SECOND ESTROGEN RECEPTOR BINDING ASSAY INTERLABORATORY VALIDATION STUDY

DATA HANDLING and STATSITICAL ANALYSIS METHODS

DETAILED REPORT

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Second Estrogen Receptor Binding Assay Interlaboratory Validation Study
Data Handling and Statistical Analysis Methods – Detailed Report

1. Introduction and Background

An Interlaboratory estrogen receptor binding assay interlaboratory validation study was conducted under the direction of EPA at Hamner Institute, Research Triangle Park, NC (Hamner), Research Triangle Institute, Research Triangle Park, NC (RTI), and Toxicology Research Laboratory, Chicago, IL (TRL). Saturation binding assay data on the estradiol standards and competitive binding assay data on the estradiol (strong) standard, the norethynodrel (weak) standard, 23 principal test chemicals, and 20 supplemental chemicals were developed at each of the laboratories. This report discusses the data handling procedures utilized and the data analysis methods and results for the competitive binding data estradiol and norethynodrel standards and the 23 principal test chemicals.

The report is organized as follows: Section 2 provides a brief overview of the organization of the data and aspects of how the data were processed. In particular the rationale for renormalizing the data is discussed. Section 3 discusses the PRISM four parameter competitive binding model fitting methods. Section 4 describes how the laboratories organized the data into subsets. This was done differently at each laboratory. It also presents summaries of the laboratory designation of acceptable and unacceptable runs. Section 5 discusses the EPA review of the model fits to the data and summarizes the EPA designation of acceptable and unacceptable runs. The EPA designation differed from the laboratory designation and was used for subsequent analyses based on the model fits. Section 6 discusses the development of performance criteria for the estradiol and norethynodrel standards based on the construction of tolerance bounds and presents tabular and graphical summaries of the application of the tolerance bound procedures. Section 7 discusses the procedures used to assign binding classifications to the test chemicals, within laboratories and pooled across laboratories.

2. Data Management

Competitive binding data analyses were carried out by each of the tests labs – RTI, TRL, and Hamner for the estradiol (strong) standard, the norethynodrel (weak) standard, 23 principal test chemicals, and 20 supplemental chemicals. The ISR discusses the analysis results for the estradiol and norethynodrel standards and the 23 principal test chemicals.

Each laboratory organized its testing into test runs. Each test run consisted of graded concentrations of estradiol and norethynodrel standards and one or multiple test chemicals.

Renormalization

The individual response data were recorded by the test laboratories in Excel spreadsheets, one spreadsheet per test run. The counts as measured were reported by the laboratories as DPMs. The DPMs were normalized to Percent Binding values based on the average DPMs in the solvent control group. In some runs the DPMs in the solvent control group were many times lower than the DPMs in the low concentration (10^{-11} M) estradiol group. In these runs the top of the estradiol standard binding curve was calculated to be far in excess of 100%. An example of the solvent control and estradiol test results from such a run is shown in Table 1 below. This corresponds to RTI, Set 2 Run 1, 2-21-08. The DPMs in the ethanol solvent control group are shown in red italics. The entries in the low concentration estradiol group are shown in red bold italics with larger font size. If DPMs are normalized to Percent Binding based on the average DPMs in the solvent control group, as specified in the test protocol, the top of the estradiol binding curve is estimated to be in excess of 700%. That is not physically reasonable. The reason for this behavior is not understood.

To account for those runs where the DPMs in the estradiol low concentration group far exceeded those in the solvent control group, all the runs were renormalized based on the average "DPMs for 1.5 mL" in the low concentration group (10^{-11} M) instead of the average of the EtOH solvent controls. The renormalized Percent Bindings are shown in Table 2. As shown in Table 2, the top of the estradiol binding curve is estimated to be in the reasonable 100% range.

Table 1. RTI. Set 2 Run 1 2-21-08. Portion of Run. Excel Spreadsheet Showing Solvent Control and Estradiol DPM and Percent Binding. DPMs in Solvent Control are Less Than 20% DPMs in Low Estradiol Concentration Group, Illustrating Need to Renormalize DPMs to Percent Binding Using Low Estradiol Concentration Group

Compound	Compound Code	Concentration (M)	DPM for 1.5 mL	Percent Binding
ethanol	EtOH	—	*1159*	121.3
ethanol	EtOH	—	*1116*	115.4
ethanol	EtOH	—	*1018*	101.6
cold E2	NSB	1.0E-07	396	14.4
cold E2	NSB	1.0E-07	231	-8.7
cold E2	NSB	1.0E-07	228	-9.2
cold E2	S	1.0E-08	634	47.8
cold E2	S	1.0E-08	880	82.3
cold E2	S	1.0E-08	569	38.6
cold E2	S	3.2E-09	1401	155.3
cold E2	S	3.2E-09	1282	138.6
cold E2	S	3.2E-09	1177	124.0
cold E2	S	1.0E-09	2625	327.0
cold E2	S	1.0E-09	2457	303.4
cold E2	S	1.0E-09	2348	288.0
cold E2	S	3.2E-10	3909	507.0
cold E2	S	3.2E-10	3833	496.3
cold E2	S	3.2E-10	4043	525.7
cold E2	S	1.0E-10	4793	630.9
cold E2	S	1.0E-10	4710	619.3
cold E2	S	1.0E-10	4418	578.3
cold E2	***S***	***1.0E-11***	***5334***	***706.8***
cold E2	***S***	***1.0E-11***	***5573***	***740.3***
cold E2	***S***	***1.0E-11***	***5465***	***725.1***
cold E2	NSB	1.0E-07	223	-9.9
cold E2	NSB	1.0E-07	197	-13.6
cold E2	NSB	1.0E-07	486	27.0
ethanol	EtOH	—	*948*	91.8
ethanol	EtOH	—	*944*	91.2
ethanol	EtOH	—	*854*	78.7

Percent Binding was calculated as follows:

1) Mean_NSB = Average of 6 DPM for 1.5mL values of the cold E2 NSB = 293.5
2) Mean_EtOH = Average of 6 DPM for 1.5mL values of ethanol EtOH = 1006.5
3) Percent Binding = 100*(DPM for 1.5mL – Mean_NSB)÷(Mean_EtOH – Mean_NSB)

Table 2. RTI. Set 2 Run 1 2-21-08. Portion of Run. Illustration of Renormalization of DPMs to Percent Binding Using Low Estradiol Concentration Group

Compound	Compound Code	Concentration (M)	DPM for 1.5 mL	Percent Binding	**Renormalized Percent Binding**
ethanol	EtOH	—	*1159*	121.3	16.76
ethanol	EtOH	—	*1116*	115.4	15.94
ethanol	EtOH	—	*1018*	101.6	14.03
cold E2	NSB	1.0E-07	396	14.4	1.99
cold E2	NSB	1.0E-07	231	-8.7	-1.21
cold E2	NSB	1.0E-07	228	-9.2	-1.27
cold E2	S	1.0E-08	634	47.8	6.60
cold E2	S	1.0E-08	880	82.3	11.36
cold E2	S	1.0E-08	569	38.6	5.33
cold E2	S	3.2E-09	1401	155.3	21.45
cold E2	S	3.2E-09	1282	138.6	19.15
cold E2	S	3.2E-09	1177	124.0	17.12
cold E2	S	1.0E-09	2625	327.0	45.16
cold E2	S	1.0E-09	2457	303.4	41.90
cold E2	S	1.0E-09	2348	288.0	39.78
cold E2	S	3.2E-10	3909	507.0	70.02
cold E2	S	3.2E-10	3833	496.3	68.54
cold E2	S	3.2E-10	4043	525.7	72.61
cold E2	S	1.0E-10	4793	630.9	87.13
cold E2	S	1.0E-10	4710	619.3	85.53
cold E2	S	1.0E-10	4418	578.3	79.87
cold E2	***S***	***1.0E-11***	***5334***	***706.8***	***97.62***
cold E2	***S***	***1.0E-11***	***5573***	***740.3***	***102.24***
cold E2	***S***	***1.0E-11***	***5465***	***725.1***	***100.15***
cold E2	NSB	1.0E-07	223	-9.9	-1.36
cold E2	NSB	1.0E-07	197	-13.6	-1.87
cold E2	NSB	1.0E-07	486	27.0	3.73
ethanol	EtOH	—	*948*	91.8	12.67
ethanol	EtOH	—	*944*	91.2	12.60
ethanol	EtOH	—	*854*	78.7	10.87

Renormalized Percent Binding was calculated as follows:

1) Mean_NSB = Average of 6 DPM for 1.5mL values of the cold E2 NSB = 293.5

2) Mean_Low_Conc = Average of 3 DPM for 1.5mL values of the cold E2 low concentration group (10^{-11} M) = 5457

3) Renormalized Percent Binding = 100*(DPM for 1.5mL – Mean_NSB)÷(Mean_Low_Conc – Mean_NSB)

U-Shaped Binding Curves

A U-shaped binding curve (i.e., percent bound decreases with increasing concentration of competitor but then begins to increase again) is questionable. In this case, something has happened to the dynamics of the binding assay and the reaction is no longer following the law of mass action (e.g., the test chemical may be binding to multiple binding sites, the test chemical may not be soluble at higher concentrations in the assay buffer, or the test chemical is changing the pH of the reaction mixture). The renormalized percent binding values in the right leg of a U-shaped curve, having percent binding values greater than 10 percentage points higher than the minimum average percent binding, were notated. These values were excluded in later Prism analysis.

Conversion of DPMs to Percent Bound. 1.5 DPM Issue

Laboratory analysis results in several of the sample tubes that were recorded in Excel files from RTI and TRL had the problem that the values in "DPM as sampled" column (O column) times 1.5 sometimes did not equal the values in "DPM for 1.5 mL" column (P column). Hamner Institute's Excel files did not have this problem.

The embedded formula in Excel files for "DPM for 1.5 mL" column (P column) is, for example, "O30*O135", where O135 was "DPM as sampled" and the value in "O30" cell was 1.5. This was true for all of Hamner's sample tube results but was not true for ten RTI sample tube results and for seven TRL sample tube results. For those 17 RTI and TRL sample tube results where the values in "DPM as sampled" column times 1.5 were not equal to the values in "DPM for 1.5 mL" column, the embedded formula varied. The formulas were, for example, "O30*O135/0.5", "O30*O135/0.9", "O135*2.25".

Tables 3-10 describe those 17 RTI and TRL samples where the values in "DPM as sampled" column times 1.5 did not equal the values in "DPM for 1.5 mL" column and how % binding values and parameter estimates (from Prism fits) changed. These tables display the formulae that were embedded in the "DPM for 1.5 mL column (P), the standard or test chemical identifier, the changes in the percent binding values, and the model fit parameters before and after the change.

Battelle used the revised percent binding values from those 17 RTI and TRL "non-standard DPM for 1.5 mL" samples in the calculations of percent binding for the final analysis.

Table 3. RTI, S1R3_2_7_08.xls

RTI, S1R3_2_7_08.xls (value in cell O30 = 1.5)							Battelle's Calculations/Model Fittings													EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After					
				Value	Embedded formula	Embedded comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope		
145	Unknown 2	1 0E-08	1513	4539	O30*O145/0 5	SEG User: PRP Aliquoted 500uL due to vial break	12	-8	31 3	65 99	-1 11	93 9	-7 63	-1 03	-1 15	94 0	-7 64	-1 01		keep
217	Unknown 5	1 0E-09	2023	6069	O30*O217/0 5	SEG User: PRP Aliquoted 500uL due to vial break	21	-9	43 0	89 4	Not Converged				Not Converged					keep

Table 4. RTI, S2R1_2_21_08.xls

RTI, S2R1_2_21_08.xls (value in cell O30 = 1.5)							Battelle's Calculations/Model Fittings													EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After					
				Value	Embedded formula	Embedded comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope		
87	norethynodrel	3 2E-05	90	269	O30*O87/0 5	ppatel: Aliquoted 500uL PRP	WP	-4 5	-3 07	-0 46	-4 39	99 8	-6 20	-0 874	-3 65	99 8	-6 21	-0 88		keep
106	Unknown 1	1 0E-03	907	1511	O30*O106/0 9	ppatel: Aliquoted 900uL PRP	4	-3	20 66	23 59	-2 24	99 8	-9 03	-0 857	No changes Both % binding values were deleted from analysis by the "10% rule"					keep

Table 5. RTI, S2R2_2_26_08.xls

RTI, S2R2_2_26_08.xls (value in cell O30 = 1.5)							Battelle's Calculations/Model Fittings												EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After				
				Value	Embedded formula	Embedded comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope	
39	Cold E2	1 0E-07	179	299	O30*O39/0 9		The highest conc of Cold E2 was used to calculate % binding for sample runs Change in this Cold E2 value would change % binding values for SC, WP, TC-4, TC-5, TC-16, TC-22												
							SC		changes slightly		-0 484	104	-9 12	-1 03	-0 49	104	-9 12	-1 04	keep
							WP		changes slightly		-1 84	102	-6 28	-0 785	-1 92	102	-6 28	-0 785	keep
124	Unknown 1	1 0E-09	548	1370	O30*O124/0 6		4	-9	9 97	19 01	-0 964	147	-9 74	-0 863	-1 05	147	-9 74	-0 863	keep
							5		changes slightly		0 737	90 4	-7 13	-0 925	0 669	90 5	-7 14	-0 924	keep
169	Unknown 3	1 0E-08	3679	6132	O30*O169/0 9		16	-8	88 10	98 30	-0 448	93 9	-5 22	-1 86	-0 905	95 5	-5 24	-1 66	keep
173	Unknown 3	1 0E-09	2564	6410	O30*O173/0 6			-9	60 30	102 90									
							22		changes slightly		Not Converged				Not Converged				keep

Table 6. RTI, S4R3_3_13_08.xls

RTI, S4R3_3_13_08.xls (value in cell O30 = 1.5)							Battelle's Calculations/Model Fittings												EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After				
				Value	Embedded formula	Embedded comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope	
94	norethynodrel	3 2E-07	1314	2464	O30*O94/0 8		WP	-6 5	55 38	70 51	-1 689	94 6	-6 036	-0 9112	-0 9814	95 29	-6 059	-0 9423	keep

Table 7. RTI, Comp_#6_9_11_07.xls (Qualification Runs)

RTI, S2R2_2_26_08.xls (value in cell O30 = 1.5)							Battelle's Calculations/Model Fittings												EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After				
				Value	Embedded formula	Embedded comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope	
38	Cold E2	1 0E-07	113	422 6	O30*O38/0 4	ppatel: Aliquoted 400ul due to vial break	The highest conc of Cold E2 was used to calculate % binding for sample runs Change in this Cold E2 value would change % binding values for SC, WP												
							SC		changes slightly		-1 730	100 6	-9 001	-0 9023	-1 678	100 5	-9 009	-0 9146	keep
							WP		changes slightly		-1 566	96 88	-6 064	-0 9115	-2 259	96 87	-6 070	-0 9113	keep

Table 8. TRL, Rev1-TRL run TTN012 080430 Chem. Codes 4, 9, 14, 20.xls

TRL, Rev1-TRL run TTN012 080430 Chem. Codes 4, 9, 14, 20.xls							Battelle's Calculations/Model Fittings												EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After				
				Value	Embedded formula	End of File Comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope	
130	Unknown 2	1 0E-03	745	1862 5	O130*2 5	Multiplier in cells P130-133 changed to 2 5 to adjust for pipeting error in EtOH extraction step	9	-3	13 0	27 9	16 99	88 81	-5 462	-2 159	24 80	87 00	~ -5 887	~ -12 27	keep
131	Unknown 2	1 0E-03	833	2082 5	O131*2 5		9	-3	15 6	32 3									
132	Unknown 2	1 0E-03	788	1970 0	O132*2 5		9	-3	14 3	30 0									
133	Unknown 2	1 0E-04	1153	2882 5	O133*2 5		9	-4	25 2	48 2									

Table 9. TRL, Rev1-TRL run TTN015 080508 Chem. Codes 1, 3, 20, 23.xls

TRL, Rev1-TRL run TTN015 080508 Chem. Codes 1, 3, 20, 23.xls							Battelle's Calculations/Model Fittings												EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After				
				Value	Embedded formula	End of File Comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope	
97	norethynodrel	1 0E-07	2347	5280 75	O97*2 25	DPM values in cells O97 - O98 mulitplied by 2 25 to account for pipeting error during ethanol extraction step of assay	WP	-7	61 98	95 65	0 1911	97 63	-5 911	-1 172	0 3415	98 22	-5 910	-1 187	keep
98	norethynodrel	1 0E-07	2364	5319 0	O98*2 25		WP	-7	62 47	96 38									

Table 10. TRL, Rev2-TRL run TTN003 080328 Chem. Codes 12, 21.xls

TRL, Rev2-TRL run TTN003 080328 Chem. Codes 12, 21.xls							Battelle's Calculations/Model Fittings												EPA's determination
Excel Row #	Competitor (D column)	Competitor Final Concentration (M) (N column)	DPM as Sampled (O column)	DPM for 1 5 mL (P column)			Chem Code	Log Conc	% Binding		Prism Fits Before				Prism Fits After				
				Value	Embedded formula	End of File Comments			Before	After	Bottom	Top	LogIC50	Hill Slope	Bottom	Top	LogIC50	Hill Slope	
151	Unknown 2	1 0E-10	1590 0	3577 5	O151*2 25	NOTE: Cell P151; formula changed to account for mispipeting of ethanol during extraction phase of assay (2 25ml added to tube instead of 1 5ml)	21	-10	48 90	82 18	Model did not fit due to too few data points 24 out of 28 data point were deleted from model fit by the "10% rule"				Same				drop

3. Model Fitting in PRISM

Model Parameterization

A four parameter one site competitive binding model was fitted to the competitive estrogen receptor binding assay data by nonlinear regression. The model takes a form of the four parameter Hill equation that describes the relationship between Y = % binding and X = $\log_{10}$(concentration of competing test chemical):

$$Y = B + \frac{T - B}{1 + 10^{[(\mu - X)*H + \log 10(\frac{T-B}{50-B} - 1)]}}$$

where μ is the $\log_{10}$IC50, representing the value of X corresponding to the response Y = 50%. H is the Hill slope, T is the top plateau and B is the bottom plateau. This model was programmed in PRISM and fitted to each individual test run.

Relative binding affinity (RBA) of norethynodrel to estradiol was also determined. RBA is defined as

$$RBA = IC50_{standard} / IC50_{weak\ positive}.$$

Based on the estimates for $\log_{10}$IC50 for the standard curves runs and the weak positive runs, $\log_{10}$RBA was estimated as

$$\log_{10}RBA = \log_{10} IC50_{standard} - \log_{10} IC50_{weak\ positive}$$

The standard error associated with $\log_{10}$RBA was calculated as

$$SE(\log RBA) = [SE(\log_{10} IC50_{standard})^2 + SE(\log_{10} IC50_{weak\ positive})^2]^{½}$$

The renormalized percent binding values were calculated in Excel for each run and were transferred to PRISM (Version 5.00 or 5.01) for model fitting. The four parameter one site competitive binding model was fitted to the data using PRISM's algorithm for nonlinear least squares with automatic outlier detection. The algorithm is discussed in detail in Motulsky and Brown (2006). (Motulsky, H.J. and Brown, R.E. (2006). "Detecting outliers when fitting data with nonlinear regression – a new method based on robust nonlinear regression and the false discovery rate". *BMC Bioinformatics,* Vol. 7, pp 123-142.). Parameter estimates and curve data were generated.

As Motulsky and Brown describe, this method "combines robust regression and outlier removal…". In this algorithm the data are initially fit using a robust regression procedure based on maximum likelihood analysis for the Cauchy-Lorentzian distribution. This distribution has very heavy tails and the fitting procedure down weights the influence of data that are far removed from the central trend. The absolute values of the

residuals from the initially fit model were ordered, were normalized by a robust estimate of the distribution standard deviation, and were tested for conformance with their expected size based on normal theory, adjusting the significance levels of the tests for simultaneity due to the fact that the higher ordered (absolute) values of the residuals were being tested. If the test that a residual conforms to normal theory behavior was rejected, that ordered residual and all larger residuals (in absolute value) were inferred to be outliers.

The test procedure sets a free parameter "Q" to control the significance level (false positive rate) of the tests. Motulsky and Brown call this the "False Discovery Rate" ("FDR"). PRISM sets the defaults for the FDR to Q = 1% to strongly control the chance of mistakenly declaring a good value to be an outlier.

The fitting algorithm deleted the identified outliers and refitted the four parameter one site binding model to the remaining data by least squares regression analysis so that standard errors, hypothesis tests, and confidence intervals could be constructed.

The results of the fits to the individual test runs are displayed in Appendix A.

4. Competitive Binding Data

Organization of Chemicals into Runs

RTI and TRL included multiple test chemicals within each test run and within each Excel worksheet. Hamner included multiple test chemicals per test run but organized its Excel worksheets to include just one test chemical and the associated strong and weak positive standards, which it repeated in multiple worksheets.

RTI organized its data into "sets". Each set contains multiple test chemicals with common standards. For example, "S1R1_2_4_08.xls" (set 1, run 1, assay date 2/4/2008) contains lab results for test chemicals 11, 12, 15, 19, and 21, with common estradiol and norethynodrel standards. Each test chemical was included in multiple runs of just a single "set". A listing of RTI data files is displayed in Appendix B, Table B-1.

TRL organized its data into "groups". Each group contained multiple test chemicals with common standards. However, unlike RTI, test chemical were mixed among different groups with different estradiol and norethynodrel standards and with different accompanying test chemicals.. For example, test chemical 1 was analyzed and recorded in 4 test runs: "Rev1-TRL run RN012 080529 Chem. Codes 1, 3, 8, 23.xls", "Rev1-TRL run TTN015 080508 Chem. Codes 1, 3, 20, 23.xls", "Rev1-TRL run TTN018 080612 Chem. Codes 1, 3, 20, 23.xls", and "Rev1-TRL run TTN019 080616 Chem. Codes 1, 3, 8, 23.xls". Each test run used different estradiol and norethynodrel standards. A list of TRL data files is displayed in Appendix B, Table B-2.

Although Hamner ran multiple test chemicals per test run, Hamner organized its data files into individual test chemicals with associated standards per spreadsheet. For example, “Hamner Comp Data-1-Run 1.xls” contains lab results for test chemical 1 for one run with associated estradiol and norethynodrel standards. Note that the same standard runs were included in more than one data file. A listing of Hamner data files is displayed in Appendix B, Table B-3.

Tables 11 – 13 summarize the laboratory organization of their data by test chemical, the number of runs carried out for each test chemical, and the laboratory designation of acceptable and unacceptable runs.

Table 11. RTI. Organization of Test Chemicals into Test Runs. Laboratory Designation of Test Runs as Acceptable/Unacceptable.

RTI							
Chemical Code	**Number of Runs Performed**	**Dates or Codes of Runs (2008) Acceptable Runs are in green**					**# of Acceptable Runs as Determined by Laboratory**
1	5	1-1	1-2	1-3	1-4	1-5	3
2	3	2-1	2-2	2-3			3
3	5	3-1	3-2	3-3	3-4	3-5	3
4	4	4-1	4-2	4-3	4-4		3
5	4	5-1	5-2	5-3	5-4		3
6	4	6-1	6-2	6-3	6-4		3
7	4	7-1	7-2	7-3	7-4		3
8	5	8-1	8-2	8-3	8-4	8-5	3
9	3	9-1	9-2	9-3			3
10	3	10-1	10-2	10-3			3
11	3	11-1	11-2	11-3			3

RTI							
Chemical Code	**Number of Runs Performed**	**Dates or Codes of Runs (2008) Acceptable Runs are in green**					**# of Acceptable Runs as Determined by Laboratory**
12	3	12-1	12-2	12-3			3
13	4	13-1	13-2	13-3	13-4		3
14	3	14-1	14-2	14-3			3
15	3	15-1	15-2	15-3			3
16	4	16-1	16-2	16-3	16-4		3
17	3	17-1	17-2	17-3			3
18	3	18-1	18-2	18-3			3
19	3	19-1	19-2	19-3			3
20	3	20-1	20-2	20-3			3
21	3	21-1	21-2	21-3			3
22	4	22-1	22-2	22-3	22-4		3
23	5	23-1	23-2	23-3	23-4	23-5	3

Table 12. TRL. Organization of Test Chemicals into Test Runs. Laboratory Designation of Test Runs as Acceptable/Unacceptable.

Chemical Code	Number of Runs Performed	RUN DATE / RUN IDENTIFIER					
		1	2	3	4	5	
12	5	3/11/2008 TTN001	3/27/2008 TTN003	4/2/2008 RN001	4/16/2008 TTN006	6/11/2008 RN013	
19	6	3/11/2008 TTN001	4/14/2008 TTN005	4/9/2008 RN002	4/21/2008 TTN007	5/14/2008 TTN017	5/12/2008 TTN016
11	6	3/17/2008 TTN002	4/7/2008 TTN004	4/16/2008 TTN006	5/12/2008 RN008	5/14/2008 TTN017	5/12/2008 TTN016
21	6	3/27/2008 TTN003	4/14/2008 TTN005	4/2/2008 RN001	4/16/2008 TTN006	5/14/2008 TTN017	5/12/2008 TTN016
15	6	3/17/2008 TTN002	4/7/2008 TTN004	4/9/2008 RN002	4/16/2008 TTN006	5/14/2008 TTN017	5/12/2008 TTN016
22	4	4/17/2008 RN003	4/21/2008 TTN007	4/22/2008 TTN008	4/23/2008 TTN009		
16	3	4/21/2008 TTN007	4/22/2008 TTN008	4/23/2008 TTN009	4/30/2008 TTN012		
5	3	4/21/2008 TTN007	4/22/2008 TTN008	4/23/2008 TTN009			
17	5	4/17/2008 RN003	4/22/2008 TTN008	4/23/2008 TTN009	4/28/2008 TTN010	5/5/2008 TTN013	
9	5	4/28/2008 TTN010	4/29/2008 TTN011	4/30/2008 TTN012	5/5/2008 TTN013	5/7/2008 TTN014	5/21/08 RN011
4	6	4/17/2008 RN003	4/28/2008 TTN010	4/29/2008 TTN011	4/30/2008 TTN012	5/5/2008 TTN013	5/7/2008 TTN014

Chemical Code	Number of Runs Performed	RUN DATE / RUN IDENTIFIER					
		1	2	3	4	5	
14	5	4/28/2008 TTN010	4/29/2008 TTN011	5/5/2008 TTN013	5/7/2008 TTN014	5/21/08 RN011	
20	5	4/29/2008 TTN011	4/30/2008 TTN012	5/7/2008 TTN014	5/8/2008 TTN015	6/12/2008 TTN018	5/21/08 RN011
3	5	5/8/2008 TTN015	5/13/2008 RN009	5/29/08 RN012	6/12/2008 TTN018	6/16/2008 TTN019	
23	5	5/8/2008 TTN015	5/13/2008 RN009	5/29/08 RN012	6/12/2008 TTN018	6/16/2008 TTN019	
1	5	5/8/2008 TTN015	5/20/2008 RN010	5/29/08 RN012	6/12/2008 TTN018	6/16/2008 TTN019	5/21/08 RN011
8	6	5/7/2008 RN007	5/12/2008 RN008	5/20/2008 RN010	5/29/08 RN012	6/11/2008 RN013	6/16/2008 TTN019
2	5	5/7/2008 RN007	5/12/2008 RN008	5/13/2008 RN009	5/20/2008 RN010	6/11/2008 RN013	
10	4	5/7/2008 RN007	5/12/2008 RN008	5/13/2008 RN009	5/20/2008 RN010		
18	3	4/24/2008 RN004	5/1/2008 RN005	5/6/2008 RN006			
13	4	5/1/2008 RN005	5/6/2008 RN006	5/7/2008 RN007	6/11/2008 RN013		
7	3	4/24/2008 RN004	5/1/2008 RN005	5/6/2008 RN006			
6	3	4/24/2008 RN004	5/1/2008 RN005	5/6/2008 RN006			

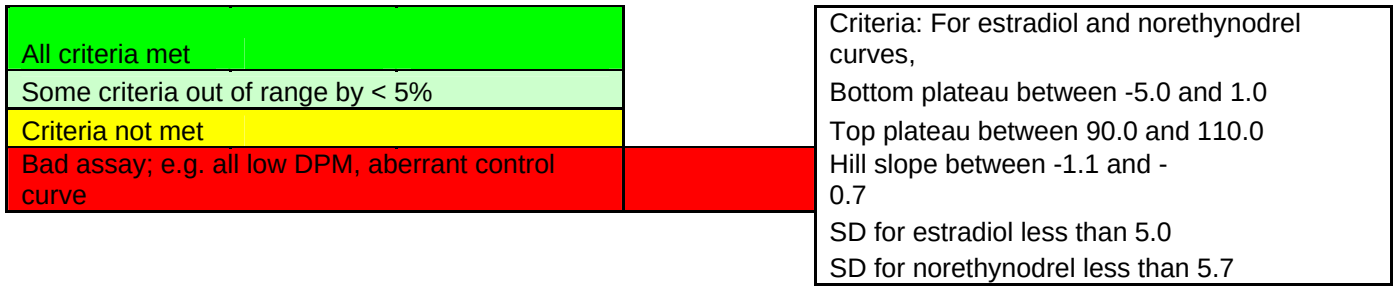
All criteria met
Some criteria out of range by < 5%
Criteria not met
Bad assay; e.g. all low DPM, aberrant control curve
Criteria: For estradiol and norethynodrel curves,
Bottom plateau between -5.0 and 1.0
Top plateau between 90.0 and 110.0
Hill slope between -1.1 and -0.7
SD for estradiol less than 5.0
SD for norethynodrel less than 5.7

Table 13. Hamner. Organization of Test Chemicals into Test Runs. Laboratory Designation of Test Runs as Acceptable/Unacceptable.

