.57764**	10
L83528-03	1.5220	1.226	0.30	7/30/2010 16:50	8/3/2010 14:21	8/3/2010 17:25	5611.00	229	0.79	0.05	0.99	0.78	**0.4650**	**0.28673**	**1.08717**	**1.00003**	**1.53947**	2
L83528-04	1.6440	1.301	0.34	7/30/2010 16:50	8/3/2010 14:21	8/3/2010 17:25	5611.00	229	0.62	0.05	0.91	0.56	**0.4885**	**1.26508**	**1.08717**	**1.00003**	**1.53947**	3
L83528-05	1.3000	1.357	-0.06	7/30/2010 16:50	8/3/2010 14:21	8/3/2010 17:25	5611.00	229	0.74	0.04	0.79	0.58	**0.5330**	**-0.04817**	**1.08717**	**1.00003**	**1.53947**	4
L83364-01D	2.7000	1.606	1.09	7/30/2010 16:50	8/3/2010 14:21	8/3/2010 17:25	5611.00	229	0.77	0.05	0.91	0.70	**0.4818**	**0.51142**	**1.08717**	**1.00003**	**1.53947**	5
L83501-03D	1.6330	1.583	0.05	7/30/2010 16:50	8/3/2010 14:21	8/3/2010 17:25	5611.00	229	0.67	0.04	0.78	0.52	**0.4957**	**0.04544**	**1.08717**	**1.00003**	**1.53947**	6
L83363-07M	4.7330	1.306	3.43	7/30/2010 16:50	8/3/2010 14:21	8/3/2010 17:25	5611.00	229	0.75	0.06	1.03	0.77	**0.4643**	**3.32485**	**1.08717**	**1.00003**	**1.53947**	7
															1.08717			

Radium 228 Calculations

A	(Net CPM Beta * 1000) / (2.22 * Eff. Beta * Samp. Vol.)
B	(0.001884 * 90) / (1 - 2.7183 ^ (-0.001884 * 90))
C	1 / (1 - 2.7183 ^ (-0.001884 * Ingrow Time))
D	1 / (2.7183 ^ (-0.001884 * Decay Time))

FRMRC.004.01.09.ver.0:

Beta efficiency equation factors for each of 10 LB770 detectors

Efficiency Equation: (Y = MX + B) where (X=Residue Density)

Detector	M	B
1	-0.0447	0.5234
2	-0.0251	0.4876
3	-0.0384	0.5154
4	-0.0850	0.6044
5	-0.0439	0.5202
6	-0.0369	0.5237
7	-0.0266	0.4869
8	-0.0258	0.4919
9	-0.0507	0.5252
10	-0.0633	0.5629

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: JJG
Date: 8/4/10

Work Group: WG237287
Sample Type: Liquid, GW
Analysis Date: 8/3/10
Analyst: JJG
Prep Date: 7/30/10

Approved: MRB
Date: 8-5-10

Weekly background file: Back 624
Daily background file: Back 626

Alpha performance file: N/A
Beta performance file: Perf 9/16

GAB dry date/time: N/A

	Yes	No	NA
1) **FOR SREV**: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?	✓		
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action
L435284-4	- Sample was diluted due to a high volume of sediment/mud.	DF

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287287

Date Reported: 05-Aug-10
Run ID: R737335
Date Analyzed: 03-Aug-10
ICAL Workgroup:
Instrument ID: LB770

L83334-04

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	RADIUM 228	REG	9.4	1		pCi/L	++	0.56	0.52		

L83363-01

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	0.88	1		pCi/L	++	1.2	0.48		

L83363-02

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	0.01	1		pCi/L	++	1.2	0.4		

L83363-03

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	1.2	1		pCi/L	++	1.3	0.49		

L83363-04

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	0.32	1		pCi/L	++	1.3	0.43		

L83363-05

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	0.96	1		pCi/L	++	1.2	0.47		

L83363-06

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	0.43	1		pCi/L	++	1.2	0.43		

WG286993LCSW

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	FOUND	11	1		pCi/L	++	1.2	0.92	RC100325-1	
SREV	RADIUM 228	REC	88.8	1		%	++	1.2	0.92	RC100325-1	
SREV	RADIUM 228	TRUE	12.381123	1		pCi/L	++	1.2	0.92	RC100325-1	

WG286993PBW

Tag: Measured: 8/3/2010 2:04:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	FOUND	0.32	1		pCi/L	++	0.63	0.21		

L83363-07 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-9320	0.3	1		pCi/L	++	1.4	0.43		

L83364-01 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
NEED	RADIUM 228	REG	1.4	1		pCi/L	++	0.67	0.3		

L83376-01 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-T-904	0.41	1		pCi/L	++	1.2	0.41		

L83376-02 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-T-904	0.28	1		pCi/L	++	1.3	0.47		

L83376-03 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	228-T-904	0.25	1		pCi/L	++	1.3	0.45		

L83480-01 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	0.33	1		pCi/L	++	1.4	0.45		

L83501-01 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	0.63	1		pCi/L	++	1.4	0.49		

L83501-02 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	0.52	1		pCi/L	++	1.4	0.46		

L83501-03 Tag: **Measured: 8/3/2010 3:54:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	1.1	1		pCi/L	++	1.3	0.49		

L83363-07MS Tag: **Measured: 8/3/2010 5:25:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	FOUND	7.2	1		pCi/L	++	1.3	0.74	RC100325-1	
SREV	RADIUM 228	REC	55.7	1		%	++	1.3	0.74	RC100325-1	
SREV	RADIUM 228	TRUE	12.380553	1		pCi/L	++	1.3	0.74	RC100325-1	

L83364-01DUP Tag: **Measured: 8/3/2010 5:25:00 PM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	FOUND	1.2	1		pCi/L	++	0.65	0.28		
SREV	RADIUM 228	RER	0.49	1		%	++	1.5	3		
FAIL	RADIUM 228	RPD	15.4	1		pCi/L	++	0.65	0.28		

L83501-03DUP

Tag: Measured: 8/3/2010 5:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	FOUND	0.15	1		pCi/L	++	1.3	0.43		
SREV	RADIUM 228	RER	1.46	1		%	++	1.5	3		
FAIL	RADIUM 228	RPD	152	1		pCi/L	ALRT	1.3	0.43		

L83528-03

Tag: Measured: 8/3/2010 5:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	0.61	1		pCi/L	++	1.3	0.43		

L83528-04

Tag: Measured: 8/3/2010 5:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	3.8	1		pCi/L	++	5.1	1.7		DF

L83528-05

Tag: Measured: 8/3/2010 5:25:00 PM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	RADIUM 228	A228-904	-0.14	1		pCi/L	++	1.2	0.35		

ACZ Laboratories, Inc.
Radium 228 in Water
EPA 904/9320

WG286993

wg286993 7/30/2010 11:04 AM

Project:
SOP # SOPRC014

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-228-904
List Function: ANALYTICAL

Analyst: jjg
Dept: 50
Prep Date: 7/30/2010 10:00
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Y Planchett Weight g	Y Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)	Ba Planchett Weight g	Ba Gross Ba Gross g	Radium 228 Total pCi/L	Error (+ -)	LLD pCi/L
1	PBW		2000									
2	LCSW		1000									
3	L83334-04	~~MW-06-5~~	2000									
4	L83363-01	MW-06-3	1000									
5	L83363-02	MW-06-1										
6	L83363-03	MW-02-3										
7	L83363-04	MW-82-3										
8	L83363-05	MW-06-2										
9	L83363-06	MW-60-12										
10	L83363-07	MW-02-4										
11	L83364-01	SLP4	2000									
12	L83376-01	RESE-1003163	1000									
13	L83376-02	RESE-1003164										
14	L83376-03	RESE-1003165										
15	L83480-01	QNT										
16	L83501-01	CPR 1-2										
17	L83501-02	PP 2B										
18	L83501-03	P-61										
19	528-3		250									
20	528-4		1000									
21	528-5											
22	556 7/30/10		556 7/30/10									
23	DUP 556 364-1		~~1000~~ 2000									
24	DUP 501-3		1000									
25	MS 63-7		1000									

DW

Comments: 528-4: High Sediment, ~~DI~~ used 250ml
DF JJG 4/4/10

Decay Equation for Ra228:	rc060823-2
Standard Preparation Date	8/1/2006
Initial True Value (pCi/mL)	20.07
Decayed Value (pCi/mL)	measuredate?

Sr89 Calibration performed with PCN 33545(Sr89) and Yttrium SCN RC090928-1

Daily performance check with SR-Y PCN 22287

Template: ra-228-904-lb770-2

DW analytical: WG287286

GW analy.: WG287287

In Grow: 16:50 7/30/10

Decay-Sx 1-9 11:35 4/3/10

10-18 12:37

19-24 14:21

ACZ Laboratories, Inc.
Radium 228 in Water
EPA 904/9320

WG286993

wg286993 8/3/2010 10:01 AM

Project:
SOP # SOPRC014

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-228-904
List Function: ANALYTICAL

Analyst: jjg
Dept: 50
Prep Date: 7/30/2010
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Y Planchett Weight g	Y Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)	Ba Planchett Weight g	Ba Gross Ba Gross g	Radium 228 Total pCi/L	Error (+ -)	LLD pCi/L
1	PBW		2000									
2	LCSW		1000									
3	L83334-04	175499-100718	2000									
4	L83363-01	MW-06-3	1000									
5	L83363-02	MW-06-1	1000									
6	L83363-03	MW-02-3	1000									
7	L83363-04	MW-82-3	1000									
8	L83363-05	MW-06-2	1000									
9	L83363-06	MW-60-12	1000									
10	L83363-07	MW-02-4	1000									
11	L83364-01	SLP4	2000									
12	L83376-01	RESE-1003163	1000									
13	L83376-02	RESE-1003164	1000									
14	L83376-03	RESE-1003165	1000									
15	L83480-01	QNT	1000									
16	L83501-01	CPR 1-2	1000									
17	L83501-02	PP 2B	1000									
18	L83501-03	P-61	1000									
19	L83528-03	P-10	1000									
20	L83528-04	SHUMWAY@HAUL RD N	250									
21	L83528-05	P-11	1000									
22	DUP		2000									
23	DUP		1000									
24	MS		1000									
25												

Comments:

Template: ra-228-904-lb770-2

Decay Equation for Ra228:	ra060823-2
Standard Preparation Date	8/7/2006
Initial True Value (pCi/mL)	20.07
Decayed Value (pCi/mL)	measuredate?

Sr89 Calibration performed with PCN 33545(Sr89) and Yttrium SCN RC090928-1

Daily performance check with SR-Y PCN 22287

ACZ LABORATORIES, INC.
Standards/Reagents Information

ANALYST: _____

Second analyst: _____

DATE TIME of prep start: _____

Water

wg286993 7/30/2010 11:04 AM

PROJECT/WG: _____

Method Ra-228 904/9320

INSTR: LB770

LCS & MS Rc100328-1

Radioactive Standards

Ammonium Sulfate:	Rc100719-1	Reagents Ytrium carrer	Rc100628-3	Ammonium Hydroxide.	34403
Barium Carrier:	Rc100204-1	Strontium carrer	Rc100614-1	Ammonium oxalate.	
Lead Carrier:	Rc100713-1	Sr-Y mix	Rc100623-2	Ammonium sulfide.	Rc100628-1
Citric Acid	Rc100511-1	Sulfuric Acid:	34642	Sulfuric Acid 0.1N	35105
Nitric Acid	34903	Acetic Acid:	34657	EDTA	Rc100719-2
Nitric Acid 6N	33895	Nitric Acid 1.5N	35036	Methyl Orange	32196
		Sodium hydroxide 10 N	Rc100628-2	Sodium hydroxide 18 N	Rc100707-1

COMMENTS:

RC228904lb770-2.xls

Sample Measurement Parameters:
Comment: WG286993
User: MWM
Instrument Name: LB770-2
Preset Time: 90:00
Cycles: 1
Outlier warning disabled
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "1.5 hour"
Protocol ID: 6
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 90:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0389 (±0.0073)	0.0167	60
2	21.63	0.0722 (±0.0100)	0.0167	60.0
3	22.23	0.0542 (±0.0087)	0.0167	60.0
4	22.39	0.0667 (±0.0096)	0.0167	60.0
5	20.50	0.0675 (±0.0097)	0.0167	60.0
6	21.48	0.0417 (±0.0076)	0.0167	60.0
7	21.84	0.0514 (±0.0084)	0.0167	60.0
8	21.74	0.0569 (±0.0089)	0.0167	60.0
9	21.77	0.0792 (±0.0105)	0.0167	60.0
10	23.74	0.0528 (±0.0086)	0.0167	60.0

	Beta		
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	64.298 (±0.315)	0.0167	60
2	1.226 (±0.041)	0.0167	60.0
3	1.301 (±0.043)	0.0167	60.0
4	1.357 (±0.043)	0.0167	60.0
5	1.606 (±0.047)	0.0167	60.0
6	1.583 (±0.047)	0.0167	60.0
7	1.306 (±0.043)	0.0167	60.0
8	1.471 (±0.045)	0.0167	60.0
9	1.456 (±0.045)	0.0167	60.0
10	1.638 (±0.048)	0.0167	60.0

Cycle 1 of 1
Start Time: 8/3/2010 14:04:20

Elapsed Time: 90:00
Guard: 1165 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7391		0.022 (±70.7%)	0.0018	0.0006	12.37 (±3.16%)	0.0502	0.0248
2	7392	pbw	0.16 (±26.7%)	0.0022	0.0009	1.556 (±8.45%)	0.0074	0.0034
3	7393	lcsw	0.13 (±28.9%)	0.0020	0.0007	8.800 (±3.55%)	0.0076	0.0035
4	7394	L83334-01	0.17 (±25.8%)	0.0022	0.0008	13.72 (±2.85%)	0.0077	0.0036
5	7395	L83363-01	0.17 (±25.8%)	0.0022	0.0008	2.222 (±7.07%)	0.0084	0.0039
6	7396	L83363-02	0.16 (±26.7%)	0.0018	0.0007	1.589 (±8.36%)	0.0083	0.0039
7	7397	L83363-03	0.18 (±25.0%)	0.0020	0.0007	2.167 (±7.16%)	0.0076	0.0035
8	7398	L83363-04	0.14 (±27.7%)	0.0020	0.0008	1.667 (±8.16%)	0.0080	0.0038
9	7399	L83363-05	0.22 (±22.4%)	0.0023	0.0009	2.089 (±7.29%)	0.0080	0.0037
10	7400	L83363-06	0.19 (±24.3%)	0.0020	0.0007	1.933 (±7.58%)	0.0085	0.0040

Sample Measurement Parameters:
Comment: WG286993
User: MWM
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 8/3/2010 15:53:50

Elapsed Time: 90:00
Guard: 1169 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7401		0.022 (±70.7%)	0.0018	0.0006	17.95 (±2.62%)	0.0502	0.0248
2	7402	L83363-07	0.078 (±37.8%)	0.0022	0.0009	1.389 (±8.94%)	0.0074	0.0034
3	7403	L83364-01	0.067 (±40.8%)	0.0020	0.0007	2.967 (±6.12%)	0.0076	0.0035
4	7404	L83376-01	0.11 (±31.6%)	0.0022	0.0008	1.567 (±8.42%)	0.0077	0.0036
5	7405	L83376-02	0.067 (±40.8%)	0.0022	0.0008	1.767 (±7.93%)	0.0084	0.0039
6	7406	L83376-03	0.067 (±40.8%)	0.0018	0.0007	1.689 (±8.11%)	0.0083	0.0039
7	7407	L83480-01	0.100 (±33.3%)	0.0020	0.0007	1.478 (±8.67%)	0.0076	0.0035
8	7408	L83501-01	0.078 (±37.8%)	0.0020	0.0008	1.844 (±7.76%)	0.0080	0.0038
9	7409	L83501-02	0.19 (±24.3%)	0.0023	0.0009	1.678 (±8.14%)	0.0080	0.0037
10	7410	L83501-03	0.078 (±37.8%)	0.0020	0.0007	2.078 (±7.31%)	0.0084	0.0040

Sample Measurement Parameters:
Comment: WG286993
User: MWM
Preset Time: 90:00
Alpha Preset Error: 0.5%
User Protocol: 1.5 hour

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 8/3/2010 17:25:04

Elapsed Time: 90:00
Guard: 1171 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	7411		0.022 (±70.7%)	0.0018	0.0006	22.51 (±2.34%)	0.0502	0.0248
2	7412	L83528-03	0.19 (±24.3%)	0.0022	0.0009	1.522 (±8.54%)	0.0074	0.0034
3	7413	L83528-04	0.078 (±37.8%)	0.0020	0.0007	1.644 (±8.22%)	0.0076	0.0035
4	7414	L83528-05	0.14 (±27.7%)	0.0022	0.0008	1.300 (±9.25%)	0.0077	0.0036
5	7415	dup 1	0.16 (±26.7%)	0.0022	0.0008	2.700 (±6.42%)	0.0084	0.0039
6	7416	dup 2	0.056 (±44.7%)	0.0018	0.0007	1.633 (±8.25%)	0.0083	0.0039
7	7417	ms	0.056 (±44.7%)	0.0020	0.0007	4.733 (±4.85%)	0.0076	0.0035
8	7418		0.022 (±70.7%)	0.0020	0.0008	1.511 (±8.57%)	0.0080	0.0038
9	7419		0.056 (±44.7%)	0.0023	0.0009	1.567 (±8.42%)	0.0080	0.0037
10	7420		0.089 (±35.4%)	0.0020	0.0007	1.778 (±7.91%)	0.0084	0.0040

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Water
EPA 9315

WG287395

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 7/30/2010
Analysis Date: 8/4/2010
Start Time:
End Time:
Approved: MWM 8-6-10
Approved: MTB 8-6-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)		Alpha emitting radium isotopes Hours	Total pCi/L	Error (+ -)	LLD pCi/L
1	wg286986PBW		1000	9.0912	9.1339	0.0427	2.1350		115.33	0.02	0.09	0.47
2	wg286986LCSW	rc100624-2	1000	9.0963	9.1485	0.0522	2.6100		115.33	17.27	0.87	0.38
3	L83363-01	MW-06-3	1000	9.06	9.1134	0.0534	2.6700		115.33	0.11	0.09	0.37
4	L83363-02	MW-06-1	1000	9.1081	9.1622	0.0541	2.7050		115.33	0.17	0.10	0.37
5	L83363-03	MW-02-3	1000	9.0926	9.1464	0.0538	2.6900		115.33	0.12	0.10	0.37
6	L83363-04	MW-82-3	1000	9.0675	9.1219	0.0544	2.7200		115.33	0.13	0.10	0.37
7	L83363-05	MW-06-2	1000	9.0353	9.0894	0.0541	2.7050		115.33	0.06	0.09	0.37
8	L83363-06	MW-60-12	1000	9.0806	9.1319	0.0513	2.5650		115.33	0.06	0.08	0.39
9	L83363-07	MW-02-4	1000	9.0982	9.1551	0.0569	2.8450		115.33	0.12	0.10	0.35
10	L83435-01	SIGNAL BROWN	1000	9.0518	9.1033	0.0515	2.5750		115.33	9.33	0.65	0.39
11	L83435-02	GATE WELL	1000	9.0707	9.1231	0.0524	2.6200		117.78	1.07	0.22	0.38
12	L83435-03	PS1-41	1000	9.0179	9.0714	0.0535	2.6750		117.78	1.83	0.29	0.37
13	L83435-04	PS1-40	1000	9.0425	9.0935	0.0510	2.5500		117.78	1.45	0.26	0.39
14	L83480-01	QNT	1000	9.055	9.0969	0.0419	2.0950		117.78	1.18	0.26	0.47
15	L83501-01	CPR 1-2	1000	8.9938	9.0488	0.0550	2.7500		117.78	0.11	0.10	0.36
16	L83501-02	PP 2B	1000	9.0869	9.1396	0.0527	2.6350		117.78	0.22	0.12	0.38
17	L83501-03	P-61	1000	8.9978	9.0333	0.0355	1.7750		117.78	0.43	0.20	0.56
18	L83528-03	P-10	1000	9.051	9.0961	0.0451	2.2550		117.78	0.40	0.16	0.44
19	L83528-04	SHUMWAY@HA	250	9.0127	9.0523	0.0396	1.9800		117.78	10.62	1.60	2.00
20	L83528-05	P-11	1000	8.9765	9.014	0.0375	1.8750		117.78	0.25	0.16	0.53
21	L83363-05DUP		1000	9.031	9.0842	0.0532	2.6600		119.37	0.09	0.09	0.37
22	L83501-02DUP		1000	8.9794	9.0326	0.0532	2.6600		119.37	0.33	0.14	0.37
23	L83363-01MS	rc100624-2	1000	9.0178	9.0704	0.0526	2.6300		119.37	16.91	0.85	0.37

Ra226 Decay Date:	
Time:	
Ba Correction Factor	0.05500
Counting Efficiency:	0.1700
Alpha BG Count @90min	0.24

Warns that Density above 5

Comments:

Template: ra-226-l-lb770

KBJ 8/6/10

ACZ Sample No.	GR CPM Alpha	Detector Alpha	BG CPM Alpha	NET CPM Alpha	Ingrow date & time	Count date & time	Ingrow Factor	Counting Efficiency	Fractional Yield	Detector #	BG alpha
wg286986PBW	0.100	1	0.0820	0.018	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.7764	1	0.082
wg286986LCSW	17.122	2	0.1220	17	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9491	2	0.122
L83363-01	0.200	3	0.0870	0.113	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9709	3	0.087
L83363-02	0.256	4	0.0810	0.175	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9836	4	0.081
L83363-03	0.244	5	0.1200	0.124	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9782	5	0.12
L83363-04	0.222	6	0.0930	0.129	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9891	6	0.093
L83363-05	0.178	7	0.1130	0.065	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9836	7	0.113
L83363-06	0.133	8	0.0750	0.058	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9327	8	0.075
L83363-07	0.233	9	0.1050	0.128	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	1.0345	9	0.105
L83435-01	9.180	10	0.1200	9.06	7/30/2010 16:05	8/4/2010 10:40	2.75	0.1700	0.9364	10	0.12
L83435-02	1.152	1	0.0820	1.07	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.9527		
L83435-03	1.982	2	0.1220	1.86	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.9727		
L83435-04	1.497	3	0.0870	1.41	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.9273		
L83480-01	1.022	4	0.0810	0.941	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.7618		
L83501-01	0.233	5	0.1200	0.113	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	1.0000		
L83501-02	0.311	6	0.0930	0.218	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.9582		
L83501-03	0.400	7	0.1130	0.287	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.6455		
L83528-03	0.422	8	0.0750	0.347	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.8200		
L83528-04	2.105	9	0.1050	2	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.7200		
L83528-05	0.300	10	0.1200	0.18	7/30/2010 16:05	8/4/2010 13:07	2.77	0.1700	0.6818		
L83363-05DUP	0.178	1	0.0820	0.096	7/30/2010 16:05	8/4/2010 14:42	2.79	0.1700	0.9673		
L83501-02DUP	0.456	2	0.1220	0.334	7/30/2010 16:05	8/4/2010 14:42	2.79	0.1700	0.9673		
L83363-01MS	17.087	3	0.0870	17	7/30/2010 16:05	8/4/2010 14:42	2.79	0.1700	0.9564		
	#N/A		#N/A					0.1700			
	#N/A		#N/A					0.1700			

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: MWM
Date: 8-6-10

Approved: MTB
Date: 8-6-10

Work Group: WG287345
Sample Type: Liquid
Analysis Date: 8-4-10
Analyst: TCD
Prep Date: 7-30-10

Weekly background file: Back 4530
Daily background file: Back 4534

Alpha performance file: Pera 2269
Beta performance file: —

GAB dry date/time: —

	Yes	No	NA
1) **FOR SREV**: QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?		✓	
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?			✓
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?	✓		
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?	✓		
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action
L83526-04	Sx required dilution due to high sediment	DF
L83363-01MS	MS recovery low, recovery associated w/LCS O.K.	M2

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

FRMRC010.07.10.21

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287395

Date Reported: 06-Aug-10
Run ID: R737614
Date Analyzed: 04-Aug-10
ICAL Workgroup:
Instrument ID: LB770

WG286986PBW

Tag: Measured: 8/4/2010 10:40:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.02	1		pCi/L	++	0.47	0.09		

WG286986LCSW

Tag: Measured: 8/4/2010 10:41:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	17	1		pCi/L	++	0.38	0.87	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	71.1	1		%	++	0.38	0.87	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	23.915	1		pCi/L	++	0.38	0.87	RC100624-2	

L83363-01

Tag: Measured: 8/4/2010 10:42:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.11	1		pCi/L	++	0.37	0.09		M2

L83363-02

Tag: Measured: 8/4/2010 10:44:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.17	1		pCi/L	++	0.37	0.1		M2

L83363-03

Tag: Measured: 8/4/2010 10:45:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.12	1		pCi/L	++	0.37	0.1		M2

L83363-04

Tag: Measured: 8/4/2010 10:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.13	1		pCi/L	++	0.37	0.1		M2

L83363-05

Tag: Measured: 8/4/2010 10:48:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.06	1		pCi/L	++	0.37	0.09		M2

L83363-06

Tag: Measured: 8/4/2010 10:50:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.06	1		pCi/L	++	0.39	0.08		M2

L83363-07 Tag: **Measured: 8/4/2010 10:51:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-9315	0.12	1		pCi/L	++	0.35	0.1		M2

L83435-01 Tag: **Measured: 8/4/2010 10:52:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	9.3	1		pCi/L	++	0.39	0.65		M2

L83435-02 Tag: **Measured: 8/4/2010 10:54:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	1.1	1		pCi/L	++	0.38	0.22		M2

L83435-03 Tag: **Measured: 8/4/2010 10:55:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	1.8	1		pCi/L	++	0.37	0.29		M2

L83435-04 Tag: **Measured: 8/4/2010 10:57:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	26-T-9315	1.5	1		pCi/L	++	0.39	0.26		M2

L83480-01 Tag: **Measured: 8/4/2010 10:58:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	1.2	1		pCi/L	++	0.47	0.26		M2

L83501-01 Tag: **Measured: 8/4/2010 11:00:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	0.11	1		pCi/L	++	0.36	0.1		M2

L83501-02 Tag: **Measured: 8/4/2010 11:01:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	0.22	1		pCi/L	++	0.38	0.12		M2

L83501-03 Tag: **Measured: 8/4/2010 11:03:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	0.43	1		pCi/L	++	0.56	0.2		M2

L83528-03 Tag: **Measured: 8/4/2010 11:04:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	0.4	1		pCi/L	++	0.44	0.16		M2

L83528-04 Tag: **Measured: 8/4/2010 11:05:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	11	1		pCi/L	++	2	1.6		DF M2

L83528-05 Tag: **Measured: 8/4/2010 11:07:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	226-903.0	0.25	1		pCi/L	++	0.53	0.16		M2

L83363-05DUP Tag: **Measured: 8/4/2010 11:08:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.09	1		pCi/L	++	0.37	0.09		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	0.23	1		%	++	1	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	40	1		pCi/L	ALRT	0.37	0.09		

L83501-02DUP Tag: **Measured: 8/4/2010 11:10:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	0.33	1		pCi/L	++	0.37	0.14		
SREV	ALPHA EMITTING RADIUM ISOTOPES	RER	0.6	1		%	++	1	5		
FAIL	ALPHA EMITTING RADIUM ISOTOPES	RPD	40	1		pCi/L	ALRT	0.37	0.14		

L83363-01MS Tag: **Measured: 8/4/2010 11:11:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA EMITTING RADIUM ISOTOPES	FOUND	17	1		pCi/L	++	0.37	0.85	RC100624-2	
SREV	ALPHA EMITTING RADIUM ISOTOPES	REC	70.6	1		%	ALRT	0.37	0.85	RC100624-2	M2
SREV	ALPHA EMITTING RADIUM ISOTOPES	TRUE	23.915	1		pCi/L	++	0.37	0.85	RC100624-2	

ACZ Laboratories, Inc.
Alpha-emitting Radium Isotopes in Water
EPA 9315

WG286986

Project:
SDG#:
SOP#: SOPRC003

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-RA-226
List Function: PREP

Analyst: tcd
Dept: 50
Prep Date: 7-30-10 10:30
Analysis Date:
Start Time:
End Time:
Approved:
Approved:

Seq. #	ACZ Sample No.	Client Sample ID	Sample Volume mL	Planchett Weight g	Gross Weight g	Sample Weight g	Residue Density mg/cm(sq)	Pb	Alpha emitting radium isotopes: Hours	Total pCi/L	Error (+ -)	LLD pCi/L
1	PBW ✓		1000									
2	LCSW ✓											
3	L83363-01 ✓	MW-06-3										
4	L83363-02 ✓	MW-06-1										
5	L83363-03 ✓	MW-02-3										
6	L83363-04 ✓	MW-82-3										
7	L83363-05 ✓	MW-06-2										
8	L83363-06 ✓	MW-60-12										
9	L83363-07 ✓	MW-02-4										
10	L83435-01 ✓	SIGNAL BROWN										
11	L83435-02 ✓	GATE WELL										
12	L83435-03 ✓	PS1-41										
13	L83435-04 ✓	PS1-40										
14	L83480-01 ✓	QNT										
15	L83501-01 ✓	CPR 1-2										
16	L83501-02 ✓	PP 2B										
17	L83501-03 ✓	P-61										
18	L83528-03 ✓	P-10										
19	L83528-04 ✓	SHUMWAY@HAUL RD NW	250ml									
20	L83528-05 ✓	P-11	1000									
21	DUP ✓	63-05										
22	DUP ✓	501-02										
23	MS ✓	63-01										

Ra226 Decay	Date:	
	Time:	
Ba Correction Factor		0.05500
Counting Efficiency:		0.1700
Alpha BG Count @90min		0.24

Pb

Warns that Density above 5

Comments: 4735-03-04: turned black with addition of lead carriers

Template: ra-226-l-lb770

L83528-04 diluted due to Sediment. Also given cleaning step 11.8.1

7-30-10
16:05

ACZ LABORATORIES, INC.
Standards/Reagents Information
wg286986
Water 7/30/2010 9:35 AM

ANALYST: _____
Second analyst: _____
DATE TIME of prep start: _____

PROJECT/WG: _____
Method Ra-226 9315 INSTR: LB770

Radioactive Standards

LCS & MS rc100624-2

Reagents

Barium Carrier:	rc100204-1	EDTA	rc100719-2
Sulfuric Acid	34642	Sulfuric Acid 0.1N	35105
Nitric Acid	34903	Ammonium sulfate	rc100719-1
lead carrier	rc100713-1	Acetic Acid	34657
Sodium hydroxide 10 N		Citric acid	rc100511-1

COMMENTS:

LB770 Number 1 User File: Radium 226 Sample Data File: 0804-01
Sample Set: WG286986 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

Category	Alpha Low	Alpha High	Beta Low	Beta High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.082	0.122	0.087	0.081	0.120	0.093	0.113	0.075	0.105	0.120
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.56	1.34	1.48	1.28	1.66	1.85	1.42	1.33	1.49	1.69
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 08-04-110 Time 10:39:34
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/1
Guard [cpm] 1144

Det#	Spl#	Spl. Name	ALPHA cpm	ALPHA %Error	ALPHA Cat	ALPHA MDA	BETA cpm	BETA %Error	BETA Cat	BETA MDA
1	2000	pbw	0.018	> 100	1	0.14	0.046	> 100	1	0.49
2	2001	lcsw	17.0	7.71	1	0.16	9.58	12.8	1	0.55
3	2002	L83363-01	0.113	> 100	1	0.14	0.624	77.4	1	0.48
4	2003	L83363-02	0.175	92.6	1	0.14	0.218	> 100	1	0.45
5	2004	L83363-03	0.124	> 100	1	0.16	0.468	> 100	1	0.51
6	2005	L83363-04	0.129	> 100	1	0.15	0.610	85.6	1	0.54
7	2006	L83363-05	0.065	> 100	1	0.16	0.158	> 100	1	0.47
8	2007	L83363-06	0.058	> 100	1	0.13	0.036	> 100	1	0.46
9	2008	L83363-07	0.128	> 100	1	0.15	0.063	> 100	1	0.48
10	2009	L83435-01	9.06	10.6	1	0.16	5.81	17.2	1	0.56

MDA = Minimum Detectable Activity [cpm]

LB770 Number 1 User File: Radium 226 Sample Data File: 0804-02
Sample Set: WG286986 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.082	0.122	0.087	0.081	0.120	0.093	0.113	0.075	0.105	0.120
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.56	1.34	1.48	1.28	1.66	1.85	1.42	1.33	1.49	1.69
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 08-04-110 Time 13:06:54
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/1
Guard [cpm] 1138

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	2010	L83435-02	1.07	31.8	1	0.14	0.964	57.0	1	0.50
2	2011	L83435-03	1.86	24.1	1	0.16	1.47	39.9	1	0.47
3	2012	L833435-04	1.41	27.6	1	0.14	1.15	49.4	1	0.49
4	2013	L83480-01	0.941	34.1	1	0.14	1.05	49.7	1	0.46
5	2014	L83501-01	0.113	> 100	1	0.16	0.448	> 100	1	0.51
6	2015	L83501-02	0.218	82.6	1	0.15	0.735	73.1	1	0.54
7	2016	L83501-03	0.287	71.1	1	0.16	0.298	> 100	1	0.47
8	2017	L83528-03	0.347	59.7	1	0.13	0.270	> 100	1	0.46
9	2018	L83528-04	2.00	23.0	1	0.15	2.30	29.2	1	0.50
10	2019	L83528-05	0.180	98.3	1	0.16	0.303	> 100	1	0.51

MDA = Minimum Detectable Activity [cpm]

Detectors with Trend:G

S A M P L E M E A S U R E M E N T

LB770 Number 1 User File: Radium 226 Sample Data File: 0804-03
Sample Set: WG286986 Mode: Alpha/Beta
HV-Meas.Counter [V] = 1550 HV-Guard Counter [V] = 1600
Statistical Error Definition: 3 standard deviation(s)

Category List [cpm]:

	Alpha		Beta	
Category	Low	High	Low	High
1	0.000	20.0	0.000	20.0
2	20.0	100.0	20.0	100.0
3	100.0		100.0	

	1	2	3	4	5	6	7	8	9	10
Alpha										
Background [cpm]	0.082	0.122	0.087	0.081	0.120	0.093	0.113	0.075	0.105	0.120
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Beta										
Background [cpm]	1.56	1.34	1.48	1.28	1.66	1.85	1.42	1.33	1.49	1.69
Efficiency	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
T(1/2) [days]	--	--	--	--	--	--	--	--	--	--
Manufacture Date	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--	--/--/--
Spillover	0.225	0.200	0.222	0.204	0.213	0.220	0.220	0.190	0.215	0.209
Normalization	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

Sample Results

Measurement Date 08-04-110 Time 14:41:38
Measuring Time [min:sec] Elapsed 0090:00 Preset 0090:00 Cycle 1/1
Guard [cpm] 1143

			ALPHA				BETA			
Det#	Spl#	Spl. Name	cpm	%Error	Cat	MDA	cpm	%Error	Cat	MDA
1	2020	L83363-05DUP	0.096	> 100	1	0.14	0.362	> 100	1	0.50
2	2021	L83501-02DUP	0.334	64.7	1	0.16	0.560	83.0	1	0.46
3	2022	L83363-01MS	17.0	7.70	1	0.14	11.2	11.8	1	0.58
4	2023		0.041	> 100	1	0.14	0.000	0.000	1	0.45
5	2024		0.102	> 100	1	0.16	0.000	0.000	1	0.51
6	2025		0.000	0.000	1	0.15	0.000	0.000	1	0.54
7	2026		0.000	0.000	1	0.16	0.146	> 100	1	0.47
8	2027		0.000	0.000	1	0.13	0.000	0.000	1	0.46
9	2028		0.017	> 100	1	0.15	0.000	0.000	1	0.48
10	2029		0.047	> 100	1	0.16	0.075	> 100	1	0.51

MDA = Minimum Detectable Activity [cpm]

ACZ Laboratories, Inc. WG287527

Gross Alpha and Gross Beta Radioactivity in Water
EPA 9310/EPA 900.0

Project: _____

SOP# SOPRC001

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-GROSS-AB
List Function: ANALYTICAL

Analyst: tcd
Dept: 55
Prep Date: 8/3/2010
Analysis Date: 8/6/2010
Start Time:
End Time:
Approved: TCD 8-9-10
Approved: MBB 8-10-10

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Planchett Weight g	TDS Check (10mL) g	Gross Weight g	TDS Residue mg	Residue Density mg/cm(sq)	Flag	Alpha pCi/L	Alpha Error (+ -)	Alpha LLD pCi/L	Beta pCi/L	Beta Error (+ -)	Beta LLD pCi/L
1	wg287173PBW		100.00	9.0130		9.0124	-0.60	-0.03		0.8	1.4	1.4	0.3	2.4	4.0
2	wg287173LCSW	rc091218-1	100.00	9.0526		9.0517	-0.90	-0.04		98.9	8.5	1.4	0.0	6.6	4.0
3	wg287173LCSW	pcn30843	100.00	9.0132		9.0128	-0.40	-0.02		0.0	0.4	1.5	98.0	6.6	4.0
4	L83332-01	CC-095	50.00	9.0393	9.0560	9.1164	77.10	3.85		8.9	5.5	4.5	11.2	5.8	7.9
5	L83332-02	CC-154	30.00	9.0497	9.0824	9.1451	95.40	4.77		5.2	7.7	7.7	21.2	10.9	13.6
6	L83332-03	CC-155	30.00	9.0755	9.1075	9.1680	92.50	4.62		8.2	7.4	7.6	21.7	10.8	13.5
7	L83332-04	CC-300	40.00	9.0183	9.0421	9.0946	76.30	3.81		36.8	11.0	5.7	44.9	9.1	10.1
8	L83332-05	CC-306	50.00	9.0433	9.0619	9.1315	88.20	4.41		16.4	7.1	4.6	11.1	6.1	8.1
9	L83332-06	CC-532	20.00	9.0320	9.0807	9.1210	89.00	4.45		463.5	53.3	11.6	247.0	25.1	20.0
10	L83332-07	CC-533	20.00	9.0930	9.1419	9.1880	95.00	4.75		155.9	31.6	11.7	105.4	19.9	20.1
11	L83332-08	CC-802	100.00	8.9975	9.0038	9.0577	60.20	3.01		17.2	4.7	2.2	11.8	3.3	4.1
12	L83332-09	CC-963	25.00	9.0282	9.0647	9.1196	91.40	4.57		6.6	8.5	9.0	12.9	11.0	16.0
13	L83332-10	CC-1000	100.00	9.0843	9.0841	9.0840	-0.30	-0.02		0.2	1.2	1.4	0.1	2.8	4.0
14	L83363-01	MW-06-3	90.00	9.0097	9.0201	9.1016	91.90	4.59		3.5	2.7	2.5	12.3	3.9	4.5
15	L83363-02	MW-06-1	60.00	9.0142	9.0293	9.1041	89.90	4.50		20.7	6.9	3.8	21.2	5.6	6.8
16	L83363-03	MW-02-3	60.00	9.0256	9.0406	9.1151	89.50	4.47		16.1	6.3	3.8	16.5	5.5	6.7
17	L83363-04	MW-82-3	60.00	9.0484	9.0634	9.1447	96.30	4.81		11.7	5.8	3.8	13.9	5.3	6.7
18	L83363-05	MW-06-2	60.00	9.0462	9.0628	9.1449	98.70	4.93		9.1	5.1	3.9	21.6	6.0	6.7
19	L83363-06	MW-60-12	100.00	9.0281	9.0278	9.0280	-0.10	0.00		-0.3	1.1	1.4	-0.8	2.4	4.0
20	L83363-07	MW-02-4	50.00	9.0338	9.0511	9.1337	99.90	4.99		13.9	6.5	4.5	21.9	6.5	8.0
21	L83376-01	RESE-1003163	100.00	9.0313	9.0386	9.1158	84.50	4.23		4.2	2.9	2.3	-1.0	2.8	4.1
22	L83376-02	RESE-1003164	100.00	9.0296	9.0366	9.1272	97.60	4.88		0.0	1.4	2.3	-1.0	2.8	4.1
23	L83376-03	RESE-1003165	100.00	9.0259	9.0301	9.0826	56.70	2.83		1.1	1.8	2.1	2.8	2.7	4.0
24	L83332-08DUP		100.00	8.9986		9.0676	69.00	3.45		13.5	4.2	2.2	5.0	3.0	4.0
25	L83363-05DUP		100.00	9.0522		9.1460	93.80	4.69		3.0	2.7	2.3	8.3	3.2	4.0
26	L83332-10MS	rc091218-1	100.00	9.0334		9.0336	0.20	0.01		96.8	8.4	1.4	0.0	6.7	4.0
27	L83376-03MS	pcn30843	100.00	8.9711		9.0273	56.20	2.81		0.0	0.6	2.1	75.7	5.9	4.0

LCS/MS Alpha SCN_____
LCS/MS Beta SCN_____

Flag Warns that Density above 5

PCN for Nitric. PCN for 2N Nitric.