HAMNER							
Chemical Code	**Number of Runs Performed**	**Dates of Runs (2008) Acceptable Runs are in Green**					**# of Acceptable Runs as Determined by the Laboratory**
12	5	3/5	3/6	3/10	3/17	3/24	3
19	4	3/5	3/6	3/10	3/11		3
11	3	3/5	3/6	3/10	3/11		3
21	3	3/11	3/12	3/17			3
15	3	3/11	3/12	3/17			3
22	3	3/26	3/27	3/31			3
16	5	3/18	3/26	3/27	4/2	6/11	3
5	3	3/26	3/27	3/31			3
17	5	4/2	4/3	4/7	4/8	4/10	3
9	8	4/2, 4/3, 4/7	6/13, 6/19	6/25	7/1	7/2	3
4	4	4/3	4/7	4/8	4/9		3
14	6	4/8	4/9	4/10	4/14	4/16, 4/17	3
20	5	4/9	4/10	4/14	4/16	4/17	3
3	16	4/14, 4/15, 5/7	5/15, 5/16, 5/18	5/23, 5/27, 5/28	6/12, 6/13, 6/16, 6/19	6/23, 6/24, 6/25	3
23	8	4/15, 5/1	5/7, 5/15	5/16, 5/27	5/28	6/11	3
1	5	4/15	5/1	5/7	5/18	5/22	3
8	5	5/1	5/7	5/19	5/22	5/27	3
2	10	5/19, 5/28	6/2, 6/3	6/7, 6/9	6/17, 6/18	6/23, 6/24	3
10	9	5/21, 6/2	6/3, 6/7	6/9, 6/16,6/17	6/23	6/24	3
18	3	6/4	6/5	6/6			3
13	4	5/21	5/29	5/30	6/6		3
7	4	6/2	6/3	6/5	6/6		3
6	4	6/2	6/3	6/5	6/6		3

5. EPA Review of PRISM Fits

The renormalized data for all the test runs, whether designated by the test laboratories as acceptable or unacceptable, were analyzed. Attempts were made to fit the four parameter competitive binding model. Some test runs could be fit and some could not. The results of the fitting process were sent to EPA for review.

The laboratories made their decisions on what was acceptable vs. unacceptable based on the curves that were normalized to the solvent control tubes, while the EPA's decisions were based on the curves as normalized to the response at the lowest concentration of estradiol. A curve that had had a top plateau at 700% may have been deemed by the lab to be unacceptable, while the same data re-normalized might have been marked "keep" by the EPA. EPA reviewed the results of the model fits to make its own decisions as to whether the test runs were acceptable or unacceptable. The EPA designations did not necessarily coincide with the laboratory designations. All subsequent references to acceptable and unacceptable runs in the analysis and reporting are based on the EPA designations and not the laboratory designations.

The summarization of the EPA designation of acceptable and unacceptable runs (referred to as “Keep” and “Drop”) is displayed in Tables 14 to 16. Table 14 corresponds to RTI test runs, Table 15 corresponds to TRL test runs, and Table 16 corresponds to Hamner test runs. For each laboratory the EPA decisions are summarized by test set (RTI) or test chemical (TRL, Hamner), run within set or chemical, EPA decision for standard curve (SC), weak positive (WP), and test chemical (TC). The original laboratory designation is shown for comparison.

Table 14. RTI. EPA Designations of Acceptable (Keep) and Unacceptable (Drop) Runs by Test Set, Run, and Standard or Test Chemical

Qualification data			SC	WP	TC					Original Lab Designation
	1	8-21	Drop	Drop						
	2	8-23	Keep	Keep						
	3	8-28	Drop	Drop						
	4	9/6	Keep	Keep						
	5	9/10	Keep	Keep						
	6	9/11	Keep	Keep						
	7	10/22	Keep	Keep						
Set 1					11	12	15	19	21	
	1	2/4	Keep	Keep	keep	keep	keep	keep	keep	
	2	2/6	Keep	Keep	keep	keep	keep	keep	keep	
	3	2/7	Keep	Keep	keep	keep	keep	keep	keep	
Set 2					4	5	16	22		
	1	2/21	Keep	Keep	Keep	Keep	Keep	drop		u
	2	2/26	Keep	Keep	Keep	Keep	Keep	Keep		
	3	2/27	Keep	Keep	Keep	Keep	Keep	Keep		
	4	3/3	Keep	Keep	Keep	Keep	Keep	Keep		
Set 3					9	14	17	20		
	1	2/28	Keep	Keep	Keep	Keep	Keep	Keep		
	2	3/4	Keep	Keep	Keep	Keep	Keep	Keep		
	3	3/5	Keep	Keep	Keep	Keep	Keep	Keep		
Set 4					1	3	8	23		
	1	3/6	Keep	Keep	Keep	Keep	drop	drop		
	2	3/11	Keep	Keep	Keep	Keep	Keep	Keep		
	3	3/13	Keep	Keep	Keep	Keep	Keep	Keep		u
	4	3/18	Keep	Keep	Keep	Keep	Keep	Keep		u
	5	4/3	Keep	Keep	Keep	Keep	Keep	Keep		
Set 5					2	10	18			
	1	3/17	Keep	Keep	Keep	Keep	Keep			
	2	3/27	Keep	Keep	Keep	Keep	Keep			
	3	3/31	Keep	Keep	Keep	Keep	Keep			
Set 6					6	7	13			
	1	4/1	Keep	Keep	Keep	Keep	Keep			
	2	4/7	Keep	Keep	Keep	Keep	Keep			u
	3	4/8	Keep	Keep	Keep	Keep	Keep			
	4	6/9	Keep	Keep	Keep	Keep	Keep			

Table 15. TRL. EPA Designations of Acceptable (Keep) and Unacceptable (Drop) Runs by Test Set, Run, and Standard or Test Chemical

Test Chemical	Run	Date	SC	WP	TC	Original Lab Designation
1	TTN015	5/8	Keep	Keep	Keep	
	RN012	5/29	Keep	Drop	Drop	u
	TTN018	6/12	Keep	Keep	Drop	
	TTN019	6/16	Keep	Keep	Keep	
2	RN007	5/7	Keep	Keep	Keep	u
	RN008	5/12	Keep	Keep	Keep	
	RN009	5/13	Keep	Keep	Keep	
	RN013	6/11	Keep	Keep	Drop	u
3	TTN015	5/8	Keep	Keep	Keep	
	RN009	5/13	Keep	Keep	Keep	
	TTN018	6/12	Keep	Keep	Keep	
	TTN019	6/16	Keep	Keep	Keep	
	RN012	5/29	Keep	Drop	Keep	u
4	RN003	4/16	Keep	Keep	Keep	u
	TTN010	4/28	Keep	Keep	Keep	u
	TTN011	4/29	Keep	Keep	Keep	u
	TTN012	4/30	Keep	Keep	Keep	u
	TTN013	5/5	Keep	Keep	Keep	u
	TTN014	5/7	Drop	Keep	Keep	u
5	TTN007	4/21	Keep	Keep	Keep	
	TTN008	4/22	Keep	Keep	Keep	
	TTN009	4/23	Keep	Keep	Keep	
6	RN004	4/24	Keep	Keep	Keep	
	RN005	5/1	Keep	Keep	Keep	
	RN006	5/6	Keep	Keep	Keep	
7	RN004	4/24	Keep	Keep	Keep	
	RN005	5/1	Keep	Keep	Keep	
	RN006	5/6	Keep	Keep	Keep	
8	RN008	5/12	Keep	Keep	Drop	
	TTN019	6/16	Keep	Keep	Drop	
	RN007	5/7	Keep	Keep	Drop	u
	RN012	5/29	Keep	Drop	Drop	u
	RN013	6/11	Keep	Keep	Drop	u
9	TTN010	4/28	Keep	Keep	Keep	
	TTN011	4/29	Keep	Keep	Keep	
	TTN012	4/30	Keep	Keep	Keep	
	TTN013	5/5	Keep	Keep	Drop	
	TTN014	5/7	Drop	Keep	Drop	
10	RN008	5/12	Keep	Keep	Keep	
	RN009	5/13	Keep	Keep	Keep	
	RN007	5/7	Keep	Keep	Drop	u
11	TTN002	3/18	Keep	Keep	Keep	
	TTN004	4/7	Keep	Drop	Drop	u
	TTN006	4/16	Keep	Keep	Keep	
	TTN017	5/14	Keep	Keep	Drop	u
	RN008		Keep	Keep	Keep	
12	TTN001	3/12	Keep	Keep	Keep	
	TTN003	3/28	Keep	Keep	Keep	u
	RN001	4/2	Drop	Keep	Keep	u
	TTN006	4/16	Keep	Keep	Keep	
	RN013	6/11	Keep	Keep	Drop	u

13	RN005	5/1	Keep	Keep	Keep	
	RN006	5/6	Keep	Keep	Keep	
	RN007	5/7	Keep	Keep	Drop	u
	RN0013	6/11	Keep	Keep	Drop	u
14	TTN010	4/28	Keep	Keep	Keep	
	TTN011	4/29	Keep	Keep	Keep	
	TTN012	4/30	Keep	Keep	Keep	
	TTN013	5/5	Keep	Keep	Keep	
	TTN014	5/7	Drop	Keep	Drop	
15	TTN002	3/18	Keep	Keep	Keep	
	TTN006	4/16	Keep	Keep	Keep	
	TTN004	4/7	Keep	Drop	Keep	u
	RN002	4/9	Keep	Keep	Keep	u
	TTN017	5/14	Keep	Keep	Keep	u
16	TTN007	4/21	Keep	Keep	Keep	
	TTN008	4/22	Keep	Keep	Keep	
	TTN009	4/23	Keep	Keep	Keep	
17	TTN008	4/22	Keep	Keep	Keep	
	TTN009	4/23	Keep	Keep	Keep	
	RN003	4/16	Keep	Keep	Keep	u
	TTN010	4/28	Keep	Keep	Keep	u
	TTN013	5/5	Keep	Keep	Drop	u
18	RN004	4/24	Keep	Keep	Keep	
	RN005	5/1	Keep	Keep	Keep	
	RN006	5/6	Keep	Keep	Keep	
19	TTN001	3/12	Keep	Keep	Keep	
	TTN007	4/21	Keep	Keep	Keep	
	TTN005	4/14	Keep	Keep	Drop	u
	RN002	4/9	Keep	Keep	Drop	u
	TTN017	5/14	Keep	Keep	Drop	u
20	TTN015	5/8	Keep	Keep	Keep	
	TTN018	6/12	Keep	Keep	Keep	
	TTN011	4/29	Keep	Keep	Drop	u
	TTN012	4/30	Keep	Keep	Drop	u
	TTN014	5/7	Drop	Keep	Drop	u
21	TTN006	4/16	Keep	Keep	Keep	
	TTN003	3/28	Keep	Keep	Drop	u
	TTN005	4/14	Keep	Keep	Drop	u
	RN001	4/2	Drop	Keep	Drop	u
	TTN017	5/14	Keep	Keep	Drop	u
22	TTN007	4/21	Keep	Keep	Keep	
	TTN008	4/22	Keep	Keep	Keep	
	TTN009	4/23	Keep	Keep	Keep	
	RN003	4/16	Keep	Keep	Drop	u
23	TTN015	5/8	Keep	Keep	Keep	
	RN009	5/13	Keep	Keep	Keep	
	TTN018	6/12	Keep	Keep	Drop	
	TTN019	6/16	Keep	Keep	Drop	
	RN012	5/29	Keep	Drop	Keep	u

Qualification Data	SC	9/12	Keep	Keep
	SC	9/21	Keep	Keep
	SC	9/24	Keep	Keep
	SC	10/3	Keep	Keep
	SC	11/7	Keep	Drop
	SC	11/7a	Keep	Keep
	SC	11/20	Keep	Keep
	SC	11/27	Keep	Keep
	SC	11/30	Keep	Keep
	SC	12/12	Keep	Keep

Table 16. Hamner. EPA Designations of Acceptable (Keep) and Unacceptable (Drop) Runs by Test Set, Run, and Standard or Test Chemical

Test Chemical	Run	Date	SC	WP	TC	Original Lab Designation
1	1	4/15	Keep	Keep	Drop	u
	2	5/1	Keep	Keep	Drop	u
	3	5/7	Drop	Drop	Keep	
	4	5/18	Keep	Drop	Keep	
	5	5/22	Drop	Keep	Keep	
2	1	5/19	Keep	Keep	Keep	
	2	5/28	Drop	Drop	Drop	u
	3	6/2	Keep	Keep	Keep	u
	4	6/3	Drop	Keep	Drop	u
	5	6/7	Drop	Keep	Drop	u
	6	6/9	Drop	Drop	Drop	u
	7	6/17	Drop	Drop	Keep	u
	8	6/18	Keep	Keep	Keep	u
	9	6/23	Drop	Drop	Keep	
	10	6/24	Keep	Drop	Keep	
3	1	4/14	Keep	Drop	Drop	u
	2	4/15	Keep	Keep	Drop	u
	3	5/7	Drop	Drop	Drop	u
	4	5/15	Keep	Drop	Drop	u
	5	5/16	Keep	Drop	Drop	u
	6	5/18	Keep	Drop	Drop	u
	7	5/23	Keep	Drop	Drop	u
	8	5/23	Drop	Drop	Drop	u
	9	5/28	Drop	Drop	Drop	u
	10	6/12	Keep	Drop	Drop	u
	11	6/13	Drop	Keep	Drop	u
	12	6/16	Keep	Drop	Drop	u
	13	6/19	Drop	Drop	Drop	u
	14	6/23	Drop	Drop	Keep	
	15	6/24	Keep	Drop	Keep	
	16	6/25	Keep	Drop	Keep	
4	1	4/3	Keep	Keep	Drop	u
	2	4/7	Keep	Keep	Keep	
	3	4/8	Keep	Keep	Keep	
	4	4/9	Keep	Keep	Keep	
	5	6/12	Keep	Drop	Drop	u
	6	6/25	Keep	Drop	Drop	u
	7	7/1	Keep	Drop	Drop	u
	8	7/2	Keep	Drop	Drop	u
5	1	3/26	Keep	Keep	Keep	
	2	3/27	Keep	Keep	Keep	
	3	3/31	Keep	Keep	Keep	
6	1	6/2	Keep	Drop	Drop	u
	2	6/3	Keep	Keep	Keep	
	3	6/5	Keep	Keep	Keep	
	4	6/6	Keep	Keep	Keep	
7	1	6/2	Keep	Drop	Drop	u
	2	6/3	Keep	Keep	Keep	
	3	6/5	Keep	Keep	Keep	
	4	6/6	Keep	Keep	Keep	
8	1	5/1	Keep	Keep	Drop	u
	2	5/7	Drop	Drop	Drop	u
	3	5/19	Keep	Keep	Keep	
	4	5/22	Drop	Keep	Keep	
	5	5/27	Keep	Keep	Keep	

9	1	4/2	Keep	Keep	Drop	u
	2	4/3	Keep	Keep	Drop	u
	3	4/7	Keep	Keep	Drop	u
	4	6/13	Drop	Keep	Drop	u
	5	6/19	Drop	Drop	Drop	u
	6	6/25	Keep	Drop	Drop	
	7	7/1	Keep	Drop	Keep	
	8	7/2	Keep	Drop	Keep	
10	1	5/21	Drop	Drop	Keep	
	2	6/2	Keep	Drop	Keep	u
	3	6/3	Keep	Keep	Drop	u
	4	6/7	Drop	Keep	Drop	u
	5	6/9	Drop	Drop	Drop	u
	6	6/16	Keep	Drop	Drop	u
	7	6/17	Drop	Drop	Drop	u
	8	6/23	Drop	Drop	Keep	
	9	6/24	Keep	Drop	Drop	
11	1	3/5	Keep	Keep	Keep	
	2	3/6	Keep	Keep	Keep	
	3	3/10	Keep	Keep	Keep	
12	1	3/5	Keep	Keep	Keep	
	2	3/6	Keep	Keep	Keep	
	3	3/10	Keep	Keep	Drop	u
	4	3/17	Keep	Keep	Drop	u
	5	3/24	Keep	Keep	Keep	
13	1	5/21	Drop	Drop	Keep	
	2	5/29	Keep	Drop	Drop	u
	3	5/30	Keep	Drop	Keep	
	4	6/6	Keep	Keep	Keep	
14	1	4/8	Keep	Keep	Drop	u
	2	4/9	Keep	Keep	Drop	u
	3	4/10	Keep	Keep	Keep	
	5	4/16	Keep	Keep	Keep	
	6	4/17	Keep	Keep	Keep	
15	1	3/11	Keep	Keep	Keep	
	2	3/12	Keep	Keep	Keep	
	3	3/17	Keep	Keep	Keep	
16	1	3/18	Keep	Keep	Keep	
	2	3/26	Keep	Keep	Keep	
	3	3/27	Keep	Keep	Keep	u
	4	4/2	Keep	Keep	Keep	u
	5	6/11	Keep	Keep	Drop	
17	1	4/2	Keep	Keep	Drop	u
	2	4/3	Keep	Keep	Keep	
	3	4/7	Keep	Keep	Drop	u
	4	4/8	Keep	Keep	Keep	
	5	4/10	Keep	Keep	Keep	
18	1	6/4	Drop	Drop	Drop	
	2	6/5	Keep	Keep	Keep	
	3	6/6	Keep	Drop	Keep	
19	1	3/5	Keep	Keep	Drop	u
	2	3/6	Keep	Keep	Keep	
	3	3/10	Keep	Keep	Keep	
	4	3/11	Keep	Keep	Keep	
20	1	4/9	Keep	Keep	Drop	u
	2	4/10	Keep	Keep	Keep	
	3	4/14	Keep	Drop	Drop	u
	4	4/16	Keep	Keep	Keep	
	5	4/17	Keep	Keep	Keep	

21	1	3/11	Keep	Keep	Keep	
	2	3/12	Keep	Keep	Keep	
	3	3/17	Keep	Keep	Keep	
22	1	3/26	Keep	Keep	Keep	
	2	3/27	Keep	Keep	Keep	
	3	3/31	Keep	Keep	Keep	
23	1	4/15	Keep	Keep	Keep	
	2	5/1	Keep	Keep	Drop	u
	3	5/7	Drop	Drop	Drop	u
	4	5/15	Keep	Drop	Drop	u
	5	5/16	Keep	Drop	Drop	u
	6	5/27	Keep	Keep	Keep	
	7	5/27	Drop	Drop	Drop	u
	8	6/11	Keep	Keep	Keep	
Qualification data	SC	9/11	Drop	Drop		
	SC	10/1	Keep	Keep		
	SC	10/3	Keep	Keep		
	SC	10/8	Keep	Keep		
	SC	10/9	Keep	Keep		
	SC	10/10	Keep	Keep		
	SC	11/26	Keep	Keep		
	SC	11/27	Keep	Keep		

6. Construction of Tolerance Bounds on Standards

For the standard (estradiol) and the weak positive (norethynodrel), univariate tolerance intervals to contain 80% of the population of acceptable test runs across all laboratories with 95% confidence were calculated and assessed as potential performance criteria. They were calculated for the top, bottom and slope for the standard and weak positive runs, and for the $\log_{10}$RBA of the weak positive relative to the standard. One-sided tolerance intervals were calculated for the residual standard deviations of estradiol and norethynodrel as a precision criterion to assess the model fit. These tolerance intervals were calculated based on the acceptable runs, as designated by EPA. The tolerance intervals were then applied to screen all test runs including both acceptable and unacceptable runs for assessing the performance of individual test runs. For $\log_{10}$RBA, the acceptable runs were those for which both the standard and the weak positive results were designated by EPA as acceptable.

The tolerance bounds were constructed based on the model fits and a mixed effects analysis of variance. For each parameter, estimates and their associated standard errors were determined for each test run by PRISM. The estimates in the acceptable test runs were combined by mixed effects analysis of variance to determine the sources of variation – within run-variance, between-run variance within labs, and between-lab variance. The combined results were then used to calculate the tolerance bounds.

Within-run Variance

For each parameter, the within run variances (the squares of the standard errors) associated with the parameter estimates from the model fits to each test run were pooled across all acceptable test runs to obtain a pooled within-run variance. A mixed effects analysis of variance including lab-to-lab variance and run-to-run variance was applied to the log-transformed within-run variance, and the pooled results from the model fit were then returned to the original scale. The pooled within-run variances were used as a component of variation in the calculation of the tolerance bounds.

Analysis of Variance and Tolerance Bounds

The estimates based on the acceptable test runs were combined by a heterogeneous variance random effects analysis of variance, and their average values, standard errors, and variance components were determined from the fit. This mixed effects analysis of variance included lab and test run as random effects and the pooled within-test run variance. The combined results and the covariance estimates from the model fits were used to construct tolerance intervals.

Two-sided tolerance intervals to contain 80% of the population of test runs with 95% confidence were calculated for the top, bottom, Hill slope and $\log_{10}$RBA, and one-sided tolerance intervals to contain 80% of the population of acceptable test runs across all laboratories with 95% confidence were calculated for the residual standard deviation.

Tolerance bounds for the top, bottom, Hill slope, and residual standard deviation were calculated separately for each parameter, for the standard and for the weak positive.

The two-sided tolerance bounds to include 100(1-p)% of the population with confidence level 100(1-γ)% were determined as

$$\hat{\mu} \pm \text{ks}$$

where k is based on the non-central t-distribution with non-centrality parameter dependent on the coverage level of the tolerance interval, $\hat{\mu}$ is the overall average estimated parameter value across runs and labs, and s is the square root of the total variance of the parameter, which includes within run, run-to-run within lab, and lab-to-lab components of variation. The variance components and their precision were estimated based on the mixed effects analysis of variance.

The two-sided tolerance bounds for each parameter are displayed in Table 17 for top, bottom and Hill slope and in Table 18 for $\log_{10}$RBA.

The one-sided upper tolerance bound to include 100(1-p)% of the population with confidence level of 100(1-γ)% is determined similarly to the two-sided bounds for the other parameters. It is of the form

$$\hat{\mu} + \text{ks}$$

where $\hat{\mu}$, k, and s are as discussed above. The upper tolerance bounds were calculated for the log-transformed residual standard deviation and back transformed to the original scale. The one-sided upper tolerance bounds for the $\log_{10}$ residual standard deviation and for the residual standard deviation are displayed in Table 19.

The tolerance bound screens were applied to both the acceptable and the unacceptable runs for each parameter. The individual results for each run are presented in Table form in Appendix C. Parameter estimates falling outside the tolerance intervals are flagged. The screening results are presented graphically in Figures 1 to 9. The "acceptable" and the "unacceptable" runs are distinguished by different symbols.
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Table 17. Tolerance Interval to Contain Parameter Estimates for Hill slope, Top and Bottom for at Least 80% of Test Runs with 95% Confidence. Without Outlier[1]

Chemical	Parameter	Average Estimate	Std Error Estimate	Lower Limit	Upper Limit
Standard Curve	Hill Slope	-1.0006	0.02319	-1.3434	-0.658
	Top	102.43	0.5857	94.3303	110.533
	Bottom	-1.4549	0.1611	-3.1906	0.281
Weak Positive	Hill Slope	-0.9874	0.03832	-1.4048	-0.570
	Top	99.8434	1.7742	74.0351	125.652
	Bottom	1.4100	1.6191	-19.1099	21.930

Table 18. Tolerance Interval to Contain Parameter Estimates for logRBA for at Least 80% of Test Runs with 95% Confidence. Without Outlier[1]

Parameter	Average Estimate	Std Error Estimate	Lower Limit	Upper Limit
logRBA	-2.9256	0.01889	-3.22953	-2.62167

Table 19. One-sided Tolerance Interval to Contain Standard Residual Deviations for at Least 80% of Test Runs with 95% Confidence. Without Outlier[1]

Chemical	Mean Log(Syx)	Std Error Mean Log(Syx)	Upper Limit Log(Syx)	Geometric Mean Syx	Geometric Std Error Syx	Upper Limit Syx
Standard Curve	1.2999	0.1964	2.34866	3.66876	1.21699	10.4715
Weak Positive	1.6175	0.1927	2.59228	5.04041	1.21257	13.3601

[1] Parameters were based on PRISM fits including outlier deletion.

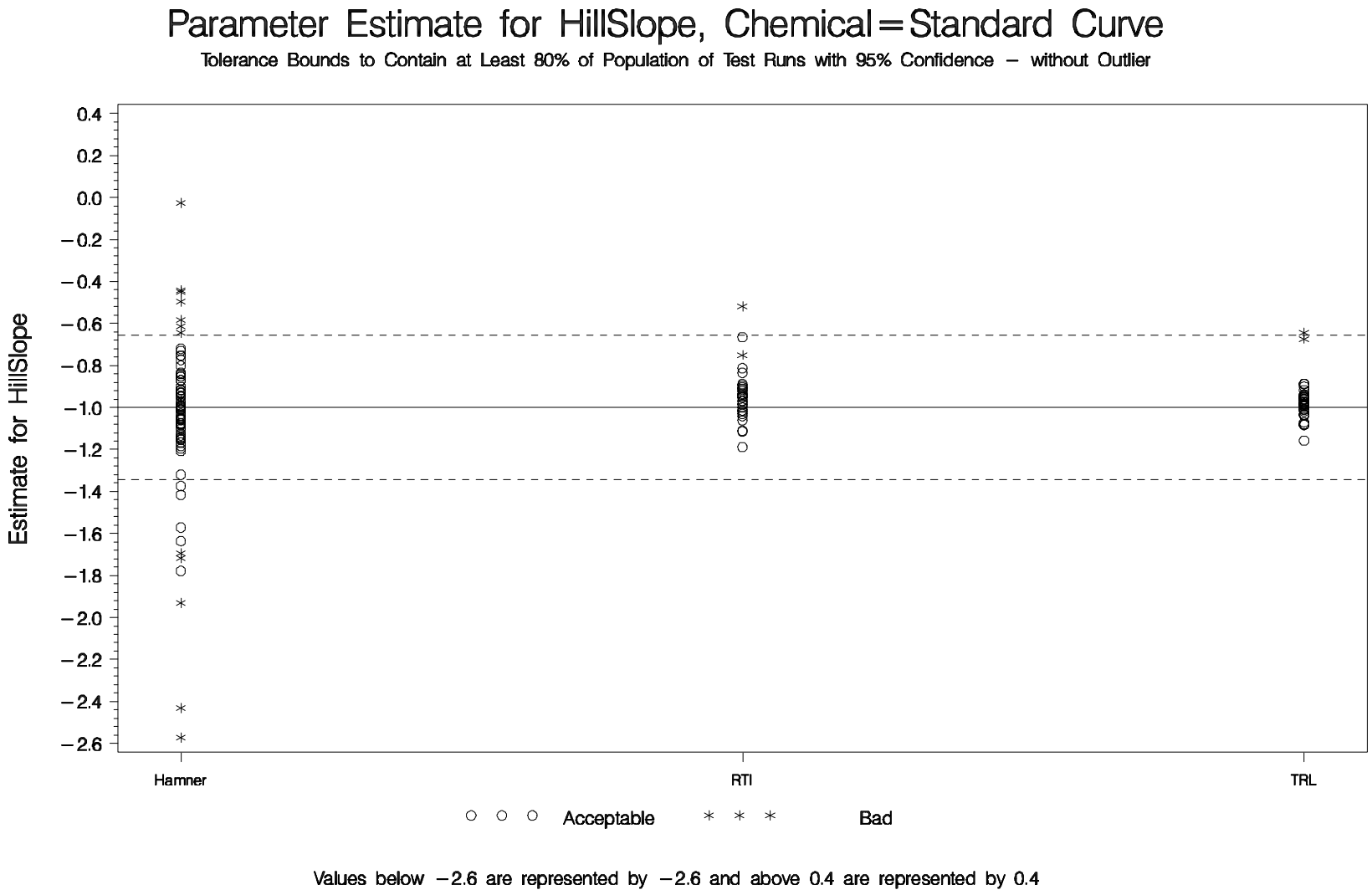

Figure 1. Parameter Estimates and Tolerance Intervals for Hill Slope for Standard Curve.