Alpha Efficiency Equation: $Y = AX^2 + BX + C$

		A	B	C
Detector:	1	0.0036	-0.0326	0.1997
Detector:	2	0.0039	-0.0349	0.1998
Detector:	3	0.0038	-0.0337	0.2003
Detector:	4	0.0032	-0.0297	0.1934
Detector:	5	0.0037	-0.0331	0.1959
Detector:	6	0.0027	-0.0265	0.1897
Detector:	7	0.0031	-0.0286	0.1889
Detector:	8	0.0034	-0.0319	0.1974
Detector:	9	0.0041	-0.0360	0.2011
Detector:	10	0.0041	-0.0366	0.2023

Comments: _____

Time of Drying.

FRMRC009.01.09.ver02

Template: RCGABLB770-2

RCGABLB770-2.xls

8/9/2010 2:39 PM
wg287527.xls

ACZ Sample No.	Alpha			Beta			LB770-2 Information				Count Time (min)
	GR CPM	NET CPM	Efficiency	GR CPM	NET CPM	Efficiency	Data File	Detector (1 - 10)	Background alpha (cpm)	Background beta (cpm)	
wg287173PBW	0.1100	0.04	0.2009	1.2500	0.02	0.3971		2	0.0722	1.2260	120
wg287173LCSW	4.4580	4.42	0.2012			0.3968		1	0.0389	64.2980	120
wg287173LCSW			0.1940	9.8580	8.50	0.3907		4	0.0667	1.3570.	120
L83332-01	0.1800	0.13	0.1269	1.7920	0.49	0.3961		3	0.0542	1.3010	120
L83332-02	0.1100	0.04	0.1222	2.1500	0.54	0.3846		5	0.0675	1.6060	120
L83332-03	0.1100	0.07	0.1249	2.1420	0.56	0.3874		6	0.0417	1.5830	120
L83332-04	0.4600	0.41	0.1249	2.8580	1.55	0.3894		7	0.0514	1.3060	120
L83332-05	0.2800	0.22	0.1228	1.9500	0.48	0.3893		8	0.0569	1.4710	120
L83332-06	2.5920	2.51	0.1221	5.7670	4.31	0.3930		9	0.0792	1.4560	120
L83332-07	0.8900	0.84	0.1210	3.4670	1.83	0.3908		10	0.0528	1.6380	120
L83332-08	0.5700	0.50	0.1301	2.2420	1.02	0.3871		2	0.0722	1.2260	120
L83332-09	0.1000	0.05	0.1257	1.5830	0.28	0.3941		3	0.0542	1.3010	120
L83332-10	0.0750	0.01	0.1964	1.6170	0.01	0.3946		5	0.0675	1.6060	120
L83363-01	0.1300	0.09	0.1249	2.5330	0.95	0.3875		6	0.0417	1.5830	120
L83363-02	0.3900	0.34	0.1230	2.4000	1.09	0.3873		7	0.0514	1.3060	120
L83363-03	0.3200	0.26	0.1227	2.3250	0.85	0.3892		8	0.0569	1.4710	120
L83363-04	0.2700	0.19	0.1228	2.1830	0.73	0.3921		9	0.0792	1.4560	120
L83363-05	0.2000	0.15	0.1215	2.7580	1.12	0.3901		10	0.0528	1.6380	120
L83363-06	0.0580	-0.01	0.2000	1.1580	-0.07	0.3970		2	0.0722	1.2260	120
L83363-07	0.2500	0.20	0.1268	2.2580	0.96	0.3929		3	0.0542	1.3010	120
L83376-01	0.1800	0.11	0.1221	1.5170	-0.09	0.3857		5	0.0675	1.6060	120
L83376-02	0.0420	0.00	0.1247	1.5000	-0.08	0.3865		6	0.0417	1.5830	120
L83376-03	0.0830	0.03	0.1327	1.5500	0.24	0.3923		7	0.0514	1.3060	120
L83332-08DUP	0.4400	0.38	0.1278	1.9080	0.44	0.3914		8	0.0569	1.4710	120
L83363-05DUP	0.1600	0.08	0.1224	2.1750	0.72	0.3924		9	0.0792	1.4560	120
L83332-10MS	4.3250	4.29	0.1994			0.3967		1	0.0389	64.2980	120
L83376-03MS			0.1318	8.3250	6.69	0.3980		10	0.0528	1.6380	120
											120
											120
											120

Beta Efficiency Equation: Y = AX + B

		A	B
Detector:	1	-0.003	0.40
Detector:	2	-0.003	0.40
Detector:	3	-0.003	0.41
Detector:	4	0.000	0.39
Detector:	5	-0.002	0.39
Detector:	6	-0.004	0.40
Detector:	7	-0.003	0.40
Detector:	8	-0.002	0.40
Detector:	9	-0.002	0.40
Detector:	10	-0.004	0.41

Standard tracability for efficiency curve calibration
Alpha attenuation curve performed on 2/9/10
used TH230 RC980902-1 and NaCl pcn25484
Beta attenuation curve performed on 2/8/10
used Sr90 PCN33619 and NaCl pcn 25484
Alpha performance checked daily with ___ pcn22289
Beta performance checked daily with ____ pcn22287

8/9/2010 1:02 PM
wg287527.xls

ACZ Laboratories, Inc.
Radiochemistry Data Review Checklist

Data Reviewer: TCD
Date: 8-9-10

Approved: [signature]
Date: 8-10-10

Work Group: 287527
Sample Type: GAB
Analysis Date: 8-6-10
Analyst: TCD
Prep Date: 8-3-10

Weekly background file: Back 624
Daily background file: Back 629

Alpha performance file: Pera920
Beta performance file: Perb920

GAB dry date/time: 8-3-10 18:05

	Yes	No	NA
1) **FOR SREV:** QA/QC approval for initial training or 2 sets of initials for WG & LIMS?	✓		
2) Does the workgroup include all required QC samples?	✓		
3) Are all QC criteria listed in LIMS within specified limits?	✓		
4) Does all QC have the correct nomenclature (PBS vs PBW, etc.)?	✓		
5) For GABs: Beta LCS/MS deleted from Alpha & Alpha LCS/MS deleted from Beta?	✓		
6) Are all PCNs / SCNs used for LIMS calculations entered correctly?	✓		
7) Have all transcriptions been reviewed for accuracy (e.g. volumes, BG's, sx counts, etc.)?	✓		
8) Are samples flagged for INSX, if applicable?			✓
9) Is any sample analyzed using less volume appropriately "D" qualified?			✓
10) Are all calculations based on the correct matrix?	✓		
11) Are all errors properly corrected (i.e. single-line crossout, dated & initialed)?	✓		
12) Is a current standard/reagent sheet attached to the workgroup?			✓
13) Are all associated WG benchsheets locked for editing?	✓		
14) For GAB WG's containing DW samples, did at least 72 hours elapse between end of drying and start of counting?			✓

QC limits *		
Analyte	**PBW**	**LCS & MS**
gross alpha	2*LLD	63-146
gross beta	2*LLD	61-123
Ra-226 (903.1)	2*LLD	45-131
Alpha emitting Ra isotopes	2*LLD	71-121
Ra-228	2*LLD	49-132
Pb-210	2*LLD	47-102
Th	2*LLD	90-120
U-234	2*LLD	89-132
U-235	2*LLD	45-150
U-238	2*LLD	87-132
Po-210	2*LLD	52-94
GAMMA	2*LLD	90-110
Rn-222	2*LLD	90-110
Instrument - Parameter	Performance Check	
XLB - α	26.8 - 28.8%	
XLB - β	36.3 - 38.3%	

For any of the items listed above that are checked "No" state the corrective action/explanation below.

QC/Sample ID	Analytical Problem	Corrective action

Comments:

LCS MS limits developed from combined control chart data for LCSW LCSS.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Workgroup Review and Approval

WG287527

Date Reported: 10-Aug-10
Run ID: R738038
Date Analyzed: 06-Aug-10
ICAL Workgroup:
Instrument ID: LB770

WG287173PBW

Tag: Measured: 8/6/2010 9:13:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	FOUND	0.85	1		pCi/L	++	1.4	1.4		
SREV	BETA	FOUND	0.27	1		pCi/L	++	4	2.5		

WG287173LCSW

Tag: Measured: 8/6/2010 9:14:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	FOUND	99	1		pCi/L	++	1.4	8.5	RC091218-1	
SREV	ALPHA	REC	122.1	1		%	++	1.4	8.5	RC091218-1	
SREV	ALPHA	TRUE	81.05888	1		pCi/L	++	1.4	8.5	RC091218-1	

WG287173LCSW

Tag: 1 Measured: 8/6/2010 9:15:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	BETA	FOUND	98	1		pCi/L	++	4	6.6	PCN30843	
SREV	BETA	REC	98	1		%	++	4	6.6	PCN30843	
SREV	BETA	TRUE	100	1		pCi/L	++	4	6.6	PCN30843	

L83332-01

Tag: Measured: 8/6/2010 9:17:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	8.9	1		pCi/L	++	4.5	5.5		
NEED	BETA	REG	11	1		pCi/L	++	8	5.8		

L83332-02

Tag: Measured: 8/6/2010 9:18:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	5.2	1		pCi/L	++	7.7	7.7		
NEED	BETA	REG	21	1		pCi/L	++	14	11		

L83332-03

Tag: Measured: 8/6/2010 9:20:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	8.2	1		pCi/L	++	7.6	7.4		
NEED	BETA	REG	22	1		pCi/L	++	14	11		

L83332-04

Tag: Measured: 8/6/2010 9:21:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	37	1		pCi/L	++	5.7	11		
NEED	BETA	REG	45	1		pCi/L	++	10	9.1		

L83332-05

Tag: Measured: 8/6/2010 9:23:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	16	1		pCi/L	++	4.6	7.1		
NEED	BETA	REG	11	1		pCi/L	++	8.1	6.1		

L83332-06 Tag: **Measured: 8/6/2010 9:24:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	460	1		pCi/L	++	12	53		
NEED	BETA	REG	250	1		pCi/L	++	20	25		

L83332-07 Tag: **Measured: 8/6/2010 9:25:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	160	1		pCi/L	++	12	32		
NEED	BETA	REG	110	1		pCi/L	++	20	20		

L83332-08 Tag: **Measured: 8/6/2010 9:27:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	17	1		pCi/L	++	2.2	4.7		
NEED	BETA	REG	12	1		pCi/L	++	4.1	3.3		

L83332-09 Tag: **Measured: 8/6/2010 9:28:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	6.6	1		pCi/L	++	9	8.5		
NEED	BETA	REG	13	1		pCi/L	++	16	11		

L83332-10 Tag: **Measured: 8/6/2010 9:30:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	GA-T-900	0.17	1		pCi/L	++	1.4	1.2		
NEED	BETA	REG	0.13	1		pCi/L	++	4	2.8		

L83363-01 Tag: **Measured: 8/6/2010 9:31:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	3.5	1		pCi/L	++	2.5	2.7		
SREV	BETA	B-T-9310	12	1		pCi/L	++	4.5	3.9		

L83363-02 Tag: **Measured: 8/6/2010 9:33:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	21	1		pCi/L	++	3.8	6.9		
SREV	BETA	B-T-9310	21	1		pCi/L	++	6.8	5.6		

L83363-03 Tag: **Measured: 8/6/2010 9:34:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	16	1		pCi/L	++	3.9	6.3		
SREV	BETA	B-T-9310	16	1		pCi/L	++	6.7	5.5		

L83363-04 Tag: **Measured: 8/6/2010 9:36:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	12	1		pCi/L	++	3.9	5.8		
SREV	BETA	B-T-9310	14	1		pCi/L	++	6.7	5.3		

L83363-05 Tag: Measured: 8/6/2010 9:37:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	9.1	1		pCi/L	++	3.9	5.1		
SREV	BETA	B-T-9310	22	1		pCi/L	++	6.7	6		

L83363-06 Tag: Measured: 8/6/2010 9:38:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	-0.32	1		pCi/L	++	1.4	1.1		
SREV	BETA	B-T-9310	-0.77	1		pCi/L	++	4	2.4		

L83363-07 Tag: Measured: 8/6/2010 9:40:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	B-T-9310	14	1		pCi/L	++	4.5	6.5		
SREV	BETA	B-T-9310	22	1		pCi/L	++	8	6.5		

L83376-01 Tag: Measured: 8/6/2010 9:41:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	AB-T-900	4.2	1		pCi/L	++	2.3	2.9		
SREV	BETA	AB-T-900	-1	1		pCi/L	++	4.1	2.8		

L83376-02 Tag: Measured: 8/6/2010 9:43:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	AB-T-900	0.01	1		pCi/L	++	2.3	1.4		
SREV	BETA	AB-T-900	-0.97	1		pCi/L	++	4.1	2.8		

L83376-03 Tag: Measured: 8/6/2010 9:44:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	AB-T-900	1.1	1		pCi/L	++	2.1	1.8		
SREV	BETA	AB-T-900	2.8	1		pCi/L	++	4	2.7		

L83332-08DUP Tag: Measured: 8/6/2010 9:46:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	FOUND	14	1		pCi/L	++	2.2	4.2		
SREV	ALPHA	RER	0.48	1		%	++	2	5		
FAIL	ALPHA	RPD	19.4	1		pCi/L	++	2.2	4.2		
SREV	BETA	FOUND	5	1		pCi/L	++	4	3		
SREV	BETA	RER	1.57	1		%	++	4	15		
FAIL	BETA	RPD	82.4	1		pCi/L	ALRT	4	3		

L83363-05DUP Tag: Measured: 8/6/2010 9:47:00 AM

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	FOUND	3	1		pCi/L	++	2.3	2.7		
SREV	ALPHA	RER	1.06	1		%	++	2	5		
FAIL	ALPHA	RPD	100.8	1		pCi/L	ALRT	2.3	2.7		
SREV	BETA	FOUND	8.3	1		pCi/L	++	4	3.2		
SREV	BETA	RER	2.01	1		%	++	4	15		
FAIL	BETA	RPD	90.4	1		pCi/L	ALRT	4	3.2		

L83332-10MS Tag: **Measured: 8/6/2010 9:49:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	ALPHA	FOUND	97	1		pCi/L	++	1.4	8.4	RC091218-1	
SREV	ALPHA	REC	119.5	1		%	++	1.4	8.4	RC091218-1	
SREV	ALPHA	TRUE	81.05888	1		pCi/L	++	1.4	8.4	RC091218-1	

L83376-03MS Tag: **Measured: 8/6/2010 9:50:00 AM**

Status	Parm_Stored	Type	Value	Dil	Qual	Units	Appv	MDL	RDL	Text Value	Ext Qual
SREV	BETA	FOUND	76	1		pCi/L	++	4	5.9	PCN30843	
SREV	BETA	REC	73.2	1		%	++	4	5.9	PCN30843	
SREV	BETA	TRUE	100	1		pCi/L	++	4	5.9	PCN30843	

ACZ Laboratories, inc. **WG287173**

Gross Alpha and Gross Beta Radioactivity in Water
EPA 9310/EPA 900.0

Project: _____

SOP# SOPRC001

Instrument: LB770
Matrix Class: LIQUID
List Type: QC-GROSS-AB
List Function: PREP

Analyst: tcd
Dept: 50
Prep Date: 8-3-10 10:00
Analysis Date: _____
Start Time: _____
End Time: _____
Approved: _____
Approved: _____

Seq. #	ACZ Sample No.	Client Sample ID	Sample Vol. mL	Planchett Weight g	TDS Check (10mL) g	Gross Weight g	TDS Residue mg	Residue Density mg/cm(sq)	Flag	Alpha pCi/L	Alpha Error (+ -)	Alpha LLD pCi/L	Beta pCi/L	Beta Error (+ -)	Beta LLD pCi/L
1	PBW		100												
2	LCSW		1												
3	LCSW		1												
4	L83332-01 GA	CC-095	50												
5	L83332-02	CC-154	30												
6	L83332-03	CC-155	30												
7	L83332-04	CC-300	40												
8	L83332-05	CC-306	50												
9	L83332-06	CC-532	20												
10	L83332-07	CC-533	20												
11	L83332-08	CC-802	100												
12	L83332-09	CC-963	25												
13	L83332-10 GA	CC-1000	100												
14	L83363-01	MW-06-3	90												
15	L83363-02	MW-06-1	60												
16	L83363-03	MW-02-3	1												
17	L83363-04	MW-82-3	1												
18	L83363-05	MW-06-2	1												
19	L83363-06	MW-60-12	100												
20	L83363-07	MW-02-4	50												
21	L83376-01	RESE-1003163	100												
22	L83376-02	RESE-1003164	1												
23	L83376-03	RESE-1003165	1												
24	DUP	L83332-08	1												
25	DUP	L83363-05	1												
26	MS	L83332-10	1												
27	MS	L83376-03	1												

LCS/MS Alpha SCN: LCS91218-1
LCS/MS Beta SCN: 30543

Warns that Density above 5

PCN for Nitric: 34903 35246
PCN for 2N Nitric: 34903

Alpha Efficiency Equation: Y = AX^2 + BX + C

		A	B	C
Detector:	1	0.0041	-0.0355	0.1901
Detector:	2	0.0040	-0.0356	0.1972
Detector:	3	0.0039	-0.0351	0.2002
Detector:	4	0.0033	-0.0321	0.1990
Detector:	5	0.0034	-0.0327	0.1963
Detector:	6	0.0040	-0.0350	0.1912
Detector:	7	0.0034	-0.0321	0.1956
Detector:	8	0.0041	-0.0363	0.2033
Detector:	9	0.0041	-0.0365	0.2036
Detector:	10	0.0034	-0.0326	0.1983

rcgabwlb.xls

Comments: _____

Time of Drying: 8-3-10 18:05

FRMRC012.01.09.ver02

Template: gr-ab-l-lb770

8/3/2010 2:55 PM
wg287173

Sample Measurement Parameters:
Comment: WG287173
User: tcd
Instrument Name: LB770-2
Preset Time: 120:00
Cycles: 1
Outlier warning disabled
Data acquired with program version 1.16.023
Alpha Preset Error: 0.5%
Beta Preset Error: 0.5%

User Protocol "2HOUR"
Protocol ID: 8
Default Data Path: C:\UMS\
Continuous sample mode: No
Preset Time: 120:00
Cycles: 1
Measurement mode: Alpha/Beta
Spillover correction: Yes
Operating Point: 1500V

	Alpha	Beta
Preset error (%)	0.5	0.5
Measurement units	cpm	cpm

		Alpha		
	Spillover (%)	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	19.46	0.0389 (±0.0073)	0.0167	60.0
2	21.63	0.0722 (±0.0100)	0.0167	60.0
3	22.23	0.0542 (±0.0087)	0.0167	60.0
4	22.39	0.0667 (±0.0096)	0.0167	60.0
5	20.5	0.0675 (±0.0097)	0.0167	60.0
6	21.48	0.0417 (±0.0076)	0.0167	60.0
7	21.84	0.0514 (±0.0084)	0.0167	60.0
8	21.74	0.0569 (±0.0089)	0.0167	60.0
9	21.77	0.0792 (±0.0105)	0.0167	60.0
10	23.74	0.0528 (±0.0086)	0.0167	60.0

	Beta		
	Bkgd (cpm)	Efficiency (cps/cpm)	Units conv. (cpm/cps)
1	64.298 (±0.315)	0.0167	60.0
2	1.226 (±0.041)	0.0167	60.0
3	1.301 (±0.043)	0.0167	60.0
4	1.357 (±0.043)	0.0167	60.0
5	1.606 (±0.047)	0.0167	60.0
6	1.583 (±0.047)	0.0167	60.0
7	1.306 (±0.043)	0.0167	60.0
8	1.471 (±0.045)	0.0167	60.0
9	1.456 (±0.045)	0.0167	60.0
10	1.638 (±0.048)	0.0167	60.0

Cycle 1 of 1
Start Time: 8/6/2010 9:13:32

Elapsed Time: 120:00
Guard: 1171.9 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	5651	lcswA	4.458 (±4.32%)	0.0015	0.0006	39.71 (±1.53%)	0.0443	0.0219
2	5652	pbw	0.11 (±27.7%)	0.0019	0.0008	1.250 (±8.16%)	0.0065	0.0030
3	5653	L83~~363~~-01	0.18 (±21.8%)	0.0017	0.0007	1.792 (±6.82%)	0.0066	0.0031
4	5654	lcss B	0.13 (±25.8%)	0.0018	0.0007	9.858 (±2.91%)	0.0068	0.0032
5	5655	L83~~363~~-02	0.11 (±27.7%)	0.0019	0.0007	2.150 (±6.23%)	0.0073	0.0035
6	5656	L83~~363~~-03	0.11 (±27.7%)	0.0015	0.0006	2.142 (±6.24%)	0.0073	0.0034
7	5657	L83~~363~~-04	0.46 (±13.5%)	0.0017	0.0006	2.858 (±5.40%)	0.0067	0.0031
8	5658	L83~~363~~-05	0.28 (±17.1%)	0.0017	0.0007	1.950 (±6.54%)	0.0070	0.0033
9	5659	L83~~363~~-06	2.592 (±5.67%)	0.0020	0.0008	5.767 (±3.80%)	0.0072	0.0033
10	5660	L83~~363~~-07	0.89 (±9.67%)	0.0017	0.0007	3.467 (±4.90%)	0.0075	0.0035

All mislabeled,
Should be L83332-01 thru -07

Sample Measurement Parameters:
Comment: WG287173
User: tcd
Preset Time: 120:00
Alpha Preset Error: 0.5%
User Protocol: 2HOUR

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 8/6/2010 11:58:32

Elapsed Time: 120:00
Guard: 1173.4 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	5671		0.075 (±33.3%)	0.0015	0.0006	30.02 (±1.76%)	0.0443	0.0219
2	5672	L83332-08	0.57 (±12.1%)	0.0019	0.0008	2.242 (±6.10%)	0.0065	0.0030
3	5673	L83332-09	0.100 (±28.9%)	0.0017	0.0007	1.583 (±7.25%)	0.0066	0.0031
4	5674		0.075 (±33.3%)	0.0018	0.0007	1.175 (±8.42%)	0.0068	0.0032
5	5675	L83332-10	0.075 (±33.3%)	0.0019	0.0007	1.617 (±7.18%)	0.0073	0.0035
6	5676	L83363-01	0.13 (±25.8%)	0.0015	0.0006	2.533 (±5.74%)	0.0073	0.0034
7	5677	L83363-02	0.39 (±14.6%)	0.0017	0.0006	2.400 (±5.89%)	0.0067	0.0031
8	5678	L83363-03	0.32 (±16.2%)	0.0017	0.0007	2.325 (±5.99%)	0.0070	0.0033
9	5679	L83363-04	0.27 (±17.7%)	0.0020	0.0008	2.183 (±6.18%)	0.0070	0.0033
10	5680	L83363-05	0.20 (±20.4%)	0.0017	0.0007	2.758 (±5.50%)	0.0074	0.0035

Sample Measurement Parameters:
Comment: WG287173
User: tcd
Preset Time: 120:00
Alpha Preset Error: 0.5%
User Protocol: 2HOUR

Instrument Name: LB770-2
Cycles: 1
Beta Preset Error: 0.5%

Cycle 1 of 1
Start Time: 8/6/2010 14:13:35

Elapsed Time: 120:00
Guard: 1171.7 cpm

	Spl #	Sample Name	Alpha (raw cpm)	MDA	MRA	Beta (raw cpm)	MDA	MRA
1	5681	ms A	4.325 (±4.39%)	0.0015	0.0006	29.45 (±1.77%)	0.0443	0.0219
2	5682	L83363-06	0.058 (±37.8%)	0.0019	0.0008	1.158 (±8.48%)	0.0065	0.0030
3	5683	L83363-07	0.25 (±18.3%)	0.0017	0.0007	2.258 (±6.07%)	0.0067	0.0031
4	5684		0.058 (±37.8%)	0.0018	0.0007	1.500 (±7.45%)	0.0068	0.0032
5	5685	L83376-01	0.18 (±21.3%)	0.0019	0.0007	1.517 (±7.41%)	0.0073	0.0035
6	5686	L83376-02	0.042 (±44.7%)	0.0015	0.0006	1.500 (±7.45%)	0.0073	0.0034
7	5687	L83376-03	0.083 (±31.6%)	0.0017	0.0006	1.550 (±7.33%)	0.0066	0.0031
8	5688	dup 1	0.44 (±13.7%)	0.0017	0.0007	1.908 (±6.61%)	0.0071	0.0033
9	5689	dup 2	0.16 (±22.9%)	0.0020	0.0008	2.175 (±6.19%)	0.0070	0.0033
10	5690	ms B	0.083 (±31.6%)	0.0017	0.0007	8.325 (±3.16%)	0.0074	0.0035

Columbia Analytical Services, Inc.
1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

REVISION 1

December 23, 2010 Analytical Report for Service Request No: K1007395

Andrea Nord
Barr Engineering
4700 West 77th Street
Minneapolis, MN 55435

RE: Rhodia Silver Bow/2646006.17-GW10-100

Dear Andrea:

Enclosed are the revised pages for chloride and sulfate for sample MW-02-3 have been corrected. The results for the total phosphorous have also been corrected of the samples submitted to our laboratory on July 17, 2010. For your reference, these analyses have been assigned our service request number K1007395.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3358. You may also contact me via Email at LHuckestein@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Lynda Huckestein
Client Services Manager

LH/rh

REVISED
11:24 am, Dec 23, 2010

100% Recycled Paper

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Chloride

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.20	20	07/19/10	108	
MW-06-1	K1007395-002	10	50	07/23/10	234	
MW-02-3	K1007395-003	10	50	07/23/10	169	
MW-82-3	K1007395-004	10	50	07/23/10	167	
MW-06-2	K1007395-005	20	100	07/23/10	178	
MW-60-12	K1007395-006	0.40	2	07/23/10	ND	
MW-02-4	K1007395-007	10	50	07/26/10	231	
Method Blank	K1007395-MB	0.20	1	07/26/10	ND	
Method Blank	K1007395-MB	0.20	1	07/23/10	ND	
Method Blank	K1007395-MB	0.20	1	07/19/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

REVISION 1

Analytical Report

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Sulfate

Analysis Method : 300.0
Test Notes :

Units : mg/L
Basis : NA

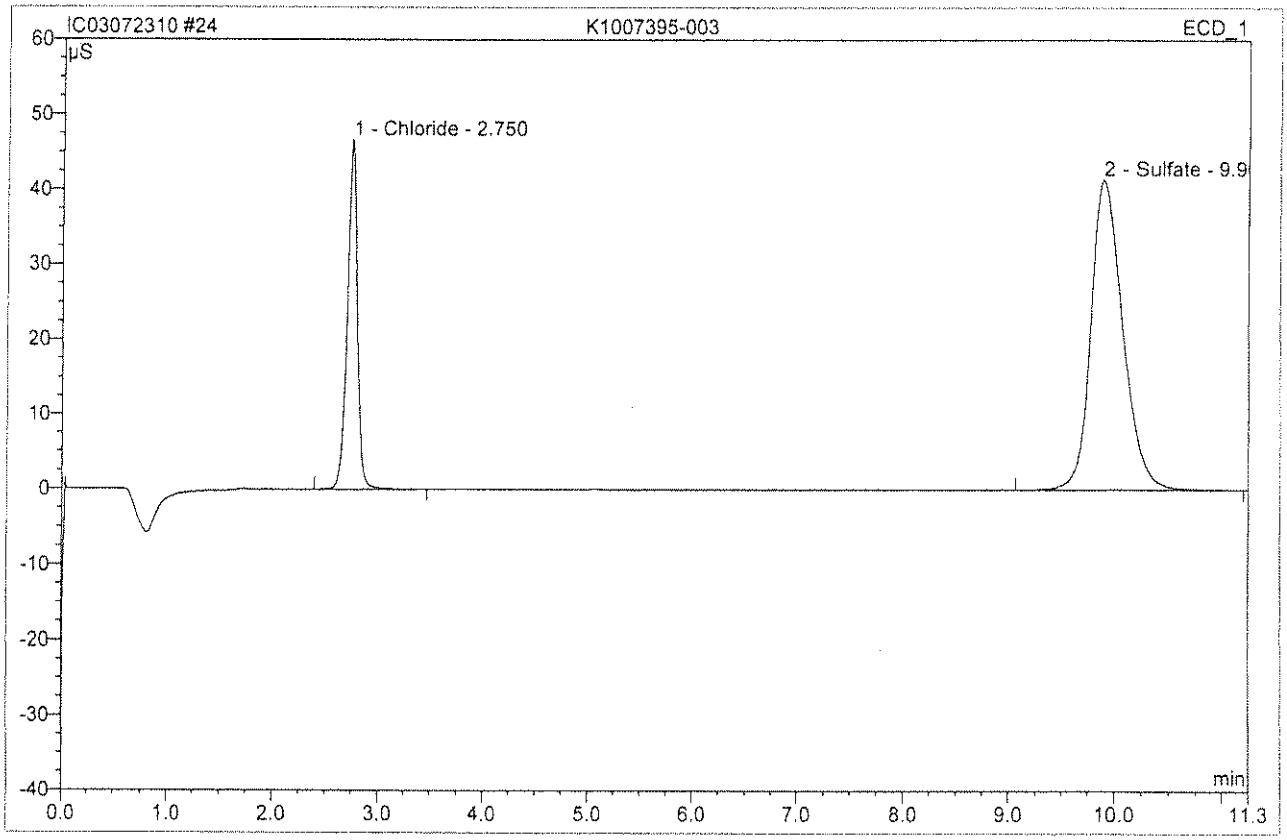
Sample Name	Lab Code	MRL	Dilution Factor	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	20	100	07/20/10	468	
MW-06-1	K1007395-002	10	50	07/23/10	401	
MW-02-3	K1007395-003	20	100	07/23/10	632	
MW-82-3	K1007395-004	20	100	07/23/10	627	
MW-06-2	K1007395-005	20	100	07/23/10	796	
MW-60-12	K1007395-006	0.40	2	07/23/10	ND	
MW-02-4	K1007395-007	20	100	07/26/10	537	
Method Blank	K1007395-MB	0.20	1	07/20/10	ND	
Method Blank	K1007395-MB	0.20	1	07/26/10	ND	
Method Blank	K1007395-MB	0.20	1	07/23/10	ND	

REVISION 1

7/26/2010 12:30 PM

24 K1007395-003

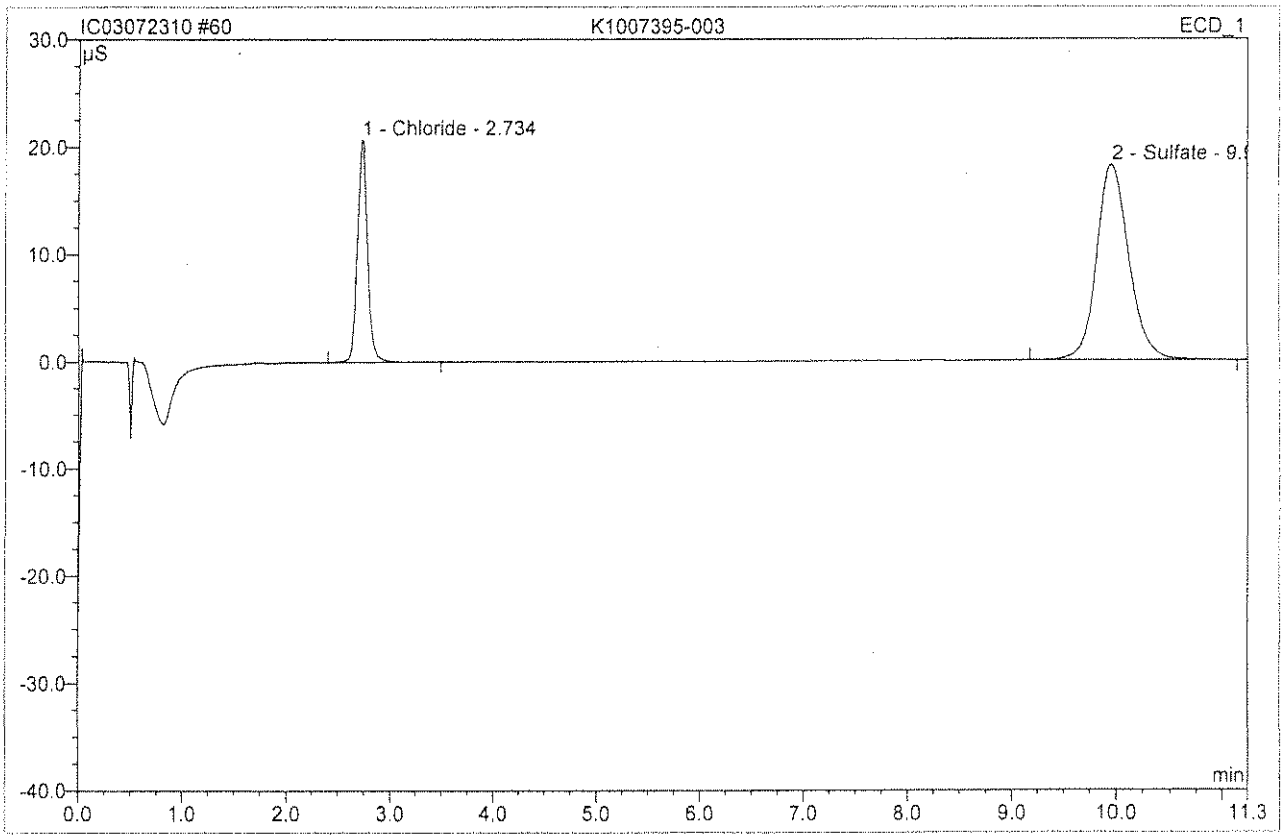
Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**50.0000**
Recording Time:	**7/23/2010 11:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.75	Chloride	46.657	5.236	26.94	168.662	BMB
2	9.90	Sulfate	41.282	14.200	73.06	714.049	BMB
Total:			87.939	19.436	100.00	882.710	

60 K1007395-003

Sample Name:	**K1007395-003**	*Injection Volume:*	**200.0**
Vial Number:	**59**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**epa300**	*Bandwidth:*	**n.a.**
Quantif. Method:	**epa300**	*Dilution Factor:*	**100.0000**
Recording Time:	**7/23/2010 19:47**	*Sample Weight:*	**1.0000**
Run Time (min):	**11.25**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount	Type
1	2.73	Chloride	20.776	2.376	27.44	153.048	BMB
2	9.97	Sulfate	18.252	6.283	72.56	631.894	BMB
Total:			39.028	8.659	100.00	784.942	

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 07/16-18/10
Date Received : 07/17-20/10

Phosphorus, Total

Prep Method : Method
Analysis Method : 365.3
Test Notes :

Units : mg/L
Basis : NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Prepared	Date Analyzed	Result	Result Notes
MW-06-3	K1007395-001	0.010	1	7/26/2010	07/26/10	0.084	
MW-06-1	K1007395-002	0.010	1	7/26/2010	07/26/10	0.200	
MW-02-3	K1007395-003	0.010	1	7/26/2010	07/26/10	0.187	
MW-82-3	K1007395-004	0.010	1	7/26/2010	07/26/10	0.187	
MW-06-2	K1007395-005	0.010	1	7/26/2010	07/26/10	0.224	
MW-60-12	K1007395-006	0.010	1	7/26/2010	07/26/10	ND	
MW-02-4	K1007395-007	0.010	1	7/26/2010	07/26/10	0.521	
Method Blank	K1007395-MB	0.010	1	7/26/2010	07/26/10	ND	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

REVISION 1

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Duplicate Summary
Inorganic Parameters

Sample Name :	MW-06-2	Units :	mg/L
Lab Code :	K1007395-005DUP	Basis :	NA
Test Notes :			

Analyte	Prep Method	Analysis Method	MRL	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
Phosphorus, Total	Method	365.3	0.010	0.224	0.185	0.205	19	

Client : Barr Engineering Company
Project Name : Rhodia Silver Bow
Project Number : 2646006.17-GW10-100
Sample Matrix : WATER

Service Request : K1007395
Date Collected : 7/18/2010
Date Received : 7/20/2010
Date Prepared : 07/26/10
Date Analyzed : 07/26/10

Matrix Spike Summary
Inorganic Parameters

Sample Name : MW-06-2
Lab Code : K1007395-005MS
Test Notes :

Units : mg/L
Basis : NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level	Sample Result	Spiked Sample Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Phosphorus, Total	Method	365.3	0.010	0.500	0.224	0.680	91	50-144	

COLUMBIA ANALYTICAL SERVICES, INC.
QA/QC Report

REVISION 1

Client :	Barr Engineering Company	**Service Request :**	K1007395
Project Name :	Rhodia Silver Bow	**Date Collected :**	7/18/2010
Project Number :	2646006.17-GW10-100	**Date Received :**	7/20/2010
Sample Matrix :	WATER	**Date Prepared :**	07/26/10
		Date Analyzed :	07/26/10

Matrix Spike/Duplicate Matrix Spike Summary

Sample Name :	MW-06-2		Units :	mg/L
Lab Code :	K1007395-005MS	K1007395-005DMS	Basis :	NA
Test Notes :				

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Spike Recovery MS	Spike Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Phosphorus, Total	Method	365.3	0.020	0.500	1.00	0.224	0.680	1.21	91	99	50-144	8	

Analytical Results Summary

Instrument Name: K-UV-VIS-01 **Analyst:** THANGANU **Analysis Lot:** 210027 **Method/Testcode:** 365.3/Phos T

REVISION 1

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
K1007348-001	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.024 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007348-002	Phosphorus, Total	N/A		Water	0.27 mg/L	100 mL	0.269 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007348-003	Phosphorus, Total	N/A		Water	0.01 mg/L	100 mL	0.015 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007348-004	Phosphorus, Total	N/A		Water	0.17 mg/L	50 mL	0.172 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
K1007348-005	Phosphorus, Total	N/A		Water	0.04 mg/L	100 mL	0.036 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007348-006	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.021 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007395-001	Phosphorus, Total	N/A		Water	0.08 mg/L	100 mL	0.084 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007395-002	Phosphorus, Total	N/A		Water	0.20 mg/L	100 mL	0.200 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007395-003	Phosphorus, Total	N/A		Water	0.19 mg/L	100 mL	0.187 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007395-004	Phosphorus, Total	N/A		Water	0.19 mg/L	100 mL	0.187 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
K1007395-005	Phosphorus, Total	N/A		Water	0.22 mg/L	50 mL	0.224 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
K1007395-006	Phosphorus, Total	N/A		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007395-007	Phosphorus, Total	N/A		Water	0.52 mg/L	100 mL	0.521 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007399-001	Phosphorus, Total	N/A		Water	0.66 mg/L	50 mL	0.655 mg/L	1	0.004	0.010			7/26/10 16:00:00	Y	V
K1007399-002	Phosphorus, Total	N/A		Water	0.08 mg/L	100 mL	0.076 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007451-001	Phosphorus, Total	N/A		Water	0.03 mg/L	100 mL	0.031 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007451-002	Phosphorus, Total	N/A		Water	0.26 mg/L	100 mL	0.263 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007451-003	Phosphorus, Total	N/A		Water	0.02 mg/L	100 mL	0.017 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007451-004	Phosphorus, Total	N/A		Water	0.50 mg/L	100 mL	0.497 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
K1007451-005	Phosphorus, Total	N/A		Water	0.13 mg/L	100 mL	0.127 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
KQ1007412-01	Phosphorus, Total	MS	K1007399-001	Water	0.58 mg/L	50 mL	1.16 mg/L	2	0.008	0.020	100		7/26/10 16:00:00	N	V
KQ1007412-02	Phosphorus, Total	DMS	K1007399-001	Water	0.31 mg/L	50 mL	1.53 mg/L	5	0.020	0.050	88	13	7/26/10 16:00:00	N	V
KQ1007412-05	Phosphorus, Total	LCS		Water	0.32 mg/L	10 mL	3.24 mg/L	1	0.04	0.10	100		7/26/10 16:00:00	N	V
KQ1007412-06	Phosphorus, Total	MB		Water	-0.01 mg/L	100 mL	0.010 mg/L U	1	0.004	0.010			7/26/10 16:00:00	N	V
KQ1007412-07	Phosphorus, Total	MS	K1007348-004	Water	0.58 mg/L	50 mL	0.579 mg/L	1	0.004	0.010	81		7/26/10 16:00:00	N	V
KQ1007412-08	Phosphorus, Total	DMS	K1007348-004	Water	0.58 mg/L	50 mL	1.17 mg/L	2	0.008	0.020	99	20	7/26/10 16:00:00	N	V
KQ1007412-09	Phosphorus, Total	DUP	K1007348-004	Water	0.17 mg/L	50 mL	0.174 mg/L	1	0.004	0.010		1	7/26/10 16:00:00	N	V
KQ1007412-10	Phosphorus, Total	MS	K1007395-005	Water	0.68 mg/L	50 mL	0.680 mg/L	1	0.004	0.010	91		7/26/10 16:00:00	N	V
KQ1007412-11	Phosphorus, Total	DMS	K1007395-005	Water	0.60 mg/L	50 mL	1.21 mg/L	2	0.008	0.020	98	7	7/26/10 16:00:00	N	V
KQ1007412-12	Phosphorus, Total	DUP	K1007395-005	Water	0.18 mg/L	50 mL	0.185 mg/L	1	0.004	0.010		19	7/26/10 16:00:00	N	V
KQ1007412-15	Phosphorus, Total	DUP	K1007399-001	Water	0.69 mg/L	50 mL	0.689 mg/L	1	0.004	0.010		5	7/26/10 16:00:00	N	V
KQ1007415-01	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.010	0.010			7/26/10 16:00:00	N	V
KQ1007415-02	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.010	0.010			7/26/10 16:00:00	N	V
KQ1007415-03	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.010	0.010			7/26/10 16:00:00	N	V
KQ1007415-04	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.010	0.010			7/26/10 16:00:00	N	V
KQ1007415-05	Phosphorus, Total	CCB		Water	0.00 mg/L	100 mL	0.010 mg/L U	1	0.010	0.010			7/26/10 16:00:00	N	V

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: K-UV-VIS-01 **Analyst:** THANGANU **Analysis Lot:** 210027 **Method/Testcode:** 365.3/Phos T

REVISION 1

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
KQ1007415-06	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4886 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
KQ1007415-07	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4875 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
KQ1007415-08	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4878 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
KQ1007415-09	Phosphorus, Total	CCV		Water	0.49 mg/L	100 mL	.4855 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V
KQ1007415-10	Phosphorus, Total	CCV		Water	0.48 mg/L	100 mL	.4821 mg/L	1	0.004	0.010			7/26/10 16:00:00	N	V

11

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

ANALYTICAL REPORT

Report Date: July 23, 2010

Andrea Nord
Barr Engineering Company
4700 West 77th Street
Minneapolis, MN 55435

Phone: (952) 823-2600
Fax: (952) 832-2601
E-mail: anord@barr.com

Workorder: **1020002**
Project ID: **Rhodia Silver Bow 071910**
Purchase Order: 26460006.17-GW10-100

Client Sample ID	Lab ID	Collect Date	Receive Date	Sampling Site
MW-06-3	1020002001	07/16/10	07/17/10	Rhodia Silver Bow
MW-06-1	1020002002	07/17/10	07/20/10	Rhodia Silver Bow
MW-02-3	1020002003	07/17/10	07/20/10	Rhodia Silver Bow
MW-82-3	1020002004	07/17/10	07/20/10	Rhodia Silver Bow
MW-06-2	1020002005	07/18/10	07/20/10	Rhodia Silver Bow
MW-60-12	1020002008	07/18/10	07/20/10	Rhodia Silver Bow
MW-02-4	1020002009	07/18/10	07/20/10	Rhodia Silver Bow

Client QC ID *	Lab ID	Collect Date	Receive Date	Sampling Site
MW-06-2MS	1020002006	07/18/10	07/20/10	Rhodia Silver Bow
MW-06-2MSD	1020002007	07/18/10	07/20/10	Rhodia Silver Bow

***Client QC is reported as part of the Quality Control results report, if requested.**

Client: Barr Engineering
Project Manager: Kevin W. Griffiths

Analytical Results

Workorder: **1020002**

Sample ID: **MW-06-3** | Matrix: Water | Collected: 7/16/2010
Lab ID: 1020002001 | Media: 500 mL Amber Glass | Received: 7/17/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 6:49:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Sample ID: **MW-06-1** | Matrix: Water | Collected: 7/17/2010
Lab ID: 1020002002 | Media: 500 mL Amber Glass | Received: 7/20/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 6:59:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Sample ID: **MW-02-3** | Matrix: Water | Collected: 7/17/2010
Lab ID: 1020002003 | Media: 500 mL Amber Glass | Received: 7/20/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 7:10:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Sample ID: **MW-82-3** | Matrix: Water | Collected: 7/17/2010
Lab ID: 1020002004 | Media: 500 mL Amber Glass | Received: 7/20/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 7:21:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Client: Barr Engineering
Project Manager: Kevin W. Griffiths

Analytical Results

Workorder: **1020002**

Sample ID: **MW-06-2** | Matrix: Water | Collected: 7/18/2010
Lab ID: 1020002005 | Media: 500 mL Amber Glass | Received: 7/20/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 7:32:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Sample ID: **MW-60-12** | Matrix: Water | Collected: 7/18/2010
Lab ID: 1020002008 | Media: 500 mL Amber Glass | Received: 7/20/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 8:05:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Sample ID: **MW-02-4** | Matrix: Water | Collected: 7/18/2010
Lab ID: 1020002009 | Media: 500 mL Amber Glass | Received: 7/20/2010
Sampling Site: Rhodia Silver Bow | Sampling Parameter: NA

Analysis Method - EPA 7580

Preparation: EPA 7580, Water Prep	**Weight/Volume**	**Analysis:** EPA 7580, Water	**Instr ID:** GCE24
Batch: EGC/2850 (HBN: 51073)	**Initial:** 120 mL	**Batch:** EGC/2853 (HBN: 51232)	**Percent Solids:** NA
Prepared: 7/21/2010	**Final:** 120 mL	**Analyzed:** 7/22/2010 8:16:00 PM	**Report Basis:** Wet

Analyte	ug/L	MDL	RL	Dilution	Qual.
White Phosphorus	ND	0.011	0.050	1	U

Report Authorization

Analysis Method - EPA 7580

Christopher Winter — **Analyst**
Mila V. Potekhin — **Peer Review**

Client: Barr Engineering
Project Manager: Kevin W. Griffiths

Laboratory Contact Information

Phone: (801) 266-7700
Email: alslt.lab@alsglobal.com
Web: www.datachem.com

ALS Laboratory Group (formerly DataChem Laboratories, Inc.)
960 W Levoy Drive
Salt Lake City, Utah 84123

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS is accredited by the State of Utah, Bureau of Laboratory Improvement under NELAP for specific fields of testing as documented in its current scope of accreditation (ID# DATA1) which is available by request or on the internet at http://health.utah.gov/lab/labimp/labcert/envlabcert.html. The quality systems implemented in the laboratory apply to all methods performed by ALS regardless of this current scope of accreditation which does not include performance based methods, modified methods and methods applied to matrices not listed in the methods.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

Result Symbol Definitions

MDL = Method Detection Limit, a statistical estimate of method/media/instrument sensitivity.
RL = Reporting Limit, a verified value of method/media/instrument sensitivity.
CRDL = Contract Required Detection Limit
Reg. Limit = Regulatory Limit.
ND = Not Detected, testing result not detected above the MDL or RL.
< This testing result is less than the numerical value.
** No result could be reported, see sample comments for details.

Qualifier Symbol Definitions

U = Qualifier indicates that the analyte was not detected above the MDL.
J = Qualifier Indicates that the analyte value is between the MDL and the RL. It is also used to indicate an estimated value for tentatively identified compounds in mass spectrometry where a 1:1 response is assumed.
B = Qualifier indicates that the analyte was detected in the blank.
E = Qualifier indicates that the analyte result exceeds calibration range.
P = Qualifier indicates that the RPD between the two columns is greater than 40%.

BARR
W
1020002
Minneapolis, MN 55435-4803
(952) 832-2600

3847/#2

MWW2

COC 1 of 1

Project Number: 26460006.17 - GW10 - 100

Project Name: Rhodia Silver Bow

Sample Origination State MT (use two letter postal state abbreviation)

COC Number: № 29304

Project Manager: TDM/RLG

Project QC Contact: AAN

Sampled by: KAM/CMLZ

Laboratory: ALS/DATA Chem

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix: Water	Matrix: Soil	Type: Grab	Type: Comp.	Type: QC	Number of Containers/Preservative — Water: VOCs (HCl) #1	SVOCs (unpreserved) #2	Dissolved Metals (HNO_3)	Total Metals (HNO_3)	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H_2SO_4) #4	500 ml Amber glass (unpres.)	Soil: VOCs (tared MeOH) #1	GRO, BTEX (tared MeOH) #1	DRO (tared unpreserved)	Metals (unpreserved)	SVOCs (unpreserved) #2	% Solids (plastic vial, unpres.)	Total Number Of Containers
1. MW-06-3	/	/	/	07/16/2010	12:05	X		X																	1
2.																									
3.																									
4.																									
5.																									
6.																									
7.																									
8.																									
9.																									
10.																									

Run Elemental Phosphorus by 7580 (See Table 1-4)

Report the data to the MDL and Report on a dry weight Basis

Common Parameter/Container - Preservation Key

#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
#2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
#3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
#4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	On Ice?	Date	Time	Received by:	Date	Time
[signature]	⊙ N	7/16/10	15:30	[signature]	17/jul/10	1732
Relinquished By:	On Ice? Y N	Date	Time	Received by:	Date	Time

Samples Shipped VIA: ☐ Air Freight ☒ Federal Express ☐ Sampler ☐ Other: _____

Air Bill Number: 8670 9280 2784

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

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10LUUUC

Chain of Custody

BARR

4700 West 77th Street
Minneapolis, MN 55435-4803
(952) 832-2600

3847/#2

COC 1 of 1

Project Number: 26460006.17 - GW10-100

Project Name: Rhodia Silver Bow

Sample Origination State MT (use two letter postal state abbreviation)

COC Number: № 29305

Project Manager: TDM/KLG

Project QC Contact: AAN

Sampled by: KAM/LMLZ

Laboratory: ALS/DATA Chem

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix: Water	Matrix: Soil	Type: Grab	Type: Comp.	Type: QC	Number of Containers/Preservative — Water: VOCs (HCl) #1	SVOCs (unpreserved) #2	Dissolved Metals (HNO_3)	Total Metals (HNO_3)	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H_2SO_4) #4	500 ml amber glass (unpres)	Soil: VOCs (tared MeOH) #1	GRO, BTEX (tared MeOH) #1	DRO (tared unpreserved)	Metals (unpreserved)	SVOCs (unpreserved) #2	% Solids (plastic vial, unpres.)	Total Number Of Containers
1. MW-06-1				07/17/2010	12:30	X		X										1							1
2. MW-02-3				07/17/2010	16:00	X		X										1							1
3. MW-82-3				07/17/2010	16:40	X		X										1							1
4. MW-06-2				07/18/2010	10:50	X		X										3	MS/MSD						3
5. MW-60-12				07/18/2010	13:45	X		X										1							1
6. MW-02-4				07/18/2010	16:35	X		X										1							1
7.																									
8.																									
9.																									
10.																									

* Run Elemental Phosphorus by 7580 (SEE TABLE 1-4 Included)

* Report the data to the MDL and Report on a dry weight basis

CALL ANDREA Nord w/ Questions

Common Parameter/Container - Preservation Key

#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List
#2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs
#3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, TDS, TS, Sulfate
#4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN

Relinquished By:	On Ice?	Date	Time	Received by:	Date	Time
	(Y) N	7/19/10	1500		7.20.10	1000
Relinquished By:	On Ice? Y N	Date	Time	Received by:	Date	Time

Samples Shipped VIA: ☐ Air Freight ☒ Federal Express ☐ Sampler ☐ Other: _____

Air Bill Number: 8670 9280 2795

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

H:\RLG\STDFORMS\Chain Of Custody Form 2009 RLG Rev. 09\01\09

ALS Laboratory Group

CHAIN-OF-CUSTODY

Project / Job / Task: 26460006.17-GW10-10	Split:	Workorder ID: 1020002
Client: Barr Engineering		Account: 8001
Comments:		

Type: 500AG

Preservatives: COOL

Requested Analysis: EPA 7580

Item	Collect Date/Time	Sample ID	Lab ID	QC	Matrix	Containers ID(s)	Containers Count	EPA 7580
1	07/16/2010 12:05	MW-06-3	1020002001		Water	A	1	A
2	07/17/2010 12:30	MW-06-1	1020002002		Water	A	1	A
3	07/17/2010 16:00	MW-02-3	1020002003		Water	A	1	A
4	07/17/2010 16:40	MW-82-3	1020002004		Water	A	1	A
5	07/18/2010 10:50	MW-06-2	1020002005		Water	A	1	A
6	07/18/2010 10:50	MW-06-2MS	1020002006	MS	Water	A	1	A
7	07/18/2010 10:50	MW-06-2MSD	1020002007	MSD	Water	A	1	A
8	07/18/2010 13:45	MW-60-12	1020002008		Water	A	1	A
9	07/18/2010 16:35	MW-02-4	1020002009		Water	A	1	A
10								

ORIGINAL FIELD SAMPLE CHAIN-OF-CUSTODY

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location
Rodriguez, Sheila	07/19/2010 09:32	ALS Sample Receiving	Sample Login
[signature]	7/20/10 1147	SD	Storage
SD [signature]	7-21-10 16:40	[signature]	7580
[signature]	7-21-10 17:15	RJ [signature]	LTS

SAMPLE PREPARATION / ANALYSIS CHAIN-OF-CUSTODY

Sample Prep / Analysis for: _____ Lab Notebook No.: _____

Prepared / Analyzed by: _____ Date / Time: _____

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Reason for Transfer / Storage Location

Tuesday, July 20, 2010 11:41:11 AM

ALSCOCV2.2

Table 1-4
ALS Laboratory Group/DataChem Laboratories - Salt Lake City, Utah
Analytical Parameters, Method and Quantitation Limits
Rhodia Silver Bow Facility
Butte, Montana

Parameter	Matrix	Method	Unit	PQL 1	MDL	Tap Water Screening Level 2
Elemental Phosphorus						
Elemental Phosphorus	Water	SW846 7580 mod.	ug/L	0.05	0.0234	0.073

Parameter	Matrix	Method	Unit	PQL 1	MDL	Residential Soil Screening Level 3
Elemental Phosphorus						
Elemental Phosphorus	Soil	SW846 7580 mod.	mg/Kg	0.00122	0.000469	0.16

Notes:

(1) PQL and MDL may vary based on level of moisture present (dry weight correction), initial volume and possible matrix interferences.

(2) Tap Water Screening Level (EPA Region 9 PRG, HQ = 0.1)

(3) Residential Soil Screening Level (EPA Region 9 PRG, HQ = 0.1)

Table 1-4

ALS Laboratory Group/DataChem Laboratories - Salt Lake City, Utah

Analytical Parameters, Method and Quantitation Limits

Rhodia Silver Bow Facility

Butte, Montana

Parameter	Matrix	Method	Unit	PQL (1)	MDL	Tap Water Screening Level (2)
Elemental Phosphorus						
Elemental Phosphorus	Water	SW846 7580 mod.	ug/L	0.05	0.0234	0.073

Parameter	Matrix	Method	Unit	PQL (1)	MDL	Residential Soil Screening Level (3)
Elemental Phosphorus						
Elemental Phosphorus	Soil	SW846 7580 mod.	mg/Kg	0.00122	0.000469	0.16

Notes:

(1) PQL and MDL may vary based on level of moisture present (dry weight correction), initial volume and possible matrix interferences.

(2) Tap Water Screening Level (EPA Region 9 PRG, HQ = 0.1)

(3) Residential Soil Screening Level (EPA Region 9 PRG, HQ = 0.1)

ALS Laboratory Group Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

Client Name: Barr Eng. Project/Task/Site: 1020002

Date/Time of Receipt: 17 Jul 10 0932 Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C02 6025	4 °C	4	C02	°C	7	C02	°C
2	C02	°C	5	C02	°C	8	C02	°C
3	C02	°C	6	C02	°C	9	C02	°C

Taken By: Meredith Edwards (Signature) Meredith Edwards (Printed Name) 17 Jul 10 (Date)

Client-Related Information

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

Briefly Describe the Problem and the Action Taken:

Client Notified? Yes ☐ No ☐ (If yes, attach client notification information.)

Response Required Within 24 Hours

Project Management

Project Manager Comments:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

ALS Laboratory Group Salt Lake City-Related Information Report (CRIR)

Cooler or Container Information Checklist (Fill In or Circle)

Client Name: BARR

Project/Task/Site: 1020002

Date/Time of Receipt: 7.20.10 1000

Number of Coolers Received: 1

Condition of Coolers:	Acceptable/Unacceptable	Temperature Control:	Present/Not Included
Custody Seals:	Present/Absent/NA	Location Temp Taken:	Control/Between Samples
	Intact/Broken/NA	Are all temperatures within	
Tamper Evident:	Yes/No/NA	project specific guidelines?	Yes/No/NA
Ice Present:	Yes/No/NA	Are all applicable pHs within	
	Frozen/Melted/NA	specific guidelines?	Yes/No/NA

pH Check Performed:	Metals	Yes/No/NA	Total Phenolics	Yes/No/NA	NO3/NO2	Yes/No/NA
	Cyanide	Yes/No/NA	TPH – 418.1	Yes/No/NA	Oil & Grease	Yes/No/NA
	Sulfide	Yes/No/NA	COD	Yes/No/NA	Total Phosphorous	Yes/No/NA
	Ammonia	Yes/No/NA	TKN	Yes/No/NA	Gross A.B, Gamma Spec	Yes/No/NA
Residual Chlorine Check Performed:	8270	Yes/No/NA	8310	Yes/No/NA	8330	Yes/No/NA
	8081	Yes/No/NA	8151	Yes/No/NA		

Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.	Cooler Received	DCL Cooler No.	Temp.
1	C02 4029	2 °C	4	C02	°C	7	C02	°C
2	C02	°C	5	C02	°C	8	C02	°C
3	C02	°C	6	C02	°C	9	C02	°C

Taken By: _____ (Signature) SUSAN RODRIGUEZ (Printed Name) 7.20.10 (Date)

Client-Related Information

☐ Missing Cooler	☐ Missing Samples/Bottles	☐ Incorrect Preservation	☐ Insufficient Sample Volume
☐ Cooler Conditions	☐ Broken/Leaking Samples	☐ pH Criteria Not Met	☐ Chain of Custody Problems
☐ Missing Paperwork	☐ Incorrect Bottle Type	☐ Residual Chlorine Present	☐ Other:
☐ Missing/Incorrect Bottle Labels	☐ Cooler Temperatures Out of Range	☐ Head Space in Bottles	EPA Custody Seal:

Briefly Describe the Problem and the Action Taken:

Client Notified? Yes ☐ No ☐ (If yes, attach client notification information.)

Response Required Within 24 Hours

Project Management

Project Manager Comments:

ALS Project Manager: _____ (Printed Name) Returned to Sample Receipt by: _____ (Signature) Date: _____

Quality Control Sample Batch Report

Analysis Information

Workorder: 1020002

Limits:	Method	**Preparation:**	EPA 7580, Water Prep	**Analysis:**	EPA 7580
Basis:	ALS Laboratory Group	**Batch:**	EGC/2850 (HBN: 51073)	**Batch:**	EGC/2853 (HBN: 51232)
		Prepared By:	Christopher Winter	**Analyzed By:**	Christopher Winter

Blank

MB: 169682
Analyzed: 07/22/2010 18:16
Units: ug/L

Analyte	Result	MDL	RL
White Phosphorus	ND	0.0112	0.05

Laboratory Control Sample

LCS: 169683
Analyzed: 07/22/2010 18:38
Units: ug/L

Analyte	Result	Target	% Recovery	QC Limits	
White Phosphorus	1.71	1.8	93	75	125

Matrix Spike - Matrix Spike Duplicate

Sample:	1020002005	**MS:**	1020002006	**MSD:**	1020002007
Analyzed:	07/22/2010 19:32	**Analyzed:**	07/22/2010 19:43	**Analyzed:**	07/22/2010 19:54
Units:	ug/L				

Analyte	Result	Result	Target	% Rec	QC Limits		Result	% Rec	RPD	QC Limits	
White Phosphorus	ND	1.5	1.8	81.6	65	135	1.5	79.4	0	0	20

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

Quality Control Sample
Batch Report

Analysis Information

Workorder: **1020002**

Limits:	Method	**Preparation:**	EPA 7580, Water Prep	**Analysis:**	EPA 7580
Basis:	ALS Laboratory Group	**Batch:**	EGC/2850 (HBN: 51073)	**Batch:**	EGC/2853 (HBN: 51232)
		Prepared By:	Christopher Winter	**Analyzed By:**	Christopher Winter

Comments

None

QC Data Approved and Reviewed by

Christopher Winter	Mila V. Potekhin	7/23/2010
Analyst	**Peer Review**	**Date**

Symbols and Definitions

* - See Comments section for more information
▲ - Sample result is greater than 4 times the spike added.

RPD - Relative % Difference (Spike / Spike Duplicate)
ND - Not Detected
QC results are not adjusted for moisture correction, where applicable.

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Case Narrative

Method:	ALS SOP/7580	**Client:**	Barr Engineering
Analysis:	White Phosphorus P4	**Account:**	8001
Preparation SOP #:	OP-SW-7580	**Matrix:**	Water
Analysis SOP #:	OP-SW-7580		
Lot/Release/SDG #:	N/A		
ALS Work Order:	1020002		

General Set Information: The field samples were received and batched for analysis.

Method Summary: This method was used to determine the concentration of white phosphorus in water using a GC equipped with a DB-1 column and a FPD detector.

Sample Preparation: A 120 mL sample aliquot was extracted using 3.0 mL Iso-Octane.

Hold Times: Holding time requirements were met for sample analyses.

Dilution(s): None.

Method QC (MB, LCS): *Method Blank(s):* White phosphorus was not detected in the method blank greater than ½ the CRDL.

Laboratory Control Samples: All recoveries were within established limits.

Matrix QC (MS, MD, MSD): MS and MSD were prepared using client selected samples.

Instrument QC (ICV, CCV, etc): *Continuing Calibration Verification:* All continuing calibration verification standards passed the percent difference criteria. See the Continuing Calibration Verification Forms.

NC/CAR: None.

Sample Calculation: Analyte concentrations in the sample extracts were determined by interpolation from 1st order regressions of standard responses (peak height) vs. concentrations. Final concentrations in ug/L were determined from the equation:

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Case Narrative

$$C_S = \frac{C_E \bullet V_E \bullet DF}{V_S}$$

Where:

C_S	=	Analyte concentration in sample (ug/L)
C_E	=	Analyte concentration in extract (ug/mL)
V_E	=	Final volume of extract (mL)
DF	=	Dilution Factor
V_S	=	Initial volume of sample taken for preparation (L)

Miscellaneous Comments: None.