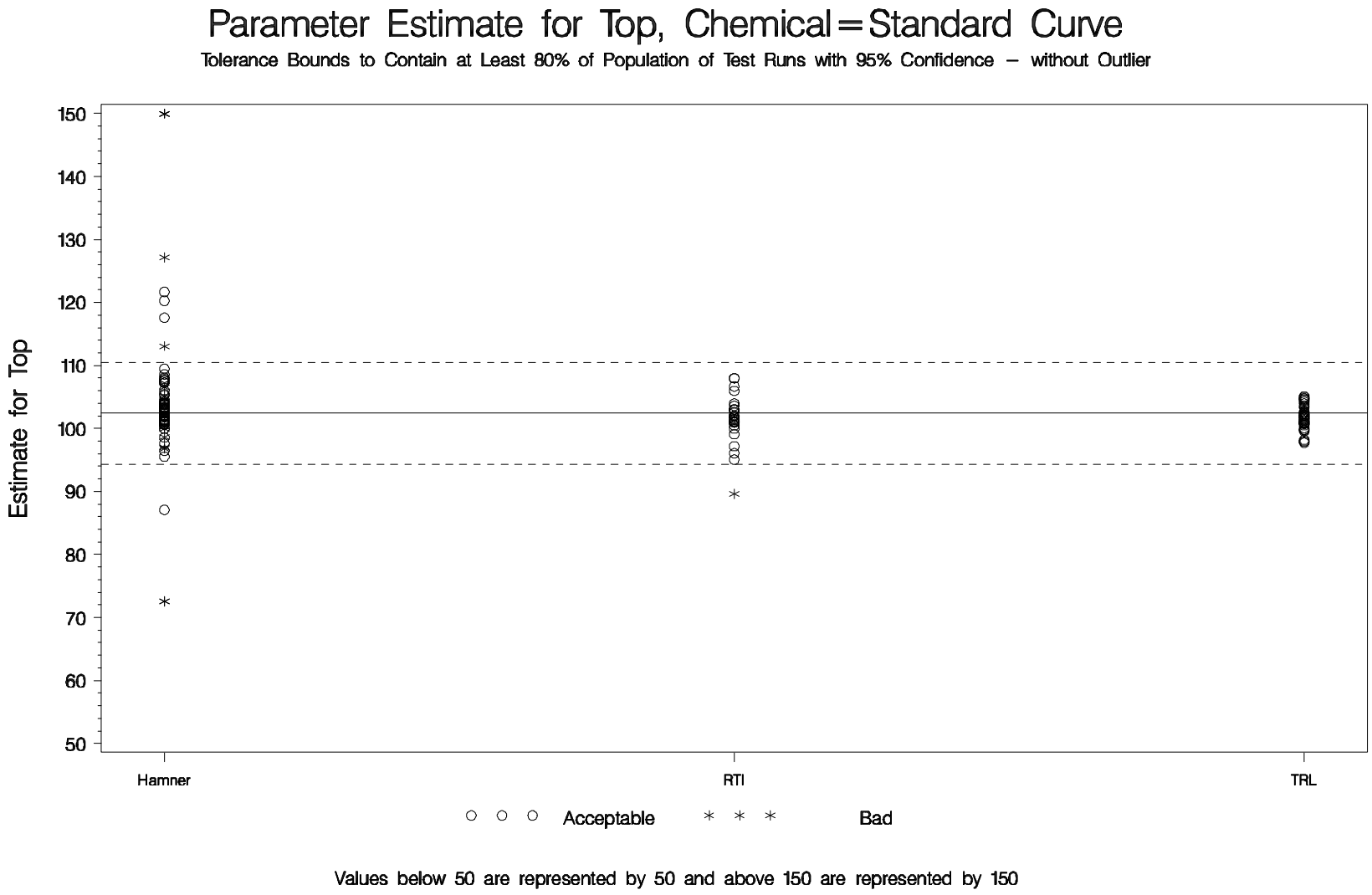

Figure 2. Parameter Estimates and Tolerance Intervals for Top for Standard Curve.

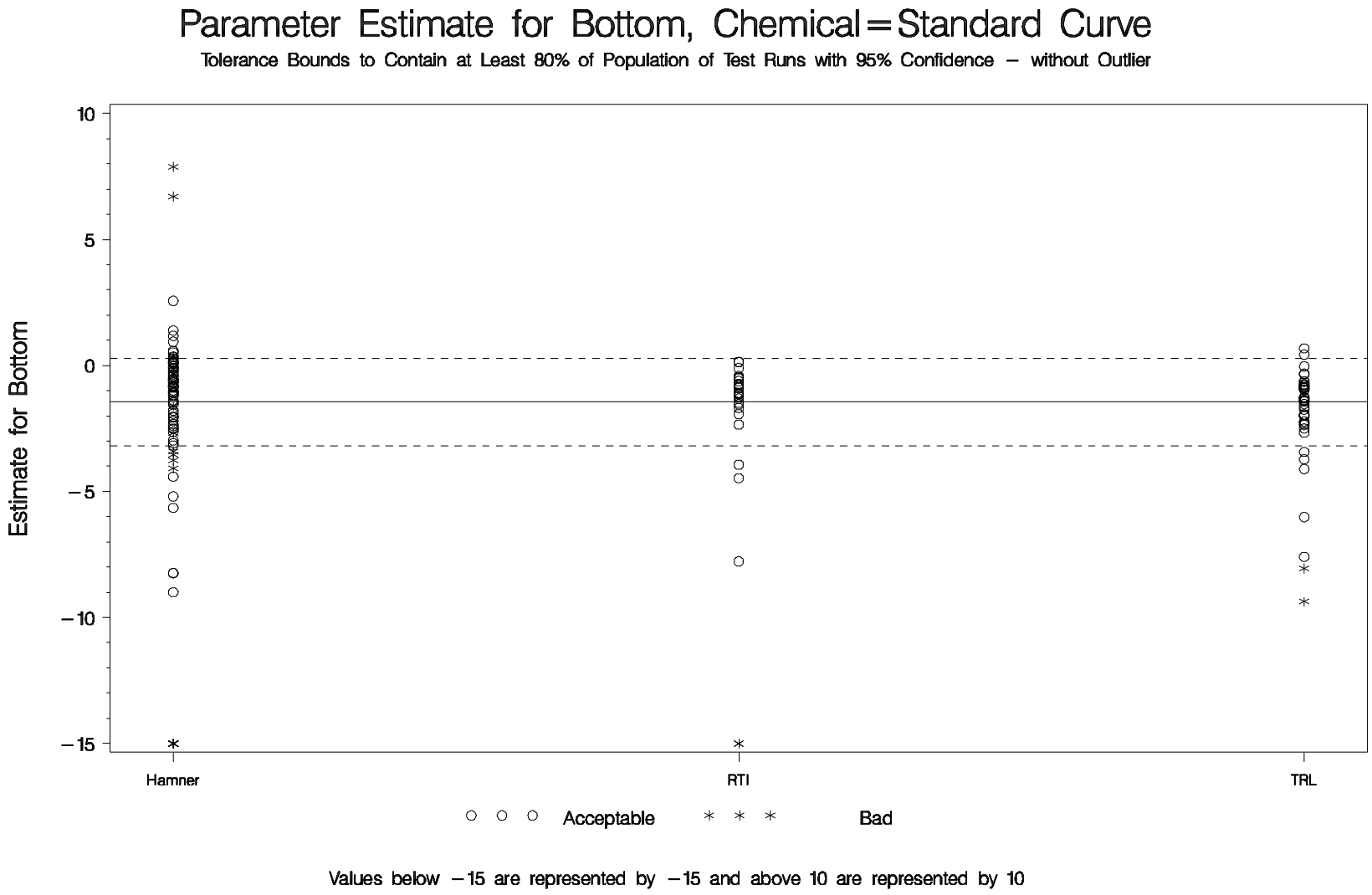

Figure 3. Parameter Estimates and Tolerance Intervals for Bottom for Standard Curve.

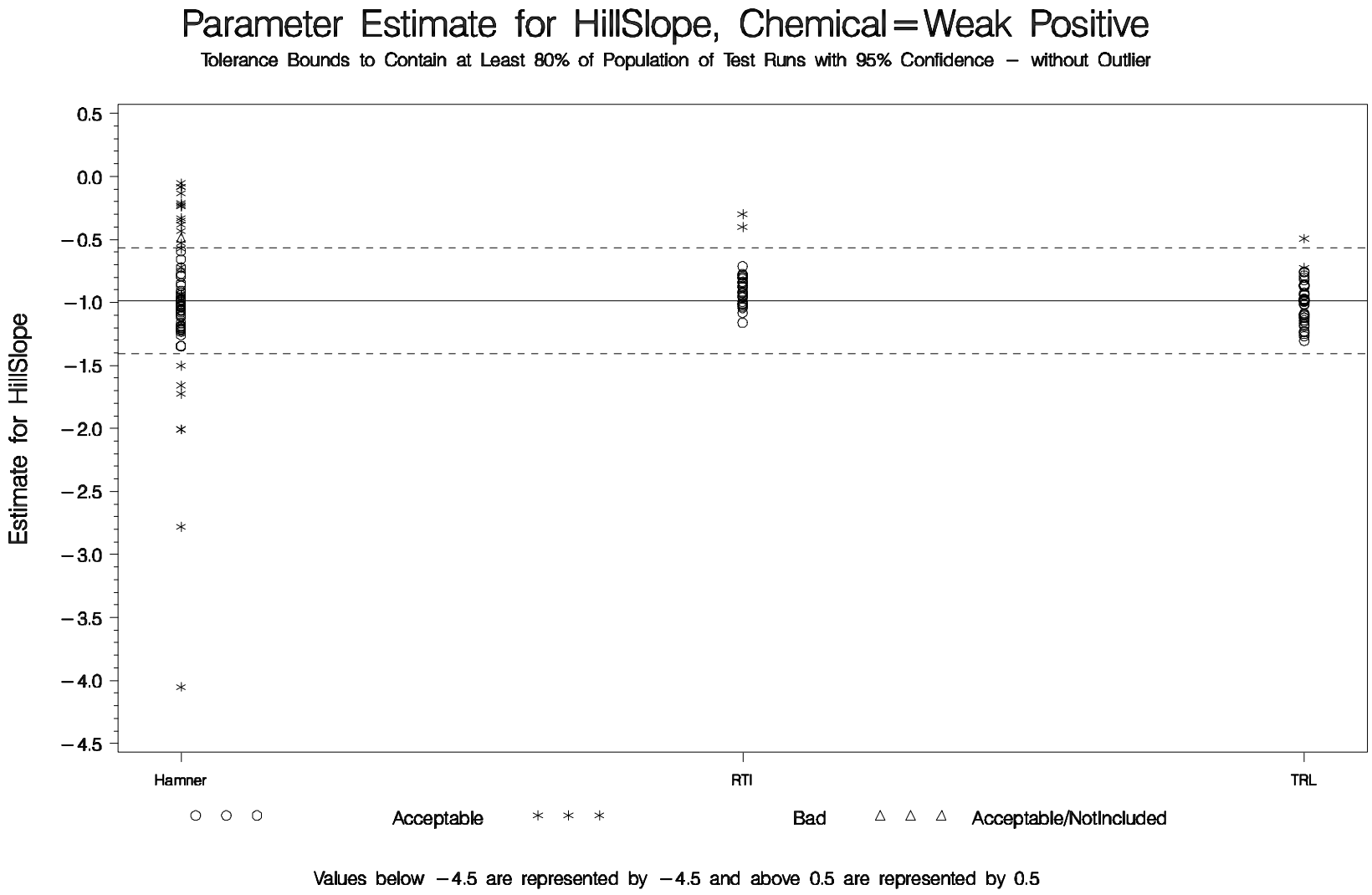

Figure 4. Parameter Estimates and Tolerance Intervals for Hill Slope for Weak Positive.

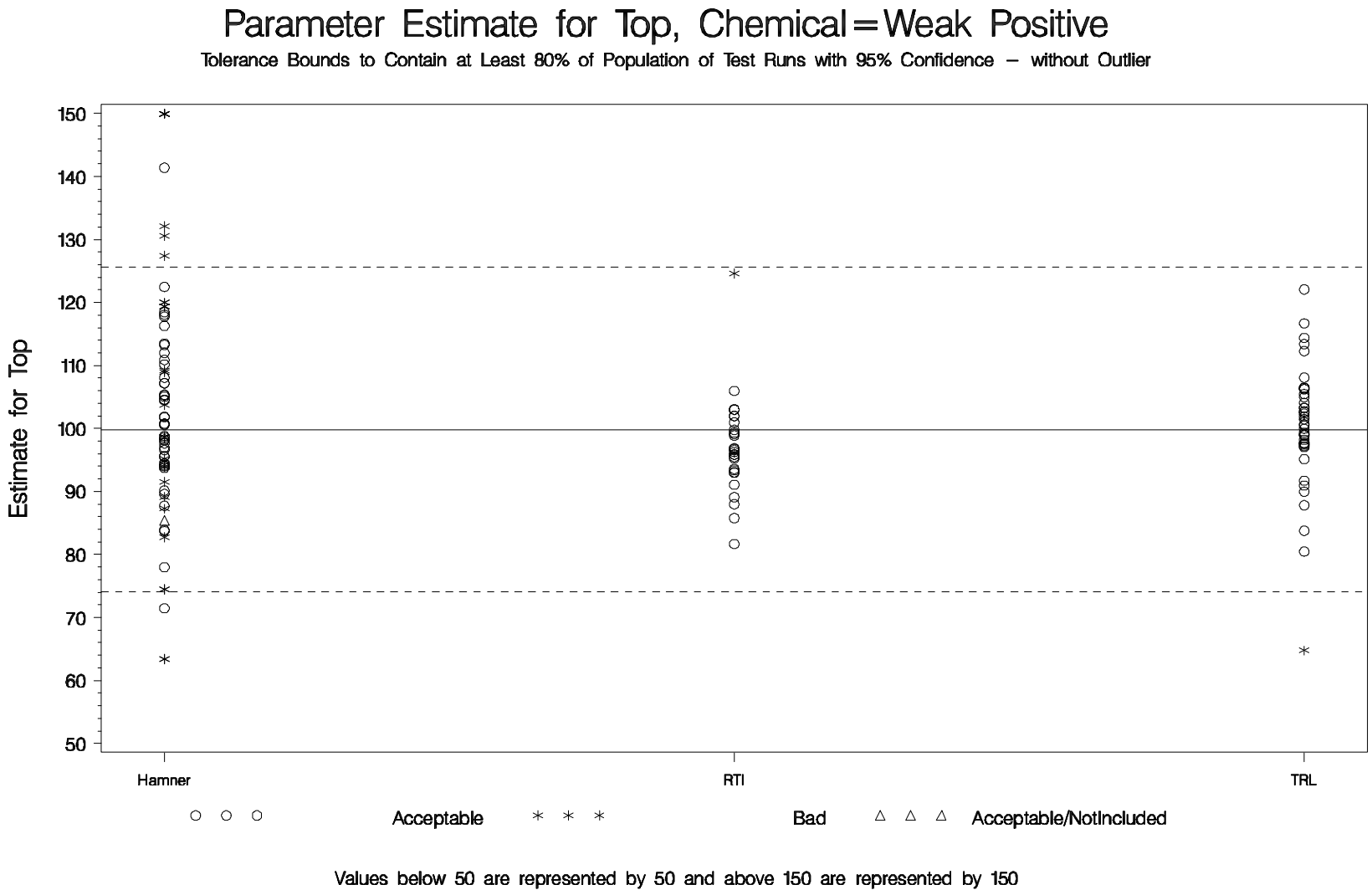

Figure 5. Parameter Estimates and Tolerance Intervals for Top for Weak Positive.

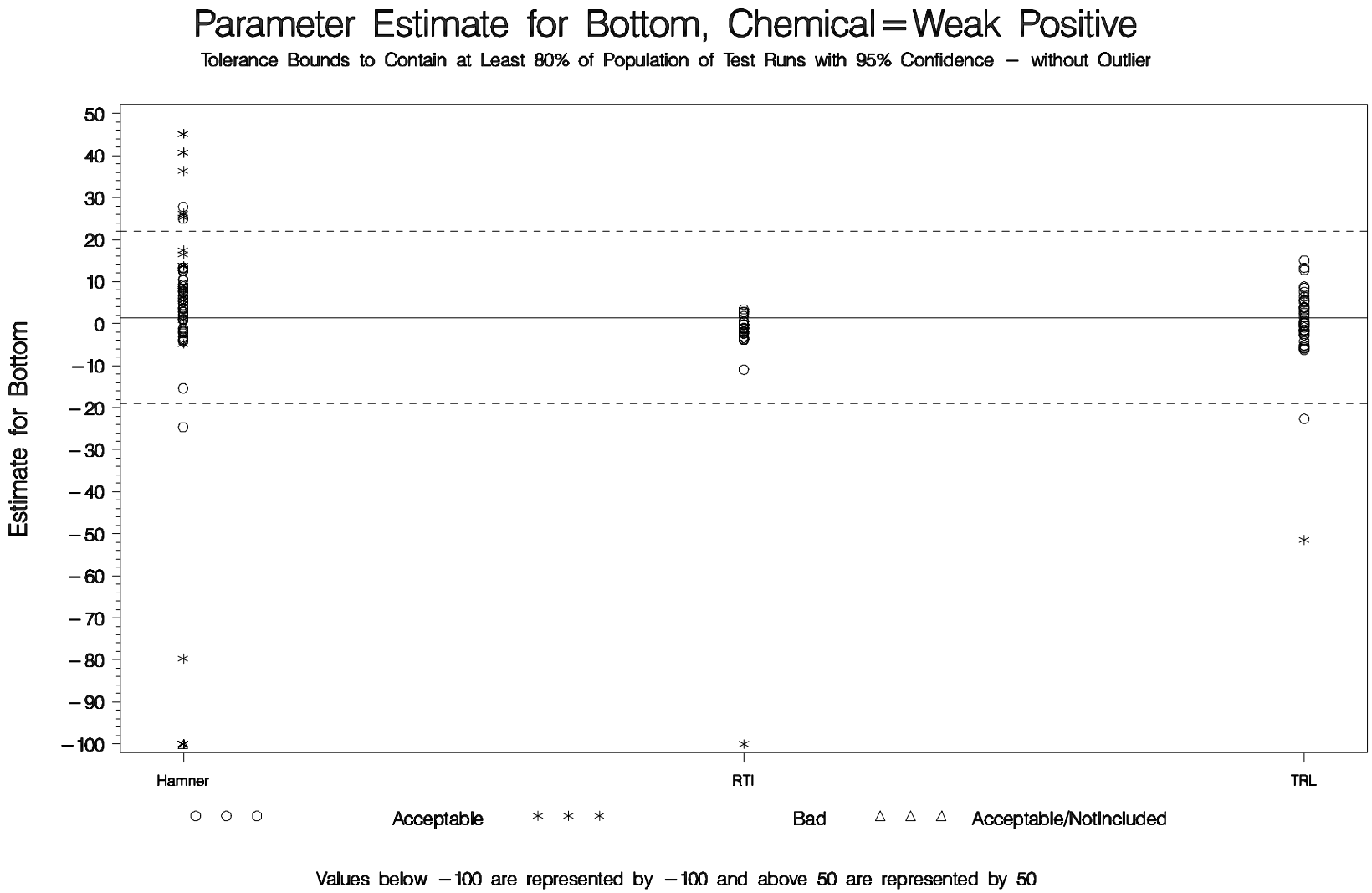

Figure 6. Parameter Estimates and Tolerance Intervals for Bottom for Weak Positive.

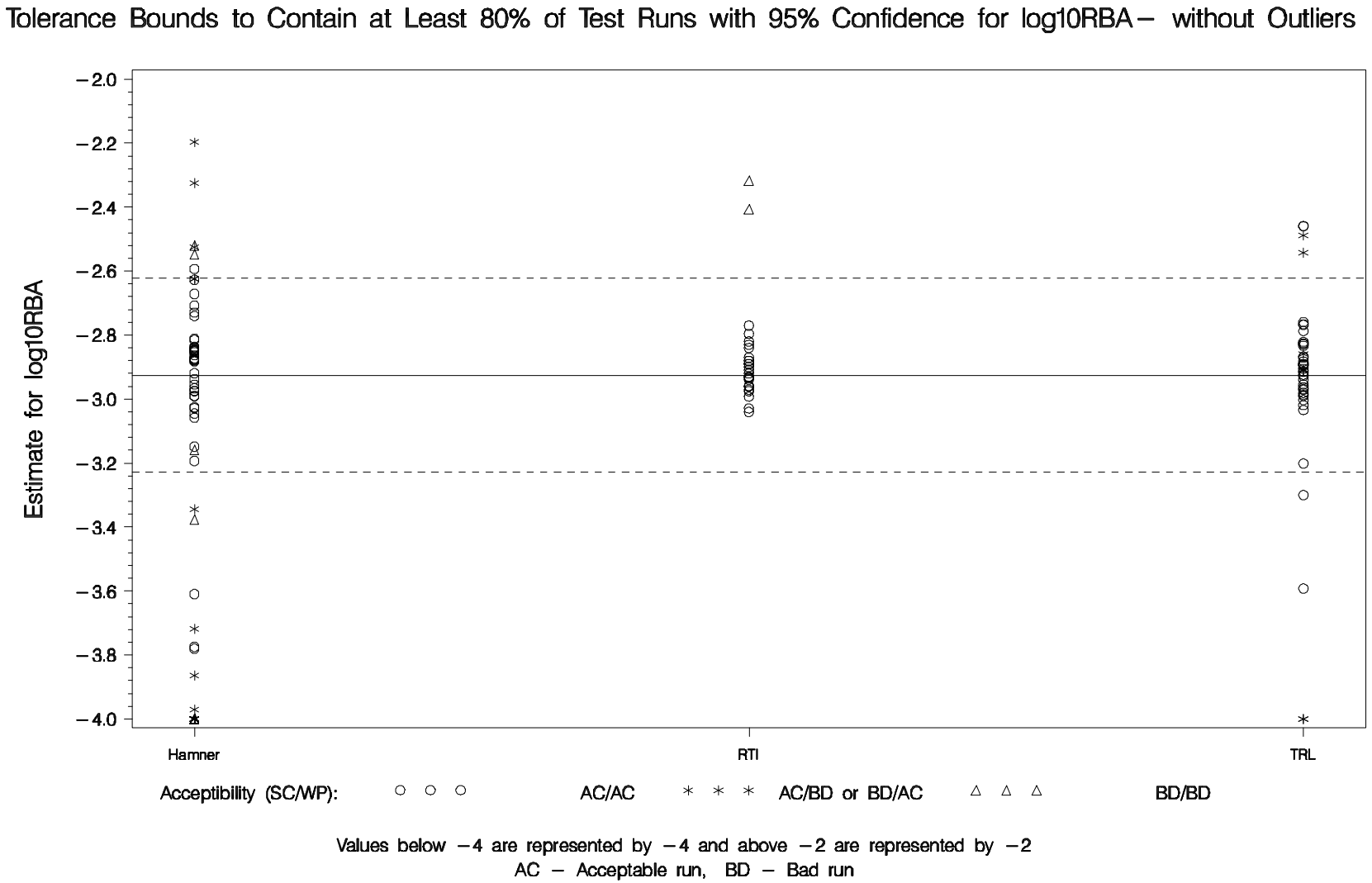

Figure 7. Parameter Estimates and Tolerance Intervals for Log_{10}RBA.

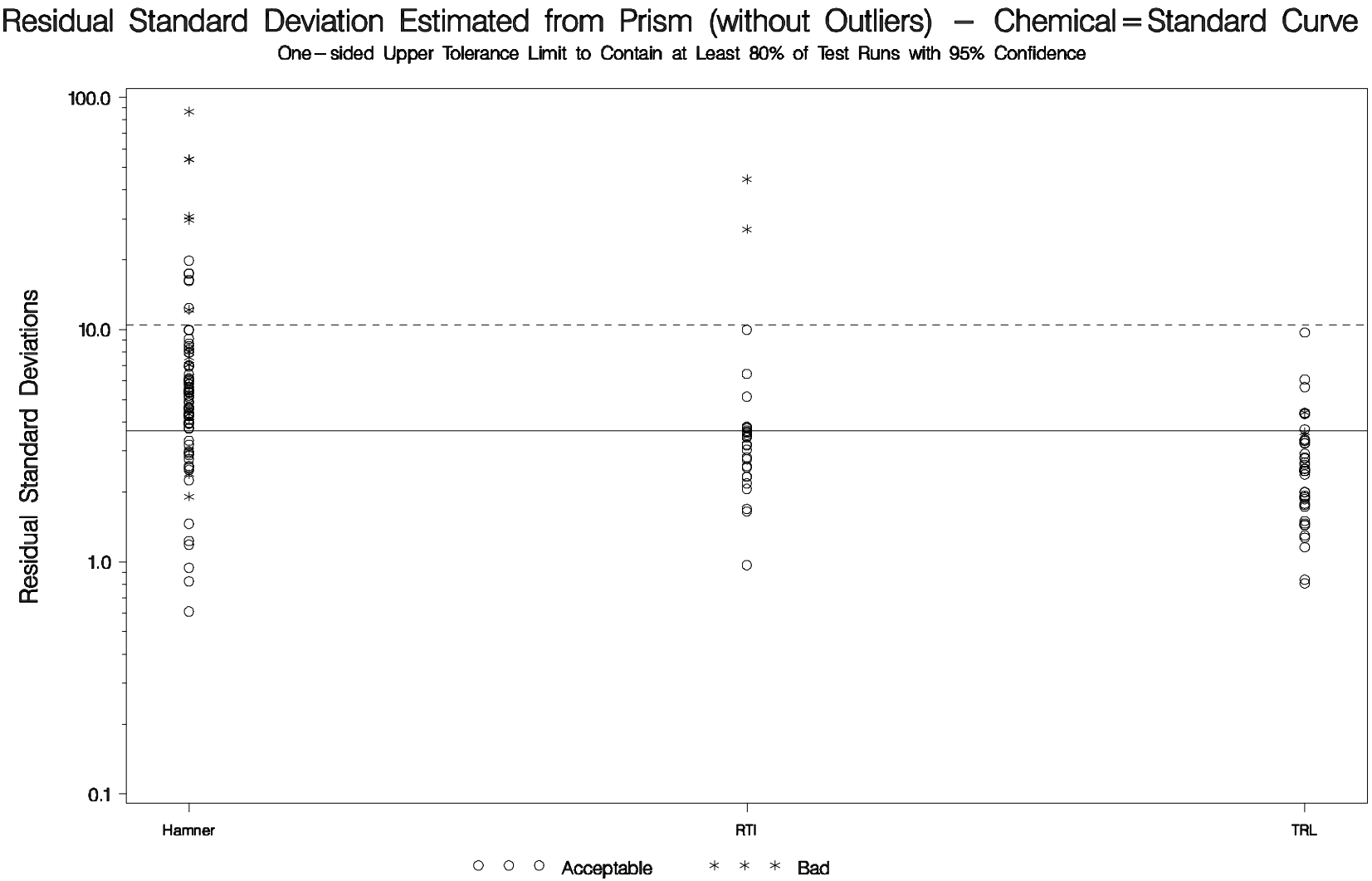

Figure 8. Parameter Estimates and Tolerance Intervals for Residual Studentized Deviation for Standard Curve.

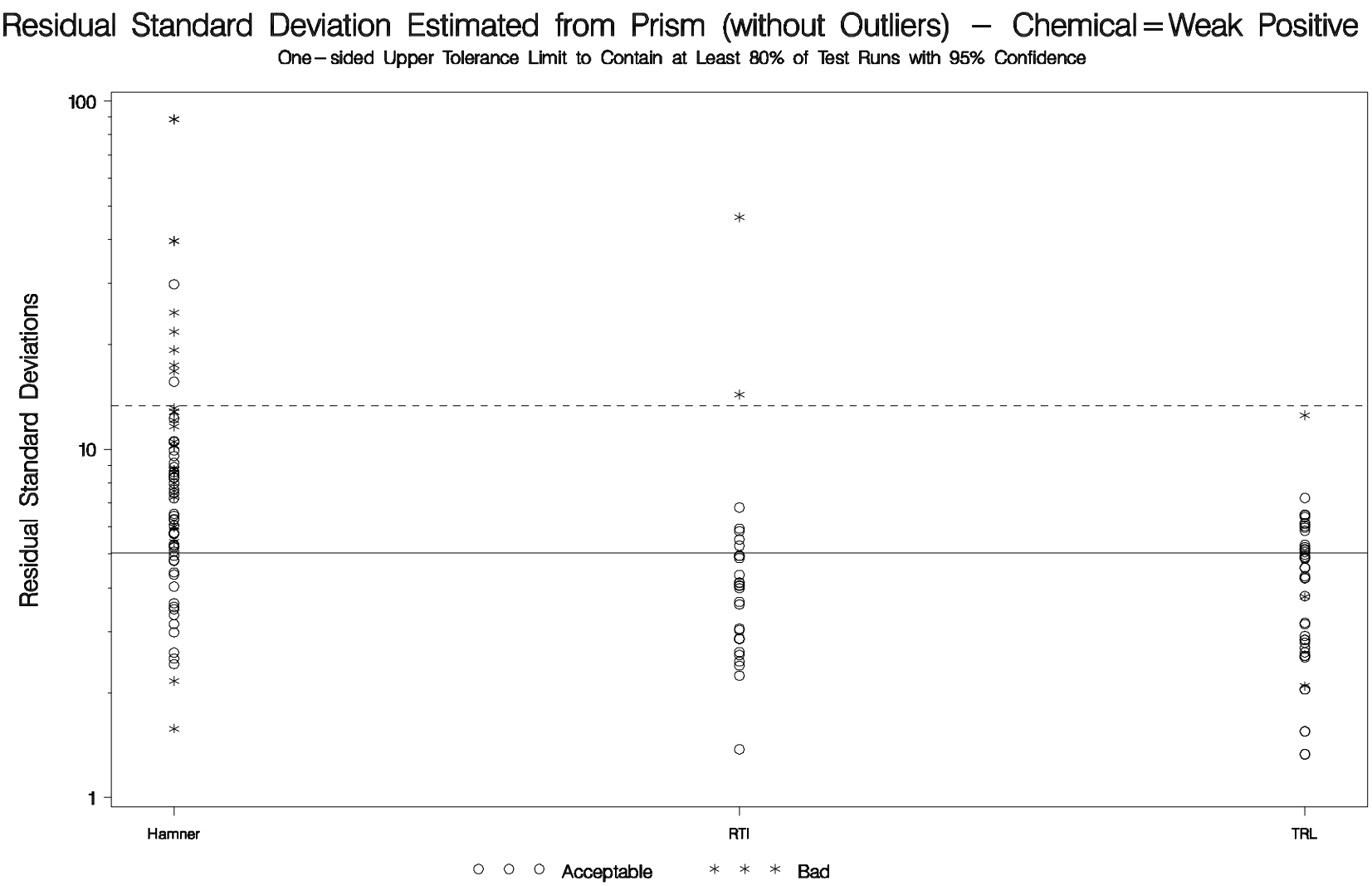

Figure 9. Parameter Estimates and Tolerance Intervals for Residual Studentized Deviation for Weak Positive

7. Binding Status of Test Compounds

The performance criteria for the 23 test chemicals were based on comparison of the binding classifications among the test laboratories with one another and with an expected affinity value. The binding classifications were based on just the acceptable runs (Appendix A).

For each test laboratory the individual test runs of the test chemicals were designated as "binder", "equivocal", "non-binder", "non-testable" according to the characteristics of the binding curve fits. The criteria are given below.

- Non-Testable – There are no data points at or above concentration 10^{-6} and one of the two following conditions hold:
    i. A binding curve can be fitted but the binding curve is not lower than 50% by concentration 10^{-6}.
    ii. A binding curve cannot be fitted. The lowest unsmoothed average percent binding among the concentration groups in the data is above 50%.

A non-testable run corresponds to the situation when the chemical could not be put into solution at a high enough concentration to determine whether or not it is a binder.

- Binder – A binding curve can be fitted. The lowest point on the response curve within the range of the data is less than 50%.

- Non-binder – If a binding curve can be fitted the lowest point on the fitted response curve within the range of the data is above 75%. If a binding curve cannot be fitted the lowest unsmoothed average percent binding among the concentration groups in the data is above 75%.

- Equivocal – Any testable run that is neither a binder nor a non-binder is equivocal. The run might or might not have a fitted model.

The (EPA) acceptable test runs (Appendix A, Table A–3) were each classified as binder, non-binder, equivocal or non-testable according to the above criteria. The classifications for each run are displayed in Appendix D, Table D-1. The table columns represent the test chemical code number (1 to 23), the test laboratory, the laboratory test run designation, the binding curve parameters (where they could be fit – otherwise missing), the highest test chemical ($\log_{10}$) concentration group in the run, the lowest fitted point on the response curve (if the response curve could be fitted), the lowest unsmoothed mean response among the concentration groups (if the response curve could not be fitted), and binding category designation. The binding category designations were:

- Testable runs: 2 – binder, 1 – equivocal, 0 – non-binder
- Non-testable runs: missing

The binding category classifications for each individual (testable) run were combined across runs within laboratory and test chemical by an averaging rule. Namely

for each test chemical and laboratory within test chemical the binding category scores for the testable runs were averaged. The average score determined the overall binding category for that laboratory and test chemical as follows:

Binder: Average ≥ 1.5, Equivocal: 0.5 ≤ Average < 1.5, Non-binder: Average < 0.5

The overall binding categorization by test chemical and laboratory within test chemical is shown in the RTI, Hamner, and TRL columns in Table 20.

The binding categorizations were combined across labs by a majority voting rule. If two or more labs reported the same binding categorization it was taken as the overall binding categorization and is shown in the "Majority of Labs" column. If each lab reported a different binding categorization the overall binding designation was reported as "Inconclusive".

For each test chemical the individual laboratory binding categorizations in Table 20 were compared to overall average binding categorization ("Majority of Labs"). The results of the comparisons are displayed in Table 20.

The "Expected Affinity" categorization for each test chemical is based on information compiled by EPA, reflecting the performance of these chemicals in the results of ER assays reported in the literature. For each chemical both the individual laboratory binding categorizations and the "Majority of Labs" binding categorizations were compared with the "Expected Affinity" categorization. The convention adopted for equivalence of overall average binding category and expected affinity category is displayed in Table 21. The results of the comparisons are displayed in Table 20

.

Table 20. Comparison of Classifications across Labs, Ranked by Expected Affinity

Chemical Code	Chemical	Expected Affinity	Majority of Labs	RTI	Hamner	TRL
2	17-Ethynylestradiol	Very Strong	Binder	Binder	Binder	Binder
3	DES	Very Strong	Binder	Binder	Binder	Binder
1	17beta-Estradiol	Strong	Binder	Binder	Binder	*Equivocal*
4	Meso-Hexestrol	Strong	Binder	Binder	Binder	Binder
13	Tamoxifen	Strong	Binder	Binder	Binder	Binder
12	Zearalenone	Strong	Binder	Binder	Binder	Binder
11	Equol	Moderate	Binder	Binder	Binder	Binder
5	Genistein	Moderate	Binder	Binder	Binder	Binder
6	Norethynodrel	Moderate	Binder	Binder	Binder	Binder
16	4-n-heptylphenol	Weak	Binder	Binder	Binder	*Equivocal*
14	5alpha-Dihydrotestosterone	Weak	Inconclusive	*Equivocal*	*Non-Binder*	*Binder*
18	Benz(a)anthracene	Weak	Inconclusive	*Non-Binder*	*Binder*	*Equivocal*
15	Bisphenol A	Weak	Binder	Binder	Binder	Binder
7	Butyl paraben	Weak	Binder	Binder	Binder	Binder
19	Enterolactone	Weak	Binder	Binder	Binder	*Equivocal*
17	Kepone (Chlordecone)	Weak	Binder	Binder	Binder	Binder
8	Nonylphenol (mixture)	Weak	Binder	Binder	Binder	[2]
9	o,p'-DDT	Weak	Binder	*Equivocal*	Binder	Binder
22	Atrazine	Negative	Equivocal	Equivocal	*Non-Binder*	Equivocal
10	Corticosterone	Negative	Binder	Binder	Binder	Binder
21	Octyltriethoxysilane	Negative	Non-Binder	Non-Binder	Non-Binder	Non-Binder
20	Progesterone	Negative	Equivocal	Equivocal	*Non-Binder*	Equivocal
23	R1881	Negative[3]	Binder	Binder	Binder	Binder

Legend	
Black (standard) font	Agreement with the "Majority of Labs"
Red (italics) font	*Disagreement with the "Majority of Labs"*
Green cell (light shading)	Agreement with the "Expected Affinity"
Yellow cell (darker shading)	Disagreement with the "Expected Affinity"

[2] TRL had no acceptable test runs for test chemical 8.
[3] During the validation study, higher concentrations of R1881 were tested than previously used and the chemical was demonstrated to be a binder.

Table 21. Correspondence between "Majority of Labs" Binding Category and "Expected Affinity" Binding Category

"Majority of Labs" Binding Category	Equivalent "Expected Affinity" Binding Category
Binder	Very Strong, Strong, Moderate, Weak
Equivocal	Moderate, Weak, Negative
Non-binder	Negative

APPENDIX A

Appendix A. Results from the PRISM model fits based on outlier elimination algorithm.

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier[3]

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
SC	**Hamner**	SC 042308 New-Old	-8.598(0.049)	-1.052(0.171)	96.500(3.323)	-2.057(3.723)	20	24	0	7.0290	0.9730
		SC 042308 Old-Old	-8.540(0.032)	-1.059(0.117)	121.700(3.894)	-1.373(2.758)	16	20	4	5.4800	0.9885
		SC 050508 Sialinized	-8.856(0.027)	-1.132(0.102)	98.590(2.358)	-1.198(1.815)	19	23	0	4.1040	0.9909
		SC 050508 Uncoated	-8.766(0.017)	-1.167(0.070)	107.700(1.605)	-0.346(1.269)	18	22	2	2.8870	0.9963
		SC 10/1	-9.062(0.028)	-1.141(0.099)	100.600(2.169)	-1.089(1.851)	14	18	1	3.7580	0.9933
		SC 10/10	-9.115(0.050)	-0.901(0.131)	104.100(4.485)	-0.845(3.252)	16	20	0	6.4400	0.9782
		SC 10/3	-9.029(0.027)	-1.195(0.112)	102.700(2.540)	-5.195(2.199)	17	21	0	4.6330	0.9902
		SC 10/8	-8.925(0.049)	-0.979(0.140)	104.100(4.316)	0.331(3.056)	14	18	0	5.9920	0.9824
		SC 10/9	-9.116(0.037)	-1.081(0.138)	102.000(4.780)	0.951(2.109)	16	20	0	5.1000	0.9827
		SC 11/26	-8.721(0.051)	-1.207(0.205)	101.800(3.820)	-0.230(3.626)	20	24	0	8.2300	0.9681
		SC 11/27	-8.988(0.039)	-1.143(0.145)	102.900(3.329)	0.591(2.702)	19	23	0	6.0920	0.9813
		TC 1 Run 1 SC UN (4/15)	-8.825(0.029)	-1.011(0.090)	103.000(2.331)	-0.542(2.008)	20	24	0	4.2460	0.9907
		TC 1 Run 2 SC UN (5/1)	-8.367(0.120)	-1.778(0.866)	87.120(6.491)	0.168(8.581)	20	24	0	19.8200	0.8070
		TC 1 Run 4 SC (5/18)	-8.581(0.051)	-1.373(0.290)	101.100(4.615)	-1.168(5.266)	11	15	0	8.7160	0.9653
		TC 11 Run 1 SC (3/5)	-8.965(0.048)	-0.720(0.106)	103.900(4.850)	-5.644(4.243)	19	23	0	6.0820	0.9782
		TC 11 Run 2 SC (3/6)	-9.141(0.066)	-1.054(0.230)	102.100(7.179)	-2.399(4.860)	17	21	0	9.9740	0.9478
		TC 11 Run 3 SC (3/10)	-9.150(0.030)	-1.030(0.100)	100.700(3.222)	-0.025(1.830)	19	23	0	4.3860	0.9884
		TC 12 Run 4 SC UN (3/17)	-9.064(0.039)	-1.001(0.122)	101.300(3.406)	-0.667(2.425)	19	23	0	5.5330	0.9838
		TC 12 Run 5 SC (3/24)	-9.113(0.037)	-0.851(0.093)	101.100(3.503)	-1.910(2.407)	20	24	0	4.9070	0.9855
		TC 13 Run 2 SC UN (5/29)	-9.200(0.046)	-1.571(0.291)	109.500(5.076)	-8.992(4.143)	17	21	0	9.9530	0.9674
		TC 13 Run 3 SC (5/30)	-9.430(0.025)	-0.917(0.073)	105.300(2.734)	0.358(1.363)	19	23	1	3.3250	0.9929
		TC 14 Run 3 SC (4/10)	-9.092(0.008)	-1.094(0.026)	95.560(0.730)	-2.192(0.384)	13	17	5	0.8246	0.9996
		TC 14 Run 5 SC (4/16)	-8.776(0.046)	-0.841(0.117)	103.300(3.848)	-2.970(3.617)	20	24	0	6.1700	0.9794
		TC 14 Run 6 SC (4/17)	-8.853(0.031)	-1.101(0.108)	97.620(2.434)	-3.085(2.257)	18	22	1	4.6060	0.9888
		TC 15 Run 1 SC (3/11)	-9.020(0.026)	-1.056(0.087)	102.400(2.297)	-0.538(1.698)	19	23	1	3.9450	0.9919
		TC 15 Run 2 SC (3/12)	-9.139(0.016)	-1.007(0.055)	100.700(1.445)	-0.671(0.964)	17	21	3	2.2450	0.9973
		TC 16 Run 1 SC (3/18)	-9.130(0.020)	-0.992(0.062)	101.900(1.877)	-0.122(1.257)	20	24	0	2.9440	0.9951
		TC 16 Run 2 SC (3/26)	-8.953(0.018)	-0.996(0.062)	99.990(2.132)	-1.042(1.194)	18	22	0	2.5530	0.9960
		TC 16 Run 3 SC UN (3/27)	-8.935(0.032)	-1.084(0.108)	101.500(2.636)	-0.625(2.097)	20	24	0	4.8290	0.9880
		TC 16 Run 4 SC UN (4/2)	-8.969(0.019)	-0.851(0.052)	105.500(2.037)	-2.321(1.304)	16	20	4	2.4890	0.9965
		TC 16 Run 5 SC (6/11)	-9.626(0.032)	-0.929(0.096)	104.600(3.996)	-1.796(1.719)	19	23	0	4.3540	0.9878
		TC 18 Run 2 SC (6/5)	-9.724(0.024)	-0.915(0.076)	107.900(3.463)	-0.079(1.207)	20	24	0	3.1970	0.9929
		TC 18 Run 3 SC (6/6)	-9.836(0.023)	-1.011(0.083)	107.300(3.625)	-1.463(1.050)	18	22	1	2.9900	0.9930
		TC 19 Run 4 SC (3/11)	-9.020(0.026)	-1.056(0.087)	102.400(2.297)	-0.538(1.698)	19	23	1	3.9450	0.9919
		TC 2 Run 1 SC (5/19)	-8.726(0.033)	-1.038(0.107)	102.000(2.441)	-2.019(2.243)	17	21	0	4.5480	0.9901
		TC 2 Run 10 SC (6/24)	-9.144(0.041)	-0.946(0.117)	103.100(3.910)	-0.411(2.560)	20	24	0	5.8430	0.9808

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 2 Run 3 SC UN (6/2)	-9.710(0.009)	-0.915(0.028)	107.600(1.258)	-0.244(0.449)	20	24	0	1.1860	0.9990
		TC 2 Run 8 SC UN (6/18)	-9.485(0.095)	-0.801(0.238)	106.100(12.250)	-2.630(5.573)	20	24	0	12.3800	0.9088
		TC 20 Run 5 SC (4/17)	-8.812(0.033)	-1.183(0.132)	100.700(2.732)	-2.505(2.548)	18	22	1	5.4030	0.9858
		TC 3 Run 1 SC UN (4/14)	-8.846(0.104)	-0.927(0.290)	120.300(12.070)	-0.563(7.829)	19	23	1	16.3800	0.8962
		TC 3 Run 10 SC UN (6/12)	-9.400(0.128)	-0.869(0.332)	103.800(14.100)	-8.232(8.449)	17	21	1	17.4600	0.8659
		TC 3 Run 12 SC UN (6/16)	-9.145(0.072)	-0.730(0.159)	108.100(8.300)	-0.985(5.058)	20	24	0	9.1300	0.9504
		TC 3 Run 15 SC (6/24)	-9.144(0.041)	-0.946(0.117)	103.100(3.910)	-0.411(2.560)	20	24	0	5.8430	0.9808
		TC 3 Run 16 SC (6/25)	-9.331(0.043)	-0.752(0.099)	107.300(5.316)	0.105(2.668)	20	24	0	5.3680	0.9810
		TC 3 Run 2 SC UN (4/15)	-8.825(0.029)	-1.011(0.090)	103.000(2.331)	-0.542(2.008)	20	24	0	4.2460	0.9907
		TC 3 Run 4 SC UN (5/15)	-8.811(0.110)	-0.971(0.336)	101.800(8.986)	-4.403(9.686)	18	22	0	16.2200	0.8782
		TC 3 Run 5 SC UN (5/16)	-8.727(0.046)	-1.123(0.172)	99.990(3.371)	0.077(3.222)	19	23	0	6.9500	0.9755
		TC 3 Run 6 SC UN (5/18)	-8.585(0.050)	-1.416(0.290)	101.000(4.471)	0.525(4.416)	12	16	0	8.4960	0.9669
		TC 3 Run 7 SC UN (5/23)	-9.495(0.009)	-1.319(0.049)	101.100(0.776)	0.128(0.427)	17	21	3	1.2310	0.9990
		TC 4 Run 1 SC UN (4/3)	-8.762(0.029)	-1.047(0.095)	108.600(2.605)	-0.818(2.033)	18	22	2	4.2940	0.9918
		TC 4 Run 2 SC (4/7)	-9.064(0.031)	-1.081(0.104)	100.700(2.662)	-0.119(1.908)	20	24	0	4.5890	0.9886
		TC 4 Run 3 SC (4/8)	-9.074(0.028)	-1.635(0.191)	101.200(2.484)	2.568(1.803)	20	24	0	5.2040	0.9871
		TC 4 Run 4 SC (4/9)	-9.043(0.017)	-1.149(0.062)	101.200(1.434)	0.260(1.046)	20	24	0	2.5890	0.9965
		TC 4 Run 5 SC UN (6/12)	-9.400(0.128)	-0.869(0.332)	103.800(14.100)	-8.232(8.449)	17	21	1	17.4600	0.8659
		TC 4 Run 6 SC UN (6/25)	-9.331(0.043)	-0.752(0.099)	107.300(5.313)	0.115(2.667)	20	24	0	5.3670	0.9810
		TC 4 Run 7 SC UN (7/1)	-9.337(0.034)	-1.153(0.129)	101.400(3.393)	-0.808(1.981)	20	24	0	5.3830	0.9840
		TC 4 Run 8 SC UN (7/2)	-9.040(0.048)	-1.076(0.163)	117.600(5.726)	1.182(3.223)	19	23	1	7.9760	0.9722
		TC 5 Run 1 SC (3/26)	-8.959(0.011)	-1.075(0.035)	103.300(0.986)	-0.783(0.638)	16	20	4	1.4610	0.9989
		TC 5 Run 2 SC (3/27)	-9.022(0.036)	-1.152(0.141)	102.600(3.626)	1.395(2.295)	19	23	0	5.6560	0.9827
		TC 5 Run 3 SC (3/31)	-8.836(0.029)	-0.841(0.075)	101.900(2.518)	-3.164(2.260)	20	24	0	3.9620	0.9912
		TC 6 Run 1 SC UN (6/2)	-8.898(0.030)	-0.834(0.077)	103.400(3.115)	-2.501(2.200)	18	22	0	3.9540	0.9906
		TC 6 Run 2 SC (6/3)	-9.138(0.005)	-0.931(0.014)	101.900(0.419)	-1.078(0.283)	16	20	4	0.6114	0.9998
		TC 6 Run 3 SC (6/5)	-9.098(0.029)	-0.773(0.068)	104.300(3.019)	-1.540(2.031)	20	24	0	3.7700	0.9912
		TC 6 Run 4 SC (6/6)	-9.133(0.007)	-0.948(0.021)	103.800(0.754)	-0.870(0.419)	17	21	3	0.9429	0.9995
		TC 8 Run 5 SC (5/27)	-8.967(0.019)	-0.990(0.057)	103.100(1.648)	-0.826(1.259)	20	24	0	2.7750	0.9959
SC	**RTI**	RTI Set 1 Run 1 SC (2/4)	-9.150(0.007)	-0.939(0.022)	106.000(1.030)	-0.795(0.432)	17	21	3	0.9680	0.9990
		RTI Set 1 Run 2 SC (2/6)	-9.050(0.024)	-1.110(0.085)	103.000(2.030)	0.149(1.450)	19	23	1	3.5300	0.9940
		RTI Set 1 Run 3 SC (2/7)	-9.230(0.017)	-0.903(0.046)	103.000(1.690)	-1.120(1.030)	20	24	0	2.3300	0.9970
		RTI Set 2 Run 1 SC UN (2/21)	-9.140(0.020)	-0.909(0.055)	101.000(1.900)	-1.220(1.270)	20	24	0	2.7700	0.9950
		RTI Set 2 Run 2 SC (2/26)	-9.120(0.011)	-1.040(0.036)	104.000(1.200)	-0.490(0.688)	19	23	1	1.6500	0.9980
		RTI Set 2 Run 3 SC (2/27)	-9.160(0.015)	-0.922(0.043)	108.000(1.820)	-1.310(0.964)	19	23	1	2.1800	0.9970
		RTI Set 2 Run 4 SC (3/3)	-9.160(0.018)	-0.984(0.053)	102.000(1.650)	-0.611(1.090)	20	24	0	2.5500	0.9960

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		RTI Set 3 Run 1 SC (2/28)	-9.090(0.018)	-1.060(0.060)	97.200(1.640)	-0.471(0.995)	17	21	3	2.3300	0.9970
		RTI Set 3 Run 2 SC (3/4)	-9.100(0.014)	-1.000(0.044)	100.000(1.290)	-0.892(0.892)	19	23	1	2.0600	0.9980
		RTI Set 3 Run 3 SC (3/5)	-9.010(0.019)	-1.020(0.062)	102.000(1.760)	-7.770(1.610)	18	22	0	3.0400	0.9960
		RTI Set 4 Run 1 SC (3/6)	-9.049(0.027)	-0.895(0.073)	103.600(2.560)	-1.096(1.813)	20	24	0	3.8160	0.9918
		RTI Set 4 Run 2 SC (3/11)	-8.942(0.023)	-1.188(0.089)	101.400(1.880)	0.143(1.493)	20	24	0	3.6290	0.9934
		RTI Set 4 Run 3 SC UN (3/13)	-8.990(0.044)	-1.114(0.157)	96.100(3.483)	-0.493(2.747)	20	24	0	6.4560	0.9765
		RTI Set 4 Run 4 SC UN (3/18)	-9.021(0.068)	-1.013(0.212)	101.700(5.955)	-0.105(4.373)	20	24	0	9.9760	0.9478
		RTI Set 4 Run 5 SC (4/3)	-9.152(0.028)	-0.834(0.069)	101.200(2.732)	-1.924(1.811)	20	24	0	3.6770	0.9916
		RTI Set 5 Run 1 SC (3/17)	-9.050(0.023)	-0.952(0.065)	101.000(2.020)	-1.140(1.460)	20	24	0	3.2000	0.9940
		RTI Set 5 Run 2 SC (3/27)	-8.760(0.024)	-0.968(0.074)	102.000(1.970)	-3.930(2.000)	19	23	0	3.6100	0.9930
		RTI Set 5 Run 3 SC (3/31)	-9.220(0.012)	-0.943(0.035)	108.000(1.440)	-0.420(0.715)	18	22	2	1.6900	0.9980
		RTI Set 6 Run 1 SC (4/1)	-9.020(0.020)	-0.933(0.057)	101.000(1.790)	-1.530(1.330)	19	23	1	2.8200	0.9950
		RTI Set 6 Run 2 SC UN (4/7)	-9.130(0.027)	-0.950(0.076)	102.000(2.500)	-0.860(1.680)	20	24	0	3.8000	0.9920
		RTI Set 6 Run 3 SC (4/8)	-9.120(0.029)	-0.812(0.071)	95.100(2.960)	-2.340(1.850)	19	23	1	3.4600	0.9910
		RTI Set 6 Run 4 SC (6/9)	-8.990(0.025)	-1.030(0.079)	99.100(2.080)	-0.742(1.600)	20	24	0	3.6000	0.9930
		SC #2 8/23	-9.060(0.042)	-0.665(0.087)	106.700(4.920)	-4.468(3.492)	20	24	0	5.1520	0.9836
		SC #4 9/6	-8.912(0.022)	-0.985(0.067)	101.100(1.834)	-1.073(1.493)	20	24	0	3.1840	0.9945
		SC #5 9/10	-8.924(0.024)	-0.969(0.070)	102.600(2.036)	-0.730(1.618)	20	24	0	3.4450	0.9936
		SC #6 9/11	-9.009(0.019)	-0.915(0.051)	100.500(1.642)	-1.678(1.242)	20	24	0	2.5830	0.9961
		SC #7 10/22	-9.051(0.028)	-0.888(0.073)	101.500(2.514)	-1.465(1.813)	20	24	0	3.7590	0.9918
SC	**TRL**	SC 10/3	-9.010(0.019)	-0.990(0.056)	101.700(1.618)	-0.030(1.198)	20	24	0	2.6790	0.9960
		SC 11/20	-8.995(0.028)	-1.082(0.096)	104.000(2.469)	0.438(1.828)	20	24	0	4.3400	0.9904
		SC 11/27	-9.245(0.031)	-1.037(0.083)	102.100(2.178)	0.685(1.397)	16	20	4	3.3220	0.9945
		SC 11/30	-9.132(0.018)	-0.985(0.054)	102.000(1.680)	-0.632(1.125)	20	24	0	2.6210	0.9961
		SC 11/7	-8.961(0.017)	-0.951(0.050)	100.800(1.489)	-1.275(1.166)	20	24	0	2.4640	0.9966
		SC 11/7a	-8.961(0.017)	-0.951(0.050)	100.800(1.489)	-1.275(1.166)	20	24	0	2.4640	0.9966
		SC 12/12	-8.883(0.028)	-1.157(0.104)	101.700(2.422)	-0.622(1.868)	18	22	2	4.3770	0.9901
		SC 9/12	-9.455(0.041)	-0.941(0.120)	102.400(4.474)	-0.890(2.264)	20	24	0	5.6580	0.9798
		SC 9/21	-8.977(0.017)	-0.916(0.047)	102.100(1.501)	-1.521(1.151)	20	24	0	2.3820	0.9968
		SC 9/24	-9.141(0.019)	-1.070(0.065)	102.200(1.779)	-0.323(1.188)	20	24	0	2.9280	0.9954
		TC 1 RN012 SC (5/29) (yellow)	-8.515(0.010)	-0.974(0.034)	100.500(0.719)	-3.713(0.889)	19	23	1	1.4640	0.9989
		TC 1 TTN015 SC (5/8)(blue)	-8.743(0.014)	-0.984(0.040)	101.900(1.001)	-1.938(0.958)	19	23	1	1.8650	0.9983
		TC 1 TTN018 SC (6/12) (blue)	-8.999(0.022)	-0.995(0.070)	103.600(2.400)	-0.883(1.463)	17	21	1	3.2470	0.9937
		TC 1 TTN019 SC (6/16) (blue)	-9.085(0.023)	-1.018(0.078)	101.500(2.154)	-0.338(1.581)	16	20	0	3.3680	0.9932
		TC 11 TTN002 SC (3/18) (blue)	-8.893(0.017)	-1.082(0.041)	99.780(0.969)	-0.844(0.769)	17	21	3	1.7270	0.9986
		TC 11 TTN004 SC (4/7) (red)	-8.812(0.023)	-0.980(0.070)	99.830(1.820)	-4.099(1.805)	19	23	0	3.3330	0.9941