Name: Christopher R. Winter

Date: 23rd July, 2010

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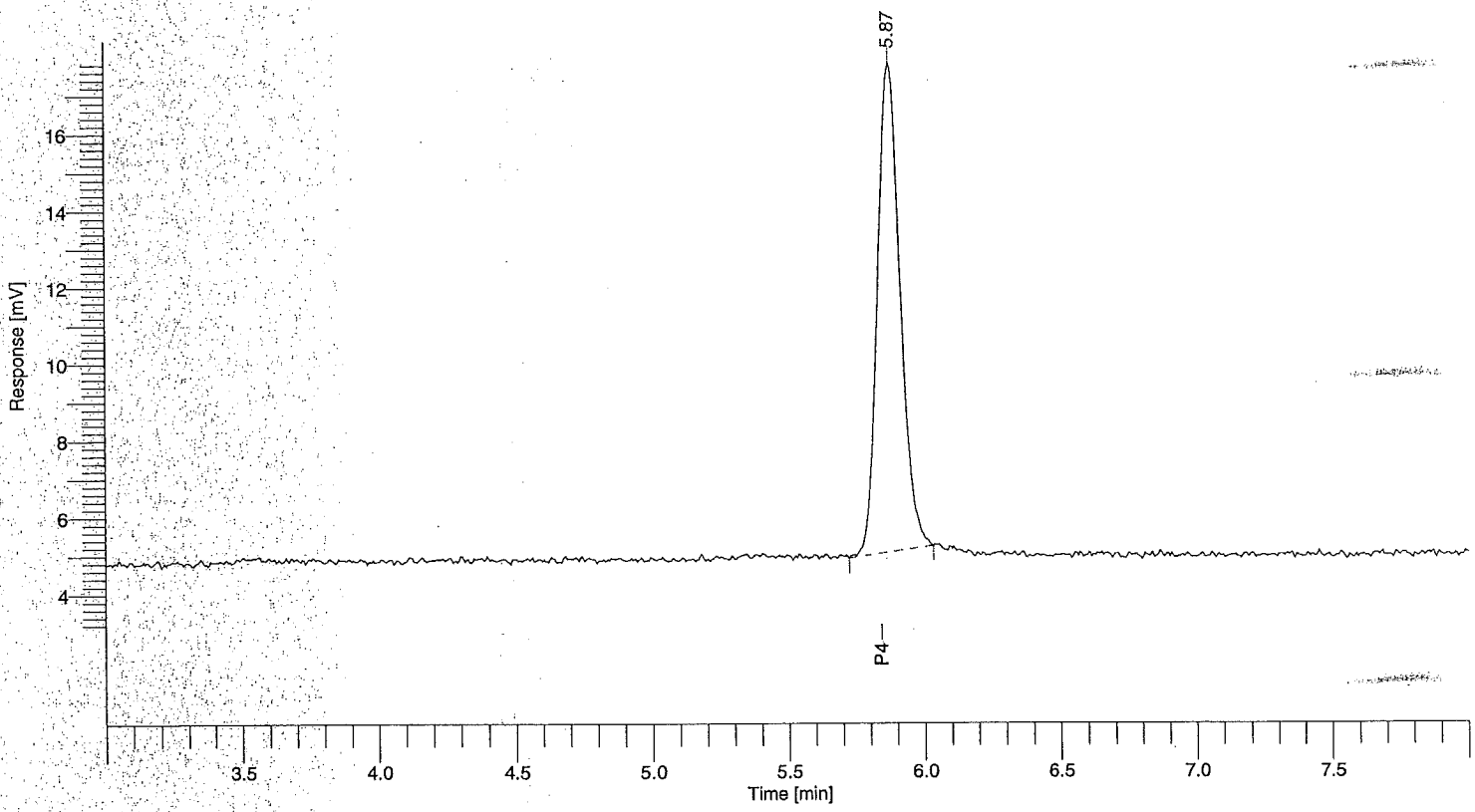
Analytical Documentation

Software Version : 6.3.1.0504
Sample Name : CCV1 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/5
Sample Amount : 1.000000
Cycle : 5

Date : 7/23/2010 7:30:56 AM
Data Acquisition Time : 7/22/2010 4:30:37 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_005.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

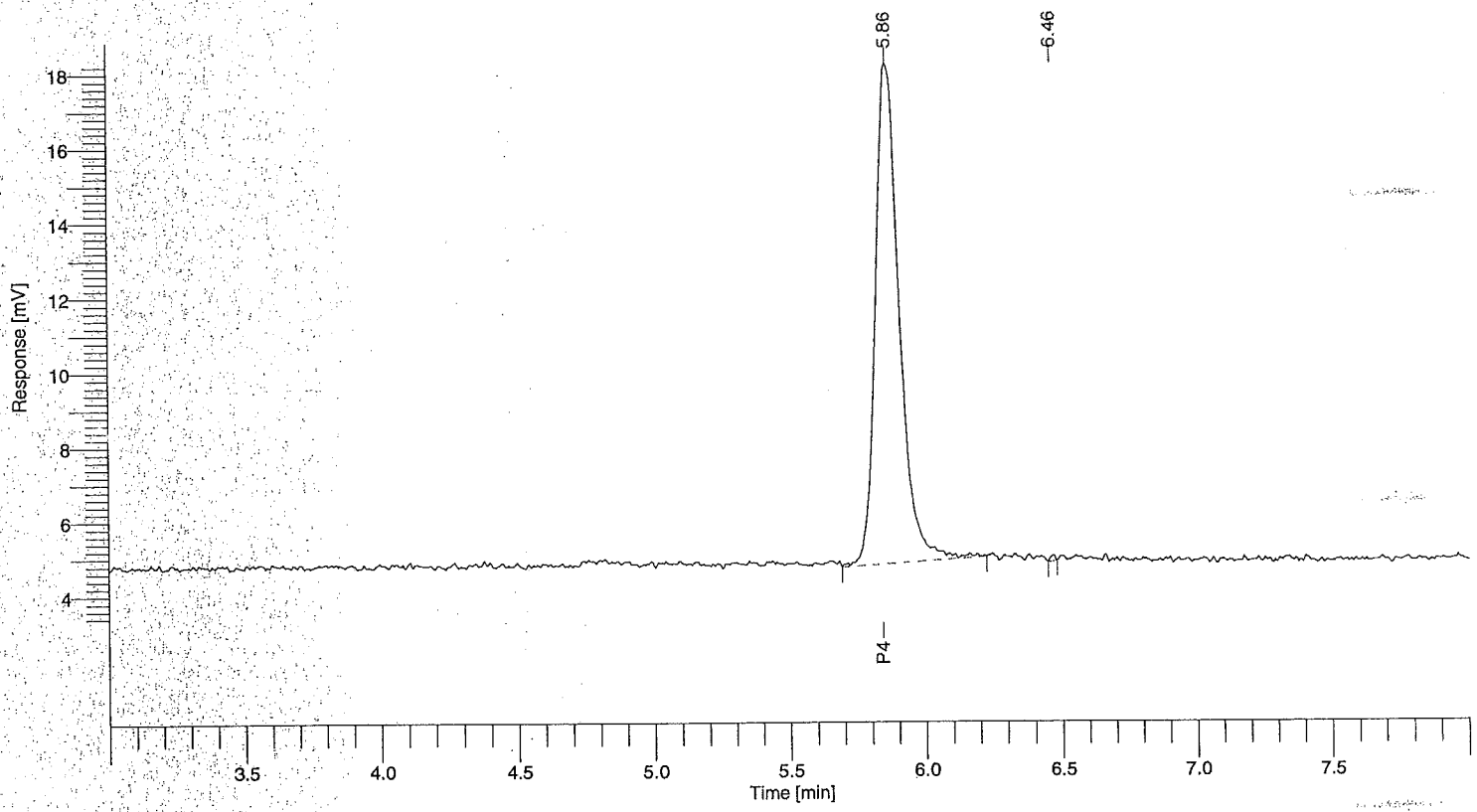
Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.87	P4	12742	73693	0.04762	0.05000	95.2
						95.2

P4 recovery 85 to 115%? YES NO

Software Version : 6.3.1.0504
Sample Name : CCV2 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/16
Sample Amount : 1.000000
Cycle : 16

Date : 7/23/2010 7:31:01 AM
Data Acquisition Time : 7/22/2010 6:27:29 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_016.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

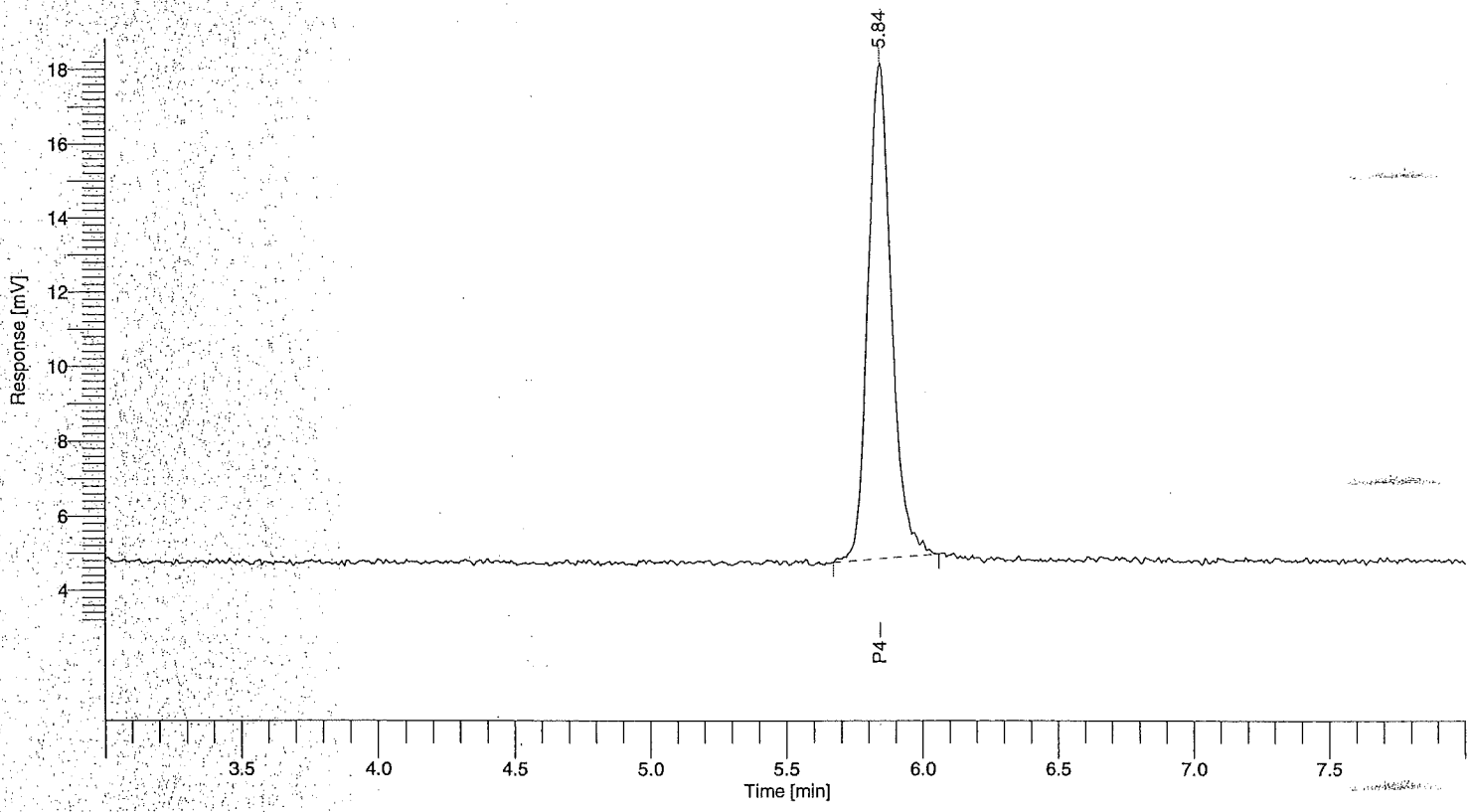
Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.86	P4	13485	82661	0.05040	0.05000	100.8
						100.8

P4 recovery 85 to 115%? YES NO

Software Version : 6.3.1.0504
Sample Name : CCV3 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/27
Sample Amount : 1.000000
Cycle : 27

Date : 7/23/2010 7:31:05 AM
Data Acquisition Time : 7/22/2010 8:27:38 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_027.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.84	P4	13353	79770	0.04991	0.05000	99.8
						99.8

P4 recovery 85 to 115%? YES NO

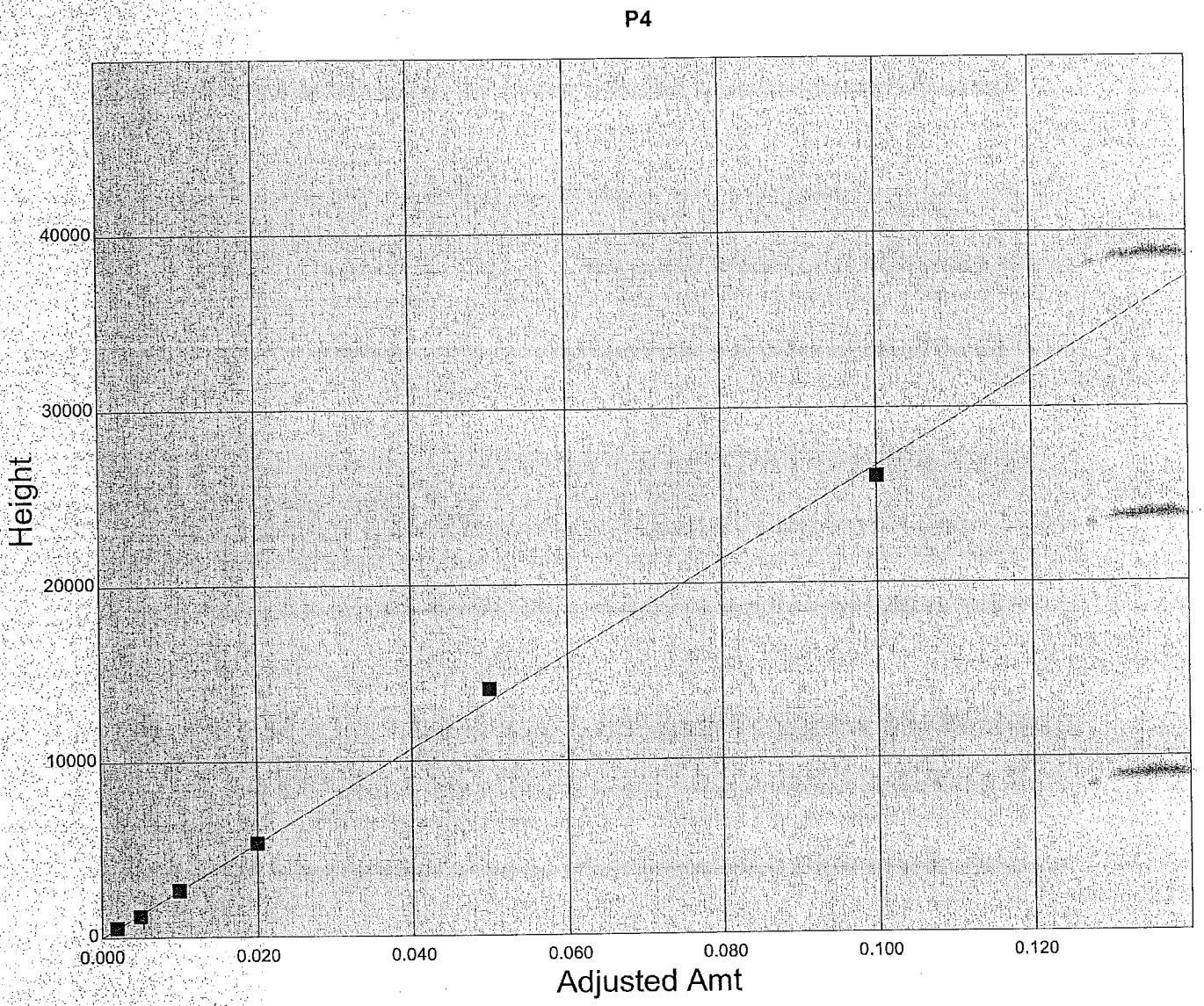
Fit Analysis Output For Method File: \\Turbo\TCCS\potekhin\GCE24\METHODS\24_P4.MTH
Reprocess Number : alsltxp025: 1001572
Component Name : P4
Date : 7/8/2010 17:06:48

Curve Parameters:

Curve #1 : 1st Order
Weighting Factor = 1/x R-Squared = 0.998388
Calibration Curve : Y = (20.273208) +(267162.801725) X

Curve #1 :

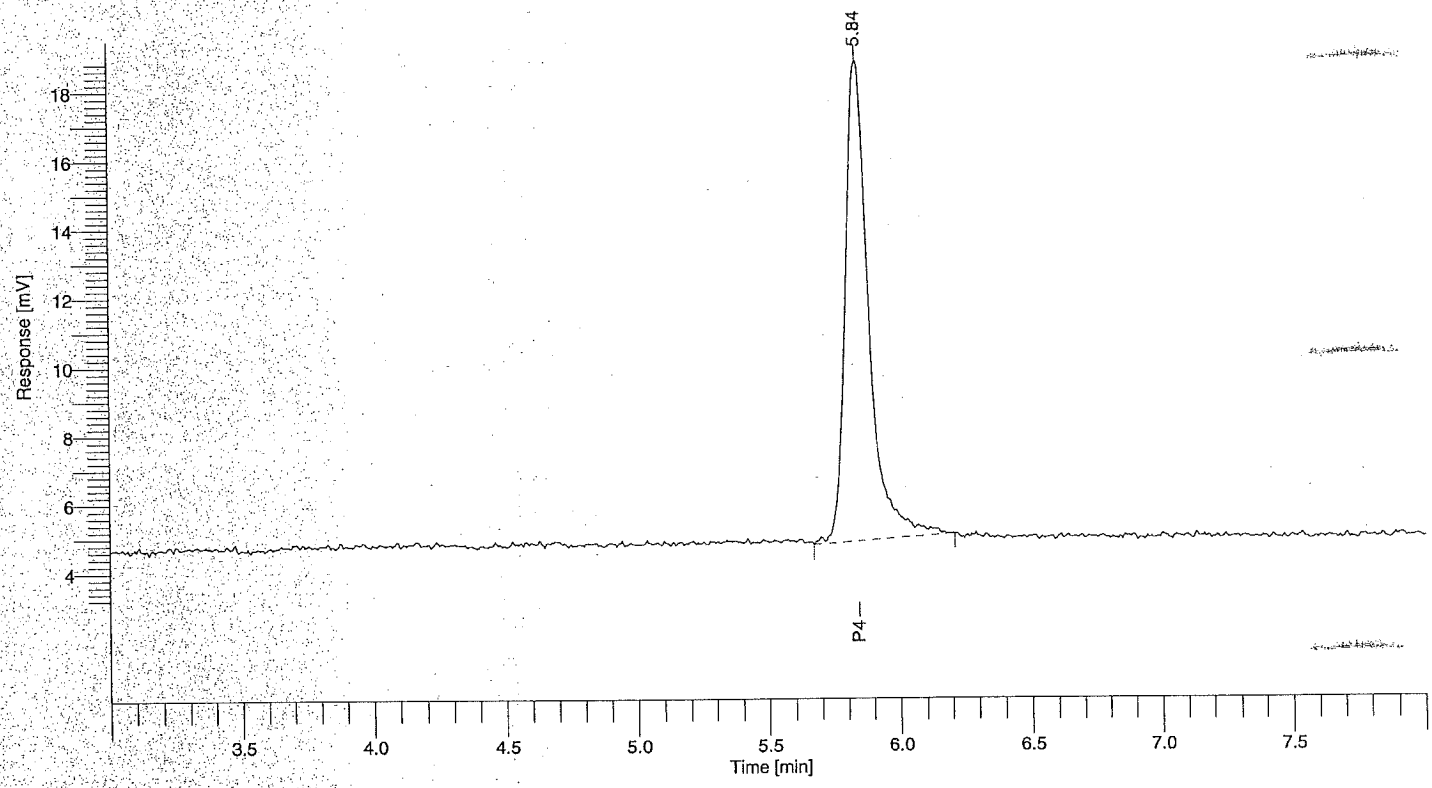
Level Name	Observed X-Value	Calculated X-Value	Delta	%Diff.	Observed Y-Value	Calculated Y-Value	Delta	%Diff.
6	0.002000	0.002104	-1.039e-04	-4.940	582.364314	554.599	27.766	5.006
5	0.005000	0.004543	0.000457	10.053	1234.063271	1356.087	-122.024	-8.998
4	0.010000	0.010088	-8.796e-05	-0.872	2715.401994	2691.901	23.501	0.873
3	0.020000	0.020056	-5.605e-05	-0.279	5378.503901	5363.529	14.975	0.279
2	0.050000	0.052570	-0.002570	-4.888	14064.953113	13378.413	686.540	5.132
1	0.100000	0.097639	0.002361	2.418	26105.796579	26736.553	-630.757	-2.359



Software Version : 6.3.1.0504
Sample Name : 8560/ICV 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/10
Sample Amount : 1.000000
Cycle : 10

Date : 7/8/2010 17:05:04
Data Acquisition Time : 7/8/2010 15:31:36
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_010.rst
Sequence File : \\Turbo\TCCS\potekhin\GCE24\SEQUENCES\24100708CAL.seq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.84	P4	14040	88236	0.05248	0.05000	105.0
						105.0

P4 recovery 85 to 115%? YES NO

Batch Worklist

Batch: EGC/ 2853 **Created:** 7/21/2010 17:13 **Instrument:** **HBN:** 51232
Rule: EPA 7580, Water **Analyst:** C. Winter **Status:** WP

Workorder: 1020002

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	169681	RLVS for HBN 51073 [EGC/2850]	120 mL	120 mL	3	RLVS		E7580...3Q	6112		7/26/2010	
2	169682	MB for HBN 51073 [EGC/2850]	120 mL	120 mL	3	MB		E7580...3Q	6112		7/26/2010	
3	169683	LCS for HBN 51073 [EGC/2850]	120 mL	120 mL	3	LCS		E7580...3Q	6112		7/26/2010	
4	1020002001	MW-06-3	120 mL	120 mL	3	SAMPLE	1020002001-A	E7580....3	5480	7/21/2010	8/3/2010	
5	1020002002	MW-06-1	120 mL	120 mL	3	SAMPLE	1020002002-A	E7580....3	5480	7/22/2010	8/3/2010	
6	1020002003	MW-02-3	120 mL	120 mL	3	SAMPLE	1020002003-A	E7580....3	5480	7/22/2010	8/3/2010	
7	1020002004	MW-82-3	120 mL	120 mL	3	SAMPLE	1020002004-A	E7580....3	5480	7/22/2010	8/3/2010	
8	1020002005	MW-06-2	120 mL	120 mL	3	SAMPLE	1020002005-A	E7580....3	5480	7/23/2010	8/3/2010	
9	1020002006	MW-06-2MS	120 mL	120 mL	3	MS	1020002006-A	E7580....3	5480	7/23/2010	8/3/2010	
10	1020002007	MW-06-2MSD	120 mL	120 mL	3	MSD	1020002007-A	E7580....3	5480	7/23/2010	8/3/2010	
11	1020002008	MW-60-12	120 mL	120 mL	3	SAMPLE	1020002008-A	E7580....3	5480	7/23/2010	8/3/2010	
12	1020002009	MW-02-4	120 mL	120 mL	3	SAMPLE	1020002009-A	E7580....3	5480	7/23/2010	8/3/2010	

Batch Worklist

Batch: EGC/ 2850 **Created:** 7/19/2010 12:29 **Instrument:** **HBN:** 51073
Rule: EPA 7580, Water Prep **Analyst:** C. Winter **Status:** NA

Workorder: 1020002

Pos	Lab ID	Sample ID	Prep Initial	Prep Final	Mx	Type	Container	Procedure	Mgr	Expire Date	Due Date	Run Date
1	169681	RLVS for HBN 51073 [EGC/2850]	120mL	120mL	3	RLVS		E7580...3P	6112		7/26/2010	
2	169682	MB for HBN 51073 [EGC/2850]			3	MB		E7580...3P	6112		7/26/2010	
3	169683	LCS for HBN 51073 [EGC/2850]			3	LCS		E7580...3P	6112		7/26/2010	
4	1020002001	MW-06-3			3	SAMPLE	1020002001-A	E7580...3P	5480		8/2/2010	
5	1020002002	MW-06-1			3	SAMPLE	1020002002-A	E7580...3P	5480		8/3/2010	
6	1020002003	MW-02-3			3	SAMPLE	1020002003-A	E7580...3P	5480		8/3/2010	
7	1020002004	MW-82-3			3	SAMPLE	1020002004-A	E7580...3P	5480		8/3/2010	
8	1020002005	MW-06-2			3	SAMPLE	1020002005-A	E7580...3P	5480		8/3/2010	
9	1020002006	MW-06-2MS			3	MS	1020002006-A	E7580...3P	5480		8/2/2010	
10	1020002007	MW-06-2MSD			3	MSD	1020002007-A	E7580...3P	5480		8/2/2010	
11	1020002008	MW-60-12			3	SAMPLE	1020002008-A	E7580...3P	5480		8/3/2010	
12	1020002009	MW-02-4			3	SAMPLE	1020002009-A	E7580...3P	5480		8/3/2010	

INJECTION LOG

File Name	Date Inject	Time Inject	Sample Name	Other ID	Instr ID	Column ID
24100722_005.rst	7/22/2010	16:30:37 PM	CCV1 0.05 ug/mL	8559	GC24	DB-1 30m x 0.53mm
24100722_006.rst	7/22/2010	16:41:11 PM	P4 STK0715 1:100 DIL.	8635	GC24	DB-1 30m x 0.53mm
24100722_007.rst	7/22/2010	16:51:43 PM	168824 RLVS 2uL	1019603	GC24	DB-1 30m x 0.53mm
24100722_008.rst	7/22/2010	17:02:15 PM	168825 MB	1019603	GC24	DB-1 30m x 0.53mm
24100722_009.rst	7/22/2010	17:12:49 PM	168826 LCS	1019603	GC24	DB-1 30m x 0.53mm
24100722_010.rst	7/22/2010	17:23:26 PM	168827 MS	1019603	GC24	DB-1 30m x 0.53mm
24100722_011.rst	7/22/2010	17:34:03 PM	168828 MSD	1019603	GC24	DB-1 30m x 0.53mm
24100722_012.rst	7/22/2010	17:44:40 PM	1019603012	1019603	GC24	DB-1 30m x 0.53mm
24100722_013.rst	7/22/2010	17:55:22 PM	P4 STK0721 1:100 DIL.	8709	GC24	DB-1 30m x 0.53mm
24100722_014.rst	7/22/2010	18:06:03 PM	169681 RLVS 2uL	1020002	GC24	DB-1 30m x 0.53mm
24100722_015.rst	7/22/2010	18:16:45 PM	169628 MB	1020002	GC24	DB-1 30m x 0.53mm
24100722_016.rst	7/22/2010	18:27:29 PM	CCV2 0.05 ug/mL	8559	GC24	DB-1 30m x 0.53mm
24100722_017.rst	7/22/2010	18:38:15 PM	169683 LCS	1020002	GC24	DB-1 30m x 0.53mm
24100722_018.rst	7/22/2010	18:49:00 PM	1020002001	1020002	GC24	DB-1 30m x 0.53mm
24100722_019.rst	7/22/2010	18:59:50 PM	1020002002	1020002	GC24	DB-1 30m x 0.53mm
24100722_020.rst	7/22/2010	19:10:39 PM	1020002003	1020002	GC24	DB-1 30m x 0.53mm
24100722_021.rst	7/22/2010	19:21:28 PM	1020002004	1020002	GC24	DB-1 30m x 0.53mm
24100722_022.rst	7/22/2010	19:32:21 PM	1020002005	1020002	GC24	DB-1 30m x 0.53mm
24100722_023.rst	7/22/2010	19:43:15 PM	1020002006 MS	1020002	GC24	DB-1 30m x 0.53mm
24100722_024.rst	7/22/2010	19:54:08 PM	1020002007 MSD	1020002	GC24	DB-1 30m x 0.53mm
24100722_025.rst	7/22/2010	20:05:21 PM	1020002008	1020002	GC24	DB-1 30m x 0.53mm
24100722_026.rst	7/22/2010	20:16:31 PM	1020002009	1020002	GC24	DB-1 30m x 0.53mm
24100722_027.rst	7/22/2010	20:27:38 PM	CCV3 0.05 ug/mL	8559	GC24	DB-1 30m x 0.53mm

Batch Information: HBN 51232 [EGC/2853]

Client:Barr Engineering

Set ID:1020002

Method: 7580 White Phosphorus

Matrix: Water

Initial Calibration: 07/08/2010

Samples analyzed: 07/22/2010

Instrument: GC24 (FPD02): HP5890 with DB-1 (30m x 0.53mm ID x 1.536um film) column and FPD detector with phosphorus filter.

Injection volulme: 2.0 uL. Voltage: 75%. Injection temp: POCO. Detector temp: 325C.

GC Program: 80C for 6.0 min.

Sample QC : A method blank, LCS were prepared and analyzed. MS/MSD were prepared using client selcted samples.

Dilutions: None.

Surrogate: Method does not required a surrogate.

Standard & QC Prep:

	Isooctane	Sample	Phosphorus 0.250 ppm 8557	
	(mL)	(mL)	(mL)	
STD1	1.00		0.400	
STD2	1.00		0.200	
STD3	1.00		0.0800	
STD4	1.00		0.0400	
STD5	1.00		0.0200	
STD6	1.00		0.00800	
ICV (STD2)	3.00		0.200	
CCVs (STD2)	3.00		0.200	
Blanks	3.00	120		
LCSs	3.00	120	0.050	8709
Samples	3.00	120		
MS and MSDs	3.00	120	0.050	8709

Miscellaneous comments: 1) Quantitation was performed using peak height and linear curve.

2) Concentration of 8709 solution was checked before analyzing set.

3) Solvent dispensing bottle top pump verified for 10mL=10mL in volumetric cylinder.

INJECTION LOG

File Name	Date Inject	Time Inject	Sample Name	Other ID	Instr ID	Column ID
24100708_004.rst	7/8/2010	14:28:02	Std1 0.1 ug/mL		GC24	DB-1 30m x 0.53mm
24100708_005.rst	7/8/2010	14:38:37	Std2 0.05 ug/mL		GC24	DB-1 30m x 0.53mm
24100708_006.rst	7/8/2010	14:49:11	Std3 0.02 ug/mL		GC24	DB-1 30m x 0.53mm
24100708_007.rst	7/8/2010	14:59:52	Std4 0.01 ug/mL		GC24	DB-1 30m x 0.53mm
24100708_008.rst	7/8/2010	15:10:27	Std5 0.005 ug/mL		GC24	DB-1 30m x 0.53mm
24100708_009.rst	7/8/2010	15:21:03	Std6 0.002 ug/mL		GC24	DB-1 30m x 0.53mm
24100708_010.rst	7/8/2010	15:31:36	8560/ICV 0.05 ug/mL		GC24	DB-1 30m x 0.53mm

STANDARD REPORT

Working Standard - P4 0.25

P4 0.25				Description - P4 0.25 ppm iso-octane sol	
Standard:	8557	**Expires:**	01/05/2011	**Usable:**	Yes
Lab Lot:	010510	**Created By:**	C. Winter	**Amount:**	50 mL
Part ID:	010510	**Create Date:**	07/08/2010	**Validated By:**	
MFG:	ALS	**MFG Lot:**	010510	**Validated Date:**	

Pos.	Analyte	Name	Concentration
1	7723-14-0	Phosphorus	0.250752 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3334	iso-octane	iso-octane for P4	01/01/09 iso-oct	49.9904 mL	1/1/2025
6714	P4 1306 ppm	P4 solution 1306 ppm	010510	0.0096 mL	1/5/2011

Working Standard - P4 0.25

Composition Detail

iso-octane

Standard:	3334	**Expires:**	1/1/2025	**Usable:**	Yes
Lab Lot:	01/01/09 iso-oct	**Created By:**	6062	**Amount:**	16 L
Part ID:		**Create Date:**	1/1/2009	**Validated By:**	
MFG:	Fisher	**MFG Lot:**	083929	**Validated Date:**	

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

P4 1306 ppm

Standard:	6714	**Expires:**	1/5/2011	**Usable:**	Yes
Lab Lot:	010510	**Created By:**	6112	**Amount:**	100 mL
Part ID:	010510	**Create Date:**	1/5/2010	**Validated By:**	
MFG:	DCL	**MFG Lot:**	010510	**Validated Date:**	

Pos.	Analyte	Name	Concentration
1	7723-14-0	Phosphorus	1306 ug/mL

STANDARD REPORT

Working Standard - P4 1306 ppm

P4 1306 ppm				**Description - P4 solution 1306 ppm**	
Standard:	6714	**Expires:**	01/05/2011	**Usable:**	Yes
Lab Lot:	010510	**Created By:**	C. Winter	**Amount:**	100 mL
Part ID:	010510	**Create Date:**	01/05/2010	**Validated By:**	
MFG:	DCL	**MFG Lot:**	010510	**Validated Date:**	

Pos.	Analyte	Name	Concentration
1	7723-14-0	Phosphorus	1306 ug/mL

Composition

Standard	Standard ID	Description	Lab Lot ID	Volume Added	Expires
3784	Toluene	Toluene	CX498	100 mL	4/16/2025
5045	Stock P4	Stock P4	755059	0.1306 grams	8/6/2025

Working Standard - P4 1306 ppm

Composition Detail

Toluene

Standard:	3784	**Expires:**	4/16/2025	**Usable:**	Yes
Lab Lot:	CX498	**Created By:**	6062	**Amount:**	8 L
Part ID:	347-4	**Create Date:**	4/16/2009	**Validated By:**	
MFG:	B&J Brand	**MFG Lot:**	CX498	**Validated Date:**	

Pos.	Analyte	Name	Concentration
Solvent - Analyte(s) not applicable			

Stock P4

Standard:	5045	**Expires:**	8/6/2025	**Usable:**	Yes
Lab Lot:	755059	**Created By:**	6062	**Amount:**	200 grams
Part ID:	755059	**Create Date:**	1/1/2008	**Validated By:**	
MFG:	Fisher	**MFG Lot:**	755059	**Validated Date:**	

Pos.	Analyte	Name	Concentration
1	7723-14-0	Phosphorus	1000 mg/g

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

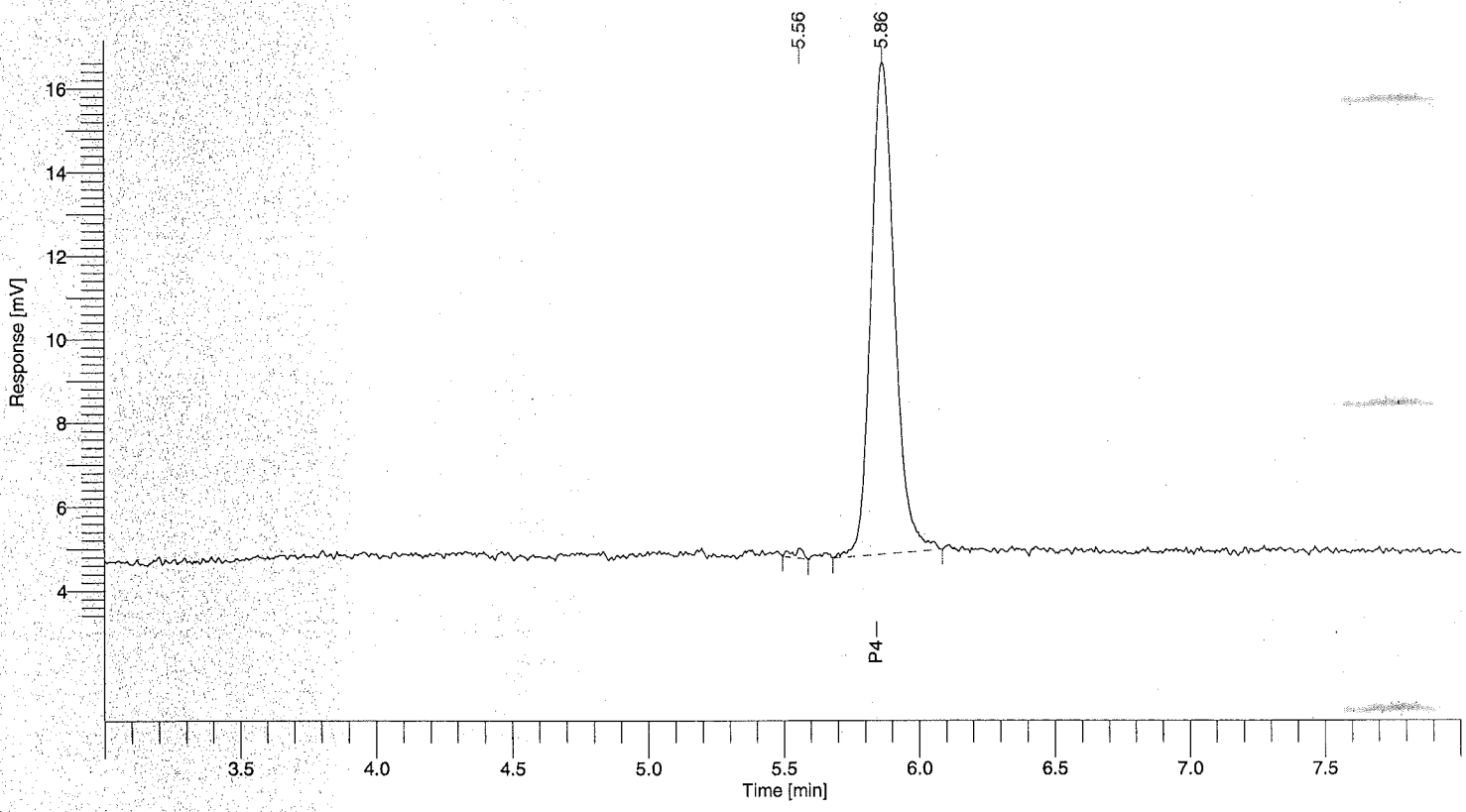
Raw Data

Calibration

Software Version : 6.3.1.0504
Sample Name : P4 STK0721 1:100 DIL.
Instrument Name : GC24
Rack/Vial : 0/13
Sample Amount : 1.000000
Cycle : 13

Date : 7/23/2010 7:30:59 AM
Data Acquisition Time : 7/22/2010 5:55:22 PM
Channel : B
Operator : winter
Dilution Factor : 100.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_013.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 STANDARD REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.86	P4	11807	71523	0.044118