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 11 TTN006 SC (4/16) (blue)	-8.971(0.014)	-0.887(0.039)	104.800(1.526)	-2.223(0.994)	19	23	1	1.9960	0.9978
		TC 11 TTN017 SC (5/14)(yellow)	-8.857(0.006)	-0.980(0.018)	102.500(0.567)	-1.642(0.406)	18	22	2	0.8379	0.9996
		TC 12 RN013 SC (6/11) (yellow)	-9.057(0.019)	-0.961(0.052)	105.100(1.924)	-0.737(1.136)	17	21	3	2.5200	0.9965
		TC 12 TTN001 SC (3/12) (blue)	-8.854(0.006)	-0.987(0.017)	102.500(0.567)	-1.395(0.389)	17	21	3	0.8074	0.9996
		TC 12 TTN003 SC (3/28)(yellow)	-8.827(0.012)	-0.970(0.037)	101.700(1.002)	-1.417(0.877)	20	24	0	1.7810	0.9983
		TC 12 TTN006 SC (4/16) (blue)	-8.971(0.014)	-0.887(0.039)	104.800(1.526)	-2.223(0.994)	19	23	1	1.9960	0.9978
		TC 15 RN002 SC (4/9) (yellow)	-8.702(0.029)	-0.983(0.084)	97.750(1.930)	-2.493(1.996)	19	23	1	3.7210	0.9927
		TC 16 TTN007 SC (4/21) (green)	-8.806(0.011)	-0.961(0.033)	97.970(0.928)	-1.992(0.742)	18	22	2	1.4410	0.9988
		TC 16 TTN008 SC (4/22) (green)	-8.876(0.013)	-1.034(0.042)	104.600(1.218)	-0.796(0.868)	19	23	1	1.9020	0.9981
		TC 16 TTN009 SC (4/23) (blue)	-8.848(0.016)	-1.080(0.055)	101.300(1.294)	-0.962(1.111)	20	24	0	2.4650	0.9969
		TC 19 TTN005 SC (4/14)(yellow)	-8.946(0.008)	-0.946(0.023)	100.900(0.697)	-1.357(0.553)	20	24	0	1.1570	0.9992
		TC 2 RN007 SC (5/7) (yellow)	-8.722(0.010)	-0.939(0.030)	98.230(0.807)	-2.658(0.727)	18	22	2	1.3000	0.9990
		TC 2 RN008 SC (5/12) (green)	-8.709(0.021)	-1.080(0.075)	101.300(1.756)	-0.858(1.678)	17	21	0	3.2430	0.9944
		TC 2 RN009 SC (5/13) (blue)	-8.675(0.013)	-0.886(0.036)	100.800(0.992)	-3.426(1.052)	20	24	0	1.7580	0.9983
		TC 2 RN013 SC (6/11) (yellow)	-9.057(0.019)	-0.961(0.052)	105.100(1.924)	-0.737(1.136)	17	21	3	2.5200	0.9965
		TC 4 RN003 SC (4/16) (yellow)	-8.811(0.068)	-0.994(0.215)	100.900(5.356)	-1.967(5.144)	18	22	0	9.7190	0.9519
		TC 4 TTN010 SC (4/28) (yellow)	-8.296(0.045)	-0.900(0.145)	102.700(2.977)	-7.585(5.662)	19	23	0	6.1070	0.9804
		TC 4 TTN011 SC (4/29) (yellow)	-8.249(0.034)	-1.011(0.124)	104.300(2.159)	-6.006(3.495)	17	21	0	4.3480	0.9916
		TC 4 TTN012 SC (4/30) (yellow)	-8.688(0.019)	-1.034(0.063)	99.570(1.397)	-1.744(1.404)	20	24	0	2.7870	0.9959
		TC 4 TTN013 SC (5/5) (yellow)	-8.873(0.009)	-1.009(0.027)	101.000(0.707)	-1.254(0.596)	20	24	0	1.2720	0.9991
		TC 5 TTN007 SC (4/21) (green)	-8.806(0.011)	-0.961(0.033)	97.970(0.928)	-1.992(0.742)	18	22	2	1.4410	0.9988
		TC 5 TTN008 SC (4/22) (green)	-8.876(0.013)	-1.034(0.042)	104.600(1.218)	-0.796(0.868)	19	23	1	1.9020	0.9981
		TC 5 TTN009 SC (4/23) (blue)	-8.848(0.016)	-1.080(0.055)	101.300(1.294)	-0.962(1.111)	20	24	0	2.4650	0.9969
		TC 6 RN004 SC (4/24) (blue)	-8.945(0.011)	-0.940(0.032)	101.000(0.927)	-1.391(0.791)	17	21	1	1.5010	0.9988
		TC 6 RN005 SC (5/1) (blue)	-8.577(0.020)	-1.005(0.067)	103.400(1.684)	-2.306(1.551)	17	21	1	2.8190	0.9961
		TC 6 RN006 SC (5/6) (green)	-8.690(0.015)	-0.973(0.042)	100.100(1.014)	-2.348(1.040)	19	23	0	1.9300	0.9981
WP	**Hamner**	TC 1 Run 1 WP UN (4/15)	-5.979(0.067)	-1.034(0.210)	107.200(4.680)	13.230(4.830)	17	21	0	8.3000	0.9566
		TC 1 Run 2 WP UN (5/1)	-5.174(0.283)	-0.481(0.209)	85.410(11.970)	-143E11(1.5E13)	16	20	0	29.8000	0.4102
		TC 1 Run 5 WP (5/22)	-6.007(0.070)	-0.593(0.151)	110.900(7.481)	-15.340(14.570)	11	15	0	7.2470	0.9707
		TC 11 Run 1 WP (3/5)	-6.150(0.037)	-1.061(0.128)	101.800(3.101)	-4.276(2.931)	18	22	1	5.7290	0.9841
		TC 11 Run 2 WP (3/6)	-6.116(0.072)	-0.770(0.159)	118.500(6.704)	-2.262(7.097)	18	22	0	9.9240	0.9552
		TC 11 Run 3 WP (3/10)	-6.159(0.023)	-1.187(0.093)	98.830(1.593)	3.782(1.848)	18	22	0	3.4760	0.9929

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier[7]

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 12 Run 4 WP UN (3/17)	-6.182(0.029)	-0.848(0.071)	98.260(2.080)	2.875(1.873)	20	24	0	3.5310	0.9918
		TC 12 Run 5 WP (3/24)	-6.268(0.033)	-0.939(0.092)	98.120(2.510)	2.778(2.074)	19	23	0	4.3720	0.9880
		TC 14 Run 3 WP (4/10)	-6.239(0.036)	-1.258(0.165)	100.600(2.805)	7.734(3.033)	16	20	0	5.3310	0.9827
		TC 14 Run 5 WP (4/16)	-5.937(0.057)	-1.344(0.266)	94.190(2.437)	25.000(3.425)	16	20	0	5.7590	0.9661
		TC 14 Run 6 WP (4/17)	-5.934(0.096)	-0.789(0.260)	83.930(4.934)	0.941(9.593)	18	22	0	9.1540	0.9164
		TC 15 Run 1 WP (3/11)	-6.291(0.033)	-1.093(0.116)	93.780(2.229)	3.599(2.387)	18	22	0	4.4380	0.9868
		TC 15 Run 2 WP (3/12)	-6.260(0.023)	-1.009(0.073)	100.700(1.708)	5.243(1.750)	18	22	0	3.1520	0.9937
		TC 16 Run 1 WP (3/18)	-6.253(0.018)	-1.077(0.057)	101.900(1.278)	1.779(1.173)	17	21	1	2.4190	0.9970
		TC 16 Run 2 WP (3/26)	-5.987(0.048)	-0.723(0.123)	97.660(4.667)	-1.969(4.695)	17	21	0	5.2960	0.9797
		TC 16 Run 3 WP UN (3/27)	-6.098(0.041)	-1.205(0.155)	117.800(3.013)	9.322(3.692)	17	21	0	6.3110	0.9820
		TC 16 Run 4 WP UN (4/2)	-6.298(0.029)	-1.216(0.121)	95.560(1.956)	8.854(2.011)	18	22	0	4.0410	0.9888
		TC 16 Run 5 WP (6/11)	-5.852(0.042)	-1.345(0.225)	105.400(3.396)	8.428(4.180)	14	18	0	6.4480	0.9765
		TC 18 Run 2 WP (6/5)	-5.944(0.064)	-1.065(0.221)	100.800(3.928)	10.400(5.670)	16	20	0	7.9870	0.9546
		TC 2 Run 1 WP (5/19)	-5.751(0.056)	-1.195(0.196)	141.400(4.457)	13.380(5.479)	14	18	0	8.4500	0.9773
		TC 2 Run 3 WP UN (6/2)	-6.101(0.047)	-1.346(0.230)	98.600(2.833)	12.730(3.771)	16	20	1	6.5340	0.9712
		TC 2 Run 4 WP UN (6/3)	-5.951(0.024)	-1.164(0.102)	83.740(1.098)	12.610(1.859)	17	21	0	2.6130	0.9917
		TC 2 Run 5 WP UN (6/7)	-5.466(0.129)	-1.231(0.417)	104.600(4.108)	27.840(7.729)	17	21	0	10.5700	0.8924
		TC 2 Run 8 WP UN (6/18)	-6.609(0.198)	-0.958(0.502)	71.490(8.541)	-1.645(13.200)	16	20	0	15.6500	0.7642
		TC 20 Run 5 WP (4/17)	-5.875(0.096)	-0.789(0.260)	87.740(5.157)	0.989(10.020)	18	22	0	9.5700	0.9164
		TC 3 Run 11 WP UN (6/13)	-6.205(0.130)	-0.907(0.366)	78.000(6.045)	-24.600(14.130)	15	19	2	12.2900	0.9070
		TC 3 Run 2 WP UN (4/15)	-5.979(0.067)	-1.034(0.210)	107.200(4.680)	13.230(4.830)	17	21	0	8.3000	0.9566
		TC 4 Run 1 WP UN (4/3)	-6.022(0.024)	-1.025(0.075)	108.100(1.762)	2.235(1.717)	20	24	0	3.6150	0.9937
		TC 4 Run 2 WP (4/7)	-6.223(0.033)	-1.220(0.121)	113.500(2.446)	7.508(2.193)	18	22	0	4.9500	0.9895
		TC 4 Run 3 WP (4/8)	-6.224(0.056)	-0.974(0.170)	116.300(5.042)	-1.255(5.849)	17	21	0	8.8930	0.9661
		TC 4 Run 4 WP (4/9)	-6.416(0.084)	-0.866(0.207)	105.300(7.102)	5.315(4.889)	19	23	0	10.5300	0.9368
		TC 5 Run 1 WP (3/26)	-6.148(0.049)	-1.015(0.161)	96.600(3.125)	8.385(4.132)	17	21	0	6.0530	0.9721
		TC 5 Run 2 WP (3/27)	-5.977(0.043)	-0.922(0.113)	113.300(2.918)	10.550(3.867)	17	21	0	5.2270	0.9835
		TC 5 Run 3 WP (3/31)	-5.846(0.047)	-1.055(0.175)	94.490(2.536)	7.911(4.551)	17	21	0	5.7220	0.9719
		TC 6 Run 2 WP (6/3)	-6.289(0.042)	-1.030(0.142)	90.160(2.659)	5.961(3.345)	17	21	0	5.0890	0.9786
		TC 6 Run 3 WP (6/5)	-6.226(0.019)	-1.183(0.076)	89.620(1.282)	3.562(1.202)	17	21	1	2.5110	0.9956
		TC 6 Run 4 WP (6/6)	-6.270(0.026)	-0.988(0.080)	104.500(1.926)	9.222(2.117)	17	21	0	3.3480	0.9926
		TC 8 Run 5 WP (5/27)	-6.092(0.023)	-0.982(0.072)	105.100(1.582)	6.623(2.107)	16	20	0	2.9860	0.9945
		WP 10/1	-6.088(0.045)	-1.111(0.168)	112.000(3.799)	-3.770(5.680)	15	19	0	7.6720	0.9737
		WP 10/10	-5.967(0.052)	-1.214(0.247)	94.010(4.023)	-3.125(5.888)	12	16	0	7.4850	0.9659
		WP 10/3	-6.075(0.057)	-0.996(0.187)	110.200(4.574)	-1.783(4.167)	16	20	1	8.6080	0.9697
		WP 10/8	-5.867(0.062)	-0.657(0.121)	118.100(5.288)	-3.949(9.164)	11	15	0	5.7550	0.9818

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier [8]

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		WP 10/9	-6.088(0.036)	-1.104(0.145)	96.980(3.116)	-1.008(2.418)	14	18	0	4.8100	0.9878
		WP 11/26	-6.014(0.030)	-1.030(0.118)	122.500(4.186)	1.117(3.400)	14	18	3	4.7870	0.9902
		WP 11/27	-6.395(0.044)	-1.203(0.178)	95.630(3.151)	4.461(3.073)	18	22	0	6.2850	0.9757
WP	**RTI**	RTI Set 1 Run 1 WP (2/4)	-6.260(0.034)	-1.010(0.097)	98.900(1.110)	-0.143(3.290)	20	24	0	3.0300	0.9940
		RTI Set 1 Run 2 WP (2/6)	-6.010(0.036)	-0.712(0.069)	106.000(2.060)	2.400(3.410)	11	15	0	2.8600	0.9960
		RTI Set 1 Run 3 WP (2/7)	-6.270(0.039)	-0.842(0.094)	102.000(3.110)	3.430(2.500)	20	24	0	4.9500	0.9850
		RTI Set 2 Run 1 WP UN (2/21)	-6.210(0.037)	-0.880(0.099)	99.800(2.820)	-3.650(3.250)	18	22	0	4.9500	0.9860
		RTI Set 2 Run 2 WP (2/26)	-6.280(0.023)	-0.785(0.053)	102.000(1.890)	-1.920(1.590)	19	23	1	2.8600	0.9950
		RTI Set 2 Run 3 WP (2/27)	-6.240(0.019)	-0.866(0.054)	103.000(1.710)	-3.000(1.930)	15	19	2	2.4600	0.9960
		RTI Set 2 Run 4 WP (3/3)	-6.280(0.032)	-0.773(0.075)	103.000(2.800)	-3.310(2.930)	18	22	0	4.1400	0.9900
		RTI Set 3 Run 1 WP (2/28)	-6.220(0.032)	-0.834(0.087)	89.100(2.110)	-3.810(3.310)	17	21	0	3.6500	0.9890
		RTI Set 3 Run 2 WP (3/4)	-6.200(0.031)	-1.030(0.100)	93.600(2.050)	0.554(2.140)	19	23	0	4.1500	0.9890
		RTI Set 3 Run 3 WP (3/5)	-6.040(0.024)	-0.992(0.077)	95.900(1.670)	-10.900(1.890)	20	24	0	3.5900	0.9940
		RTI Set 4 Run 1 WP (3/6)	-6.169(0.033)	-0.799(0.079)	96.840(2.460)	-1.841(2.392)	20	24	0	4.0740	0.9894
		RTI Set 4 Run 2 WP (3/11)	-5.950(0.026)	-1.160(0.106)	99.150(1.695)	0.463(2.349)	18	22	0	3.9960	0.9908
		RTI Set 4 Run 3 WP UN (3/13)	-6.059(0.012)	-0.942(0.031)	95.290(0.805)	-0.981(0.733)	15	19	5	1.3770	0.9989
		RTI Set 4 Run 4 WP UN (3/18)	-6.062(0.053)	-0.952(0.158)	93.400(3.368)	-0.177(3.576)	20	24	0	6.8170	0.9708
		RTI Set 4 Run 5 WP (4/3)	-6.356(0.022)	-0.783(0.051)	96.290(1.994)	-1.868(1.574)	18	22	1	2.5710	0.9953
		RTI Set 5 Run 1 WP (3/17)	-6.160(0.023)	-0.799(0.055)	93.100(1.550)	-1.950(1.600)	19	23	1	2.6200	0.9950
		RTI Set 5 Run 2 WP (3/27)	-5.870(0.041)	-1.080(0.151)	95.900(2.490)	-3.790(3.080)	20	24	0	5.9200	0.9810
		RTI Set 5 Run 3 WP (3/31)	-6.290(0.017)	-0.961(0.049)	96.600(1.220)	-0.251(1.060)	19	23	1	2.2400	0.9970
		RTI Set 6 Run 1 WP (4/1)	-6.200(0.037)	-1.020(0.115)	81.700(2.120)	-1.070(2.020)	19	23	1	4.0600	0.9870
		RTI Set 6 Run 2 WP UN (4/7)	-6.220(0.022)	-0.926(0.065)	95.500(1.760)	-1.280(1.450)	18	22	2	2.8600	0.9950
		RTI Set 6 Run 3 WP (4/8)	-6.290(0.049)	-0.876(0.121)	85.800(2.930)	-1.130(2.830)	20	24	0	5.2900	0.9790
		RTI Set 6 Run 4 WP (6/9)	-6.220(0.026)	-0.920(0.071)	88.000(1.610)	-2.360(1.770)	19	23	0	3.0600	0.9930
		WP #2 8/23	-6.126(0.053)	-0.811(0.128)	91.090(3.455)	1.858(3.510)	19	23	1	5.8250	0.9741
		WP #4 9/6	-5.883(0.043)	-0.846(0.119)	99.370(2.642)	2.773(4.885)	17	21	0	4.8770	0.9813
		WP #5 9/10	-5.949(0.040)	-1.008(0.127)	101.000(2.594)	2.897(2.776)	20	24	0	5.5090	0.9830
		WP #6 9/11	-6.070(0.018)	-0.911(0.051)	96.870(1.237)	-2.259(1.293)	20	24	0	2.3950	0.9966
		WP #7 10/22	-6.091(0.032)	-1.042(0.106)	93.010(2.041)	-0.257(2.112)	20	24	0	4.3660	0.9883
WP	**TRL**	TC 1 TTN015 WP (5/8)(blue)	-5.910(0.025)	-1.187(0.104)	98.220(1.684)	0.342(1.972)	17	21	0	3.7950	0.9922
		TC 1 TTN018 WP (6/12) (blue)	-6.129(0.030)	-1.303(0.156)	102.400(2.190)	1.560(2.951)	13	17	2	4.8870	0.9884
		TC 1 TTN019 WP (6/16) (blue)	-6.131(0.033)	-0.857(0.093)	97.220(2.409)	-5.181(3.747)	17	21	0	4.2770	0.9878
		TC 11 TTN002 WP (3/18)(blue)	-6.010(0.038)	-1.174(0.137)	105.500(2.304)	3.929(3.401)	16	20	1	5.1720	0.9860
		TC 11 TTN006 WP (4/16) (blue)	-6.081(0.018)	-0.864(0.052)	103.300(1.430)	-5.888(2.207)	17	21	0	2.5550	0.9962

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 11 TTN017 WP (5/14)(yellow)	-5.975(0.021)	-0.821(0.059)	100.700(1.515)	-5.214(2.749)	17	21	0	2.6930	0.9951
		TC 12 RN001 WP (4/2) (yellow)	-5.951(0.042)	-0.989(0.140)	80.510(1.921)	3.260(2.815)	19	23	0	4.3270	0.9816
		TC 12 RN013 WP (6/11) (yellow)	-6.231(0.013)	-0.865(0.038)	102.700(1.129)	-1.602(1.238)	12	16	4	1.5520	0.9987
		TC 12 TTN001 WP (3/12) (blue)	-5.949(0.019)	-1.153(0.074)	105.000(1.228)	5.133(1.885)	17	21	0	2.7870	0.9954
		TC 12 TTN003 WP (3/28)(yellow)	-6.059(0.035)	-0.935(0.101)	99.040(2.451)	2.304(2.607)	18	22	0	4.5670	0.9870
		TC 12 TTN006 WP (4/16) (blue)	-6.081(0.018)	-0.864(0.052)	103.300(1.430)	-5.888(2.207)	17	21	0	2.5550	0.9962
		TC 15 RN002 WP (4/9) (yellow)	-5.775(0.051)	-1.233(0.258)	87.830(2.443)	6.463(4.892)	16	20	1	6.3930	0.9628
		TC 16 TTN007 WP (4/21) (green)	-5.914(0.021)	-0.985(0.067)	97.690(1.315)	-0.397(1.529)	20	24	0	2.8400	0.9953
		TC 16 TTN008 WP (4/22) (green)	-5.962(0.015)	-0.970(0.048)	106.300(1.021)	-2.750(1.639)	16	20	1	2.0450	0.9977
		TC 16 TTN009 WP (4/23) (blue)	-6.389(0.009)	-1.119(0.040)	106.500(0.826)	-1.554(0.797)	13	17	4	1.3330	0.9992
		TC 19 TTN005 WP (4/14)(yellow)	-6.180(0.018)	-0.973(0.054)	101.500(1.335)	-0.431(1.512)	18	22	0	2.5280	0.9963
		TC 2 RN007 WP (5/7) (yellow)	-5.855(0.048)	-1.229(0.232)	83.790(2.348)	0.108(4.700)	17	21	0	6.1460	0.9657
		TC 2 RN008 WP (5/12) (green)	-5.816(0.031)	-0.991(0.107)	99.040(1.917)	-1.926(3.132)	18	22	0	4.2680	0.9887
		TC 2 RN009 WP (5/13) (blue)	-5.704(0.049)	-1.098(0.223)	91.730(3.420)	-2.440(3.957)	17	21	2	6.4810	0.9754
		TC 2 RN013 WP (6/11) (yellow)	-6.231(0.013)	-0.865(0.038)	102.700(1.129)	-1.602(1.238)	12	16	4	1.5520	0.9987
		TC 4 RN003 WP (4/16) (yellow)	-5.821(0.044)	-0.939(0.138)	116.700(4.686)	12.810(3.474)	15	19	2	5.1400	0.9844
		TC 4 TTN010 WP (4/28) (yellow)	-5.310(0.057)	-0.874(0.179)	108.100(2.213)	-22.640(17.620)	17	21	0	4.9200	0.9846
		TC 4 TTN011 WP (4/29) (yellow)	-5.326(0.051)	-0.981(0.149)	95.160(1.793)	-5.587(5.575)	20	24	0	4.8580	0.9854
		TC 4 TTN012 WP (4/30) (yellow)	-5.867(0.038)	-0.922(0.124)	98.920(2.422)	-4.160(4.826)	17	21	0	4.9820	0.9832
		TC 4 TTN013 WP (5/5) (yellow)	-6.086(0.019)	-0.982(0.057)	99.980(1.311)	0.712(1.286)	20	24	0	2.6170	0.9961
		TC 4 TTN014 WP (5/7) (yellow)	-5.729(0.055)	-0.755(0.172)	89.980(3.418)	-6.238(10.690)	15	19	0	5.2420	0.9730
		TC 5 TTN007 WP (4/21) (green)	-5.914(0.021)	-0.985(0.067)	97.690(1.315)	-0.397(1.529)	20	24	0	2.8400	0.9953
		TC 5 TTN008 WP (4/22) (green)	-5.962(0.015)	-0.970(0.048)	106.300(1.021)	-2.750(1.639)	16	20	1	2.0450	0.9977
		TC 5 TTN009 WP (4/23) (blue)	-6.389(0.009)	-1.119(0.040)	106.500(0.826)	-1.554(0.797)	13	17	4	1.3330	0.9992
		TC 6 RN004 WP (4/24) (blue)	-5.983(0.020)	-1.138(0.080)	97.640(1.267)	0.183(2.049)	17	21	0	2.9140	0.9946
		TC 6 RN005 WP (5/1) (blue)	-5.818(0.039)	-1.267(0.182)	101.900(2.333)	3.968(4.105)	17	21	0	5.9590	0.9781
		TC 6 RN006 WP (5/6) (green)	-5.862(0.022)	-1.086(0.082)	97.470(1.413)	-0.872(1.790)	18	22	0	3.1500	0.9943

Table A-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		WP 10/3	-5.991(0.039)	-1.249(0.179)	90.960(2.180)	5.615(3.520)	17	21	0	5.3180	0.9778
		WP 11/20	-5.992(0.052)	-1.103(0.200)	97.080(3.422)	2.708(5.159)	16	20	0	7.2540	0.9654
		WP 11/27	-5.945(0.054)	-0.983(0.163)	100.500(3.054)	13.330(4.478)	17	21	0	6.0310	0.9703
		WP 11/30	-6.098(0.051)	-0.785(0.115)	112.300(4.003)	8.509(4.775)	17	21	0	5.8390	0.9778
		WP 11/7a	-5.981(0.045)	-0.758(0.097)	114.400(3.972)	7.615(3.833)	17	21	0	5.0750	0.9839
		WP 12/12	-5.944(0.054)	-1.011(0.155)	113.400(3.375)	15.090(4.447)	17	21	0	6.5050	0.9739
		WP 9/12	-5.863(0.042)	-1.093(0.136)	122.100(2.862)	8.870(4.168)	17	21	0	6.1140	0.9828
		WP 9/21	-6.009(0.025)	-1.015(0.085)	99.350(1.623)	3.787(2.369)	15	19	1	3.1770	0.9935
		WP 9/24	-5.940(0.040)	-0.803(0.096)	104.100(2.708)	5.616(3.552)	18	22	0	4.5790	0.9853

Table A-2. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Unacceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
SC	**Hamner**	SC 9/11	.(.)	.(.)	100.000(50.400)	-80.380(384.100)	9	13	0	86.950	0.5209
		TC 1 Run 3 SC (5/7)	-9.071(0.348)	-0.024(0.046)	600.500(958.700)	-3111E9(9.99E12)	17	21	0	29.640	0.6708
		TC 1 Run 5 SC (5/22)	-8.531(0.055)	-0.962(0.176)	96.820(3.951)	-4.073(4.693)	11	15	1	6.150	0.9812
		TC 10 Run 1 SC (5/21)	-8.554(0.097)	-0.495(0.188)	106.600(9.921)	-24.200(25.240)	13	17	0	8.326	0.9635
		TC 18 Run 1 SC (6/4)	-10.340(0.044)	-0.442(0.078)	.(.)	-2.688(1.292)	20	24	0	3.016	0.9926
		TC 2 Run 2 SC UN (5/28)	.(.)	.(.)	72.590(15.610)	.(.)	17	21	0	54.090	0.4946
		TC 2 Run 4 SC UN (6/3)	-9.814(0.044)	-0.612(0.097)	127.200(14.180)	-3.546(2.448)	20	24	0	4.526	0.9849
		TC 2 Run 5 SC UN (6/7)	-9.435(0.022)	-1.694(0.175)	98.630(2.342)	-0.119(1.314)	18	22	2	4.144	0.9900
		TC 2 Run 6 SC UN (6/9)	-10.290(0.036)	-0.582(0.089)	258.600(118.600)	-1.607(1.208)	20	24	0	2.390	0.9954
		TC 2 Run 7 SC UN (6/17)	-9.177(0.037)	-2.572(0.422)	104.300(3.304)	6.705(2.279)	20	24	0	7.600	0.9748
		TC 2 Run 9 SC (6/23)	-9.264(0.380)	.(.)	.(.)	-144.20(99.030)	17	21	3	7.048	0.9631
		TC 23 Run 7 SC UN (5/27)	.(.)	.(.)	72.590(15.610)	.(.)	17	21	0	54.090	0.4946
		TC 3 Run 11 SC UN (6/23)	-9.424(0.042)	-1.718(0 264)	97.060(4.125)	-32.410(4.213)	13	17	1	8.010	0.9835
		TC 3 Run 13 SC UN (6/19)	-9.903(0.063)	-0.449(0 130)	182.700(76.950)	-3.396(4.385)	20	24	0	5.341	0.9773
		TC 3 Run 14 SC (6/23)	-9.264(0.380)	.(.)	.(.)	-144.20(99.030)	17	21	3	7.048	0.9631
		TC 3 Run 3 SC UN (5/7)	-9.033(0.265)	-0.644(0 543)	105.100(30.300)	-3.758(23.950)	19	23	0	30.770	0.6086
		TC 3 Run 8 SC UN (5/23)	-9.498(0.009)	-1.929(0.093)	100.300(1.049)	0.371(0.571)	20	24	0	1.914	0.9981
		TC 3 Run 9 SC UN (5/28)	-9.148(0.055)	-2.431(0 588)	113.100(5.378)	7.896(3.690)	20	24	0	12.210	0.9450
SC	**RTI**	SC #1 8/21	-7.595(0.365)	-0.749(0.454)	101.300(14.120)	-164E11(3.1E13)	17	21	0	44.520	0.6006
		SC #3 8/28	-7.682(0.243)	-0.519(0.167)	89.630(10.320)	-163E11(1.46E13)	19	23	0	27.120	0.6523
SC	**TRL**	TC 12 RN001 SC (4/2) (yellow)	-8.810(0.032)	-0.644(0.067)	103.000(3.091)	-8.053(3.339)	19	23	0	3.609	0.9921
		TC 4 TTN014 SC (5/7) (yellow)	-8.639(0.037)	-0.673(0.086)	103.600(3.810)	-9.366(4.477)	19	23	0	4.413	0.9885
WP	**Hamner**	NOR2 10/8	-5.531(0.203)	-0.221(0 285)	176.000(63.810)	-138.20(464.700)	20	24	0	19.300	0.8591
		TC 1 Run 3 WP (5/7)	-4.950(3.959)	.(.)	63.390(10.350)	.(.)	16	20	0	39.650	0.3430
		TC 1 Run 4 WP (5/18)	.(.)	.(.)	74.460(5.739)	13.750(9.074)	7	11	0	12.830	0.8328
		TC 10 Run 1 WP (5/21)	-6.034(0.123)	-1.502(0.759)	82.800(5.665)	25.260(8.092)	14	18	0	12.120	0.8116
		TC 13 Run 2 WP UN (5/29)	.(.)	.(.)	.(.)	.(.)	.	23	0	.	.
		TC 13 Run 3 WP (5/30)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		TC 18 Run 1 WP (6/4)	-5.954(0.019)	-0.530(0.036)	95.200(1.492)	-4.754(2.570)	16	20	4	1.581	0.9980
		TC 18 Run 3 WP (6/6)	-6.119(0.099)	-4.049(2.743)	89.170(5.240)	26.280(3.907)	16	20	0	11.630	0.8875
		TC 2 Run 10 WP (6/24)	-5.104(0.263)	-2.006(0.862)	98.640(2.656)	45.230(5.207)	16	20	1	8.583	0.8669
		TC 2 Run 2 WP UN (5/28)	-4.777(0.435)	-0.079(0.027)	663.200(175.000)	-518E11(2.22E13)	15	19	0	88.740	0.5464
		TC 2 Run 6 WP UN (6/9)	-7.743(1.736)	-0.053(0.097)	.(.)	-79.720(101.100)	16	20	1	5.419	0.9250
		TC 2 Run 7 WP UN (6/17)	-5.056(0.124)	-0.434(0.275)	109.200(7.692)	-101.90(317.000)	14	18	3	7.297	0.9474
		TC 2 Run 9 WP (6/23)	-4.919(0.232)	-0.936(0.278)	120.000(4.251)	40.780(8.005)	17	21	0	8.743	0.9201

Table A-2. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Unacceptable) Standard Curve (SC) and Weak Positive (WP) Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 23 Run 7 WP UN (5/27)	-4.777(0.435)	-0.079(0.027)	663.200(175.000)	-518E11(2.22E13)	15	19	0	88.740	0.5464
		TC 3 Run 1 WP UN (4/14)	-6.522(0.177)	-0.351(0.319)	94.280(33.780)	5.547(28.250)	18	22	0	10.210	0.8202
		TC 3 Run 10 WP UN (6/12)	-4.927(0.232)	-0.379(0 216)	103.800(14.160)	-4775E9(8.12E12)	16	20	0	21.740	0.5507
		TC 3 Run 12 WP UN (6/16)	-6.948(0.146)	-0.574(0 319)	93.950(20.930)	16.580(8.939)	17	21	0	10.280	0.8414
		TC 3 Run 13 WP UN (6/19)	-6.745(0.106)	-0.328(0 255)	701.200(3726.00)	17.550(12.680)	17	21	0	7.590	0.9572
		TC 3 Run 14 WP (6/23)	-4.919(0.232)	-0.936(0.278)	120.000(4.251)	40.780(8.005)	17	21	0	8.743	0.9201
		TC 3 Run 15 WP (6/24)	-5.104(0.263)	-2.006(0.862)	98.640(2.656)	45.230(5.207)	16	20	1	8.583	0.8669
		TC 3 Run 16 WP (6/25)	-4.942(0.067)	-0.234(0.168)	119.400(15.590)	-2.14E7(3.71E12)	14	18	3	6.000	0.9520
		TC 3 Run 3 WP UN (5/7)	-4.950(3.959)	.(.)	63.390(10.350)	.(.)	16	20	0	39.650	0.3430
		TC 3 Run 4 WP UN (5/15)	-6.187(0.137)	-1.725(0.788)	109.000(7.053)	25.800(6.804)	18	22	0	16.780	0.8461
		TC 3 Run 5 WP UN (5/16)	-6.102(0.067)	-1.656(0.479)	91.520(4.007)	8.334(5.728)	17	21	0	10.540	0.9269
		TC 3 Run 6 WP UN (5/18)	.(.)	.(.)	74.460(5.739)	13.750(9.074)	7	11	0	12.830	0.8328
		TC 3 Run 7 WP UN (5/23)	-6.151(0.013)	-2.779(0.210)	87.290(0.746)	6.206(1.251)	14	18	3	2.166	0.9965
		TC 3 Run 8 WP UN (5/23)	-6.122(0.068)	-0.716(0.130)	127.400(6.355)	0.809(7.172)	16	20	1	8.016	0.9712
		TC 3 Run 9 WP UN (5/28)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		TC 4 Run 5 WP UN (6/12)	-5.065(0.398)	-0.212(0.047)	130.600(14.910)	-212E11(1.66E13)	16	20	0	24.650	0.5604
		TC 4 Run 6 WP UN (6/25)	-4.943(0.069)	-0.234(0.082)	119.400(15.030)	-5.63E7(1.72E12)	14	18	3	5.997	0.9521
		TC 4 Run 7 WP UN (7/1)	-5.018(0.124)	-0.131(0.047)	176.700(31.530)	-5896E9(2.07E13)	17	21	0	13.130	0.8809
		TC 4 Run 8 WP UN (7/2)	-4.777(0.353)	-0.937(0.551)	132.100(7.900)	36.340(21.520)	17	21	0	17.430	0.7902
		TC 6 Run 1 WP UN (6/2)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		WP 9/11	.(.)	.(.)	.(.)	.(.)	.	6	0	.	.
WP	**RTI**	WP #1 8/21	-5.188(0.300)	-0.402(0.172)	124.600(14.380)	-559E11(1.77E13)	16	20	0	46.380	0.4831
		WP #3 8/28	-5.365(0.163)	-0.299(0.048)	96.200(8.301)	.(.)	17	21	0	14.380	0.7864
WP	**TRL**	TC 1 RN012 WP (5/29) (yellow)	-5.606(0.047)	-0.492(0.104)	101.900(3.527)	-51.370(34.090)	14	18	0	3.769	0.9896
		TC 11 TTN004 WP (4/7) (red)	-6.270(0.162)	.(.)	.(.)	.(.)	18	22	0	12.530	0.8727
		WP 11/7	-6.473(0.066)	-0.722(0.099)	64.770(1.424)	6.560(3.192)	8	12	0	2.091	0.9927

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
Chem 1	**Hamner**	TC 1 Run 3 (5/7)	-8.229(0.371)	-0.421(0.333)	94.070(12.570)	-60.410(98.380)	19	23	0	28.5300	0.6964
		TC 1 Run 4 (5/18)	.(.)	-0.190(0.118)	.(.)	.(.)	19	23	0	26.0500	0.3617
		TC 1 Run 5 (5/22)	-9.420(0.225)	-0.722(0.267)	73.590(2.890)	0.283(5.363)	10	14	0	6.4350	0.9693
Chem 1	**RTI**	RTI Set 4 Run 1 TC 1 (3/6)	-9.129(0.018)	-0.880(0.051)	90.920(2.323)	-1.423(0.511)	14	18	0	1.3390	0.9985
		RTI Set 4 Run 2 TC 1 (3/11)	-9.049(0.012)	-0.886(0.031)	96.290(1.266)	-1.592(0.577)	15	19	5	1.2660	0.9988
		RTI Set 4 Run 3 TC 1 UN (3/13)	-9.111(0.029)	-0.936(0.071)	83.890(1.770)	-1.640(1.315)	19	23	1	2.9700	0.9931
		RTI Set 4 Run 4 TC 1 UN (3/18)	-9.013(0.024)	-1.129(0.076)	84.140(1.878)	-1.000(1.038)	16	20	4	2.4840	0.9953
		RTI Set 4 Run 5 TC 1 (4/3)	-9.221(0.023)	-1.064(0.066)	82.710(1.380)	-0.185(0.965)	19	23	1	2.3790	0.9955
Chem 1	**TRL**	TC 1 TTN015 (5/8)(blue)	-9.879(0.173)	-0.610(0.238)	.(.)	-2.452(1.268)	13	17	1	3.6190	0.9750
		TC 1 TTN019 (6/16) (blue)	.(.)	-0.997(0.072)	.(.)	-1.667(0.558)	10	14	4	1.2790	0.9890
Chem 10	**Hamner**	TC 10 Run 1 (5/21)	-5.181(0.191)	-1.299(1.193)	77.870(3.795)	5.781(15.890)	19	23	0	14.3600	0.7331
		TC 10 Run 2 UN (6/2)	-5.057(0.090)	-0.886(0.183)	117.600(3.181)	-1.332(5.929)	20	24	0	10.1000	0.9643
		TC 10 Run 8 (6/23)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
Chem 10	**RTI**	RTI Set 5 Run 1 TC 10 (3/17)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		RTI Set 5 Run 2 TC 10 (3/27)	-3.970(0.048)	-3.570(4.110)	86.900(2.370)	11.700(5.480)	20	24	0	9.1700	0.9350
		RTI Set 5 Run 3 TC 10 (3/31)	-3.690(0.051)	-1.190(0.323)	86.800(1.500)	11.800(10.300)	19	23	1	5.1900	0.9630
Chem 10	**TRL**	TC 10 RN008 (5/12) (green)	.(.)	.(.)	96.680(1.438)	44.220(43.250)	20	24	0	5.5710	0.9198
		TC 10 RN009 (5/13) (blue)	-3.903(0.146)	-1.975(3.083)	89.320(1.443)	5.871(11.560)	20	24	0	5.5630	0.9670
Chem 11	**Hamner**	TC 11 Run 1 (3/5)	-5.718(0.084)	-1.027(0.239)	102.500(2.748)	4.116(5.693)	16	20	1	8.0640	0.9678
		TC 11 Run 2 (3/6)	-5.822(0.059)	-0.942(0.153)	107.200(2.330)	-6.696(4.775)	16	20	1	6.5750	0.9835
		TC 11 Run 3 (3/10)	-5.931(0.051)	-0.741(0.080)	115.900(1.893)	1.866(3.469)	17	21	0	4.7130	0.9909
Chem 11	**RTI**	RTI Set 1 Run 1 TC 11 (2/4)	-6.080(0.041)	-0.882(0.089)	105.000(1.520)	2.970(2.440)	17	21	0	4.0500	0.9920
		RTI Set 1 Run 2 TC 11 (2/6)	-5.940(0.032)	-0.820(0.063)	106.000(1.120)	1.430(2.120)	17	21	0	2.9800	0.9960
		RTI Set 1 Run 3 TC 11 (2/7)	-6.100(0.022)	-0.944(0.059)	90.800(0.738)	2.340(1.250)	16	20	0	1.9900	0.9980
Chem 11	**TRL**	TC 11 RN008 (5/12) (green)	-5.296(0.062)	-1.022(0.187)	88.680(1.774)	1.400(5.204)	16	20	1	5.4640	0.9760
		TC 11 TTN002 (3/18) (blue)	-5.551(0.028)	-0.841(0.056)	104.300(0.890)	-1.660(2.431)	17	21	0	2.6330	0.9964
		TC 11 TTN006 (4/16) (blue)	-5.672(0.035)	-0.939(0.082)	100.000(1.154)	-1.333(2.647)	16	20	1	3.3320	0.9943
Chem 12	**Hamner**	TC 12 Run 1 (3/5)	-7.546(0.075)	-1.110(0.183)	99.220(3.741)	1.486(2.720)	16	20	0	7.5540	0.9744
		TC 12 Run 2 (3/6)	-7.683(0.075)	-0.886(0.152)	112.500(4.976)	-10.850(3.400)	17	21	0	8.9120	0.9758

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 12 Run 5 (3/24)	-7.790(0.040)	-1.021(0.100)	89.780(1.841)	0.918(1.424)	16	20	0	3.6470	0.9926
Chem 12	**RTI**	RTI Set 1 Run 1 TC 12 (2/4)	-7.320(0.028)	-1.220(0.089)	100.000(1.340)	-0.601(1.260)	15	19	1	3.0400	0.9960
		RTI Set 1 Run 2 TC 12 (2/6)	-7.480(0.012)	-1.160(0.030)	105.000(0.556)	-0.775(0.391)	14	18	3	1.0900	1.0000
		RTI Set 1 Run 3 TC 12 (2/7)	-7.630(0.008)	-1.030(0.017)	93.900(0.366)	-1.110(0.246)	14	18	3	0.6670	1.0000
Chem 12	**TRL**	TC 12 RN001 (4/2) (yellow)	-6.591(0.038)	-1.023(0.080)	91.600(1.159)	-1.795(1.494)	16	20	1	3.1130	0.9954
		TC 12 TTN001 (3/12) (blue)	-7.039(0.017)	-1.048(0.056)	102.800(0.843)	-0.657(0.804)	17	21	0	1.9520	0.9985
		TC 12 TTN003 (3/28)(yellow)	-6.840(0.035)	-1.161(0.127)	94.370(1.498)	0.250(1.631)	16	20	1	3.7160	0.9936
		TC 12 TTN006 (4/16) (blue)	-6.816(0.021)	-0.904(0.047)	103.300(0.921)	-2.107(1.043)	17	21	0	2.1910	0.9981
Chem 13	**Hamner**	TC 13 Run 1 (5/21)	-7.779(0.158)	-1.301(0.651)	86.280(3.865)	12.530(7.065)	13	17	0	11.0500	0.9173
		TC 13 Run 3 (5/30)	-7.639(0.050)	-0.966(0.098)	77.610(1.384)	6.735(1.413)	13	17	1	2.7910	0.9935
		TC 13 Run 4 (6/6)	-7.416(0.073)	-1.774(0.298)	90.540(1.938)	6.685(1.941)	20	24	0	5.7410	0.9828
Chem 13	**RTI**	RTI Set 6 Run 1 TC 13 (4/1)	-7.300(0.055)	-1.440(0.261)	74.300(1.360)	1.480(1.140)	16	20	1	3.0800	0.9930
		RTI Set 6 Run 2 TC 13 UN (4/7)	-7.380(0.014)	-1.530(0.075)	91.700(0.971)	0.483(0.818)	17	21	3	2.0500	0.9980
		RTI Set 6 Run 3 TC 13 (4/8)	-7.490(0.032)	-1.540(0.150)	72.400(1.330)	0.188(1.400)	20	24	0	3.4200	0.9900
		RTI Set 6 Run 4 TC 13 (6/9)	-7.400(0.014)	-1.380(0.060)	87.400(0.705)	-0.865(0.742)	18	22	2	1.7300	0.9980
Chem 13	**TRL**	TC 13 RN005 (5/1) (blue)	-5.847(0.106)	-2.064(1.400)	96.810(1.985)	2.624(3.892)	17	21	0	6.7480	0.9782
		TC 13 RN006 (5/6) (green)	-5.664(0.057)	-2.113(0.358)	95.610(1.025)	1.111(2.428)	15	19	1	3.3800	0.9943
Chem 14	**Hamner**	TC 14 Run 3 (4/10)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		TC 14 Run 5 (4/16)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		TC 14 Run 6 (4/17)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
Chem 14	**RTI**	RTI Set 3 Run 1 TC 14 (2/28)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		RTI Set 3 Run 2 TC 14 (3/4)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		RTI Set 3 Run 3 TC 14 (3/5)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
Chem 14	**TRL**	TC 14 TTN010 (4/28) (yellow)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		TC 14 TTN011 (4/29) (yellow)	.(.)	.(.)	91.490(15.420)	.(.)	12	16	1	6.5440	0.6691
		TC 14 TTN012 (4/30) (yellow)	-5.337(0.141)	-0.810(0.338)	85.220(4.321)	-663E9(4.56E12)	14	18	0	11.5700	0.8467
		TC 14 TTN013 (5/5) (yellow)	-5.484(0.105)	-0.768(0.149)	72.670(4.895)	-134E11(4.55E12)	14	18	0	12.8900	0.7453
Chem 15	**Hamner**	TC 15 Run 1 (3/11)	-5.599(0.038)	-0.779(0.060)	92.160(1.100)	-2.904(1.875)	20	24	0	3.2420	0.9941

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 15 Run 2 (3/12)	-5.512(0.044)	-0.767(0.067)	103.800(1.394)	-0.804(2.308)	20	24	0	4.0390	0.9925
		TC 15 Run 3 (3/17)	-5.601(0.046)	-0.878(0.083)	90.680(1.292)	-1.014(2.086)	20	24	0	3.9730	0.9910
Chem 15	**RTI**	RTI Set 1 Run 1 TC 15 (2/4)	-5.320(0.042)	-0.968(0.095)	97.500(1.290)	0.072(2.170)	20	24	0	4.1500	0.9910
		RTI Set 1 Run 2 TC 15 (2/6)	-5.220(0.051)	-1.000(0.130)	101.000(1.660)	-1.320(2.860)	20	24	0	5.4100	0.9860
		RTI Set 1 Run 3 TC 15 (2/7)	-5.400(0.052)	-0.801(0.088)	93.900(1.500)	-1.740(2.750)	20	24	0	4.5600	0.9880
Chem 15	**TRL**	TC 15 RN002 (4/9) (yellow)	-4.999(0.040)	-1.006(0.123)	89.980(1.221)	-5.029(2.731)	19	23	0	4.0280	0.9906
		TC 15 TTN002 (3/18) (blue)	-5.410(0.045)	-0.926(0.088)	105.700(1.504)	-2.167(2.423)	20	24	0	4.7250	0.9909
		TC 15 TTN004 (4/7) (red)	-5.206(0.022)	-0.920(0.061)	104.100(0.778)	-13.160(2.958)	17	21	0	2.4610	0.9969
		TC 15 TTN006 (4/16) (blue)	-4.947(0.040)	-0.903(0.066)	99.890(0.831)	-2.236(1.950)	18	22	2	2.7330	0.9964
		TC 15 TTN017 (5/14) (yellow)	-4.997(0.033)	-1.026(0.101)	109.900(1.175)	-0.792(2.230)	20	24	0	3.9060	0.9937
Chem 16	**Hamner**	TC 16 Run 1 (3/18)	-5.579(0.040)	-1.392(0.133)	101.300(1.155)	1.515(2.474)	17	21	0	3.8830	0.9927
		TC 16 Run 2 (3/26)	-5.474(0.091)	-1.353(0.274)	111.500(2.824)	2.622(6.122)	17	21	0	9.4720	0.9639
		TC 16 Run 3 UN (3/27)	-5.520(0.048)	-1.542(0.176)	108.900(1.088)	11.300(2.775)	16	20	0	3.6870	0.9928
		TC 16 Run 4 UN (4/2)	-5.746(0.052)	-1.741(0.339)	89.380(1.081)	8.863(2.199)	17	21	0	3.6820	0.9907
Chem 16	**RTI**	RTI Set 2 Run 1 TC16 UN (2/21)	-5.870(0.022)	-1.460(0.134)	89.200(0.780)	-1.430(1.040)	19	23	1	2.4800	0.9970
		RTI Set 2 Run 2 TC 16 (2/26)	-5.220(0.052)	-1.860(0.431)	93.900(1.230)	-0.448(2.500)	16	20	1	4.0400	0.9910
		RTI Set 2 Run 3 TC 16 (2/27)	-5.720(0.118)	-0.865(0.217)	73.000(2.250)	-5.500(7.650)	17	21	0	6.9300	0.9500
		RTI Set 2 Run 4 TC 16 (3/3)	-5.220(0.020)	-1.920(0.220)	89.700(1.590)	-1.570(2.340)	20	24	0	4.4700	0.9880
Chem 16	**TRL**	TC 16 TTN007 (4/21) (green)	.(.)	.(.)	99.900(0.968)	-0.210(1.389)	19	23	1	3.2460	0.9955
		TC 16 TTN008 (4/22) (green)	-5.116(0.020)	-1.649(0.197)	106.000(0.796)	-1.466(1.208)	20	24	0	2.7430	0.9971
		TC 16 TTN009 (4/23) (blue)	.(.)	.(.)	102.100(0.953)	-2.331(1.372)	20	24	0	3.3100	0.9957
Chem 17	**Hamner**	TC 17 Run 2 (4/3)	-5.586(0.053)	-0.332(0.059)	114.400(3.202)	-1166E9(4.54E12)	17	21	0	6.3760	0.9718
		TC 17 Run 4 (4/8)	-5.548(0.089)	-0.934(0.258)	116.600(1.698)	10.740(14.740)	17	21	0	5.4270	0.9768
		TC 17 Run 5 (4/10)	-5.709(0.179)	-1.122(0.541)	91.290(2.635)	31.540(5.812)	19	23	0	8.9360	0.8923
Chem 17	**RTI**	RTI Set 3 Run 1 TC 17 (2/28)	.(.)	.(.)	85.500(1.310)	14.300(4.520)	15	19	0	4.5200	0.9800
		RTI Set 3 Run 2 TC 17 (3/4)	-5.560(0.032)	-2.490(0.411)	88.100(2.270)	15.800(2.210)	20	24	0	5.8700	0.9720
		RTI Set 3 Run 3 TC 17 (3/5)	-5.560(0.030)	-2.480(0.386)	83.100(2.210)	6.780(3.000)	17	21	0	5.7800	0.9750
Chem 17	**TRL**	TC 17 RN003 (4/16) (yellow)	-5.324(0.080)	-1.225(0.251)	105.500(2.774)	-2.228(6.566)	17	21	0	9.2360	0.9605

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 17 TTN008 (4/22) (green)	-5.398(0.012)	-1.026(0.030)	108.900(0.486)	-4.390(1.063)	14	18	3	1.3230	0.9993
		TC 17 TTN009 (4/23) (blue)	-5.404(0.058)	-2.001(0.248)	101.700(1.240)	12.870(2.523)	17	21	0	4.2710	0.9897
		TC 17 TTN010 (4/28)(yellow)	-5.087(0.072)	-1.473(0.250)	104.300(1.592)	31.080(3.432)	17	21	0	5.4040	0.9729
Chem 18	**Hamner**	TC 18 Run 2 (6/5)	-6.459(0.258)	-0.336(0.127)	127.600(13.120)	16.580(12.620)	20	24	0	11.5700	0.9185
		TC 18 Run 3 (6/6)	-5.087(0.161)	-0.465(0.167)	113.700(4.105)	-13.080(36.140)	19	23	1	10.5400	0.9275
Chem 18	**RTI**	RTI Set 5 Run 1 TC 18 (3/17)	.(.)	.(.)	.(.)	.(.)	.	11	0	.	.
		RTI Set 5 Run 2 TC 18 (3/27)	.(.)	.(.)	.(.)	.(.)	.	17	0	.	.
		RTI Set 5 Run 3 TC 18 (3/31)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
Chem 18	**TRL**	TC 18 RN004 (4/24) (blue)	.(.)	.(.)	.(.)	.(.)	.	15	0	.	.
		TC 18 RN005 (5/1) (blue)	.(.)	.(.)	.(.)	.(.)	.	10	0	.	.
		TC 18 RN006 (5/6) (green)	.(.)	.(.)	93.020(1.346)	.(.)	19	23	0	4.5870	0.9589
Chem 19	**Hamner**	TC 19 Run 2 (3/6)	.(.)	.(.)	115.800(3.315)	-6.500(18.460)	19	23	0	12.8400	0.9077
		TC 19 Run 3 (3/10)	-3.786(0.053)	-0.828(0.157)	111.600(1.329)	-22.680(17.180)	19	23	1	4.5260	0.9873
		TC 19 Run 4 (3/11)	-4.035(0.045)	-0.746(0.112)	96.570(1.102)	-17.470(11.170)	20	24	0	3.7930	0.9879
Chem 19	**RTI**	RTI Set 1 Run 1 TC 19 (2/4)	-3.840(0.065)	-1.130(0.393)	97.500(1.370)	-8.400(15.100)	20	24	0	5.1300	0.9780
		RTI Set 1 Run 2 TC 19 (2/6)	-3.760(0.067)	-0.810(0.220)	103.000(1.390)	-41.600(39.100)	20	24	0	4.9100	0.9830
		RTI Set 1 Run 3 TC 19 (2/7)	-3.910(0.036)	-0.701(0.091)	98.000(0.823)	-35.700(16.600)	20	24	0	2.7900	0.9940
Chem 19	**TRL**	TC 19 TTN001 (3/12) (blue)	.(.)	.(.)	100.000(0.958)	.(.)	16	20	4	3.5090	0.9912
		TC 19 TTN007 (4/21) (green)	.(.)	.(.)	98.730(0.692)	12.030(139.700)	20	24	0	2.6790	0.9925
Chem 2	**Hamner**	TC 2 Run 1 (5/19)	-9.406(0.186)	-0.557(0.207)	116.300(16.080)	-6.903(8.032)	16	20	1	16.6800	0.8938
		TC 2 Run 10 (6/24)	-8.630(0.086)	-0.740(0.123)	99.590(3.245)	-6.730(3.499)	18	22	0	7.4390	0.9781
		TC 2 Run 3 UN (6/2)	-9.304(0.042)	-0.890(0.076)	129.100(1.720)	0.803(1.642)	18	22	2	4.2500	0.9956
		TC 2 Run 7 UN (6/17)	-8.582(0.178)	-0.466(0.145)	96.510(7.463)	4.449(6.929)	20	24	0	10.9500	0.9204
		TC 2 Run 8 UN (6/18)	-10.410(0.385)	-0.453(0.207)	65.640(10.990)	-6.908(6.632)	20	24	0	12.0700	0.8474
		TC 2 Run 9 (6/23)	-8.744(0.037)	-0.628(0.041)	129.700(1.842)	7.626(1.190)	17	21	3	2.8590	0.9973
Chem 2	**RTI**	RTI Set 5 Run 1 TC 2 (3/17)	-9.320(0.030)	-0.982(0.104)	89.000(4.430)	-0.280(0.519)	17	21	0	1.6800	0.9970
		RTI Set 5 Run 2 TC 2 (3/27)	-8.940(0.036)	-1.150(0.119)	88.600(1.560)	-4.170(1.760)	20	24	0	4.1200	0.9910
		RTI Set 5 Run 3 TC 2 (3/31)	-9.500(0.012)	-0.927(0.029)	91.300(1.080)	-0.465(0.468)	17	21	3	1.1800	0.9990
Chem 2	**TRL**	TC 2 RN007 (5/7) (yellow)	-9.008(0.014)	-1.065(0.033)	74.660(1.079)	-1.155(0.287)	11	15	2	0.7919	0.9991