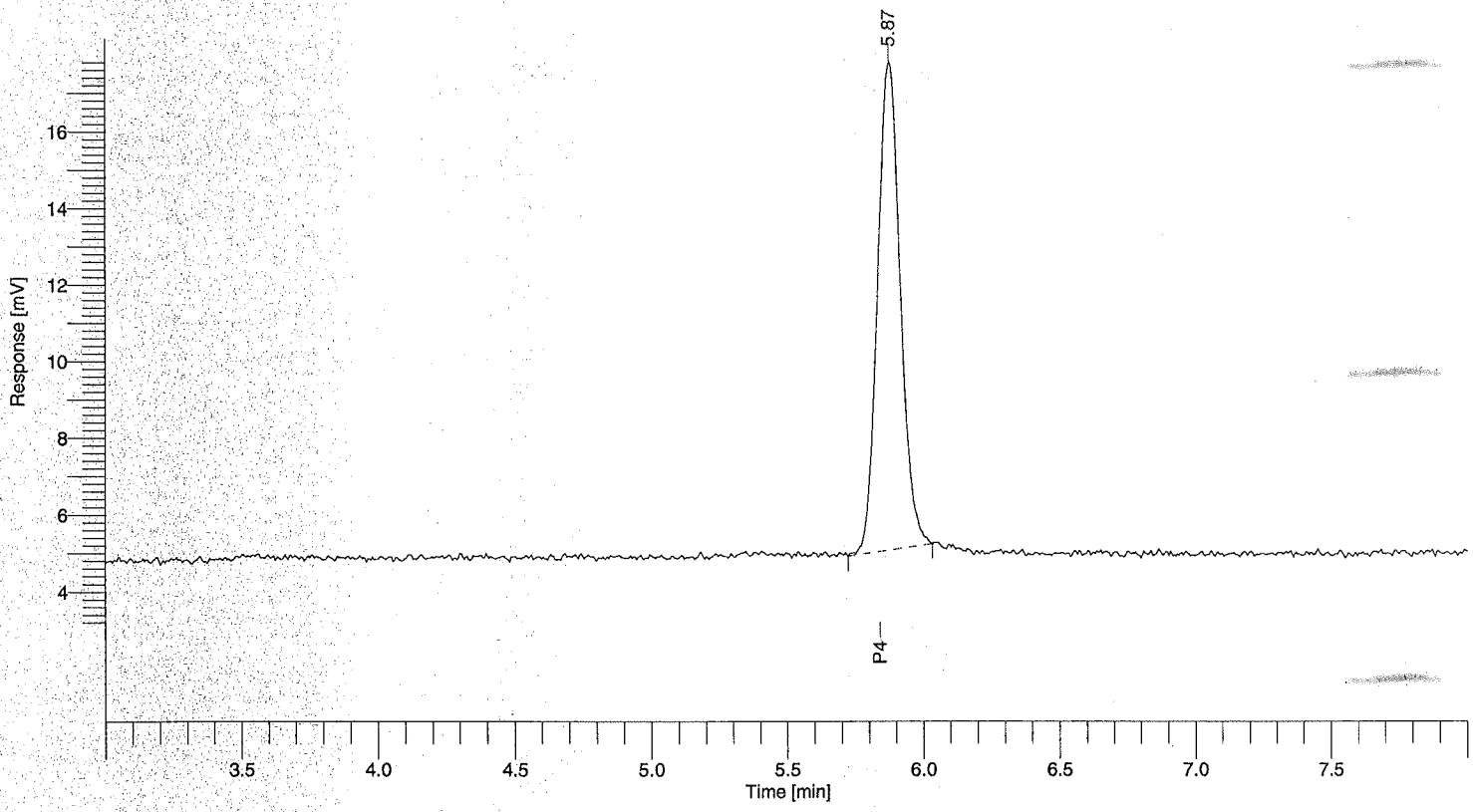
4.41 µg/mL

CW 7-23-10

Software Version : 6.3.1.0504
Sample Name : CCV1 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/5
Sample Amount : 1.000000
Cycle : 5

Date : 7/23/2010 7:30:56 AM
Data Acquisition Time : 7/22/2010 4:30:37 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_005.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.87	P4	12742	73693	0.04762	0.05000	95.2
						95.2

P4 recovery 85 to 115%? YES NO

Software Version	: 6.3.1.0504	Date	: 7/23/2010 7:31:01 AM
Sample Name	: CCV2 0.05 ug/mL	Data Acquisition Time	: 7/22/2010 6:27:29 PM
Instrument Name	: GC24	Channel	: B
Rack/Vial	: 0/16	Operator	: winter
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 16		

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_016.rst
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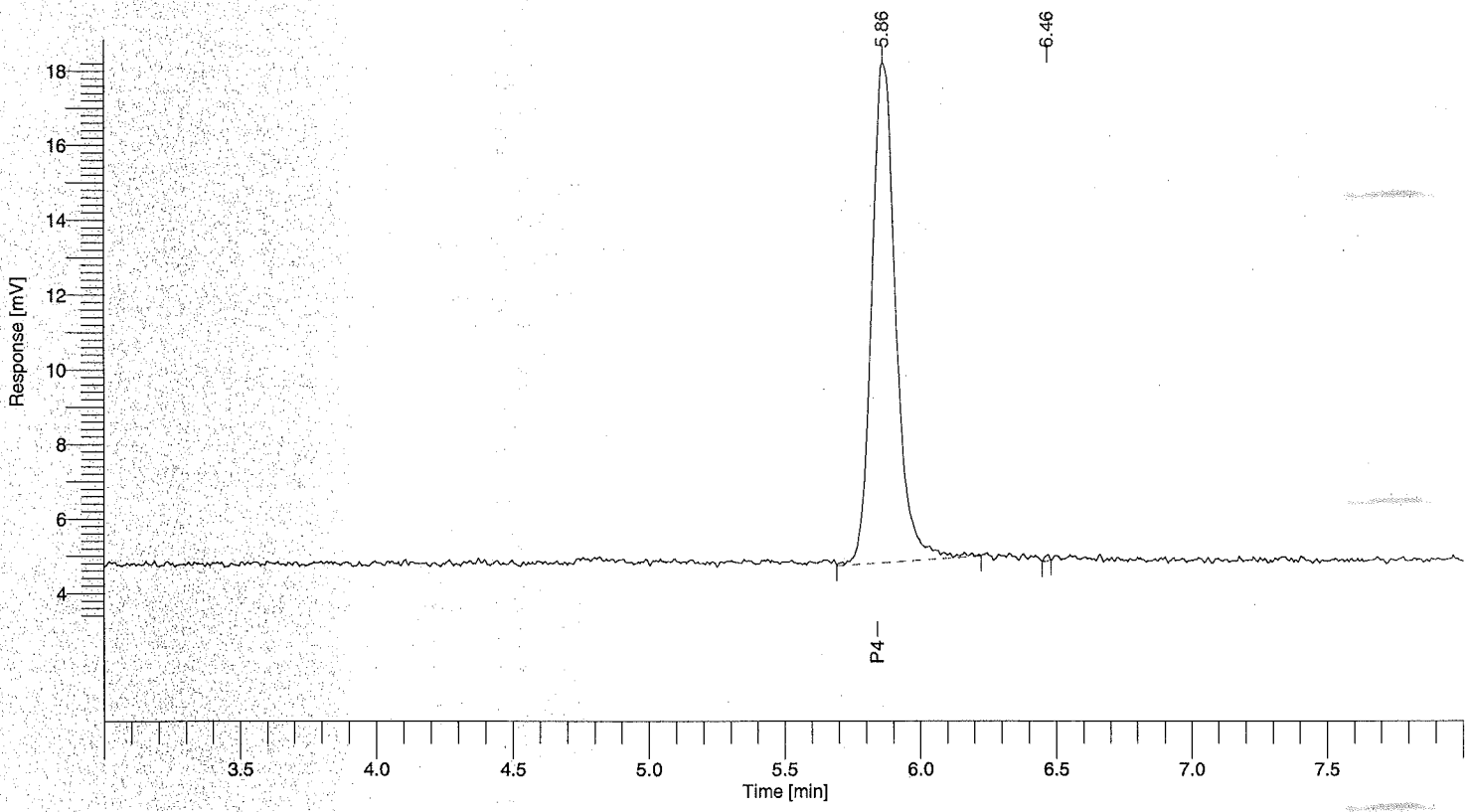


P4 CCV REPORT

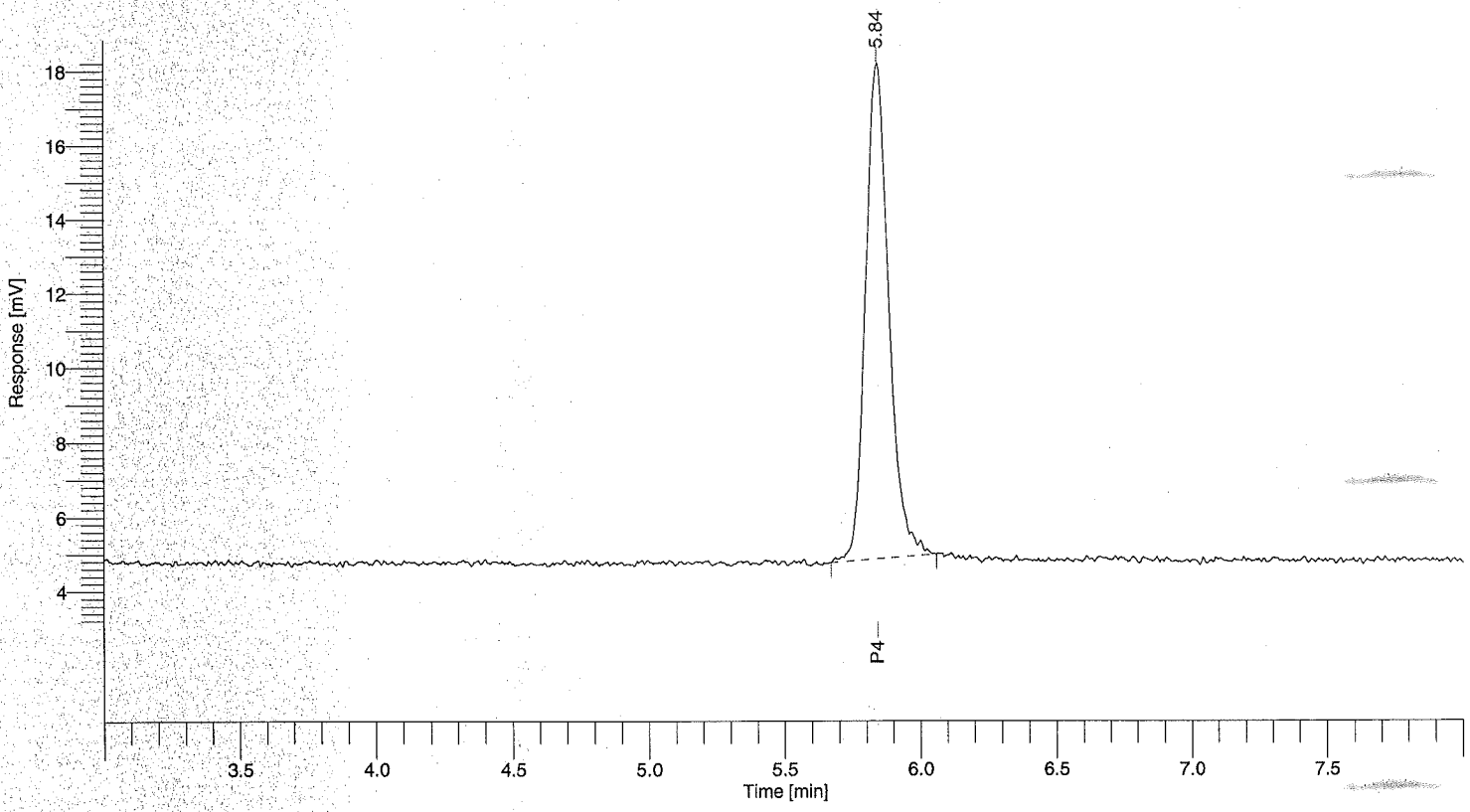
Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.86	P4	13485	82661	0.05040	0.05000	100.8
						100.8

P4 recovery 85 to 115%? YES NO

Software Version	: 6.3.1.0504	Date	: 7/23/2010 7:31:05 AM
Sample Name	: CCV3 0.05 ug/mL	Data Acquisition Time	: 7/22/2010 8:27:38 PM
Instrument Name	: GC24	Channel	: B
Rack/Vial	: 0/27	Operator	: winter
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 27		

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_027.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.84	P4	13353	79770	0.04991	0.05000	99.8
						99.8

P4 recovery 85 to 115%? YES NO

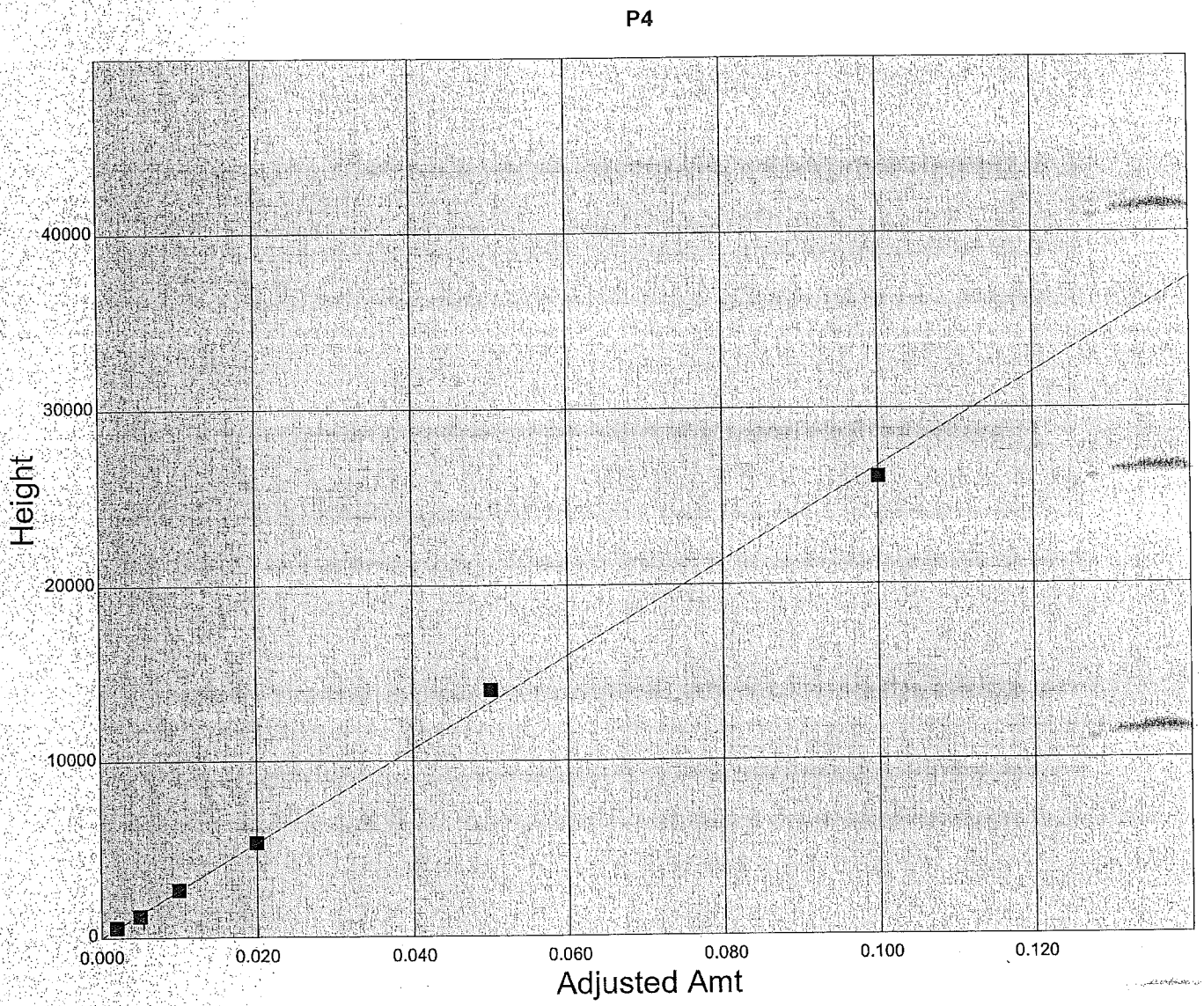
Fit Analysis Output For Method File: \\Turbo\TCCS\potekhin\GCE24\METHODS\24_P4.MTH
Reprocess Number : alsltxp025: 1001572
Component Name : P4
Date : 7/8/2010 17:06:48

Curve Parameters:

Curve #1 : 1st Order
Weighting Factor = 1/x R-Squared = 0.998388
Calibration Curve : Y = (20.273208) +(267162.801725) X

Curve #1 :

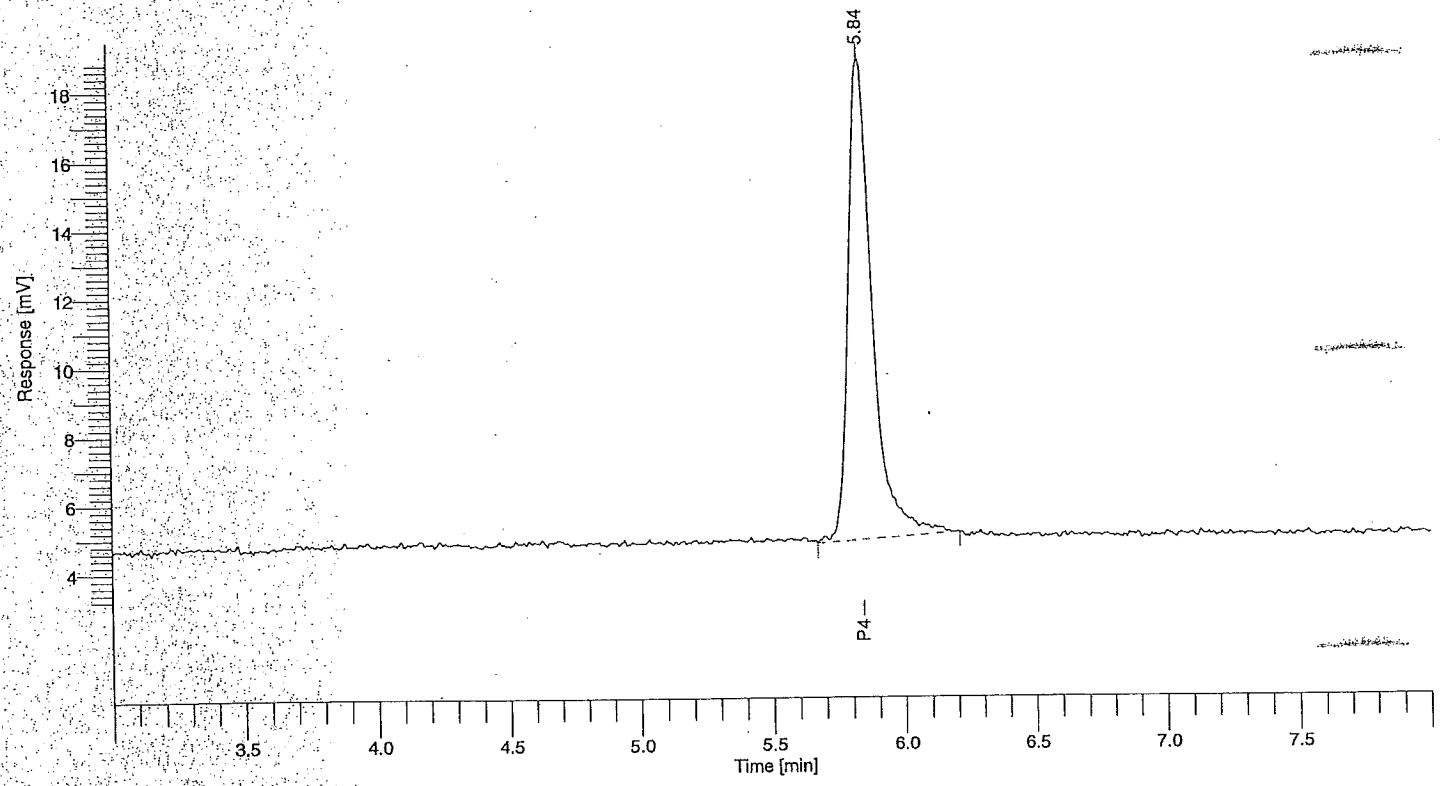
Level Name	Observed X-Value	Calculated X-Value	Delta	%Diff.	Observed Y-Value	Calculated Y-Value	Delta	%Diff.
6	0.002000	0.002104	-1.039e-04	-4.940	582.364314	554.599	27.766	5.006
5	0.005000	0.004543	0.000457	10.053	1234.063271	1356.087	-122.024	-8.998
4	0.010000	0.010088	-8.796e-05	-0.872	2715.401994	2691.901	23.501	0.873
3	0.020000	0.020056	-5.605e-05	-0.279	5378.503901	5363.529	14.975	0.279
2	0.050000	0.052570	-0.002570	-4.888	14064.953113	13378.413	686.540	5.132
1	0.100000	0.097639	0.002361	2.418	26105.796579	26736.553	-630.757	-2.359



Software Version : 6.3.1.0504
Sample Name : 8560/ICV 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/10
Sample Amount : 1.000000
Cycle : 10

Date : 7/8/2010 17:05:04
Data Acquisition Time : 7/8/2010 15:31:36
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_010.rst
Sequence File : \\Turbo\TCCS\potekhin\GCE24\SEQUENCES\24100708CALseq.seq



P4 CCV REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

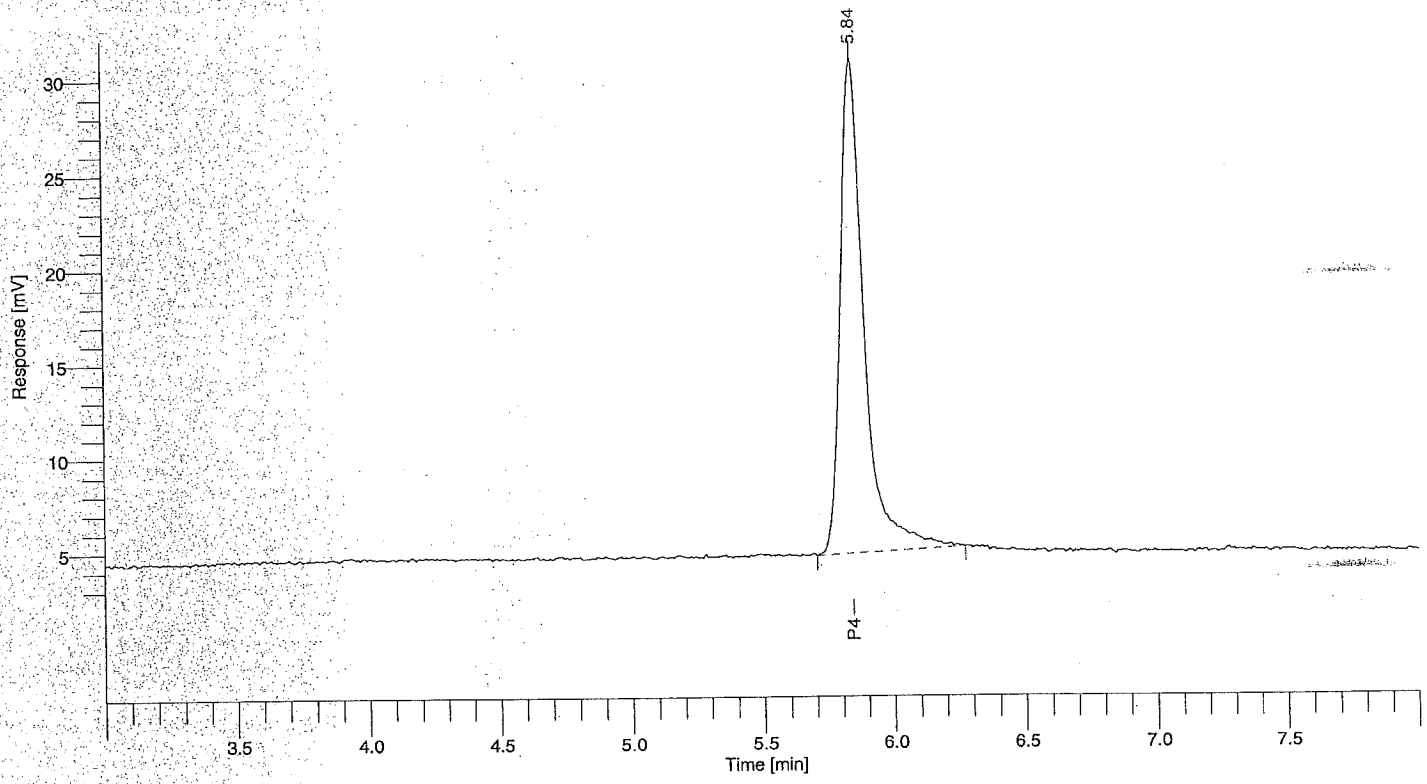
Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	Target Amt ug/mL	Rec %
5.84	P4	14040	88236	0.05248	0.05000	105.0
						105.0

P4 recovery 85 to 115%? YES NO

Software Version : 6.3.1.0504
Sample Name : Std1 0.1 ug/mL
Instrument Name : GC24
Rack/Vial : 0/4
Sample Amount : 1.000000
Cycle : 4

Date : 7/8/2010 17:04:54
Data Acquisition Time : 7/8/2010 14:28:02
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_004.rst
Sequence File : \\Turbo\TCCS\potekhin\GCE24\SEQUENCES\24100708CALseq.seq



P4 STANDARD REPORT

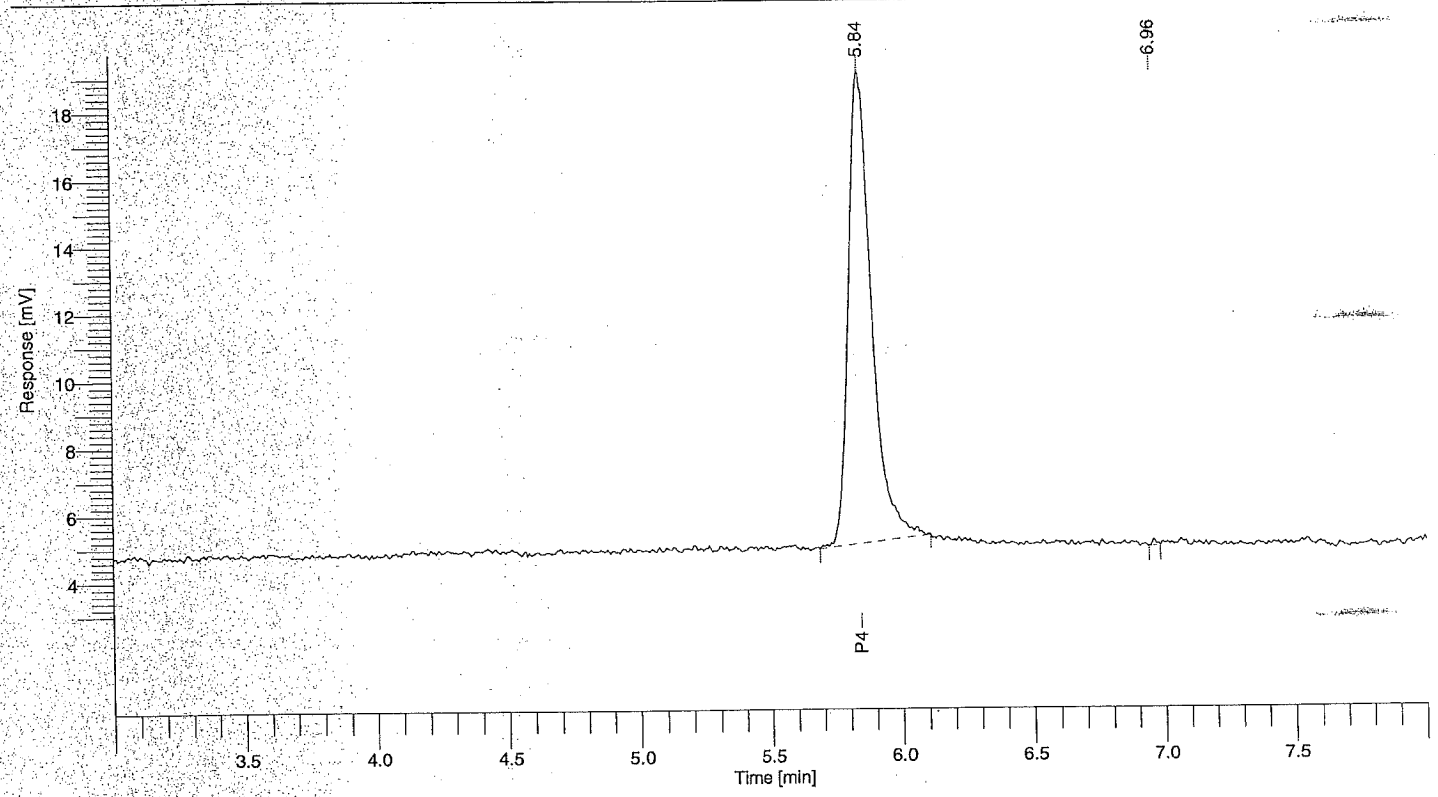
Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.84	P4	26106	167948	0.097639

Software Version : 6.3.1.0504
Sample Name : Std2 0.05 ug/mL
Instrument Name : GC24
Rack/Vial : 0/5
Sample Amount : 1.000000
Cycle : 5

Date : 7/8/2010 17:04:56
Data Acquisition Time : 7/8/2010 14:38:37
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_005.rst
Sequence File : \\Turbo\TCCS\potekhin\GCE24\SEQUENCES\24100708CALseq.seq



P4 STANDARD REPORT

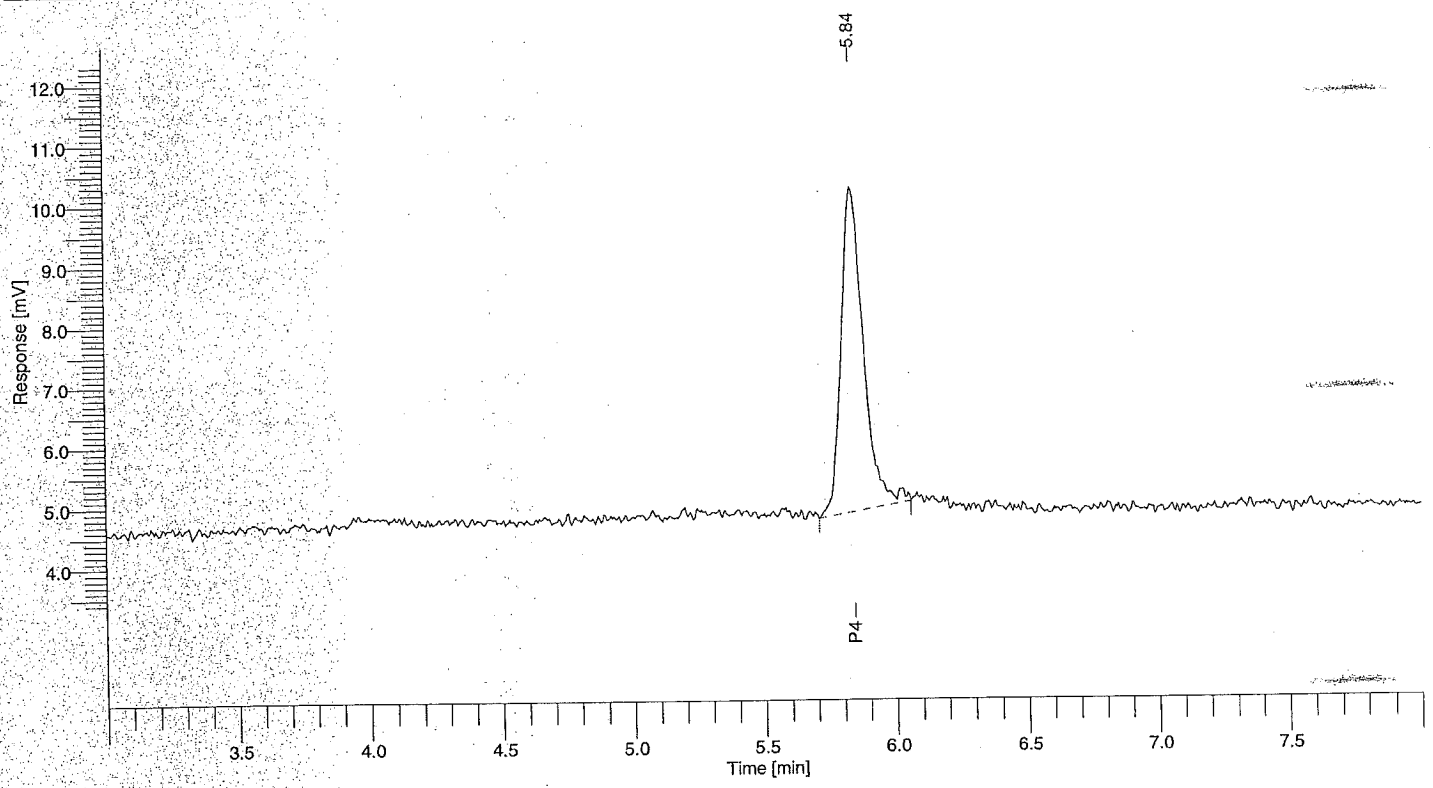
Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.84	P4	14065	86644	0.052570

Software Version : 6.3.1.0504
Sample Name : Std3 0.02 ug/mL
Instrument Name : GC24
Rack/Vial : 0/6
Sample Amount : 1.000000
Cycle : 6

Date : 7/8/2010 17:04:57
Data Acquisition Time : 7/8/2010 14:49:11
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_006.rst
Sequence File : \\Turbo\TCCS\potekhin\GCE24\SEQUENCES\24100708CALseq.seq



P4 STANDARD REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.84	P4	5379	31925	0.020056

Software Version : 6.3.1.0504
Sample Name : Std4 0.01 ug/mL
Instrument Name : GC24
Rack/Vial : 0/7
Sample Amount : 1.000000
Cycle : 7

Date : 7/8/2010 17:04:59
Data Acquisition Time : 7/8/2010 14:59:52
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_007.rst
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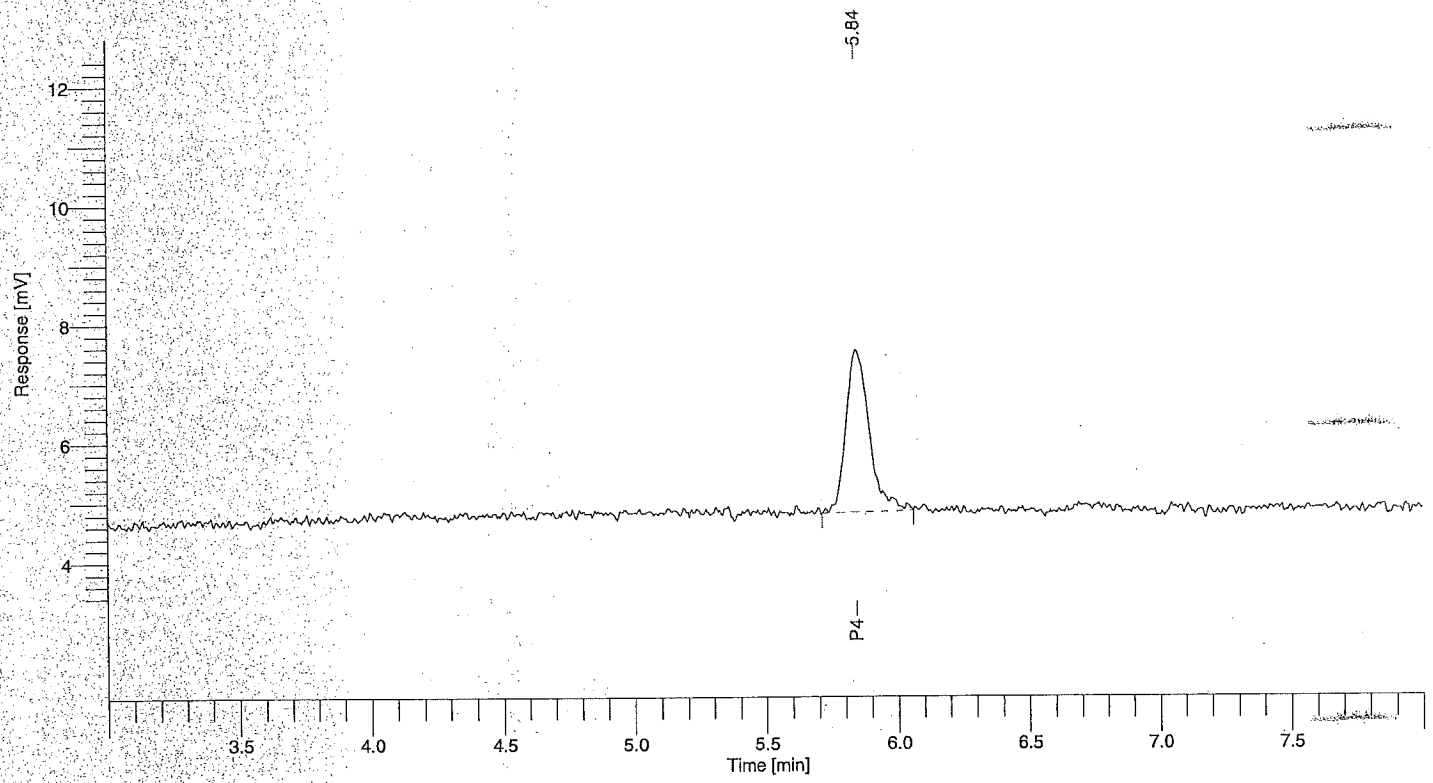