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 2 RN008 (5/12) (green)	-8.774(0.006)	-1.037(0.014)	103.700(0.476)	-2.703(0.149)	11	15	5	0.4079	0.9999
		TC 2 RN009 (5/13) (blue)	-8.732(0.024)	-1.044(0.057)	85.000(1.839)	-1.937(0.604)	16	20	1	1.9460	0.9968
Chem 20	**Hamner**	TC 20 Run 2 (4/10)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		TC 20 Run 4 (4/16)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		TC 20 Run 5 (4/17)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
Chem 20	**RTI**	RTI Set 3 Run 1 TC 20 (2/28)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		RTI Set 3 Run 2 TC 20 (3/4)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		RTI Set 3 Run 3 TC 20 (3/5)	.(.)	.(.)	.(.)	.(.)	.	16	0	.	.
Chem 20	**TRL**	TC 20 TTN015 (5/8) (blue)	.(.)	.(.)	62.720(2.975)	16.120(4.705)	13	17	0	8.5030	0.8814
		TC 20 TTN018 (6/12) (blue)	.(.)	.(.)	59.410(3.324)	24.140(4.204)	9	13	0	9.4010	0.8280
Chem 21	**Hamner**	TC 21 Run 1 (3/11)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 21 Run 2 (3/12)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
		TC 21 Run 3 (3/17)	.(.)	.(.)	.(.)	.(.)	.	9	0	.	.
Chem 21	**RTI**	RTI Set 1 Run 1 TC 21 (2/4)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		RTI Set 1 Run 2 TC 21 (2/6)	.(.)	.(.)	.(.)	.(.)	.	19	0	.	.
		RTI Set 1 Run 3 TC 21 (2/7)	.(.)	.(.)	.(.)	.(.)	.	8	0	.	.
Chem 21	**TRL**	TC 21 TTN006 (4/16) (blue)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
Chem 22	**Hamner**	TC 22 Run 1 (3/26)	.(.)	.(.)	.(.)	.(.)	.	22	0	.	.
		TC 22 Run 2 (3/27)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 22 Run 3 (3/31)	.(.)	.(.)	.(.)	.(.)	.	16	0	.	.
Chem 22	**RTI**	RTI Set 2 Run 2 TC 22 (2/26)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		RTI Set 2 Run 3 TC 22 (2/27)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		RTI Set 2 Run 4 TC 22 (3/3)	-4.500(0.029)	-0.991(0.136)	95.700(1.300)	-0.495(7.470)	17	21	0	3.3600	0.9910
Chem 22	**TRL**	TC 22 TTN007 (4/21) (green)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
		TC 22 TTN008 (4/22) (green)	-3.280(1.727)	-1.860(7.516)	104.000(1.148)	35.960(93.610)	19	23	1	4.4210	0.9649
		TC 22 TTN009 (4/23) (blue)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
Chem 23	**Hamner**	TC 23 Run 1 (4/15)	-4.818(0.159)	-0.798(0.255)	107.300(3.415)	10.610(11.660)	17	21	1	10.6500	0.9251
		TC 23 Run 6 (5/27)	-5.228(0.032)	-0.870(0.071)	102.700(0.929)	3.720(3.092)	17	21	0	2.8650	0.9945
		TC 23 Run 8 (6/11)	-5.564(0.023)	-1.690(0.084)	86.620(0.686)	-3.531(1.157)	13	17	3	1.9060	0.9982

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
Chem 23	**RTI**	RTI Set 4 Run 2 TC 23 (3/11)	-5.158(0.023)	-1.169(0.095)	88.370(1.647)	3.875(1.654)	17	21	0	2.8960	0.9936
		RTI Set 4 Run 3 TC 23 UN(3/13)	-5.469(0.054)	-1.011(0.139)	65.290(2.293)	2.462(2.389)	15	19	2	3.1920	0.9839
		RTI Set 4 Run 4 TC 23 UN(3/18)	-5.369(0.064)	-1.389(0.270)	70.630(3.034)	4.851(2.334)	19	23	0	5.8260	0.9621
		RTI Set 4 Run 5 TC 23 (4/3)	-5.342(0.028)	-1.033(0.092)	96.860(2.520)	4.437(1.502)	20	24	0	3.6660	0.9902
Chem 23	**TRL**	TC 23 RN009 (5/13) (blue)	-4.817(0.141)	-0.458(0.154)	83.340(3.167)	-19.560(27.270)	19	23	1	8.0000	0.9363
		TC 23 RN012 (5/29)(yellow)	-4.648(0.245)	-1.245(0.573)	65.890(2.975)	0.864(8.201)	20	24	0	11.2000	0.8385
		TC 23 TTN015 (5/8) (blue)	.(.)	.(.)	61.320(1.790)	10.620(3.246)	16	20	4	5.8860	0.9476
Chem 3	**Hamner**	TC 3 Run 14 (6/23)	-9.489(0.152)	-0.825(0.245)	111.600(4.641)	7.858(7.006)	20	24	0	13.5400	0.9246
		TC 3 Run 15 (6/24)	-9.652(0.157)	-0.853(0.234)	86.910(3.031)	-1.253(4.875)	18	22	0	9.0080	0.9559
		TC 3 Run 16 (6/25)	-9.449(0.128)	-0.713(0.181)	93.740(3.336)	7.122(5.966)	20	24	0	9.4650	0.9406
Chem 3	**RTI**	RTI Set 4 Run 1 TC 3 (3/6)	-9.755(0.095)	-0.939(0.387)	106.700(72.600)	0.452(0.749)	17	21	0	2.4080	0.9902
		RTI Set 4 Run 2 TC 3 (3/11)	-9.639(0.028)	-1.167(0.104)	95.320(1.836)	0.273(1.788)	20	24	0	4.1140	0.9905
		RTI Set 4 Run 3 TC 3 UN (3/13)	-9.767(0.057)	-1.090(0.170)	76.520(2.548)	-0.402(2.590)	20	24	0	5.6800	0.9721
		RTI Set 4 Run 4 TC 3 UN (3/18)	-9.766(0.047)	-1.027(0.143)	92.330(3.149)	-1.053(2.809)	20	24	0	6.2770	0.9761
		RTI Set 4 Run 5 TC 3 (4/3)	-10.080(0.030)	-1.207(0.079)	66.690(0.931)	-0.349(0.860)	19	23	1	2.0350	0.9956
Chem 3	**TRL**	TC 3 RN009 (5/13) (blue)	-9.141(0.019)	-1.020(0.060)	82.200(1.862)	-2.756(0.441)	16	20	4	1.4300	0.9976
		TC 3 RN012 (5/29) (yellow)	-9.160(0.023)	-0.858(0.056)	89.750(3.025)	-4.019(0.501)	17	21	1	1.6390	0.9969
		TC 3 TTN015 (5/8) (blue)	-9.627(0.046)	-1.247(0.158)	62.590(2.283)	-1.050(0.352)	17	21	0	1.1800	0.9974
		TC 3 TTN018 (6/12) (blue)	-10.010(0.018)	-1.177(0.121)	59.930(3.715)	-3.789(0.167)	15	19	3	0.5565	0.9991
		TC 3 TTN019 (6/16) (blue)	.(.)	-1.033(0.098)	.(.)	-1.156(0.498)	16	20	4	1.6680	0.9882
Chem 4	**Hamner**	TC 4 Run 2 (4/7)	-10.580(0.070)	-0.659(0.086)	80.190(1.636)	-4.669(3.480)	19	23	0	4.3670	0.9850
		TC 4 Run 3 (4/8)	-10.480(0.067)	-0.608(0.072)	111.400(2.097)	-3.361(3.835)	19	23	0	5.2930	0.9885
		TC 4 Run 4 (4/9)	-10.320(0.069)	-0.676(0.093)	97.100(1.947)	-0.012(4.034)	20	24	0	5.5280	0.9820
Chem 4	**RTI**	RTI Set 2 Run 1 TC4 UN (2/21)	-9.030(0.013)	-0.857(0.029)	99.800(1.720)	-2.240(0.283)	15	19	2	0.8800	0.9990
		RTI Set 2 Run 2 TC 4 (2/26)	-9.740(0.020)	-0.863(0.077)	147.000(34.900)	-0.964(0.194)	12	16	5	0.5110	1.0000
		RTI Set 2 Run 3 TC 4 (2/27)	-9.780(0.039)	-0.847(0.165)	114.000(42.200)	-0.878(0.479)	13	17	3	1.2500	0.9970
		RTI Set 2 Run 4 TC 4 (3/3)	-9.570(0.022)	-1.020(0.068)	101.000(1.560)	-0.401(1.500)	20	24	0	3.2400	0.9950

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
Chem 4	**TRL**	TC 4 RN003 (4/16) (yellow)	-8.932(0.077)	-1.609(1.155)	97.820(7.235)	0.738(5.031)	6	10	0	8.4140	0.9758
		TC 4 TTN010 (4/28) (yellow)	-8.574(0.047)	-1.555(0.158)	75.270(2.173)	-4.651(0.705)	11	15	3	2.0520	0.9963
		TC 4 TTN011 (4/29) (yellow)	-8.524(0.042)	-1.000(0.097)	96.250(2.827)	-8.776(1.363)	13	17	1	3.5700	0.9942
		TC 4 TTN012 (4/30) (yellow)	-9.088(0.011)	-1.039(0.051)	98.250(1.698)	-1.981(0.384)	14	18	0	1.0630	0.9992
		TC 4 TTN013 (5/5) (yellow)	-9.425(0.011)	-1.016(0.031)	90.360(1.670)	-1.419(0.127)	11	15	2	0.3501	0.9999
		TC 4 TTN014 (5/7) (yellow)	.(.)	.(.)	.(.)	-0.557(3.264)	13	17	1	7.6270	0.8796
Chem 5	**Hamner**	TC 5 Run 1 (3/26)	-7.727(0.034)	-0.678(0.050)	101.500(1.407)	1.973(1.685)	16	20	1	2.8100	0.9960
		TC 5 Run 2 (3/27)	-7.952(0.051)	-0.806(0.098)	97.770(2.144)	1.608(2.485)	16	20	0	4.5540	0.9895
		TC 5 Run 3 (3/31)	-7.013(0.045)	-0.786(0.080)	91.200(1.740)	0.699(1.852)	17	21	0	3.6980	0.9922
Chem 5	**RTI**	RTI Set 2 Run 1 TC5 UN (2/21)	-7.050(0.054)	-1.110(0.206)	92.000(2.310)	1.250(2.330)	17	21	0	5.5900	0.9840
		RTI Set 2 Run 2 TC 5 (2/26)	-7.130(0.018)	-0.925(0.046)	90.400(0.776)	0.737(0.689)	15	19	2	1.5500	0.9990
		RTI Set 2 Run 3 TC 5 (2/27)	.(.)	.(.)	80.500(2.020)	3.820(1.950)	17	21	0	5.3300	0.9820
		RTI Set 2 Run 4 TC 5 (3/3)	-7.140(0.029)	-1.200(0.119)	97.800(1.670)	2.420(1.520)	20	24	0	4.0600	0.9920
Chem 5	**TRL**	TC 5 TTN007 (4/21) (green)	-6.458(0.053)	-0.823(0.093)	93.940(1.680)	0.800(2.390)	16	20	1	4.1570	0.9910
		TC 5 TTN008 (4/22) (green)	-6.518(0.031)	-1.030(0.069)	102.300(1.139)	2.095(1.449)	17	21	0	3.0630	0.9960
		TC 5 TTN009 (4/23) (blue)	-6.444(0.024)	-0.970(0.050)	102.200(0.904)	-0.280(1.196)	17	21	0	2.4060	0.9975
Chem 6	**Hamner**	TC 6 Run 2 (6/3)	-6.311(0.074)	-1.064(0.205)	89.160(1.830)	10.350(4.910)	17	21	0	5.9550	0.9667
		TC 6 Run 3 (6/5)	-6.303(0.030)	-1.064(0.078)	93.160(0.802)	12.450(1.925)	15	19	1	2.4070	0.9952
		TC 6 Run 4 (6/6)	-6.262(0.042)	-1.058(0.127)	95.390(1.255)	2.270(3.565)	17	21	0	4.0890	0.9881
Chem 6	**RTI**	RTI Set 6 Run 1 TC 6 (4/1)	-6.170(0.065)	-1.090(0.273)	81.600(1.760)	10.700(5.200)	14	18	0	4.9200	0.9720
		RTI Set 6 Run 2 TC 6 UN (4/7)	-6.290(0.028)	-1.120(0.100)	87.400(1.630)	0.855(1.960)	19	23	1	3.5800	0.9910
		RTI Set 6 Run 3 TC 6 (4/8)	-6.250(0.040)	-1.210(0.145)	73.700(1.540)	1.560(2.300)	20	24	0	3.9200	0.9850
		RTI Set 6 Run 4 TC 6 (6/9)	-6.230(0.028)	-1.030(0.092)	87.000(1.480)	1.140(2.160)	20	24	0	3.4400	0.9910
Chem 6	**TRL**	TC 6 RN004 (4/24) (blue)	-5.877(0.035)	-1.104(0.152)	98.010(1.199)	0.494(3.652)	15	19	0	3.6120	0.9920
		TC 6 RN005 (5/1) (blue)	.(.)	.(.)	99.470(1.804)	18.500(9.151)	14	18	0	5.4110	0.9755
		TC 6 RN006 (5/6) (green)	-5.764(0.069)	-0.889(0.229)	103.400(1.846)	-1.356(14.500)	14	18	0	4.8810	0.9824
Chem 7	**Hamner**	TC 7 Run 2 (6/3)	-5.255(0.086)	-1.061(0.239)	86.170(1.964)	2.878(4.768)	17	21	0	6.4680	0.9671
		TC 7 Run 3 (6/5)	.(.)	.(.)	92.610(1.600)	5.505(2.932)	20	24	0	5.8470	0.9798

Table A-3. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Acceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 7 Run 4 (6/6)	-5.172(0.053)	-0.991(0.149)	99.200(1.836)	0.532(4.088)	16	20	2	5.4170	0.9837
Chem 7	**RTI**	RTI Set 6 Run 1 TC 7 (4/1)	-4.720(0.045)	-1.310(0.162)	84.200(1.040)	5.620(2.450)	19	23	0	3.7700	0.9880
		RTI Set 6 Run 2 TC 7 UN (4/7)	-4.660(0.021)	-1.330(0.113)	98.000(1.360)	2.500(2.300)	20	24	0	3.8700	0.9910
		RTI Set 6 Run 3 TC 7 (4/8)	-4.640(0.027)	-1.300(0.134)	87.400(1.420)	7.680(2.510)	20	24	0	4.0800	0.9850
		RTI Set 6 Run 4 TC 7 (6/9)	-4.480(0.018)	-1.190(0.078)	92.000(1.030)	0.535(2.020)	20	24	0	2.9400	0.9930
Chem 7	**TRL**	TC 7 RN004 (4/24) (blue)	-3.743(0.066)	-0.981(0.283)	101.700(1.243)	-23.530(25.440)	17	21	2	4.2920	0.9834
		TC 7 RN005 (5/1) (blue)	-3.513(0.048)	-0.518(0.094)	104.100(1.921)	-1623E9(4.56E12)	18	22	0	5.8380	0.9756
		TC 7 RN006 (5/6) (green)	-3.697(0.066)	-1.012(0.274)	98.060(0.973)	-11.370(19.990)	18	22	0	3.3820	0.9896
Chem 8	**Hamner**	TC 8 Run 3 (5/19)	-5.727(0.320)	-1.958(2.395)	140.800(4.488)	6.444(10.050)	15	19	0	14.8200	0.9423
		TC 8 Run 4 (5/22)	-5.910(0.115)	-0.491(0.143)	86.420(4.087)	-19.010(19.980)	14	18	0	7.1920	0.9558
		TC 8 Run 5 (5/27)	-5.912(0.038)	-1.224(0.169)	97.690(1.193)	1.970(2.212)	16	20	1	3.6820	0.9935
Chem 8	**RTI**	RTI Set 4 Run 2 TC 8 (3/11)	-5.932(0.020)	-0.964(0.088)	89.330(1.883)	-4.092(3.265)	18	22	2	2.6970	0.9936
		RTI Set 4 Run 3 TC 8 UN (3/13)	-6.291(0.093)	-0.836(0.228)	64.340(3.230)	-5.887(10.690)	20	24	0	5.1810	0.9521
		RTI Set 4 Run 4 TC 8 UN (3/18)	-6.861(0.068)	-0.772(0.169)	84.400(6.737)	3.443(3.577)	20	24	0	5.0760	0.9645
		RTI Set 4 Run 5 TC 8 (4/3)	-6.785(0.036)	-0.872(0.069)	61.350(1.380)	-3.532(1.707)	19	23	1	1.6540	0.9948
Chem 9	**Hamner**	TC 9 Run 7 (7/1)	-9.764(0.075)	-0.694(0.138)	67.350(1.593)	26.180(3.114)	9	13	2	2.1090	0.9851
		TC 9 Run 8 (7/2)	-10.190(0.177)	-0.766(0.284)	82.570(4.380)	30.270(4.458)	14	18	0	7.4080	0.9093
Chem 9	**RTI**	RTI Set 3 Run 1 TC 9 (2/28)	-4.360(0.314)	-0.685(0.175)	92.600(1.680)	45.800(4.180)	17	21	0	4.2400	0.9530
		RTI Set 3 Run 2 TC 9 (3/4)	.(.)	.(.)	92.000(1.770)	45.300(1.600)	17	21	0	4.5300	0.9660
		RTI Set 3 Run 3 TC 9 (3/5)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
Chem 9	**TRL**	TC 9 TTN010 (4/28) (yellow)	-4.368(0.425)	-0.867(0.165)	106.400(1.697)	48.070(2.064)	20	24	0	4.6450	0.9721
		TC 9 TTN011 (4/29) (yellow)	-4.366(0.182)	-0.789(0.222)	93.070(1.913)	38.190(4.833)	19	23	0	5.9340	0.9343
		TC 9 TTN012 (4/30) (yellow)	-5.462(0.101)	-2.159(0.455)	88.810(1.689)	16.990(2.801)	17	21	3	5.5800	0.9763
R1881	**RTI**	RTI Set 1 Run 1 NC (2/4)	-5.340(0.036)	-0.971(0.082)	104.000(0.974)	1.990(3.000)	19	23	1	3.4600	0.9930
		RTI Set 1 Run 2 NC (2/6)	-5.300(0.034)	-0.975(0.078)	97.100(1.070)	2.370(1.710)	19	23	1	3.2800	0.9940
		RTI Set 1 Run 3 NC (2/7)	-5.580(0.043)	-0.905(0.085)	98.100(1.290)	4.000(1.970)	19	23	1	3.9100	0.9920

Table A-4. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Unacceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
Chem 1	**Hamner**	TC 1 Run 1 UN (4/15)	-10.180(0.132)	-0.337(0.138)	.(.)	0.774(2.008)	12	16	0	3.986	0.9895
		TC 1 Run 2 UN (5/1)	.(.)	.(.)	61.800(9.999)	0.654(10.430)	19	23	0	29.680	0.5320
Chem 1	**TRL**	TC 1 RN012 (5/29) (yellow)	-8.562(0.074)	-1.129(0.180)	72.030(2.669)	-3.965(1.509)	14	18	0	3.972	0.9878
		TC 1 TTN018 (6/12) (blue)	.(.)	.(.)	.(.)	.(.)	.	16	0	.	.
Chem 10	**Hamner**	TC 10 Run 3 UN (6/3)	.(.)	-1.242(0.774)	.(.)	9.126(3.002)	20	24	0	4.262	0.9416
		TC 10 Run 4 UN (6/7)	.(.)	-0.060(0.062)	.(.)	-1913E9(3.44E12)	20	24	0	9.705	0.4928
		TC 10 Run 5 UN (6/9)	-10.980(0.149)	-0.614(0.171)	.(.)	5.672(2.200)	15	19	0	6.701	0.8791
		TC 10 Run 6 UN (6/16)	.(.)	.(.)	.(.)	.(.)	.	19	0	.	.
		TC 10 Run 7 UN (6/17)	-7.628(0.135)	-0.756(0.240)	78.510(2.552)	-2.762(11.670)	20	24	0	8.654	0.9176
		TC 10 Run 9 (6/24)	-7.147(0.218)	-0.243(0.034)	84.930(4.186)	-573E9(2.85E12)	20	24	0	8.388	0.9592
Chem 10	**TRL**	TC 10 RN007 (5/7) (yellow)	.(.)	.(.)	.(.)	.(.)	.	23	0	.	.
Chem 11	**TRL**	TC 11 TTN004 (4/7) (red)	-5.624(0.037)	-1.008(0.092)	99.090(1.211)	-5.365(2.958)	17	21	0	3.827	0.9927
		TC 11 TTN017 (5/14) (yellow)	-5.590(0.069)	-1.089(0.177)	89.580(1.972)	1.177(4.505)	16	20	0	6.082	0.9757
Chem 12	**Hamner**	TC 12 Run 3 UN (3/10)	-9.369(0.053)	-0.402(0.050)	.(.)	-3.781(1.055)	16	20	1	2.880	0.9920
		TC 12 Run 4 UN (3/17)	.(.)	-0.734(0.227)	.(.)	2.581(0.964)	17	21	0	2.834	0.9752
Chem 12	**TRL**	TC 12 RN013 (6/11) (yellow)	.(.)	-0.825(0.313)	.(.)	-2.512(3.258)	16	20	1	6.834	0.9220
Chem 13	**Hamner**	TC 13 Run 2 .UN (5/29)	.(.)	.(.)	66.560(7.008)	.(.)	8	12	0	13.000	0.9540
Chem 13	**TRL**	TC 13 RN007 (5/7) (yellow)	-7.215(0.059)	-1.283(0.251)	75.910(1.417)	3.856(1.525)	14	18	0	3.492	0.9913
		TC 13 RN013 (6/11) (yellow)	-10.260(1.314)	-0.471(0.144)	52.330(5.320)	-2.383(3.767)	16	20	1	5.224	0.9422
Chem 14	**Hamner**	TC 14 Run 1 UN (4/8)	-5.427(0.135)	-0.639(0.364)	104.900(2.471)	-77.690(259.200)	17	21	0	6.992	0.9517
		TC 14 Run 2 UN (4/9)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
Chem 14	**TRL**	TC 14 TTN014 (5/7) (yellow)	.(.)	.(.)	81.810(4.124)	21.080(6.734)	12	16	2	11.660	0.8920
Chem 16	**Hamner**	TC 16 Run 5 (6/11)	-4.836(0.201)	-1.076(0.317)	58.440(1.372)	-6.317(5.320)	16	20	1	4.582	0.9683
Chem 17	**Hamner**	TC 17 Run 1 UN (4/2)	.(.)	.(.)	90.600(2.508)	29.910(5.607)	20	24	0	9.712	0.8970
		TC 17 Run 3 UN (4/7)	.(.)	.(.)	88.480(5.759)	22.650(2.880)	8	12	0	4.989	0.9780
Chem 17	**TRL**	TC 17 TTN013 (5/5)(yellow)	-6.184(4.489)	0.321(0.758)	.(.)	61.770(10.840)	17	21	0	24.810	0.4410

Table A-4. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Unacceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
Chem 18	**Hamner**	TC 18 Run 1 (6/4)	.(.)	.(.)	.(.)	.(.)	.	13	0	.	.
Chem 19	**Hamner**	TC 19 Run 1 UN (3/5)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
Chem 19	**TRL**	TC 19 RN002 (4/9) (yellow)	-3.441(0.038)	-0.756(0.069)	90.870(0.975)	.(.)	16	20	1	3.435	0.9903
		TC 19 TTN005 (4/14) (yellow)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 19 TTN017 (5/14) (yellow)	-3.637(0.380)	-0.126(0.120)	118.900(26.580)	-587E10(4.81E12)	20	24	0	16.090	0.7267
Chem 2	**Hamner**	TC 2 Run 2 UN (5/28)	-7.764(0.251)	-0.944(0.369)	514.600(36.430)	-66.280(70.540)	14	18	0	96.470	0.8709
		TC 2 Run 4 UN (6/3)	.(.)	-0.324(0.119)	.(.)	-1.990(0.649)	17	21	3	1.258	0.9920
		TC 2 Run 5 UN (6/7)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
		TC 2 Run 6 UN (6/9)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
Chem 2	**TRL**	TC 2 RN013 (6/11) (yellow)	.(.)	.(.)	.(.)	.(.)	.	19	2	.	.
Chem 20	**Hamner**	TC 20 Run 1 UN (4/9)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
		TC 20 Run 3 UN (4/14)	.(.)	.(.)	.(.)	.(.)	.	14	0	.	.
Chem 20	**TRL**	TC 20 TTN011 (4/29) (yellow)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		TC 20 TTN012 (4/30) (yellow)	-5.252(0.066)	-0.776(0.191)	92.820(2.855)	-2161E9(5.71E12)	14	18	0	7.368	0.9333
		TC 20 TTN014 (5/7) (yellow)	-5.756(0.453)	-1.265(2.798)	78.540(4.572)	19.180(49.900)	12	16	1	12.530	0.7240
Chem 21	**TRL**	TC 21 RN001 (4/2) (yellow)	.(.)	.(.)	.(.)	.(.)	.	22	0	.	.
		TC 21 TTN003 (3/28) (yellow)	.(.)	.(.)	.(.)	.(.)	.	4	0	.	.
		TC 21 TTN005 (4/14) (yellow)	-4.033(0.161)	-1.903(0.431)	95.030(0.942)	45.640(2.152)	19	23	1	3.625	0.9720
		TC 21 TTN017 (5/14) (yellow)	.(.)	.(.)	.(.)	.(.)	.	17	0	.	.
Chem 22	**RTI**	RTI Set 2 Run 1 TC22 UN (2/21)	.(.)	.(.)	.(.)	.(.)	.	12	0	.	.
Chem 22	**TRL**	TC 22 RN003 (4/16) (yellow)	.(.)	.(.)	.(.)	.(.)	.	13	0	.	.
Chem 23	**Hamner**	TC 23 Run 2 UN (5/1)	-5.965(0.457)	-0.131(0.029)	112.400(13.700)	-191E11(5.69E12)	14	18	1	22.060	0.6430
		TC 23 Run 3 UN (5/7)	-4.402(2.620)	-0.738(0.791)	108.900(6.416)	-41E12(2.98E14)	16	20	0	38.070	0.5047
		TC 23 Run 4 UN (5/15)	-5.215(0.173)	-0.780(0.408)	95.920(5.197)	-11.690(30.080)	16	20	0	15.600	0.8309
		TC 23 Run 5 UN (5/16)	.(.)	.(.)	77.410(2.773)	20.040(9.009)	18	22	0	10.340	0.8470
		TC 23 Run 7 UN (5/27)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.