P4 STANDARD REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.84	P4	2715	16625	0.010088

Software Version : 6.3.1.0504
Sample Name : Std5 0.005 ug/mL
Instrument Name : GC24
Rack/Vial : 0/8
Sample Amount : 1.000000
Cycle : 8

Date : 7/8/2010 17:05:01
Data Acquisition Time : 7/8/2010 15:10:27
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_008.rst
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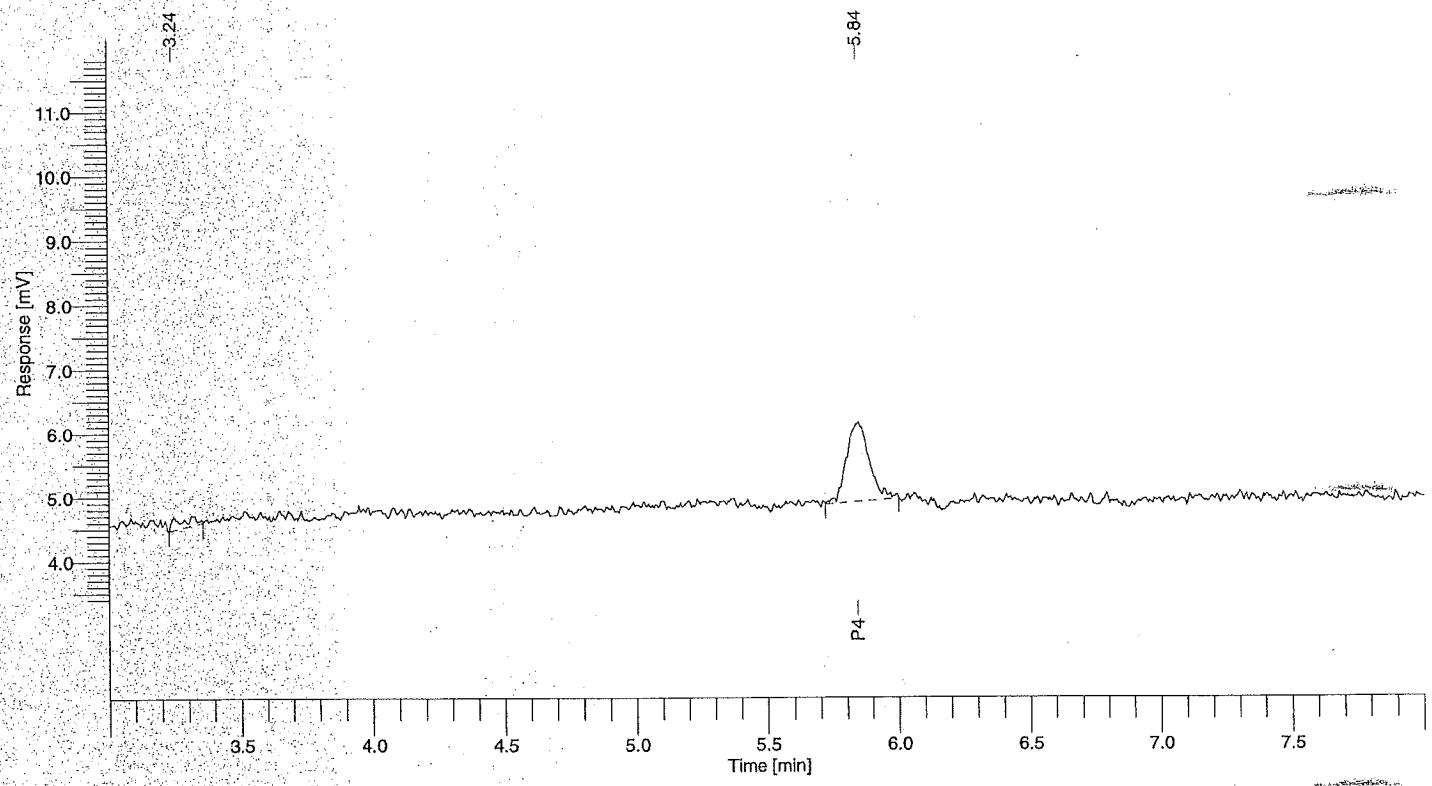

P4 STANDARD REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.84	P4	1234	7573	0.004543

Software Version : 6.3.1.0504
Sample Name : Std6 0.002 ug/mL
Instrument Name : GC24
Rack/Vial : 0/9
Sample Amount : 1.000000
Cycle : 9

Date : 7/8/2010 17:05:02
Data Acquisition Time : 7/8/2010 15:21:03
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\Turbo\TCCS\potekhin\GCE24\DATA\24100708\24100708_009.rst
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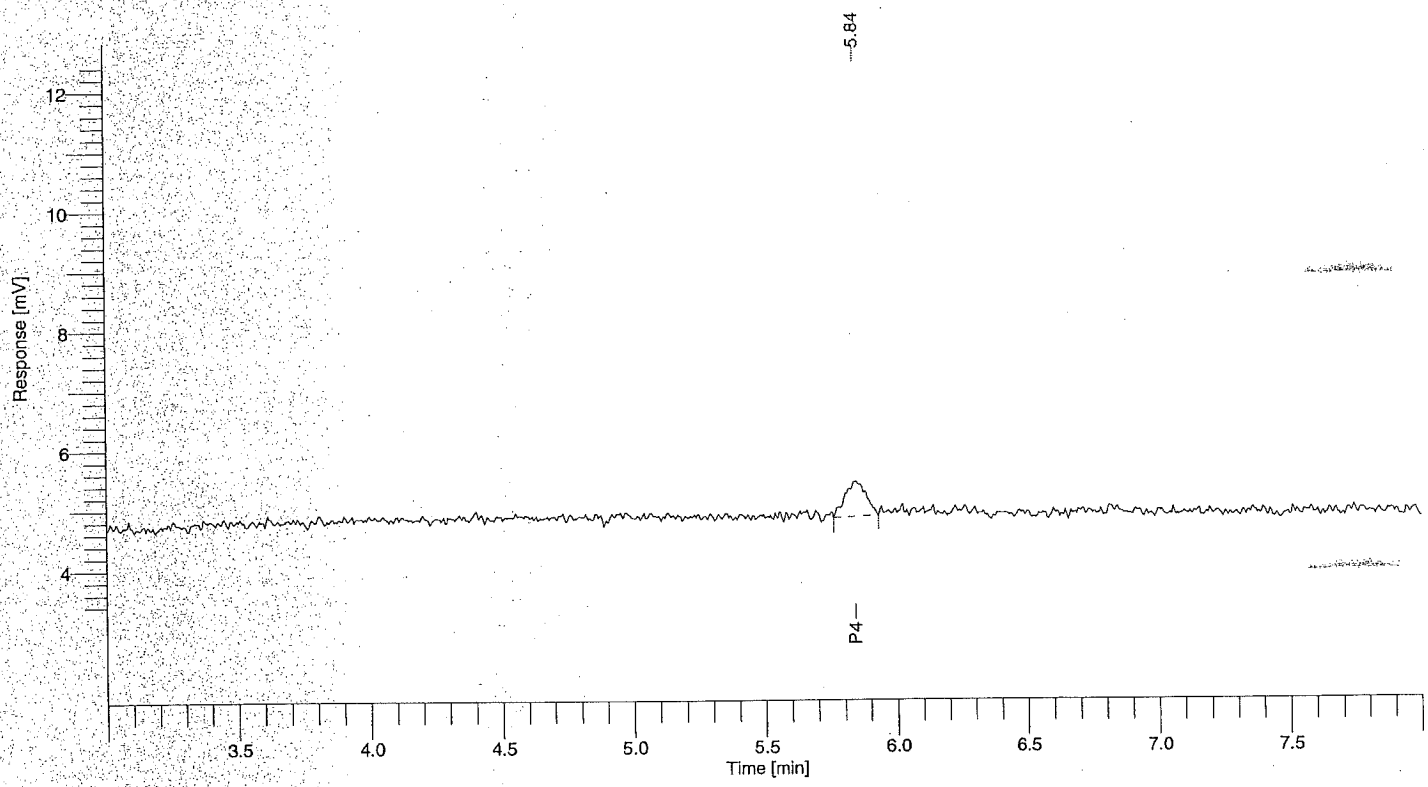

P4 STANDARD REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL
5.84	P4	582	3190	0.002104

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Raw Data

Software Version	: 6.3.1.0504	Date	: 7/23/2010 7:31:00 AM
Sample Name	: 169628 MB	Data Acquisition Time	: 7/22/2010 6:16:45 PM
Instrument Name	: GC24	Channel	: B
Rack/Vial	: 0/15	Operator	: winter
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 15		

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_015.rst
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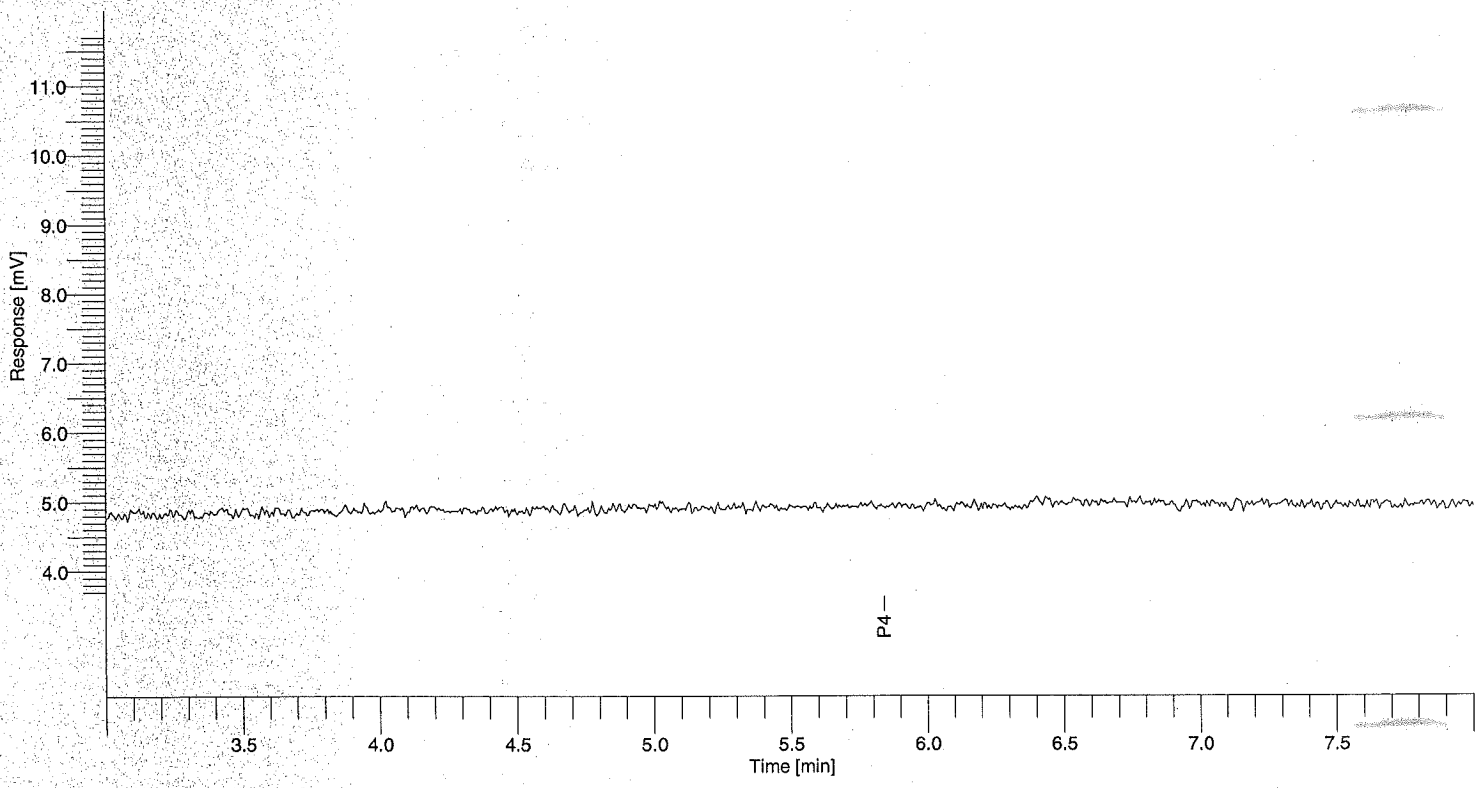

P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version : 6.3.1.0504
Sample Name : 169683 LCS
Instrument Name : GC24
Rack/Vial : 0/17
Sample Amount : 1.000000
Cycle : 17

Date : 7/23/2010 7:31:01 AM
Data Acquisition Time : 7/22/2010 6:38:15 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_017.rst
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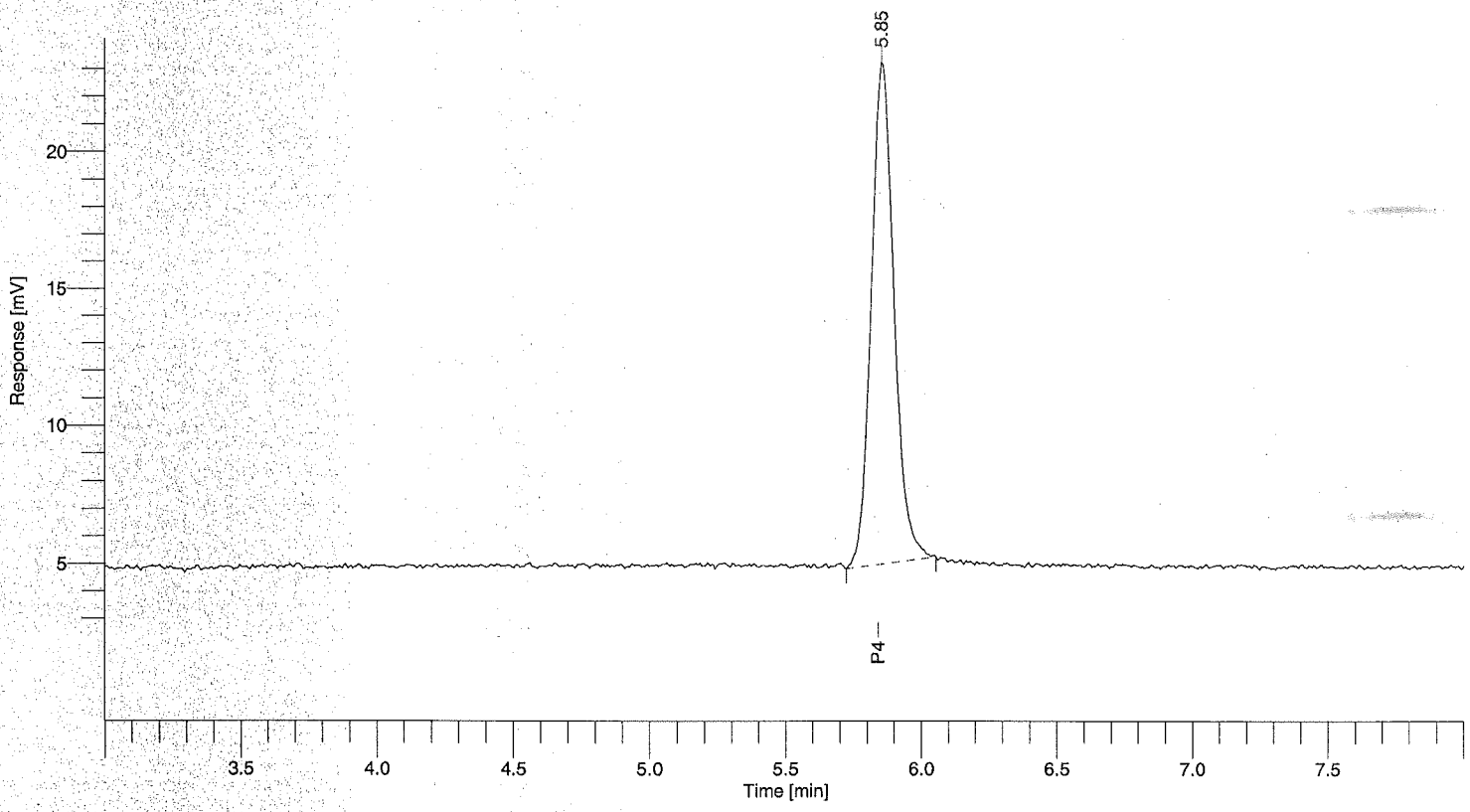

P4 WATER QC REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L	Spike Targ ug/L	Rec %
5.85	P4	18279	106893	0.068344	1	3.0	0.120	1.000	0.0234	0.0500	1.7086	~~1.418~~ 1.8	~~120.5~~ 93%

CW 7-23-10

P4 recovery 75 to 125% for LCS or 65 to 135% for MS/MSD? YES NO

Software Version : 6.3.1.0504
Sample Name : 1020002001
Instrument Name : GC24
Rack/Vial : 0/18
Sample Amount : 1.000000
Cycle : 18

Date : 7/23/2010 7:31:01 AM
Data Acquisition Time : 7/22/2010 6:49:00 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_018.rst
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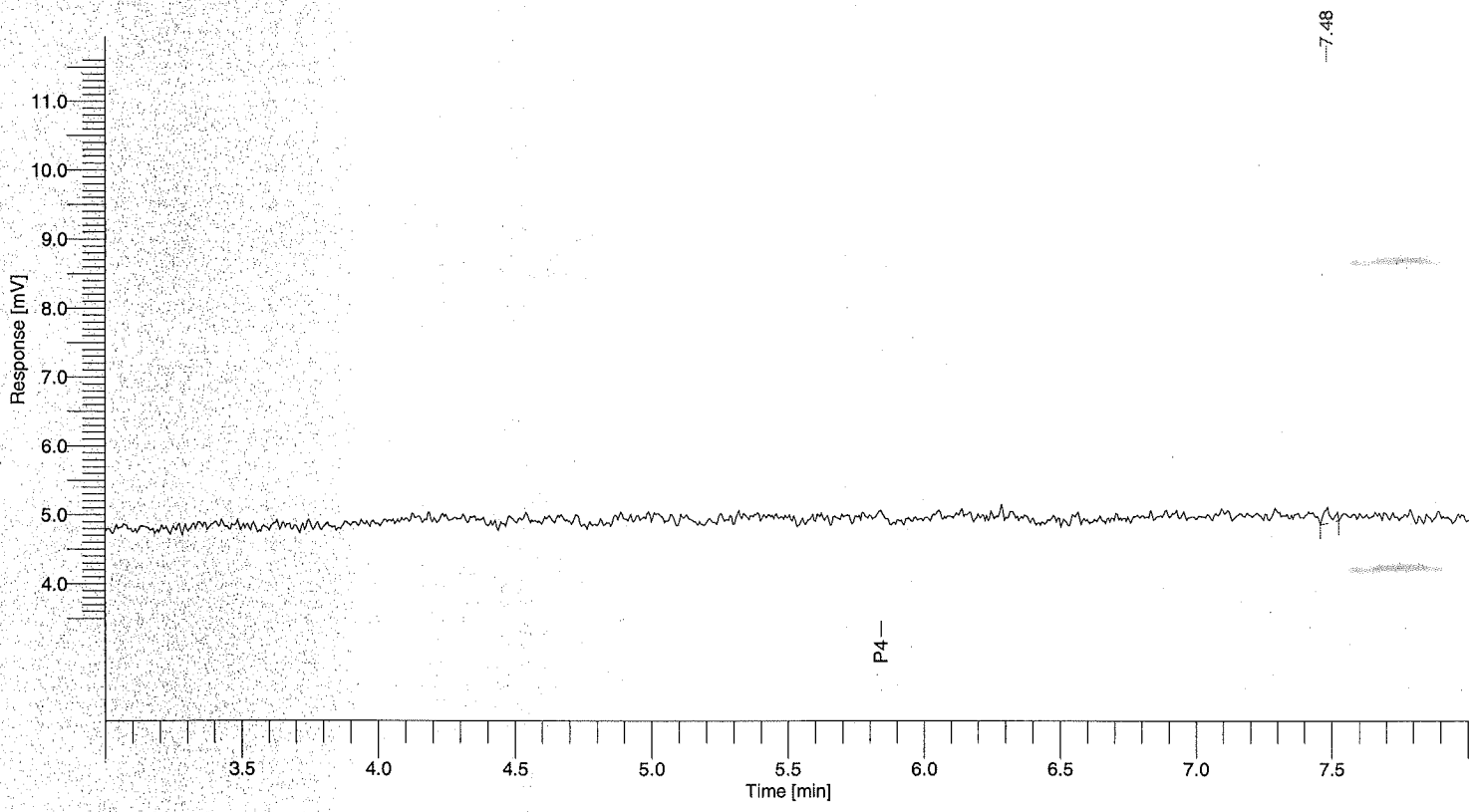


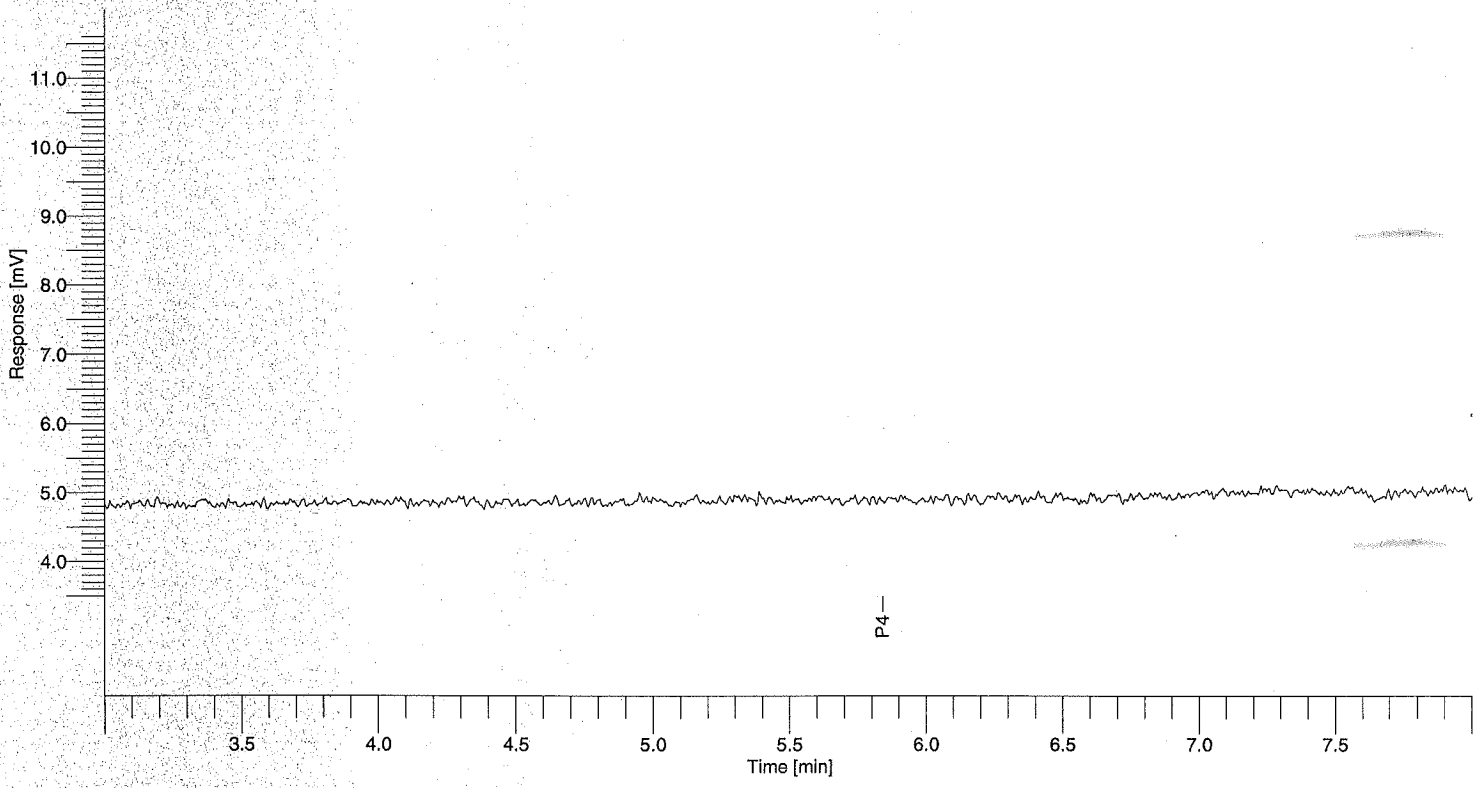
P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version	: 6.3.1.0504	Date	: 7/23/2010 7:31:02 AM
Sample Name	: 1020002002	Data Acquisition Time	: 7/22/2010 6:59:50 PM
Instrument Name	: GC24	Channel	: B
Rack/Vial	: 0/19	Operator	: winter
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 19		

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_019.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



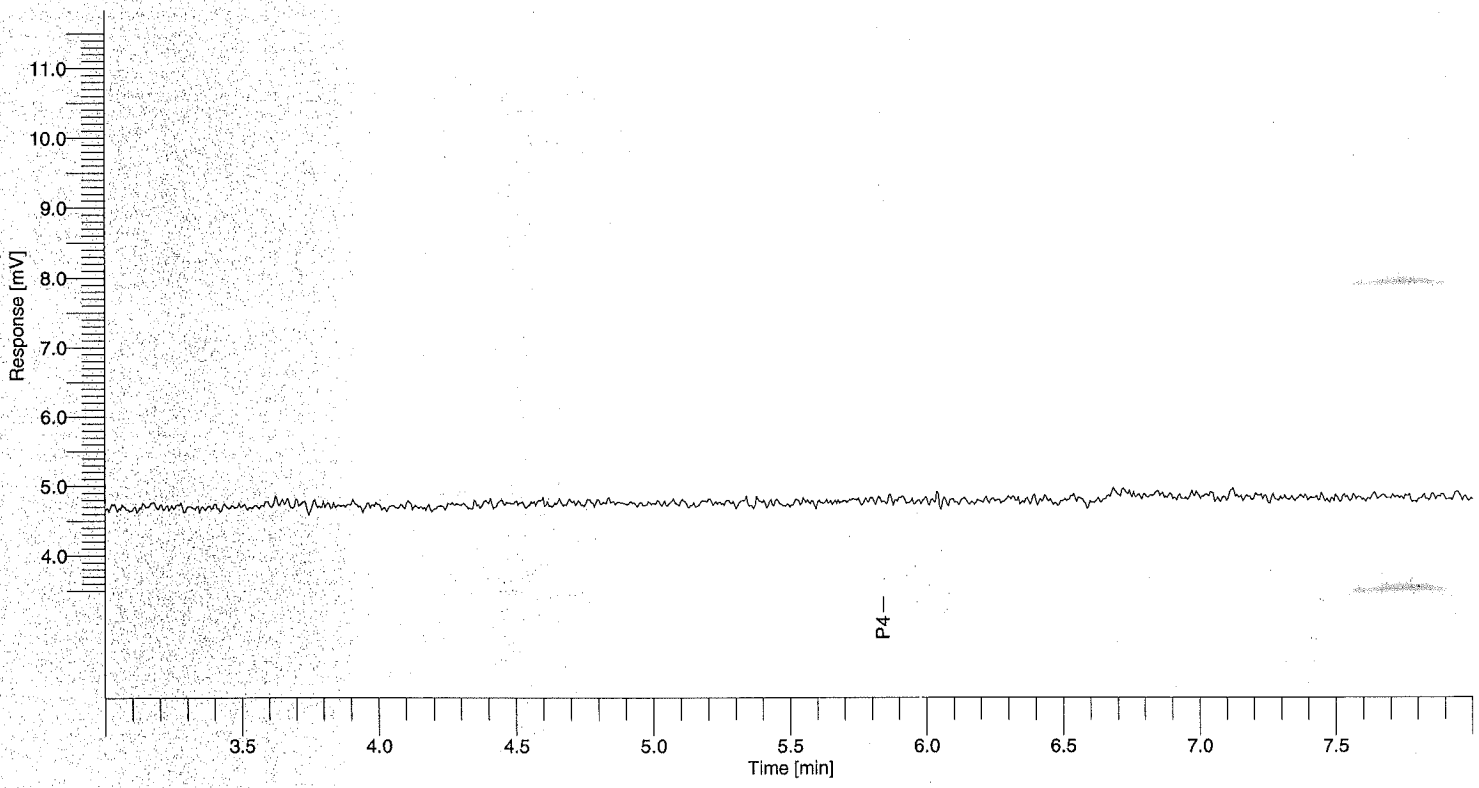
P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version	: 6.3.1.0504	Date	: 7/23/2010 7:31:02 AM
Sample Name	: 1020002003	Data Acquisition Time	: 7/22/2010 7:10:39 PM
Instrument Name	: GC24	Channel	: B
Rack/Vial	: 0/20	Operator	: winter
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 20		

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_020.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version : 6.3.1.0504
Sample Name : 1020002004
Instrument Name : GC24
Rack/Vial : 0/21
Sample Amount : 1.000000
Cycle : 21

Date : 7/23/2010 7:31:02 AM
Data Acquisition Time : 7/22/2010 7:21:28 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_021.rst
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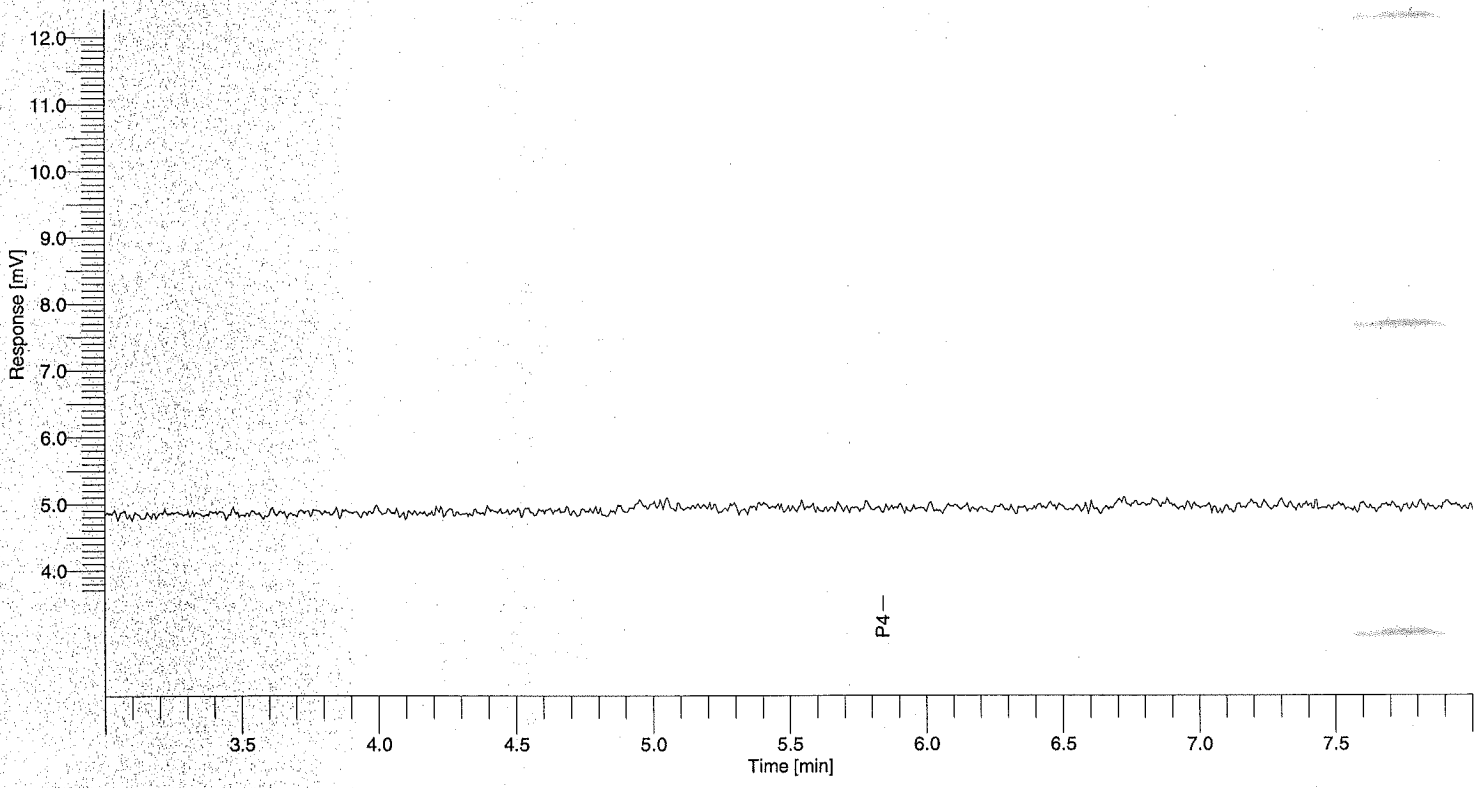

P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version : 6.3.1.0504
Sample Name : 1020002005
Instrument Name : GC24
Rack/Vial : 0/22
Sample Amount : 1.000000
Cycle : 22

Date : 7/23/2010 7:31:03 AM
Data Acquisition Time : 7/22/2010 7:32:21 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_022.rst
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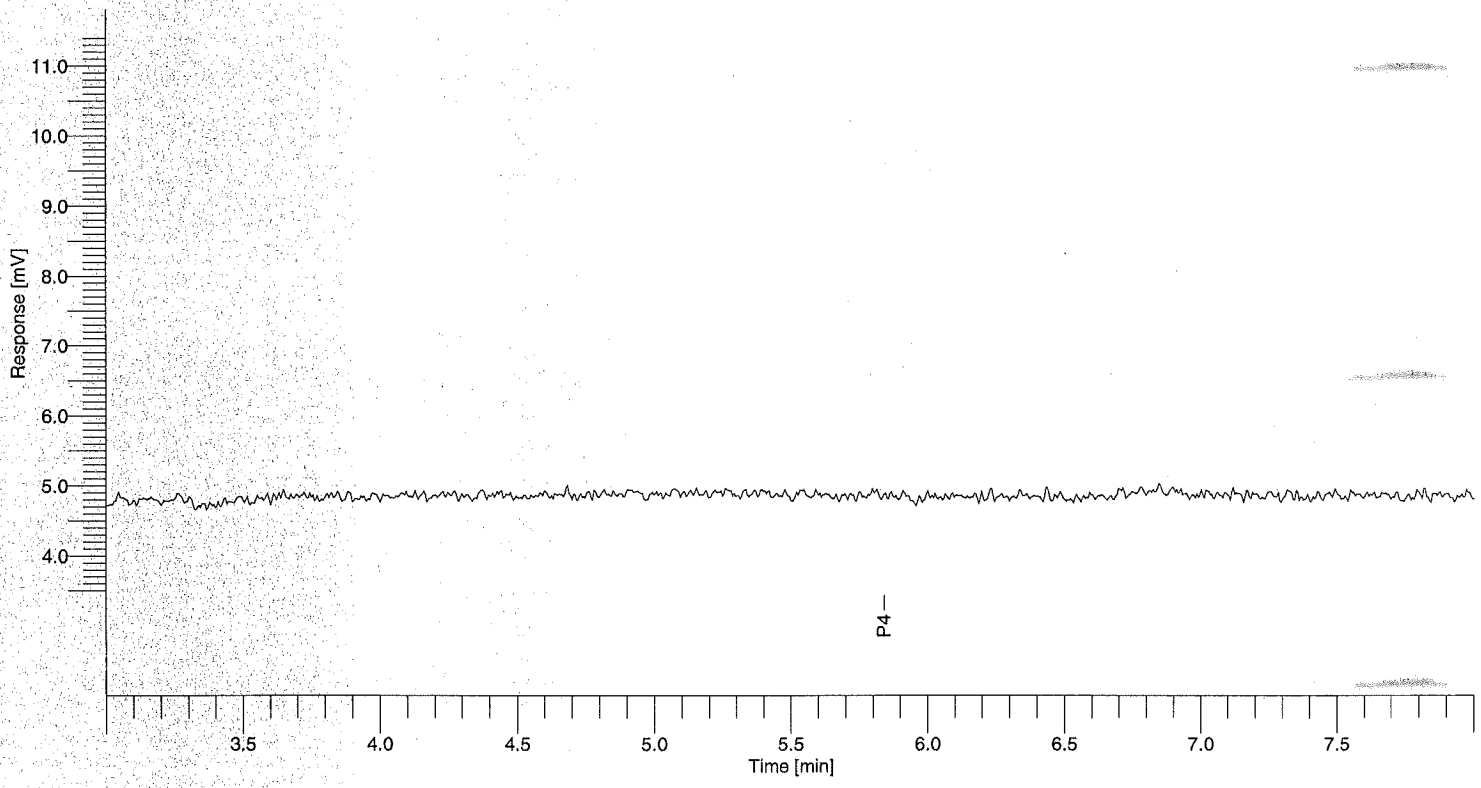

P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version : 6.3.1.0504
Sample Name : 1020002006 MS
Instrument Name : GC24
Rack/Vial : 0/23
Sample Amount : 1.000000
Cycle : 23

Date : 7/23/2010 7:31:03 AM
Data Acquisition Time : 7/22/2010 7:43:15 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_023.rst
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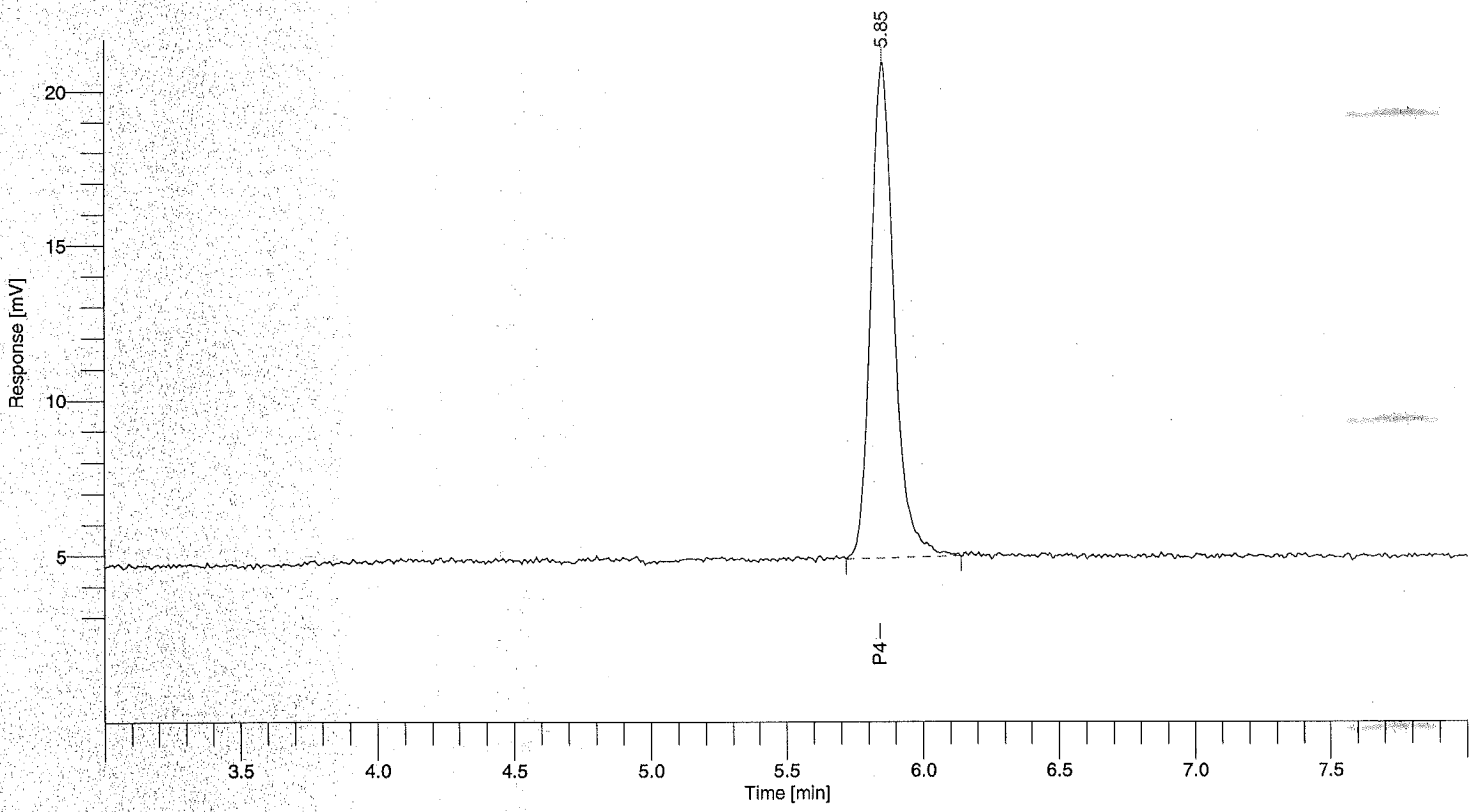


P4 WATER QC REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L	Spike Targ ug/L	Rec %
5.85	P4	16041	95575	0.059967	1	3.0	0.120	1.000	0.0234	0.0500	1.4992	~~1.418~~ 1.8	~~105.8~~ 81.6%

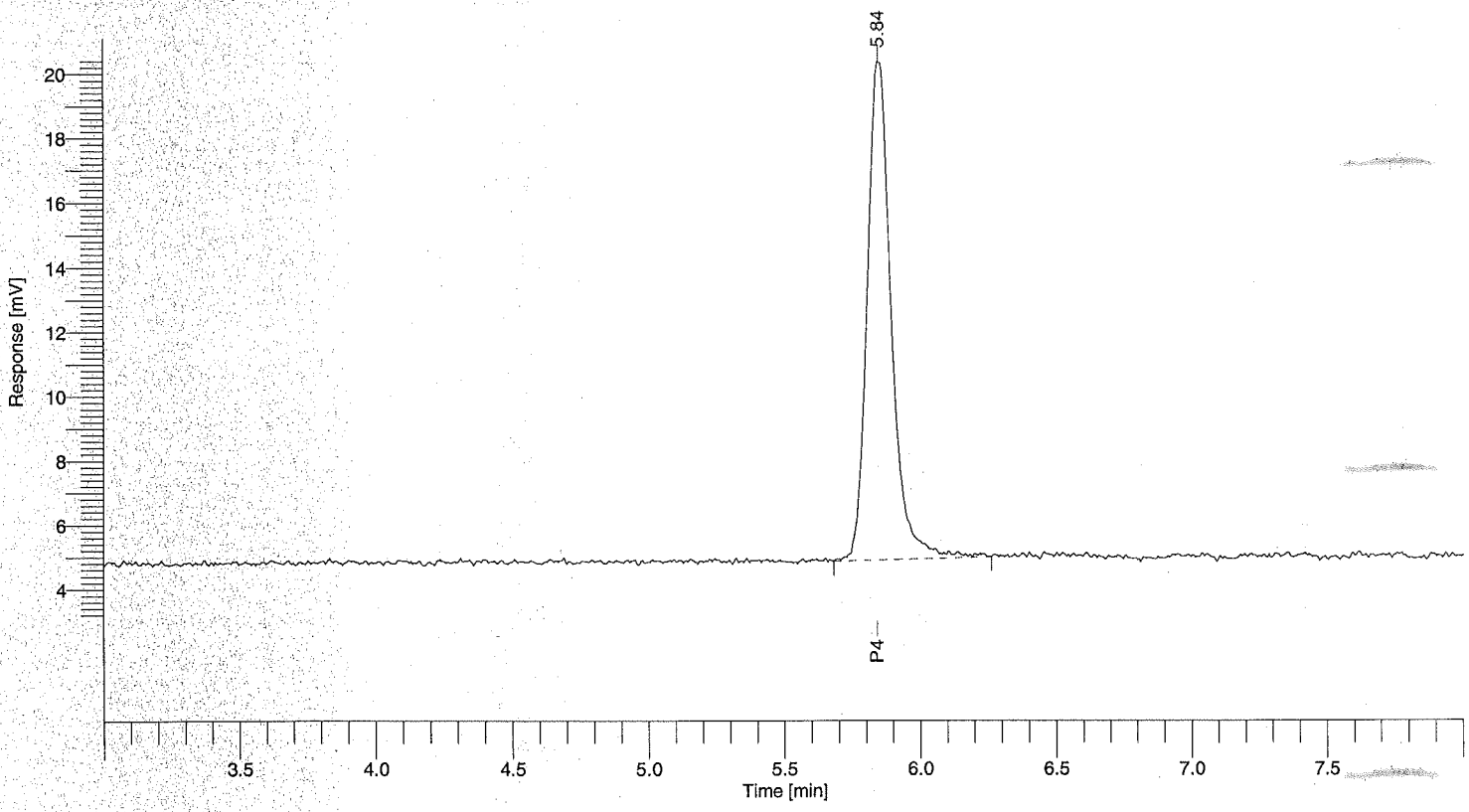
CW 7-23-10

P4 recovery 75 to 125% for LCS or 65 to 135% for MS/MSD? YES NO

Software Version : 6.3.1.0504
Sample Name : 1020002007 MSD
Instrument Name : GC24
Rack/Vial : 0/24
Sample Amount : 1.000000
Cycle : 24

Date : 7/23/2010 7:31:04 AM
Data Acquisition Time : 7/22/2010 7:54:08 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_024.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 WATER QC REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L	Spike Targ ug/L	Rec %
5.84	P4	15612	96162	0.058360	1	3.0	0.120	1.000	0.0234	0.0500	1.4590	~~1.418~~ 1.8	~~102.9~~ 79.4%

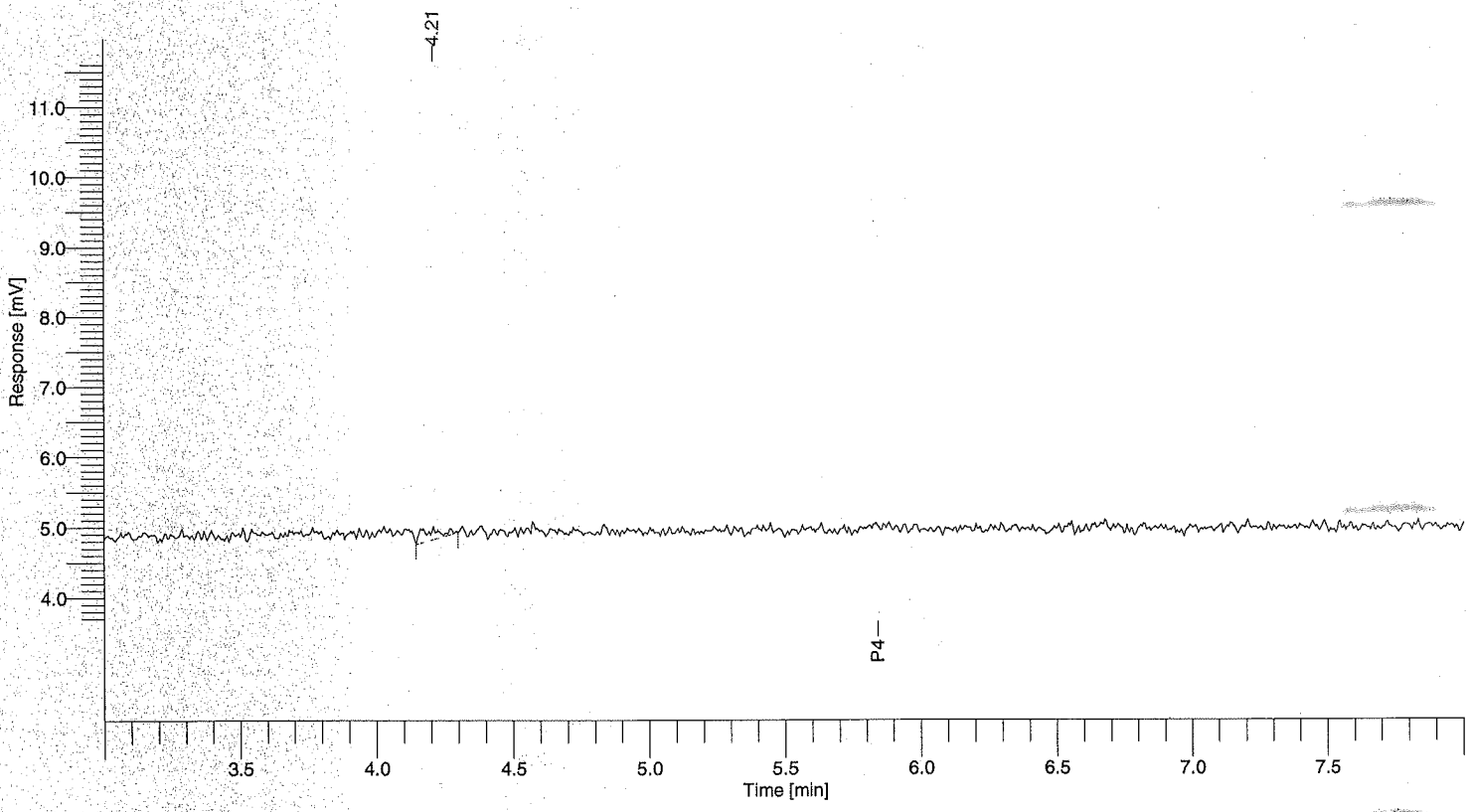
CW 7-23-10

P4 recovery 75 to 125% for LCS or 65 to 135% for MS/MSD? YES ✓ NO

Software Version : 6.3.1.0504
Sample Name : 1020002008
Instrument Name : GC24
Rack/Vial : 0/25
Sample Amount : 1.000000
Cycle : 25

Date : 7/23/2010 7:31:04 AM
Data Acquisition Time : 7/22/2010 8:05:21 PM
Channel : B
Operator : winter
Dilution Factor : 1.000000

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_025.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



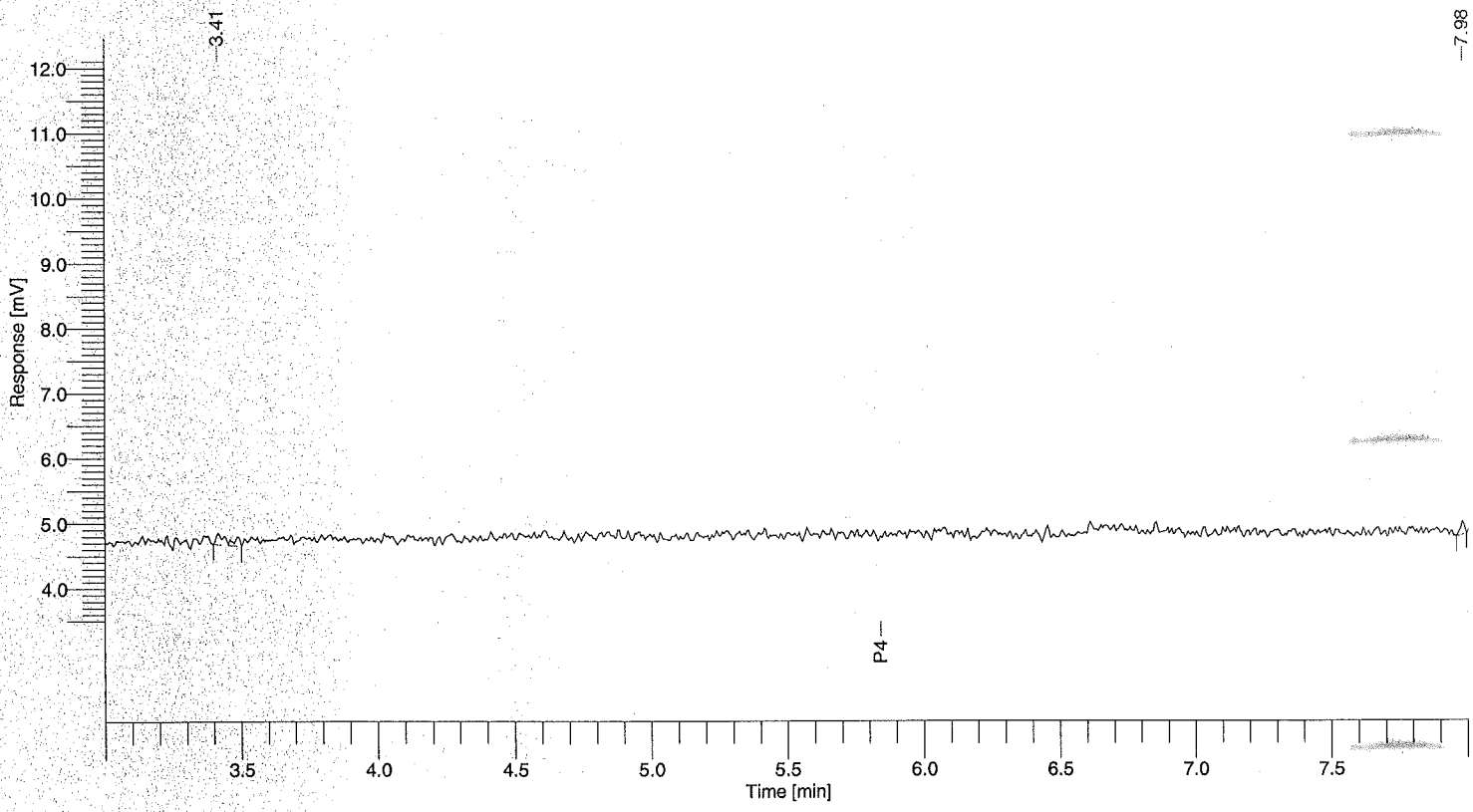
P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [µV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Software Version	: 6.3.1.0504	Date	: 7/23/2010 7:31:04 AM
Sample Name	: 1020002009	Data Acquisition Time	: 7/22/2010 8:16:31 PM
Instrument Name	: GC24	Channel	: B
Rack/Vial	: 0/26	Operator	: winter
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 26		

Result File : \\turbo\TCCS\potekhin\GCE24\DATA\24100722\24100722_026.rst
Sequence File : \\turbo\TCCS\potekhin\GCE24\SEQUENCES\24100722seq.seq



P4 WATER SAMPLE REPORT

Column A: DB-1 30m x 0.53mm x 1.5um

Time min	Component Name	Height uV	Area [μV·s]	Raw Amt ug/mL	DF	Extract mL	Sample L	Method DF	MDL ug/L	PQL ug/L	Adj Amt ug/L
5.84	P4	0	0	0.000000	1	3.0	0.1200	1.000	----------	----------	0.0000

Appendix 1-E4

2010 Quality Assurance Data Summaries

Appendix 1-E4a
Laboratory Precision Data Summary
2010
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

			Sys Loc Code	BG-1		RPD	BG-15		RPD
			Sample Date	6/29/2010			6/25/2010		
			Depth Interval	0 - 2	0 - 2	Percent %	12 - 18	12 - 18	Percent %
			Depth Unit	in	in		in	in	
			Sample Name		BG-100 0-2 COMP			BG-102 2-12 COMP	
					BG-1 0-2		BG-15 12-18	BG-15 12-18	
			Sys Sample Code	BG-1 0-2 COMP_06292010	COMP_06292010_FD		COMP_06252010	COMP_06252010_FD	
			Sample Type Code	N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location							
General Parameters									
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--		--	--		
Alkalinity, carbonate as CaCO3	NA	Lab	--	--		--	--		
Chloride	NA	Lab	--	--		--	--		
Fluoride	NA	Lab	< 1.5 mg/kg	< 1.5 mg/kg		**0.27 J mg/kg**	**0.28 J mg/kg**		**3.64**
Nitrate + Nitrite	NA	Lab	--	--		--	--		
Nitrogen, ammonia as N	NA	Lab	--	--		--	--		
Phosphorus, elemental (white)	NA	Lab	--	--		--	--		
Phosphorus, total	NA	Lab	--	--		--	--		
Sulfate	NA	Lab	--	--		--	--		
Metals									
Antimony	NA	Lab	**0.667 mg/kg**	**0.551 mg/kg**	**19.05**	**0.104 mg/kg**	**0.112 mg/kg**		**7.41**
Antimony	Total	Lab	--	--		--	--		
Arsenic	NA	Lab	**35.5 mg/kg**	**40.6 mg/kg**	**13.40**	**5.70 mg/kg**	**4.84 J mg/kg**		**16.32**
Arsenic	Total	Lab	--	--		--	--		
Barium	NA	Lab	**133 mg/kg**	**101 mg/kg**	**27.35**	**90.3 mg/kg**	**102 mg/kg**		**12.17**
Barium	Total	Lab	--	--		--	--		
Beryllium	NA	Lab	**0.38 J mg/kg**	**0.32 J mg/kg**	**17.14**	**0.52 J mg/kg**	**0.54 J mg/kg**		**3.77**
Beryllium	Total	Lab	--	--		--	--		
Cadmium	NA	Lab	**0.5 J mg/kg**	**0.3 J mg/kg**	**50.00**	< 0.2 mg/kg	< 0.2 mg/kg		
Cadmium	Total	Lab	--	--		--	--		
Calcium	NA	Lab	**2520 mg/kg**	**1970 mg/kg**	**24.50**	**3440 mg/kg**	**3540 mg/kg**		**2.87**
Calcium	Total	Lab	--	--		--	--		
Chromium	NA	Lab	**11.5 mg/kg**	**7.9 mg/kg**	**37.11**	**7.0 mg/kg**	**7.4 mg/kg**		**5.56**
Chromium	Total	Lab	--	--		--	--		
Cobalt	NA	Lab	**5.2 mg/kg**	**4.2 mg/kg**	**21.28**	**4.2 mg/kg**	**4.8 mg/kg**		**13.33**
Cobalt	Total	Lab	--	--		--	--		
Copper	NA	Lab	**47.6 mg/kg**	**36.4 mg/kg**	**26.67**	**11.6 mg/kg**	**12.8 mg/kg**		**9.84**
Copper	Total	Lab	--	--		--	--		
Iron	NA	Lab	**24500 mg/kg**	**17900 mg/kg**	**31.13**	**18200 mg/kg**	**18500 mg/kg**		**1.63**
Iron	Total	Lab	--	--		--	--		
Lead	NA	Lab	**31.6 mg/kg**	**24.6 mg/kg**	**24.91**	**3.9 J mg/kg**	**4.6 J mg/kg**		**16.47**
Lead	Total	Lab	--	--		--	--		
Magnesium	NA	Lab	**2020 mg/kg**	**1550 mg/kg**	**26.33**	**3630 mg/kg**	**3840 mg/kg**		**5.62**
Magnesium	Total	Lab	--	--		--	--		
Manganese	NA	Lab	**457 mg/kg**	**369 mg/kg**	**21.31**	**334 mg/kg**	**379 mg/kg**		**12.62**
Manganese	Total	Lab	--	--		--	--		
Mercury	NA	Lab	**0.023 mg/kg**	**0.020 mg/kg**	**13.95**	**0.005 J mg/kg**	**0.014 J mg/kg**		**94.74**
Mercury	Total	Lab	--	--		--	--		
Nickel	NA	Lab	**3.7 J mg/kg**	**2.6 J mg/kg**	**34.92**	**4.3 J mg/kg**	**4.4 J mg/kg**		**2.30**

Appendix 1-E4a
Laboratory Precision Data Summary
2010
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

			Sys Loc Code	BG-1		RPD	BG-15		RPD
			Sample Date	6/29/2010			6/25/2010		
			Depth Interval	0 - 2	0 - 2	Percent %	12 - 18	12 - 18	Percent %
			Depth Unit	in	in		in	in	
			Sample Name		BG-100 0-2 COMP			BG-102 2-12 COMP	
			Sys Sample Code	BG-1 0-2 COMP_06292010	BG-1 0-2 COMP_06292010_FD		BG-15 12-18 COMP_06252010	BG-15 12-18 COMP_06252010_FD	
			Sample Type Code	N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location							
Nickel	Total	Lab		--	--		--	--	
Potassium	NA	Lab		**2160 mg/kg**	**1790 mg/kg**	**18.73**	**2930 mg/kg**	**3110 mg/kg**	**5.96**
Potassium	Total	Lab		--	--		--	--	
Selenium	NA	Lab		**0.4 J mg/kg**	**0.4 J mg/kg**	**0.00**	**0.4 J mg/kg**	**0.4 J mg/kg**	**0.00**
Selenium	Total	Lab		--	--		--	--	
Silver	NA	Lab		< 0.4 mg/kg	< 0.4 mg/kg		< 0.5 mg/kg	< 0.5 mg/kg	
Silver	Total	Lab		--	--		--	--	
Sodium	NA	Lab		**43.6 mg/kg**	**33.1 mg/kg**	**27.38**	**66.2 mg/kg**	**69.7 mg/kg**	**5.15**
Sodium	Total	Lab		--	--		--	--	
Thallium	NA	Lab		**0.220 mg/kg**	**0.232 mg/kg**	**5.31**	**0.331 mg/kg**	**0.303 mg/kg**	**8.83**
Thallium	Total	Lab		--	--		--	--	
Uranium	NA	Lab		**2.140 mg/kg**	**2.020 mg/kg**	**5.77**	**2.220 mg/kg**	**1.770 mg/kg**	**22.56**
Uranium	Total	Lab		--	--		--	--	
Vanadium	NA	Lab		**54.6 mg/kg**	**38.9 mg/kg**	**33.58**	**32.4 mg/kg**	**32.2 mg/kg**	**0.62**
Vanadium	Total	Lab		--	--		--	--	
Zinc	NA	Lab		**60.7 mg/kg**	**48.7 mg/kg**	**21.94**	**31.1 mg/kg**	**33.8 mg/kg**	**8.32**
Zinc	Total	Lab		--	--		--	--	
PCBs									
Aroclor 1016	NA	Lab		--	--		--	--	
Aroclor 1221	NA	Lab		--	--		--	--	
Aroclor 1232	NA	Lab		--	--		--	--	
Aroclor 1242	NA	Lab		--	--		--	--	
Aroclor 1248	NA	Lab		--	--		--	--	
Aroclor 1254	NA	Lab		--	--		--	--	
Aroclor 1260	NA	Lab		--	--		--	--	
Aroclor 1262	NA	Lab		--	--		--	--	
Aroclor 1268	NA	Lab		--	--		--	--	
Radiochemical Parameters									
Gross Alpha (radiation)	NA	Lab		--	--		--	--	
Gross Beta (radiation)	NA	Lab		--	--		--	--	
Lead 210	NA	Lab		< 4 pCi/g	< 4.3 pCi/g		< 4.8 pCi/g	< 4.7 pCi/g	
Radium 226	NA	Lab		**2.1 +/- 0.48 J pCi/g**	**1.9 +/- 0.46 pCi/g**	**10.00**	**2 +/- 0.45 pCi/g**	**1.9 +/- 0.46 pCi/g**	**5.13**
Radium 228	NA	Lab		--	--		--	--	
Thorium 230	NA	Lab		**1.2 +/- 0.61 pCi/g**	**3.4 +/- 0.77 pCi/g**	**95.65**	**1.3 +/- 0.58 pCi/g**	< 0.62 pCi/g	
Uranium 234	NA	Lab		**0.55 +/- 0.48 J pCi/g**	**1.4 +/- 0.64 pCi/g**	**87.18**	**0.29 +/- 0.49 pCi/g**	**0.37 +/- 0.51 pCi/g**	**24.24**
Uranium 235	NA	Lab		< 0.22 pCi/g	< 0.31 pCi/g		< 0.24 pCi/g	< 0.24 pCi/g	
Uranium 238 (radiochemical method)	NA	Lab		**0.87 +/- 0.35 J pCi/g**	**1.21 +/- 0.56 pCi/g**	**32.69**	**0.6 +/- 0.36 pCi/g**	**1.05 +/- 0.4 pCi/g**	**54.55**

Appendix 1-E4a
Laboratory Precision Data Summary
2010
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

	Sys Loc Code		BG-8		RPD	FTS-26		RPD
	Sample Date		6/26/2010			6/30/2010		
	Depth Interval		2 - 12	2 - 12	Percent %	0 - 2	0 - 2	Percent %
	Depth Unit		in	in		in	in	
	Sample Name		BG-8 2-12	BG-101 2-12 COMP BG-8 2-12		FTS-26	FTS-101 0-2 FTS-26	
	Sys Sample Code		COMP_06262010	COMP_06262010_FD		0_2_06302010	0_2_06302010_FD	
	Sample Type Code		N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--		--	--	
Alkalinity, carbonate as CaCO3	NA	Lab	--	--		--	--	
Chloride	NA	Lab	--	--		--	--	
Fluoride	NA	Lab	**0.31 J mg/kg**	**0.30 J mg/kg**	**3.28**	--	--	
Nitrate + Nitrite	NA	Lab	--	--		--	--	
Nitrogen, ammonia as N	NA	Lab	--	--		--	--	
Phosphorus, elemental (white)	NA	Lab	--	--		--	--	
Phosphorus, total	NA	Lab	--	--		--	--	
Sulfate	NA	Lab	--	--		--	--	
Metals								
Antimony	NA	Lab	**0.132 mg/kg**	**0.154 mg/kg**	**15.38**	--	--	
Antimony	Total	Lab	--	--		--	--	
Arsenic	NA	Lab	**12.0 mg/kg**	**17.4 mg/kg**	**36.73**	--	--	
Arsenic	Total	Lab	--	--		--	--	
Barium	NA	Lab	**168 mg/kg**	**162 mg/kg**	**3.64**	--	--	
Barium	Total	Lab	--	--		--	--	
Beryllium	NA	Lab	**0.35 J mg/kg**	**0.36 J mg/kg**	**2.82**	--	--	
Beryllium	Total	Lab	--	--		--	--	
Cadmium	NA	Lab	< 0.2 mg/kg	< 0.2 mg/kg		--	--	
Cadmium	Total	Lab	--	--		--	--	
Calcium	NA	Lab	**3230 mg/kg**	**3190 mg/kg**	**1.25**	--	--	
Calcium	Total	Lab	--	--		--	--	
Chromium	NA	Lab	**11.0 mg/kg**	**9.7 mg/kg**	**12.56**	--	--	
Chromium	Total	Lab	--	--		--	--	
Cobalt	NA	Lab	**6.5 mg/kg**	**5.5 mg/kg**	**16.67**	--	--	
Cobalt	Total	Lab	--	--		--	--	
Copper	NA	Lab	**10.3 mg/kg**	**10.6 mg/kg**	**2.87**	--	--	
Copper	Total	Lab	--	--		--	--	
Iron	NA	Lab	**23500 mg/kg**	**20500 mg/kg**	**13.64**	--	--	
Iron	Total	Lab	--	--		--	--	
Lead	NA	Lab	**3.8 J mg/kg**	**3.5 J mg/kg**	**8.22**	--	--	
Lead	Total	Lab	--	--		--	--	
Magnesium	NA	Lab	**3650 mg/kg**	**3280 mg/kg**	**10.68**	--	--	
Magnesium	Total	Lab	--	--		--	--	
Manganese	NA	Lab	**519 mg/kg**	**503 mg/kg**	**3.13**	--	--	
Manganese	Total	Lab	--	--		--	--	
Mercury	NA	Lab	**0.007 J mg/kg**	**0.004 J mg/kg**	**54.55**	--	--	
Mercury	Total	Lab	--	--		--	--	
Nickel	NA	Lab	**4.5 J mg/kg**	**3.9 J mg/kg**	**14.29**	--	--	

Appendix 1-E4a
Laboratory Precision Data Summary
2010
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

			Sys Loc Code	BG-8		RPD	FTS-26		RPD
			Sample Date	6/26/2010			6/30/2010		
			Depth Interval	2 - 12	2 - 12	Percent %	0 - 2	0 - 2	Percent %
			Depth Unit	in	in		in	in	
			Sample Name	BG-8 2-12	BG-101 2-12 COMP		FTS-26	FTS-101 0-2	
			Sys Sample Code	COMP_06262010	BG-8 2-12 COMP_06262010_FD		0_2_06302010	FTS-26 0_2_06302010_FD	
			Sample Type Code	N	FD		N	FD	
Chemical Name	Total or Dissolved	Analysis Location							
Nickel	Total	Lab		--	--		--	--	
Potassium	NA	Lab		**3670 mg/kg**	**3320 mg/kg**	**10.01**	--	--	
Potassium	Total	Lab		--	--		--	--	
Selenium	NA	Lab		**0.2 J mg/kg**	**0.4 J mg/kg**	**66.67**	--	--	
Selenium	Total	Lab		--	--		--	--	
Silver	NA	Lab		< 0.5 mg/kg	< 0.4 mg/kg		--	--	
Silver	Total	Lab		--	--		--	--	
Sodium	NA	Lab		**49.0 mg/kg**	**47.3 mg/kg**	**3.53**	--	--	
Sodium	Total	Lab		--	--		--	--	
Thallium	NA	Lab		**0.276 mg/kg**	**0.285 mg/kg**	**3.21**	--	--	
Thallium	Total	Lab		--	--		--	--	
Uranium	NA	Lab		**1.880 mg/kg**	**1.590 mg/kg**	**16.71**	--	--	
Uranium	Total	Lab		--	--		--	--	
Vanadium	NA	Lab		**52.8 mg/kg**	**43.3 mg/kg**	**19.77**	--	--	
Vanadium	Total	Lab		--	--		--	--	
Zinc	NA	Lab		**35.6 mg/kg**	**34.1 mg/kg**	**4.30**	--	--	
Zinc	Total	Lab		--	--		--	--	
PCBs									
Aroclor 1016	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1221	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1232	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1242	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1248	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1254	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1260	NA	Lab		--	--		**14 mg/kg**	**15 mg/kg**	**6.90**
Aroclor 1262	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Aroclor 1268	NA	Lab		--	--		< 0.19 mg/kg	< 0.19 mg/kg	
Radiochemical Parameters									
Gross Alpha (radiation)	NA	Lab		--	--		--	--	
Gross Beta (radiation)	NA	Lab		--	--		--	--	
Lead 210	NA	Lab		< 5.3 pCi/g	< 4.8 pCi/g		--	--	
Radium 226	NA	Lab		**2.2 +/- 0.51 pCi/g**	**2.2 +/- 0.51 pCi/g**	**0.00**	--	--	
Radium 228	NA	Lab		--	--		--	--	
Thorium 230	NA	Lab		< 0.63 pCi/g	< 0.64 pCi/g		--	--	
Uranium 234	NA	Lab		**0.3 +/- 0.39 pCi/g**	< 0.21 pCi/g		--	--	
Uranium 235	NA	Lab		< 0.24 pCi/g	< 0.21 pCi/g		--	--	
Uranium 238 (radiochemical method)	NA	Lab		**0.79 +/- 0.32 pCi/g**	**0.54 +/- 0.32 pCi/g**	**37.59**	--	--	

Appendix 1-E4a
Laboratory Precision Data Summary
2010
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

		Sys Loc Code	MW-02-3		RPD
		Sample Date	7/17/2010		Percent %
		Depth Interval			
		Depth Unit			
		Sample Name		MW-82-3	
		Sys Sample Code	MW-02-3_07172010	MW-02-3_07172010_FD	
		Sample Type Code	N	FD	
Chemical Name	Total or Dissolved	Analysis Location			
General Parameters					
Alkalinity, bicarbonate as CaCO3	NA	Lab	**134 mg/l**	**137 mg/l**	**2.21**
Alkalinity, carbonate as CaCO3	NA	Lab	< 2.0 mg/l	< 9.0 mg/l	
Chloride	NA	Lab	**169 mg/l**	**167 mg/l**	**1.19**
Fluoride	NA	Lab	**0.49 mg/l**	**0.49 mg/l**	**0.00**
Nitrate + Nitrite	NA	Lab	**0.240 mg/l**	**0.234 mg/l**	**2.53**
Nitrogen, ammonia as N	NA	Lab	< 0.050 mg/l	< 0.050 mg/l	
Phosphorus, elemental (white)	NA	Lab	< 0.011 ug/l	< 0.011 ug/l	
Phosphorus, total	NA	Lab	**0.187 mg/l**	**0.187 mg/l**	**0.00**
Sulfate	NA	Lab	**632 mg/l**	**627 mg/l**	**0.79**
Metals					
Antimony	NA	Lab	--	--	
Antimony	Total	Lab	**0.16 ug/l**	**0.17 ug/l**	**6.06**
Arsenic	NA	Lab	--	--	
Arsenic	Total	Lab	**11.2 ug/l**	**11.3 ug/l**	**0.89**
Barium	NA	Lab	--	--	
Barium	Total	Lab	**25.1 ug/l**	**25.0 ug/l**	**0.40**
Beryllium	NA	Lab	--	--	
Beryllium	Total	Lab	< 0.02 ug/l	< 0.02 ug/l	
Cadmium	NA	Lab	--	--	
Cadmium	Total	Lab	< 0.02 ug/l	< 0.02 ug/l	
Calcium	NA	Lab	--	--	
Calcium	Total	Lab	**285000 ug/l**	**294000 ug/l**	**3.11**
Chromium	NA	Lab	--	--	
Chromium	Total	Lab	**0.3 ug/l**	**0.4 ug/l**	**28.57**
Cobalt	NA	Lab	--	--	
Cobalt	Total	Lab	**1.17 ug/l**	**1.15 ug/l**	**1.72**
Copper	NA	Lab	--	--	
Copper	Total	Lab	**2.8 ug/l**	**2.9 ug/l**	**3.51**
Iron	NA	Lab	--	--	
Iron	Total	Lab	**104 ug/l**	**89 ug/l**	**15.54**
Lead	NA	Lab	--	--	
Lead	Total	Lab	**0.20 ug/l**	**0.20 ug/l**	**0.00**
Magnesium	NA	Lab	--	--	
Magnesium	Total	Lab	**42000 ug/l**	**42700 ug/l**	**1.65**
Manganese	NA	Lab	--	--	
Manganese	Total	Lab	**1.83 ug/l**	**1.74 ug/l**	**5.04**
Mercury	NA	Lab	--	--	
Mercury	Total	Lab	< 0.2 ug/l	< 0.2 ug/l	
Nickel	NA	Lab	--	--	

Appendix 1-E4a
Laboratory Precision Data Summary
2010
Rhodia Silver Bow Plant

%RPD = | (N - FD) / (N + FD) / 2 | X 100
Where: N = 1st Value
FD = 2nd Value

			Sys Loc Code	MW-02-3		RPD
			Sample Date	7/17/2010		
			Depth Interval			Percent %
			Depth Unit			
			Sample Name		MW-82-3	
			Sys Sample Code	MW-02-3_07172010	MW-02-3_07172010_FD	
			Sample Type Code	N	FD	
Chemical Name	Total or Dissolved	Analysis Location				
Nickel	Total	Lab	**4.3 ug/l**	**4.7 ug/l**	**8.89**	
Potassium	NA	Lab	--	--		
Potassium	Total	Lab	**14200 ug/l**	**14400 ug/l**	**1.40**	
Selenium	NA	Lab	--	--		
Selenium	Total	Lab	**9.4 ug/l**	**9.3 ug/l**	**1.07**	
Silver	NA	Lab	--	--		
Silver	Total	Lab	< 0.02 ug/l	< 0.02 ug/l		
Sodium	NA	Lab	--	--		
Sodium	Total	Lab	**76500 ug/l**	**79200 ug/l**	**3.47**	
Thallium	NA	Lab	--	--		
Thallium	Total	Lab	< 0.02 ug/l	< 0.02 ug/l		
Uranium	NA	Lab	--	--		
Uranium	Total	Lab	**14.0 ug/l**	**13.9 ug/l**	**0.72**	
Vanadium	NA	Lab	--	--		
Vanadium	Total	Lab	**4.2 ug/l**	**4.1 ug/l**	**2.41**	
Zinc	NA	Lab	--	--		
Zinc	Total	Lab	< 8.2 ug/l	< 8.5 ug/l		
PCBs						
Aroclor 1016	NA	Lab	--	--		
Aroclor 1221	NA	Lab	--	--		
Aroclor 1232	NA	Lab	--	--		
Aroclor 1242	NA	Lab	--	--		
Aroclor 1248	NA	Lab	--	--		
Aroclor 1254	NA	Lab	--	--		
Aroclor 1260	NA	Lab	--	--		
Aroclor 1262	NA	Lab	--	--		
Aroclor 1268	NA	Lab	--	--		
Radiochemical Parameters						
Gross Alpha (radiation)	NA	Lab	**16 +/- 6.3 pCi/l**	**12 +/- 5.8 pCi/l**	**28.57**	
Gross Beta (radiation)	NA	Lab	**16 +/- 5.5 pCi/l**	**14 +/- 5.3 pCi/l**	**13.33**	
Lead 210	NA	Lab	--	--		
Radium 226	NA	Lab	< 0.37 pCi/l	< 0.37 pCi/l		
Radium 228	NA	Lab	< 1.3 pCi/l	< 1.3 pCi/l		
Thorium 230	NA	Lab	--	--		
Uranium 234	NA	Lab	--	--		
Uranium 235	NA	Lab	--	--		
Uranium 238 (radiochemical method)	NA	Lab	--	--		

Appendix 1-E4b-1
Field Blank Data - Aqueous
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC
			Sample Date	6/23/2010	6/23/2010	6/29/2010	6/30/2010	7/18/2010
			Depth Interval	2 - 12	12 - 18	0 - 2	0 - 2	
			Depth Unit	in	in	in	in	
			Sample Name	BG-121 COMP	BG-122 COMP	BG-120 COMP	FTS-121 0-2	MW-60-12
			Sys Sample Code	FBBG-10 2-12 COMP_06232010	FBBG-14 12-18 COMP_06232010	FBBG-3 0-2 COMP_06292010	FBFTS28 0-2_06302010	FBMW-06-2_07182010
			Sample Type Code	FB	FB	FB	FB	FB
Chemical Name	Total or Dissolved	Analysis Location						
General Parameters								
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--	--	--	**224 mg/l**
Alkalinity, carbonate as CaCO3	NA	Lab	--	--	--	--	< 9.0 mg/l
Chloride	NA	Lab	--	--	--	--	< 0.40 mg/l
Fluoride	NA	Lab	**0.04 J mg/l**	**0.03 J mg/l**	**0.04 J mg/l**	--	< 0.40 mg/l
Nitrate + Nitrite	NA	Lab	--	--	--	--	< 0.050 mg/l
Nitrogen, ammonia as N	NA	Lab	--	--	--	--	< 0.050 mg/l
Phosphorus, elemental (white)	NA	Lab	--	--	--	--	< 0.011 ug/l
Phosphorus, total	NA	Lab	--	--	--	--	< 0.010 mg/l
Sulfate	NA	Lab	--	--	--	--	< 0.40 mg/l
Metals							
Antimony	Total	Lab	< 0.02 ug/l	< 0.02 ug/l	< 0.02 ug/l	--	< 0.05 ug/l
Arsenic	Total	Lab	< 0.07 ug/l	< 0.07 ug/l	< 0.07 ug/l	--	< 0.5 ug/l
Barium	Total	Lab	< 0.6 ug/l	< 0.6 ug/l	< 0.6 ug/l	--	**0.58 ug/l**
Beryllium	Total	Lab	< 0.05 ug/l	< 0.05 ug/l	< 0.05 ug/l	--	< 0.02 ug/l
Cadmium	Total	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	--	< 0.02 ug/l
Calcium	Total	Lab	**12.1 J ug/l**	< 6.0 ug/l	**8.4 J ug/l**	--	**119 ug/l**
Chromium	Total	Lab	**5.8 ug/l**	< 2.0 ug/l	< 2.0 ug/l	--	< 0.2 ug/l
Cobalt	Total	Lab	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	--	< 0.02 ug/l
Copper	Total	Lab	**2.5 J ug/l**	**3.3 J ug/l**	**2.9 J ug/l**	--	**0.2 ug/l**
Iron	Total	Lab	**30.1 ug/l**	**4.5 J ug/l**	**2.6 J ug/l**	--	< 20 ug/l
Lead	Total	Lab	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	--	**0.04 ug/l**
Magnesium	Total	Lab	**1.1 J ug/l**	**0.3 J ug/l**	< 0.3 ug/l	--	**23 ug/l**
Manganese	Total	Lab	**0.70 J ug/l**	**0.25 J ug/l**	**0.21 J ug/l**	--	**0.13 ug/l**
Mercury	Total	Lab	< 0.02 ug/l	< 0.02 ug/l	**0.02 J ug/l**	--	< 0.2 ug/l
Nickel	Total	Lab	**2.5 J ug/l**	< 2.0 ug/l	< 2.0 ug/l	--	**0.7 ug/l**
Potassium	Total	Lab	< 40 ug/l	< 40 ug/l	< 40 ug/l	--	< 400 ug/l
Selenium	Total	Lab	< 0.3 ug/l	< 0.3 ug/l	< 0.3 ug/l	--	< 1.0 ug/l
Silver	Total	Lab	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	--	< 0.02 ug/l
Sodium	Total	Lab	< 20 ug/l	< 20 ug/l	< 20 ug/l	--	< 100 ug/l
Thallium	Total	Lab	< 0.002 ug/l	< 0.002 ug/l	< 0.002 ug/l	--	< 0.02 ug/l
Uranium	Total	Lab	< 0.003 ug/l	< 0.003 ug/l	< 0.003 ug/l	--	< 0.020 ug/l
Vanadium	Total	Lab	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	--	< 0.2 ug/l
Zinc	Total	Lab	< 0.8 ug/l	< 0.8 ug/l	**1.0 J ug/l**	--	**2.6 ug/l**

Appendix 1-E4b-1
Field Blank Data - Aqueous
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC
			Sample Date	6/23/2010	6/23/2010	6/29/2010	6/30/2010	7/18/2010
			Depth Interval	2 - 12	12 - 18	0 - 2	0 - 2	
			Depth Unit	in	in	in	in	
			Sample Name	BG-121 COMP	BG-122 COMP	BG-120 COMP	FTS-121 0-2	MW-60-12
			Sys Sample Code	FBBG-10 2-12 COMP_06232010	FBBG-14 12-18 COMP_06232010	FBBG-3 0-2 COMP_06292010	FBFTS28 0-2_06302010	FBMW-06-2_07182010
			Sample Type Code	FB	FB	FB	FB	FB
Chemical Name	Total or Dissolved	Analysis Location						
PCBs								
Aroclor 1016	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1221	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1232	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1242	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1248	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1254	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1260	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1262	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Aroclor 1268	NA	Lab	--	--	--	< 0.0094 ug/l	--	
Radiochemical Parameters								
Gross Alpha (radiation)	NA	Lab	--	--	--	--	< 1.4 pCi/l	
Gross Beta (radiation)	NA	Lab	--	--	--	--	< 4 pCi/l	
Lead 210	NA	Lab	--	--	< 4 pCi/l	--	--	
Radium 226	NA	Lab	--	--	< 0.18 pCi/l	--	< 0.39 pCi/l	
Radium 228	NA	Lab	--	--	--	--	< 1.2 pCi/l	
Thorium 230	NA	Lab	--	--	< 0.57 pCi/l	--	--	
Uranium 234	NA	Lab	--	--	< 1.1 pCi/l	--	--	
Uranium 235	NA	Lab	--	--	**-0.13 +/- 0.79 pCi/l**	--	--	
Uranium 238 (radiochemical method)	NA	Lab	--	--	**2.63 +/- 1.5 pCi/l**	--	--	

Appendix 1-E4b-2i
Laboratory Blank Data - Aqueous General Parameters, Metals and Radionuclides
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC	QC
			Sample Date	06/30/2010	07/01/2010	07/07/2010	07/16/2010	07/19/2010	07/20/2010
			Depth Unit	LB_06302010	LB_07012010	LB_07072010	LB_07162010	LB_07192010	LB_07202010
			Sample Type Code	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location							
General Parameters									
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--	--	--	--	< 9.0 mg/l	
Alkalinity, carbonate as CaCO3	NA	Lab	--	--	--	--	--	--	
Chloride	NA	Lab	--	--	--	--	< 0.20 mg/l	--	
Fluoride	NA	Lab	--	**0.04 J mg/l**	--	--	--	< 0.20 mg/l	
Nitrate + Nitrite	NA	Lab	--	--	--	--	--	--	
Nitrogen, ammonia as N	NA	Lab	--	--	--	--	< 0.050 mg/l	--	
Phosphorus, elemental (white)	NA	Lab	--	--	--	--	--	--	
Phosphorus, total	NA	Lab	--	--	--	--	--	--	
Sulfate	NA	Lab	--	--	--	--	--	< 0.20 mg/l	
Metals									
Antimony	Total	Lab	--	--	--	--	--	--	
Arsenic	Total	Lab	--	--	--	--	--	--	
Barium	Total	Lab	--	--	--	--	--	--	
Beryllium	Total	Lab	--	--	--	--	--	--	
Cadmium	Total	Lab	--	--	--	--	--	--	
Calcium	Total	Lab	--	--	--	--	--	--	
Chromium	Total	Lab	--	--	--	--	--	--	
Cobalt	Total	Lab	--	--	--	--	--	--	
Copper	Total	Lab	--	--	--	--	--	--	
Iron	Total	Lab	--	--	--	--	--	--	
Lead	Total	Lab	--	--	--	--	--	--	
Magnesium	Total	Lab	--	--	--	--	--	--	
Manganese	Total	Lab	--	--	--	--	--	--	
Mercury	Total	Lab	< 0.02 ug/l	--	< 0.02 ug/l	--	--	--	
Nickel	Total	Lab	--	--	--	--	--	--	

Appendix 1-E4b-2i
Laboratory Blank Data - Aqueous General Parameters, Metals and Radionuclides
2010
Rhodia Silver Bow Plant

		Sys Loc Code	QC	QC	QC	QC	QC	QC
		Sample Date	06/30/2010	07/01/2010	07/07/2010	07/16/2010	07/19/2010	07/20/2010
		Depth Unit	LB_06302010	LB_07012010	LB_07072010	LB_07162010	LB_07192010	LB_07202010
		Sample Type Code	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location						
Potassium	Total	Lab	--	--	--	--	--	--
Selenium	Total	Lab	--	--	--	--	--	--
Silver	Total	Lab	--	--	--	--	--	--
Sodium	Total	Lab	--	--	--	--	--	--
Thallium	Total	Lab	--	--	--	--	--	--
Uranium	Total	Lab	--	--	--	--	--	--
Vanadium	Total	Lab	--	--	--	--	--	--
Zinc	Total	Lab	--	--	--	--	--	--
Radiochemical Parameters								
Gross Alpha (radiation)	NA	Lab	--	--	--	--	--	--
Gross Beta (radiation)	NA	Lab	--	--	--	--	--	--
Lead 210	NA	Lab	--	--	--	--	--	--
Radium 226	NA	Lab	--	--	--	--	--	--
Radium 228	NA	Lab	--	--	--	--	--	--
Thorium 230	NA	Lab	--	--	--	--	--	--
Uranium 234	NA	Lab	--	--	--	< 1.1 pCi/l	--	--
Uranium 235	NA	Lab	--	--	--	< 1.1 pCi/l	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	< 1.1 pCi/l	--	--

Appendix 1-E4b-2i
Laboratory Blank Data - Aqueous General Parameters, Metals and Radionuclides
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC	QC
			Sample Date	07/21/2010	07/22/2010	07/23/2010	07/26/2010	07/27/2010	07/28/2010
			Depth Unit	LB_07212010	LB_07222010	LB_07232010	LB_07262010	LB_07272010	LB_07282010
			Sample Type Code	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location							
General Parameters									
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--	--	--	--	< 2.0 mg/l	
Alkalinity, carbonate as CaCO3	NA	Lab	--	< 9.0 mg/l	--	--	--	< 2.0 mg/l	
Chloride	NA	Lab	--	--	< 0.20 mg/l	< 0.20 mg/l	--	--	
Fluoride	NA	Lab	**0.04 J mg/l**	--	< 0.20 mg/l	< 0.20 mg/l	--	--	
Nitrate + Nitrite	NA	Lab	--	--	< 0.050 mg/l	--	--	--	
Nitrogen, ammonia as N	NA	Lab	--	--	--	--	< 0.050 mg/l	--	
Phosphorus, elemental (white)	NA	Lab	< 0.0112 ug/l	--	--	--	--	--	
Phosphorus, total	NA	Lab	--	--	--	< 0.010 mg/l	--	--	
Sulfate	NA	Lab	--	--	< 0.20 mg/l	< 0.20 mg/l	--	--	
Metals									
Antimony	Total	Lab	< 0.02 ug/l < 0.02 ug/l	--	--	--	--	--	
Arsenic	Total	Lab	< 0.07 ug/l < 0.07 ug/l	--	--	--	--	--	
Barium	Total	Lab	< 0.6 ug/l < 0.6 ug/l	--	--	--	--	--	
Beryllium	Total	Lab	< 0.05 ug/l 0.05 J ug/l	--	--	--	--	--	
Cadmium	Total	Lab	< 2.0 ug/l < 2.0 ug/l	--	--	--	--	--	
Calcium	Total	Lab	< 6.0 ug/l 7.5 J ug/l	--	--	--	--	--	
Chromium	Total	Lab	**2.8 J ug/l** **< 2.0 ug/l**	--	--	--	--	--	
Cobalt	Total	Lab	< 2.0 ug/l < 2.0 ug/l	--	--	--	--	--	
Copper	Total	Lab	**2.4 J ug/l** **3.3 J ug/l**	--	--	--	--	--	
Iron	Total	Lab	**1.1 J ug/l** **< 0.8 ug/l**	--	--	--	--	--	
Lead	Total	Lab	< 20.0 ug/l < 20.0 ug/l	--	--	--	--	--	
Magnesium	Total	Lab	< 0.3 ug/l < 0.3 ug/l	--	--	--	--	--	
Manganese	Total	Lab	< 0.20 ug/l < 0.20 ug/l	--	--	--	--	--	
Mercury	Total	Lab	--	< 0.2 ug/l	--	--	--	--	
Nickel	Total	Lab	< 2.0 ug/l < 2.0 ug/l	--	--	--	--	--	

Appendix 1-E4b-2i
Laboratory Blank Data - Aqueous General Parameters, Metals and Radionuclides
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC	QC
			Sample Date	07/21/2010	07/22/2010	07/23/2010	07/26/2010	07/27/2010	07/28/2010
			Depth Unit	LB_07212010	LB_07222010	LB_07232010	LB_07262010	LB_07272010	LB_07282010
			Sample Type Code	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location							
Potassium	Total	Lab	< 40 ug/l < 40 ug/l	--	--	--	--	--	--
Selenium	Total	Lab	< 0.3 ug/l < 0.3 ug/l	--	--	--	--	--	--
Silver	Total	Lab	< 5.0 ug/l < 5.0 ug/l	--	--	--	--	--	--
Sodium	Total	Lab	< 20 ug/l < 20 ug/l	--	--	--	--	--	--
Thallium	Total	Lab	< 0.002 ug/l < 0.002 ug/l	--	--	--	--	--	--
Uranium	Total	Lab	< 0.003 ug/l < 0.003 ug/l	--	--	--	--	--	--
Vanadium	Total	Lab	< 5.0 ug/l < 5.0 ug/l	--	--	--	--	--	--
Zinc	Total	Lab	< 0.8 ug/l < 0.8 ug/l	--	--	--	--	--	--
Radiochemical Parameters									
Gross Alpha (radiation)	NA	Lab	--	--	--	--	--	--	--
Gross Beta (radiation)	NA	Lab	--	--	--	--	--	--	--
Lead 210	NA	Lab	--	--	< 4 pCi/l	--	--	--	--
Radium 226	NA	Lab	--	**0.3 +/- 0.1 pCi/l**	--	--	--	--	--
Radium 228	NA	Lab	--	--	--	--	--	--	--
Thorium 230	NA	Lab	--	--	< 0.56 pCi/l	--	--	--	--
Uranium 234	NA	Lab	--	--	--	--	--	--	--
Uranium 235	NA	Lab	--	--	--	--	--	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	--	--	--	--

Appendix 1-E4b-2i
Laboratory Blank Data - Aqueous General Parameters, Metals and Radionuclides
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC
			Sample Date	08/03/2010	08/04/2010	08/06/2010
			Depth Unit	LB_08032010	LB_08042010	LB_08062010
			Sample Type Code	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location				
General Parameters						
Alkalinity, bicarbonate as CaCO3	NA	Lab	--	--	--	
Alkalinity, carbonate as CaCO3	NA	Lab	--	--	--	
Chloride	NA	Lab	--	--	--	
Fluoride	NA	Lab	--	--	--	
Nitrate + Nitrite	NA	Lab	--	--	--	
Nitrogen, ammonia as N	NA	Lab	--	--	--	
Phosphorus, elemental (white)	NA	Lab	--	--	--	
Phosphorus, total	NA	Lab	--	--	--	
Sulfate	NA	Lab	--	--	--	
Metals						
Antimony	Total	Lab	--	< 0.05 ug/l	--	
Arsenic	Total	Lab	--	< 0.5 ug/l	--	
Barium	Total	Lab	--	< 0.05 ug/l	--	
Beryllium	Total	Lab	--	< 0.02 ug/l	--	
Cadmium	Total	Lab	--	< 0.02 ug/l	--	
Calcium	Total	Lab	--	< 50 ug/l	--	
Chromium	Total	Lab	--	< 0.2 ug/l	--	
Cobalt	Total	Lab	--	< 0.02 ug/l	--	
Copper	Total	Lab	--	< 0.1 ug/l	--	
Iron	Total	Lab	--	< 20 ug/l	--	
Lead	Total	Lab	--	< 0.02 ug/l	--	
Magnesium	Total	Lab	--	< 20 ug/l	--	
Manganese	Total	Lab	--	< 0.05 ug/l	--	
Mercury	Total	Lab	--	--	--	
Nickel	Total	Lab	--	< 0.2 ug/l	--	

Appendix 1-E4b-2i
Laboratory Blank Data - Aqueous General Parameters, Metals and Radionuclides
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC
			Sample Date	08/03/2010	08/04/2010	08/06/2010
			Depth Unit	LB_08032010	LB_08042010	LB_08062010
			Sample Type Code	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location				
Potassium	Total	Lab	--	< 400 ug/l	--
Selenium	Total	Lab	--	< 1.0 ug/l	--
Silver	Total	Lab	--	< 0.02 ug/l	--
Sodium	Total	Lab	--	< 100 ug/l	--
Thallium	Total	Lab	--	< 0.02 ug/l	--
Uranium	Total	Lab	--	< 0.020 ug/l	--
Vanadium	Total	Lab	--	< 0.2 ug/l	--
Zinc	Total	Lab	--	< 0.5 ug/l	--
Radiochemical Parameters					
Gross Alpha (radiation)	NA	Lab	--	--	< 1.4 pCi/l
Gross Beta (radiation)	NA	Lab	--	--	< 4 pCi/l
Lead 210	NA	Lab	--	--	--
Radium 226	NA	Lab	--	< 0.47 pCi/l	--
Radium 228	NA	Lab	< 0.63 pCi/l	--	--
Thorium 230	NA	Lab	--	--	--
Uranium 234	NA	Lab	--	--	--
Uranium 235	NA	Lab	--	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--

Appendix 1-E4b-2ii
Laboratory Blank Data - Aqueous Polychlorinated Biphenyls
2010
Rhodia Silver Bow Plant

		Sys Loc Code	QC
		Sample Date	7/7/2010
		Sys Sample Code	LB1006867_07072010_LB
		Sample Type Code	LB
Chemical Name	Total or Dissolved	Analysis Location	
PCBs			
Aroclor 1016	NA	Lab	< 0.0094 ug/l
Aroclor 1221	NA	Lab	< 0.0094 ug/l
Aroclor 1232	NA	Lab	< 0.0094 ug/l
Aroclor 1242	NA	Lab	< 0.0094 ug/l
Aroclor 1248	NA	Lab	< 0.0094 ug/l
Aroclor 1254	NA	Lab	< 0.0094 ug/l
Aroclor 1260	NA	Lab	< 0.0094 ug/l
Aroclor 1262	NA	Lab	< 0.0094 ug/l
Aroclor 1268	NA	Lab	< 0.0094 ug/l

Appendix 1-E4c-1
Laboratory Blank Data - Solid General Parameters, Metals and Radionucludes
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC	QC	QC
			Sample Date	07/02/2010	07/14/2010	07/15/2010	07/16/2010	07/19/2010	07/20/2010	07/21/2010
			Depth Unit	LB_07022010	LB_07142010	LB_07152010	LB_07162010	LB_07192010	LB_07202010	LB_07212010
			Sample Type Code	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location								
General Parameters										
Fluoride	NA	Lab	--	--	--	--	--	--	--	
Metals										
Antimony	NA	Lab	--	< 0.009 mg/kg < 0.009 mg/kg	< 0.009 mg/kg < 0.009 mg/kg	--	--	--	--	
Arsenic	NA	Lab	--	< 0.05 mg/kg < 0.05 mg/kg	< 0.05 mg/kg < 0.05 mg/kg	--	--	--	--	
Barium	NA	Lab	--	--	< 0.3 mg/kg < 0.3 mg/kg	--	< 0.3 mg/kg < 0.3 mg/kg	--	--	
Beryllium	NA	Lab	--	**0.02 J mg/kg** **0.02 J mg/kg**	< 0.01 mg/kg < 0.01 mg/kg	--	--	--	--	
Cadmium	NA	Lab	--	< 0.2 mg/kg < 0.2 mg/kg	< 0.2 mg/kg < 0.2 mg/kg	--	--	--	--	
Calcium	NA	Lab	--	< 2.0 mg/kg < 2.0 mg/kg	< 2.0 mg/kg < 2.0 mg/kg	--	--	--	--	
Chromium	NA	Lab	--	< 0.4 mg/kg < 0.4 mg/kg	< 0.4 mg/kg < 0.4 mg/kg	--	--	--	--	
Cobalt	NA	Lab	--	< 0.3 mg/kg < 0.3 mg/kg	< 0.3 mg/kg < 0.3 mg/kg	--	--	--	--	
Copper	NA	Lab	--	< 0.6 mg/kg < 0.6 mg/kg	< 0.6 mg/kg < 0.6 mg/kg	--	--	--	--	
Iron	NA	Lab	--	**1.3 J mg/kg** **1.3 J mg/kg**	**1.2 J mg/kg** **1.3 J mg/kg**	--	--	--	--	
Lead	NA	Lab	--	--	< 3.0 mg/kg < 3.0 mg/kg	--	< 3.0 mg/kg < 3.0 mg/kg	--	--	
Magnesium	NA	Lab	--	**0.09 J mg/kg** **0.09 J mg/kg**	**0.05 J mg/kg** **0.05 J mg/kg**	--	--	--	--	
Manganese	NA	Lab	--	--	< 0.04 mg/kg < 0.04 mg/kg	--	< 0.04 mg/kg < 0.04 mg/kg	--	--	
Mercury	NA	Lab	< 0.002 mg/kg < 0.002 mg/kg	--	--	< 0.002 mg/kg	< 0.002 mg/kg	--	--	
Nickel	NA	Lab	--	< 0.5 mg/kg < 0.5 mg/kg	< 0.5 mg/kg < 0.5 mg/kg	--	--	--	--	
Potassium	NA	Lab	--	--	**5.2 J mg/kg** **< 5.0 mg/kg**	--	< 5.0 mg/kg < 5.0 mg/kg	--	--	
Selenium	NA	Lab	--	< 0.2 mg/kg < 0.2 mg/kg	< 0.2 mg/kg < 0.2 mg/kg	--	--	--	--	
Silver	NA	Lab	--	< 0.4 mg/kg < 0.4 mg/kg	< 0.4 mg/kg < 0.4 mg/kg	--	--	--	--	
Sodium	NA	Lab	--	< 4.0 mg/kg < 4.0 mg/kg	< 4.0 mg/kg < 4.0 mg/kg	--	--	--	--	

Appendix 1-E4c-1
Laboratory Blank Data - Solid General Parameters, Metals and Radionucludes
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC	QC	QC
			Sample Date	07/02/2010	07/14/2010	07/15/2010	07/16/2010	07/19/2010	07/20/2010	07/21/2010
			Depth Unit	LB_07022010	LB_07142010	LB_07152010	LB_07162010	LB_07192010	LB_07202010	LB_07212010
			Sample Type Code	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location								
Thallium	NA	Lab	--	< 0.003 mg/kg < 0.003 mg/kg	< 0.003 mg/kg < 0.003 mg/kg	--	--	--	--	--
Uranium	NA	Lab	--	< 0.006 mg/kg < 0.006 mg/kg	< 0.006 mg/kg < 0.006 mg/kg	--	--	--	--	--
Vanadium	NA	Lab	--	< 0.4 mg/kg < 0.4 mg/kg	< 0.4 mg/kg < 0.4 mg/kg	--	--	--	--	--
Zinc	NA	Lab	--	**0.5 J mg/kg** **0.5 J mg/kg**	**0.3 J mg/kg** **< 0.3 mg/kg**	--	--	--	--	--
Radiochemical Parameters										
Lead 210	NA	Lab	--	--	--	--	--	--	--	--
Radium 226	NA	Lab	--	--	--	--	--	--	< 1.6 pCi/g 0.51 +/- 0.35 pCi/g	--
Thorium 230	NA	Lab	--	--	--	--	--	--	--	< 0.66 pCi/g < 0.66 pCi/g
Uranium 234	NA	Lab	--	--	--	--	--	--	--	--
Uranium 235	NA	Lab	--	--	--	--	--	--	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--	--	--	--	--	--	--

Appendix 1-E4c-1
Laboratory Blank Data - Solid General Parameters, Metals and Radionucludes
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC	QC	QC	QC	QC	QC
			Sample Date	07/23/2010	07/26/2010	07/27/2010	07/28/2010	07/29/2010	07/30/2010	08/02/2010
			Depth Unit	LB_07232010	LB_07262010	LB_07272010	LB_07282010	LB_07292010	LB_07302010	LB_0802010
			Sample Type Code	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location								
General Parameters										
Fluoride	NA	Lab	--	**0.4 J mg/kg** **0.2 J mg/kg** **0.2 J mg/kg**	--	--	--	--	--	
Metals										
Antimony	NA	Lab	--	--	--	--	--	--	--	
Arsenic	NA	Lab	--	--	--	--	--	--	--	
Barium	NA	Lab	--	--	--	--	--	--	--	
Beryllium	NA	Lab	--	--	--	--	--	--	--	
Cadmium	NA	Lab	--	--	--	--	--	--	--	
Calcium	NA	Lab	--	--	--	--	--	--	--	
Chromium	NA	Lab	--	--	--	--	--	--	--	
Cobalt	NA	Lab	--	--	--	--	--	--	--	
Copper	NA	Lab	--	--	--	--	--	--	--	
Iron	NA	Lab	--	--	--	--	--	--	--	
Lead	NA	Lab	--	--	--	--	--	--	--	
Magnesium	NA	Lab	--	--	--	--	--	--	--	
Manganese	NA	Lab	--	--	--	--	--	--	--	
Mercury	NA	Lab	--	--	--	--	--	--	--	
Nickel	NA	Lab	--	--	--	--	--	--	--	
Potassium	NA	Lab	--	--	--	--	--	--	--	
Selenium	NA	Lab	--	--	--	--	--	--	--	
Silver	NA	Lab	--	--	--	--	--	--	--	
Sodium	NA	Lab	--	--	--	--	--	--	--	

Appendix 1-E4c-1
Laboratory Blank Data - Solid General Parameters, Metals and Radionucludes
2010
Rhodia Silver Bow Plant

		Sys Loc Code	QC	QC	QC	QC	QC	QC	QC
		Sample Date	07/23/2010	07/26/2010	07/27/2010	07/28/2010	07/29/2010	07/30/2010	08/02/2010
		Depth Unit	LB_07232010	LB_07262010	LB_07272010	LB_07282010	LB_07292010	LB_07302010	LB_0802010
		Sample Type Code	LB	LB	LB	LB	LB	LB	LB
Chemical Name	Total or Dissolved	Analysis Location							
Thallium	NA	Lab	--	--	--	--	--	--	--
Uranium	NA	Lab	--	--	--	--	--	--	--
Vanadium	NA	Lab	--	--	--	--	--	--	--
Zinc	NA	Lab	--	--	--	--	--	--	--
Radiochemical Parameters									
Lead 210	NA	Lab	< 5.7 pCi/g < 5.7 pCi/g	--	--	< 5.4 pCi/g	--	--	--
Radium 226	NA	Lab	--	--	--	--	--	< 0.86 pCi/g	< 0.89 pCi/g
Thorium 230	NA	Lab	--	--	--	< 0.65 pCi/g	< 0.63 pCi/g	--	--
Uranium 234	NA	Lab	--	**0.38 +/- 0.41 pCi/g** **0.38 +/- 0.41 pCi/g**	< 0.23 pCi/g	--	--	--	< 0.21 pCi/g
Uranium 235	NA	Lab	--	< 0.2 pCi/g < 0.2 pCi/g	< 0.23 pCi/g	--	--	--	< 0.21 pCi/g
Uranium 238 (radiochemical method)	NA	Lab	--	< 0.2 pCi/g < 0.2 pCi/g	< 0.23 pCi/g	--	--	--	< 0.21 pCi/g

Appendix 1-E4c-1
Laboratory Blank Data - Solid General Parameters, Metals and Radionucludes
2010
Rhodia Silver Bow Plant

			Sys Loc Code	QC	QC
			Sample Date	08/03/2010	11/18/2010
			Depth Unit	LB_08032010	LB_11182010
			Sample Type Code	LB	LB
Chemical Name	Total or Dissolved	Analysis Location			
General Parameters					
Fluoride	NA	Lab	--	**0.19 J mg/kg** **0.18 J mg/kg**	
Metals					
Antimony	NA	Lab	--	--	
Arsenic	NA	Lab	--	--	
Barium	NA	Lab	--	--	
Beryllium	NA	Lab	--	--	
Cadmium	NA	Lab	--	--	
Calcium	NA	Lab	--	--	
Chromium	NA	Lab	--	--	
Cobalt	NA	Lab	--	--	
Copper	NA	Lab	--	--	
Iron	NA	Lab	--	--	
Lead	NA	Lab	--	--	
Magnesium	NA	Lab	--	--	
Manganese	NA	Lab	--	--	
Mercury	NA	Lab	--	--	
Nickel	NA	Lab	--	--	
Potassium	NA	Lab	--	--	
Selenium	NA	Lab	--	--	
Silver	NA	Lab	--	--	
Sodium	NA	Lab	--	--	

Appendix 1-E4c-1
Laboratory Blank Data - Solid General Parameters, Metals and Radionucludes
2010
Rhodia Silver Bow Plant

		Sys Loc Code	QC	QC
		Sample Date	08/03/2010	11/18/2010
		Depth Unit	LB_08032010	LB_11182010
		Sample Type Code	LB	LB
Chemical Name	Total or Dissolved	Analysis Location		
Thallium	NA	Lab	--	--
Uranium	NA	Lab	--	--
Vanadium	NA	Lab	--	--
Zinc	NA	Lab	--	--
Radiochemical Parameters				
Lead 210	NA	Lab	< 4.1 pCi/g	--
Radium 226	NA	Lab	--	--
Thorium 230	NA	Lab	--	--
Uranium 234	NA	Lab	--	--
Uranium 235	NA	Lab	--	--
Uranium 238 (radiochemical method)	NA	Lab	--	--

Appendix 1-E4c-2
Laboratory Blank Data - Solid Polychlorinated Biphenyls
2010
Rhodia Silver Bow Plant

		Sys Loc Code	QC
		Sample Date	7/13/2010
		Sys Sample Code	LB1006867_2_070720 10_LB
		Sample Type Code	LB
Chemical Name	Total or Dissolved	Analysis Location	
PCBs			
Aroclor 1016	NA	Lab	< 0.019 mg/kg
Aroclor 1221	NA	Lab	< 0.019 mg/kg
Aroclor 1232	NA	Lab	< 0.019 mg/kg
Aroclor 1242	NA	Lab	< 0.019 mg/kg
Aroclor 1248	NA	Lab	< 0.019 mg/kg
Aroclor 1254	NA	Lab	< 0.019 mg/kg
Aroclor 1260	NA	Lab	< 0.019 mg/kg
Aroclor 1262	NA	Lab	< 0.019 mg/kg
Aroclor 1268	NA	Lab	< 0.019 mg/kg