Table A-4. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Unacceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
Chem 23	**RTI**	RTI Set 4 Run 1 TC 23 (3/6)	.(.)	.(.)	56.730(3.171)	3.528(5.013)	20	24	0	11.210	0.8345
Chem 23	**TRL**	TC 23 TTN018 (6/12) (blue)	.(.)	.(.)	.(.)	.(.)	.	23	0	.	.
		TC 23 TTN019 (6/16) (blue)	.(.)	.(.)	53.890(7.866)	2.820(14.220)	15	19	0	26.040	0.4697
Chem 3	**Hamner**	TC 3 Run 1 UN (4/14)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
		TC 3 Run 10 UN (6/12)	-11.940(1.327)	-0.029(0.024)	.(.)	-243.70(209.300)	20	24	0	10.450	0.9431
		TC 3 Run 11 UN (6/23)	.(.)	-0.247(0.104)	.(.)	-96.210(19.820)	20	24	0	10.300	0.9440
		TC 3 Run 12 UN (6/16)	-25.040(28.130)	-0.073(0.043)	.(.)	-886E9(3.14E11)	20	24	0	11.470	0.6392
		TC 3 Run 13 UN (6/19)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 3 Run 2 UN (4/15)	.(.)	.(.)	.(.)	.(.)	.	16	1	.	.
		TC 3 Run 3 UN (5/7)	.(.)	.(.)	.(.)	.(.)	.	23	0	.	.
		TC 3 Run 4 UN (5/15)	-11.870(1.213)	-0.196(0.424)	.(.)	14.130(6.671)	20	24	0	10.960	0.7769
		TC 3 Run 5 UN (5/16)	-14.660(1.271)	-0.098(0.097)	.(.)	-12.950(8.817)	19	23	1	4.560	0.8850
		TC 3 Run 6 UN (5/18)	.(.)	.(.)	.(.)	.(.)	.	22	0	.	.
		TC 3 Run 7 UN (5/23)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 3 Run 8 UN (5/23)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 3 Run 9 UN (5/28)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
Chem 4	**Hamner**	TC 4 Run 1 UN (4/3)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		TC 4 Run 5 UN (6/12)	.(.)	.(.)	.(.)	.(.)	.	17	0	.	.
		TC 4 Run 6 UN (6/25)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		TC 4 Run 7 UN (7/1)	.(.)	.(.)	.(.)	-27.320(31.030)	19	23	1	4.483	0.9364
		TC 4 Run 8 UN (7/2)	-10.720(0.144)	-1.112(0.285)	69.630(3.569)	2.085(2.431)	20	24	0	7.862	0.9438
Chem 6	**Hamner**	TC 6 Run 1 UN (6/2)	.(.)	.(.)	.(.)	.(.)	.	21	0	.	.
Chem 7	**Hamner**	TC 7 Run 1 UN (6/2)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
Chem 8	**Hamner**	TC 8 Run 1 UN (5/1)	.(.)	.(.)	.(.)	.(.)	.	20	0	.	.
		TC 8 Run 2 UN (5/7)	.(.)	.(.)	.(.)	.(.)	.	17	0	.	.
Chem 8	**RTI**	RTI Set 4 Run 1 TC 8 (3/6)	.(.)	.(.)	63.140(10.630)	8.602(6.492)	16	20	1	8.928	0.9035
Chem 8	**TRL**	TC 8 RN007 (5/7) (yellow)	.(.)	.(.)	.(.)	.(.)	.	18	0	.	.
		TC 8 RN008 (5/12) (green)	-4.731(0.185)	-1.299(0.964)	94.310(2.460)	25.140(12.690)	16	20	0	8.278	0.8875

Table A-4. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Unacceptable) Chemical Test Run - without Outlier

Chemical	Laboratory	Test Run	LogIC50	SLOPE	TOP	BOTTOM	DF	N	# Outliers Excluded	Syx	R2
		TC 8 RN012 (5/29) (yellow)	-4.545(0.095)	-0.571(0.115)	88.000(2.005)	-716E8(2.17E12)	16	20	1	4.849	0.9747
		TC 8 RN013 (6/11) (yellow)	.(.)	-0.074(0.218)	.(.)	-537E9(2.64E12)	17	21	0	13.030	0.4620
		TC 8 TTN019 (6/16) (blue)	.(.)	.(.)	.(.)	.(.)	.	10	0	.	.
Chem 9	**Hamner**	TC 9 Run 1 UN (4/2)	-5.839(0.090)	-1.279(0.237)	105.500(1.407)	37.070(3.671)	20	24	0	5.305	0.9643
		TC 9 Run 2 UN (4/3)	-6.228(0.057)	-1.024(0.141)	100.200(1.193)	17.440(3.532)	19	23	0	4.342	0.9835
		TC 9 Run 3 UN (4/7)	-6.029(0.074)	-0.591(0.113)	106.500(2.027)	-8.553(15.000)	17	21	0	5.221	0.9800
		TC 9 Run 4 UN (6/13)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 9 Run 5 UN (6/19)	.(.)	.(.)	.(.)	.(.)	.	24	0	.	.
		TC 9 Run 6 (6/25)	.(.)	-1.143(1.049)	.(.)	3.804(1.744)	14	18	0	4.959	0.9403
Chem 9	**TRL**	TC 9 TTN013 (5/5) (yellow)	-6.218(0.639)	-0.060(0.292)	148.600(377.700)	-2853E9(1.69E13)	17	21	0	19.130	0.6807
		TC 9 TTN014 (5/7) (yellow)	.(.)	.(.)	61.080(18.150)	32.210(40.120)	18	22	0	31.610	0.1688

APPENDIX B

APPENDIX B. LIST OF EXCEL FILES FROM LABS

Table B-1. Excel Files Provided by EPA from RTI for the Competitive Binding Data Analyses.

Table B-2. Excel Files Provided by EPA from TRL for the Competitive Binding Data Analyses.

Table B-3. Excel Files Provided by EPA from Hamner for the Competitive Binding Data Analyses.

Table B-1. Excel Files Provided by EPA from RTI for the Competitive Binding Data Analyses.

Excel Files from RTI	Test Chemicals	Assay Date	Note
Qualification Data (only estradiol and norethynodrel standards were tested)			
Comp #1 8 21 07.xls		8/21/2007	
Comp_#2_8_23_07.xls		8/23/2007	
Comp #3 8 28 07.xls		8/28/2007	
Comp #4 9 6 07.xls		9/6/2007	
Comp_#5_9_10_07.xls		9/10/2007	
Comp #6 9 11 07.xls		9/11/2007	
Comp #7 10 22 07.xls		10/22/2007	
Principal Test Chemical Data (estradiol and norethynodrel standards were tested along with the test chemicals)			
S1R1_2_4_08.xls	11, 12, 15, 19, 21	2/4/2008	
S1R2 2 6 08.xls	11, 12, 15, 19, 21	2/6/2008	
S1R3 2 708.xls	11, 12, 15, 19, 21	2/7/2008	
S2R1_2_21_08.xls	4, 5, 16, 22	2/21/2008	
S2R2 2 26 08.xls	4, 5, 16, 22	2/26/2008	
S2R3 2 27 08.xls	4, 5, 16, 22	2/27/2008	
S2R4 3 3 08.xls	4, 5, 16, 22	3/3/2008	
S3R1_2_28_08.xls	9, 14, 17, 20	2/28/2008	
S3R2 3 4 08.xls	9, 14, 17, 20	3/4/2008	
S3R3 3 5 08.xls	9, 14, 17, 20	3/5/2008	
S4R1_3_6_08.xls	1, 3, 8, 23	3/6/2008	
S4R2 3 11 08.xls	1, 3, 8, 23	3/11/2008	
S4R3 3 13 08.xls	1, 3, 8, 23	3/13/2008	
S4R4_3_18_08.xls	1, 3, 8, 23	3/18/2008	
S4R5 4 3 08.xls	1, 3, 8, 23	4/3/2008	
S5R1 3 17 08.xls	2, 10, 18	3/17/2008	
S5R2 3 27 08.xls	2, 10, 18	3/27/2008	
S5R3_3_31_08.xls	2, 10, 18	3/31/2008	
S6R1 4 1 08.xls	6, 7, 13	4/1/2008	
S6R2 4 7 08.xls	6, 7, 13	4/7/2008	
S6R3_4_8_08.xls	6, 7, 13	4/8/2008	
S6R4 6 9 08.xls	6, 7, 13	6/9/2008	
Supplemental Test Chemical Data (estradiol and norethynodrel standards were tested along with the test chemicals)			
S7R1 4 22 08.xls	27, 38, 39, 44	4/22/2008	
S7R2_4_29_08Rev.xls	27, 38, 39, 44	4/29/2008	
S7R3 4 30 08.xls	27, 38, 39, 44	4/30/2008	
S8R1 4 28 08 corr.xls	31, 34, 35, 42	4/28/2008	
S8R2_5_28_08.xls	31, 34, 35, 42	5/28/2008	

S8R3 6 10 08.xls	31, 34, 35, 42	6/10/2008	
S9R1 5 27 08.xls	36, 41, 43, 45	5/27/2008	
S9R2 6 23 08.xls	36, 41, 43, 45	6/23/2008	
S10R1_6_11_08.xls	28, 30, 32, 40	6/11/2008	
S10R1 6 24 08.xls	28, 30, 32, 40	6/24/2008	
S11R1 6 12 08.xls	29, 33, 37, 46	6/12/2008	
S11R1_6_25_08.xls	29, 33, 37, 46	6/25/2008	

Table B-2. Excel Files Provided by EPA from TRL for the Competitive Binding Data Analyses.

Excel Files from TRL	Test Chemicals	Assay Date	Note
Qualification Data (only estradiol and norethynodrel standards were tested). The following filenames are proceed with " Protocol Appendix B ER-RUC data entry templates" in the original filenames.			
v10-9-12-07.xls		9/12/2007	
v10-9-21-07.xls		9/21/2007	
v10-9-24-07.xls		9/24/2007	
v10-10-3-07.xls		10/3/2007	
v10-11-7-07.xls		11/7/2007	
v10-11-7-07a.xls		11/7/2007	
v10-11-20-07competition 50ug.xls		11/20/2007	
v10-11-27-07competition 40ug.xls		11/27/2007	
v10-11-30-07competition 40ug.xls		11/30/2007	
v10-12-12-07competition 40ug.xls		12/12/2007	
v10-11-12-07.xls		11/12/2007	Not used due to data not complete.
Principal Test Chemical Data (estradiol and norethynodrel standards were tested along with the test chemicals)			
Rev1-TRL run RN001 080402 Chem Codes 12 and 21.xls	12, 21	4/2/2008	
Rev1-TRL run RN 002 080409 Chem Codes 15 and 19.xls	15, 19	4/9/2008	
Rev1-TRL run RN003 080416 Chem Codes 4, 17, 22.xls	4, 7, 22	4/16/2008	
Rev1-TRL run RN004 080424 Chem Codes 6, 7, 18.xls	6, 7, 18	4/24/ 2008	
Rev1-TRL run RN005 080501 Chem Codes 6, 7, 13, 18.xls	6, 7, 13, 18	5/1/ 2008	
Rev1-TRL run RN006 080506 Chem Codes 6, 7, 13, 18.xls	6, 7, 13, 18	5/6/ 2008	
Rev1-TRL run RN007 080507 Chem Codes 2, 8, 10, 13.xls	2, 8, 10, 13	5/7/ 2008	
Rev1-TRL run RN008 080512 Chem Codes 2, 8, 10, 11.xls	2, 8, 10, 11	5/12/ 2008	
Rev1-TRL run RN009 080513 Chem Codes 2, 3, 10, 23.xls	2, 3, 10, 23	5/13/ 2008	
Rev1-TRL run RN012 080529 Chem Codes 1, 3, 8, 23.xls	1, 3, 8, 23	5/29/2008	
Rev1-TRL run RN013 080611 Chem Codes 2, 8, 12, 13.xls	2, 8, 12, 13	6/11/2008	
Rev2-TRL run TTN001 080312 Chem Codes 12, 19.xls	12, 19	3/12/ 2008	
Rev2-TRL run TTN002 080318 Chem Codes 11, 15.xls	11, 15	3/18/ 2008	
Rev2-TRL run TTN003 080328 Chem Codes 12, 21.xls	12, 21	3/18/ 2008	
Rev2-TRL run TTN004 080407 Chem Codes 11, 15.xls	11, 15	3/28/ 2008	
Rev2-TRL run TTN005 080414 Chem Codes 19, 21.xls	19, 21	4/14/ 2008	
Rev2-TRL run TTN006 080416 Chem Codes 11, 12, 15, 21.xls	11, 12, 15, 21	4/16/ 2008	
Rev1-TRL run TTN007 080421 Chem Codes 5, 16, 19, 22.xls	1, 3, 20, 23	5/08/2008	
Rev1-TRL run TTN008 080422 Chem Codes 5, 16, 17, 22.xls	1, 3, 20, 23	6/12/2008	
Rev1-TRL run TTN009 080423 Chem Codes 5, 16, 17, 22.xls	1, 3, 8, 23	6/16/2008	
Rev1-TRL run TTN010 080428 Chem Codes 4, 9, 14, 17.xls	4, 9, 14, 17	4/23/ 2008	
Rev1-TRL run TTN011 080429 Chem Codes 4, 9, 14, 20.xls	4, 9, 14, 20	4/28/ 2008	

Rev1-TRL run TTN012 080430 Chem Codes 4, 9, 14, 20.xls	4, 9, 14, 20	4/30/ 2008	
Rev1-TRL run TTN013 080505 Chem Codes 4, 9, 14, 17.xls	4, 9, 14, 17	5/5/ 2008	
Rev1-TRL run TTN014 080507 Chem Codes 4, 9, 14, 20.xls	4, 9, 14, 20	5/7/ 2008	
Rev1-TRL run TTN015 080508 Chem Codes 1, 3, 20, 23.xls	1, 3, 20, 23	5/8/ 2008	
Rev1-TRL run TTN017 080514 Chem Codes 11, 15, 19, 21.xls	11, 15, 19, 21	5/14/ 2008	
Rev1-TRL run TTN018 080612 Chem Codes 1, 3, 20, 23.xls	1, 3, 20, 23	6/12/ 2008	
Rev1-TRL run TTN019 080616 Chem Codes 1, 3, 8, 23.xls			
TRL run RN013 080611 Chem Codes 2, 8, 12, 13.xls	2, 8, 12, 13	6/11/2008	Not used. "Rev 1" files were used.
TRL run TTN018 080612 Chem Codes 1, 3, 20, 23.xls	1, 3, 20, 23	6/12/ 2008	
Supplemental Test Chemical Data (estradiol and norethynodrel standards were tested along with the test chemicals)			
Rev1-TRL run RN014 080618 Chem Codes 36, 37, 38, 39.xls	36, 37, 38, 39	6/18/ 2008	
Rev1-TRL run RN015 080625 Chem Codes 30, 31, 33, 34.xls	30, 31, 33, 34	6/25/ 2008	
Rev1-TRL run TTN020 080617 Chem Codes 27, 28, 29, 32.xls	27, 28, 29, 32	6/17/ 2008	
Rev1-TRL run TTN021 080618 Chem Codes 30, 31, 33, 34.xls	30, 31, 33, 34	6/18/ 2008	
Rev1-TRL run TTN022 080619 Chem Codes 35,40,42,43.xls	35,40,42,43	6/19/ 2008	
Rev1-TRL run TTN023 080623 Chem Codes 41,44,45,46.xls	41,44,45,46	6/23/ 2008	
Rev1-TRL run TTN025 080626 Chem Codes 36, 37, 38, 39.xls	36, 37, 38, 39	6/26/ 2008	

Table B-3. Excel Files Provided by EPA from Hamner for the Competitive Binding Data Analyses.

Excel Files from Hamner	Test Chemical	Assay Date	Note
Qualification Data (only estradiol and norethynodrel standards were tested).			
Data 091107.xls		9/11/2007	
112607 ER-COMP data.xls		11/26/2007	
112707 ER-COMP data.xls		11/27/2007	
Data 100307 v10.xls		10/3/2007	
Data 100907 v10.xls		10/9/2007	
Revised Data 100107-COMP.xls		10/1/2007	
Revised Data 100807-COMP.xls		10/8/2007	
Revised Data 101007-COMP.xls		10/10/2007	
Additional Estradiol Data (only estradiol standard was tested).			
Hamner Comp Data-042308, New-Old.xls		4/23/2008	
Hamner Comp Data-042308, Old-Old.xls		4/23/2008	
Hamner Comp Data-050508-E2-sialinized.xls		5/5/2008	
Hamner Comp Data-050508-E2-uncoated.xls		5/5/2008	
Hamner Comp Data-042308, New-New.xls		4/23/2008	Not Used. Data not complete.
Hamner Comp Data-042308, New-Old-NS.xls		4/23/2008	
Hamner Comp Data-042308, Old-New.xls		4/23/2008	
Hamner Comp Data-E2 uncoated.xls		5/1/2008	Not Used. An uncoated tubes test run.
Principal Test Chemical Data (estradiol and norethynodrel standards were tested along with the test chemicals)			
Hamner Comp Data-1-Run 1.xls	1	4/15/2008	
Hamner Comp Data-1-Run 2.xls	1	5/1/2008	
Hamner Comp Data-1-Run 3.xls	1	5/7/2008	
Hamner Comp Data-1-Run 4.xls	1	5/18/2008	
Hamner Comp Data-1-Run 5.xls	1	5/22/2008	
Hamner Comp Data-2-Run 1.xls	2	5/19/2008	
Hamner Comp Data-2-Run 2.xls	2	5/28/2008	
jz Hamner Comp Data-2-Run 3.xls	2	6/2/2008	
jz Hamner Comp Data-2-Run 4.xls	2	6/3/2008	
jz Hamner Comp Data-2-Run 5.xls	2	6/7/2008	
jz Hamner Comp Data-2-Run 6.xls	2	6/9/2008	
jz Hamner Comp Data-2-Run 7.xls	2	6/17/2008	
jz Hamner Comp Data-2-Run 8.xls	2	6/18/2008	
jz Hamner Comp Data-2-Run 9.xls	2	6/23/2008	
jz Hamner Comp Data-2-Run 10.xls	2	6/24/2008	
Hamner Comp Data-2-Run 3.xls	2	6/2/2008	Not used. "jz" files were used.
Hamner Comp Data-2-Run 4.xls	2	6/3/2008	
Hamner Comp Data-2-Run 5.xls	2	6/7/2008	
Hamner Comp Data-3-Run 1.xls	3	4/14/2008	

Hamner Comp Data-3-Run 2.xls	3	4/15/2008	
Hamner Comp Data-3-Run 3.xls	3	5/7/2008	
Hamner Comp Data-3-Run 4.xls	3	5/15/2008	
Hamner Comp Data-3-Run 5.xls	3	5/16/2008	
Hamner Comp Data-3-Run 6.xls	3	5/18/2008	
jz Hamner Comp Data-3-Run 7.xls	3	5/23/2008	
Hamner Comp Data-3-Run 8.xls	3	5/27/2008	
jz Hamner Comp Data-3-Run 9.xls	3	5/28/2008	
jz Hamner Comp Data-3-Run 10.xls	3	6/12/2008	
jz Hamner Comp Data-3-Run 11.xls	3	6/13/2008	
jz Hamner Comp Data-3-Run 12.xls	3	6/16/2008	
jz Hamner Comp Data-3-Run 13.xls	3	6/19/2008	
jz Hamner Comp Data-3-Run 13.xls	3	6/23/2008	Filename misnumbered. Should be jz Hamner Comp Data-3-Run 14.xls
jz Hamner Comp Data-3-Run 14.xls	3	6/24/2008	Filename misnumbered. Should be jz Hamner Comp Data-3-Run 15.xls
jz Hamner Comp Data-3-Run 15.xls	3	6/25/2008	Filename misnumbered. Should be jz Hamner Comp Data-3-Run 16.xls
Hamner Comp Data-3-Run 7.xls	3	5/23/2008	Not used. “jz” files were used.
Hamner Comp Data-3-Run 9.xls	3	5/28/2008	
Hamner Comp Data-4-Run 1.xls	4	4/3/2008	
Hamner Comp Data-4-Run 2.xls	4	4/7/2008	
Hamner Comp Data-4-Run 3.xls	4	4/8/2008	
Hamner Comp Data-4-Run 4.xls	4	4/9/2008	
jz Hamner Comp Data-4-Run 5.xls	4	6/12/2008	
jz Hamner Comp Data-4-Run 6.xls	4	6/25/2008	
jz Hamner Comp Data-4-Run 7.xls	4	7/1/2008	
jz Hamner Comp Data-4-Run 8.xls	4	7/2/2008	
Hamner Comp Data-5-Run 1.xls	5	3/26/2008	
Hamner Comp Data-5-Run 2.xls	5	3/27/2008	
Hamner Comp Data-5-Run 3.xls	5	3/31/2008	
Hamner Comp Data-6-Run 1.xls	6	6/2/2008	
Hamner Comp Data-6-Run 2.xls	6	6/3/2008	
Hamner Comp Data-6-Run 3.xls	6	6/5/2008	
Hamner Comp Data-6-Run 4.xls	6	6/6/2008	
Hamner Comp Data-7-Run 1.xls	7	6/2/2008	
Hamner Comp Data-7-Run 2.xls	7	6/3/2008	
Hamner Comp Data-7-Run 3.xls	7	6/5/2008	
Hamner Comp Data-7-Run 4.xls	7	6/6/2008	

Hamner Comp Data-8-Run 1.xls	8	5/1/2008	
Hamner Comp Data-8-Run 2.xls	8	5/7/2008	
Hamner Comp Data-8-Run 3.xls	8	5/19/2008	
Hamner Comp Data-8-Run 4.xls	8	5/22/2008	
Hamner Comp Data-8-Run 5.xls	8	5/27/2008	
Hamner Comp Data-9-Run 1.xls	9	4/2/2008	
Hamner Comp Data-9-Run 2.xls	9	4/3/2008	
Hamner Comp Data-9-Run 3.xls	9	4/7/2008	
jz Hamner Comp Data-9-Run 4.xls	9	6/13/2008	
jz Hamner Comp Data-9-Run 5.xls	9	6/19/2008	
jz Hamner Comp Data-9-Run 6.xls	9	6/25/2008	
jz Hamner Comp Data-9-Run 7.xls	9	7/1/2008	
jz Hamner Comp Data-9-Run 8.xls	9	7/2/2008	
Hamner Comp Data-10-Run 1.xls	10	5/21/2008	
jz Hamner Comp Data-10-Run 2.xls	10	6/2/2008	
jz Hamner Comp Data-10-Run 3.xls	10	6/3/2008	
jz Hamner Comp Data-10-Run 4.xls	10	6/7/2008	
jz Hamner Comp Data-10-Run 5.xls	10	6/9/2008	
jz Hamner Comp Data-10-Run 6.xls	10	6/16/2008	
jz Hamner Comp Data-10-Run 7.xls	10	6/17/2008	
jz Hamner Comp Data-10-Run 8.xls	10	6/23/2008	
jz Hamner Comp Data-10-Run 9.xls	10	6/24/2008	
Hamner Comp Data-10-Run 2.xls	10	6/2/2008	Not used. “jz” files were used.
Hamner Comp Data-10-Run 3.xls	10	6/3/2008	
Hamner Comp Data-10-Run 4.xls	10	6/7/2008	
Hamner Comp Data-11-Run 1.xls	11	3/5/2008	
Hamner Comp Data-11-Run 2.xls	11	3/6/2008	
Hamner Comp Data-11-Run 3.xls	11	3/10/2008	
Hamner Comp Data-12-Run 1.xls	12	3/5/2008	
Hamner Comp Data-12-Run 2.xls	12	3/6/2008	
Hamner Comp Data-12-Run 3.xls	12	3/10/2008	
Hamner Comp Data-12-Run 4.xls	12	3/17/2008	
Hamner Comp Data-12-Run 5.xls	12	3/24/2008	
Hamner Comp Data-13-Run 1.xls	13	5/21/2008	
jz Hamner Comp Data-13-Run 2.xls	13	5/29/2008	
jz Hamner Comp Data-13-Run 3.xls	13	5/30/2008	
Hamner Comp Data-13-Run 4.xls	13	6/6/2008	
Hamner Comp Data-13-Run 2.xls	13	5/29/2008	Not used. “jz” file was used.
Hamner Comp Data-14-Run 1.xls	14	4/8/2008	
Hamner Comp Data-14-Run 2.xls	14	4/9/2008	
Hamner Comp Data-14-Run 3.xls	14	4/10/2008	
Hamner Comp Data-14-Run 4.xls	14	4/14/2008	
Hamner Comp Data-14-Run 5.xls	14	4/16/2008	
Hamner Comp Data-14-Run 6.xls	14	4/17/2008	

Hamner Comp Data-15-Run 1.xls	15	3/11/2008	
Hamner Comp Data-15-Run 2.xls	15	3/12/2008	
Hamner Comp Data-15-Run 3.xls	15	3/17/2008	
Hamner Comp Data-16-Run 1.xls	16	3/18/2008	
Hamner Comp Data-16-Run 2.xls	16	3/26/2008	
Hamner Comp Data-16-Run 3.xls	16	3/27/2008	
Hamner Comp Data-16-Run 4.xls	16	4/2/2008	
jz Hamner Comp Data-16-Run 5.xls	16	6/11/2008	
Hamner Comp Data-16-Run 5.xls	16	6/11/2008	Not used. “jz” file was used.
Hamner Comp Data-17-Run 1.xls	17	4/2/2008	
Hamner Comp Data-17-Run 2.xls	17	4/3/2008	
Hamner Comp Data-17-Run 3.xls	17	4/7/2008	
Hamner Comp Data-17-Run 4.xls	17	4/8/2008	
Hamner Comp Data-17-Run 5.xls	17	4/10/2008	
jz Hamner Comp Data-18-Run 1.xls	18	6/4/2008	
jz Hamner Comp Data-18-Run 2.xls	18	6/5/2008	
jz Hamner Comp Data-18-Run 3.xls	18	6/6/2008	
Hamner Comp Data-18-Run 1.xls	18	6/4/2008	Not used. “jz” files was used.
Hamner Comp Data-18-Run 2.xls	18	6/5/2008	
Hamner Comp Data-18-Run 3.xls	18	6/6/2008	
Hamner Comp Data-19-Run 1.xls	19	3/5/2008	
Hamner Comp Data-19-Run 2.xls	19	3/6/2008	
Hamner Comp Data-19-Run 3.xls	19	3/10/2008	
Hamner Comp Data-19-Run 4.xls	19	3/11/2008	
Hamner Comp Data-20-Run 1.xls	20	4/9/2008	
Hamner Comp Data-20-Run 2.xls	20	4/10/2008	
Hamner Comp Data-20-Run 3.xls	20	4/14/2008	
Hamner Comp Data-20-Run 4.xls	20	4/16/2008	
Hamner Comp Data-20-Run 5.xls	20	4/17/2008	
Hamner Comp Data-21-Run 1.xls	21	3/11/2008	
Hamner Comp Data-21-Run 2.xls	21	3/12/2008	
Hamner Comp Data-21-Run 3.xls	21	3/17/2008	
Hamner Comp Data-22-Run 1.xls	22	3/26/2008	
Hamner Comp Data-22-Run 2.xls	22	3/27/2008	
Hamner Comp Data-22-Run 3.xls	22	3/31/2008	
Hamner Comp Data-23-Run 1.xls	23	4/152008	
Hamner Comp Data-23-Run 2.xls	23	5/1/08	
Hamner Comp Data-23-Run 3.xls	23	5/7/08	
Hamner Comp Data-23-Run 4.xls	23	5/15/08	
Hamner Comp Data-23-Run 5.xls	23	5/16/08	
Hamner Comp Data-23-Run 6.xls	23	5/27/08	
Hamner Comp Data-23-Run 7.xls	23	5/28/08	
jz Hamner Comp Data-23-Run 8.xls	23	6/11/08	
Hamner Comp Data-23-Run 8.xls	23	6/11/08	Not used.

			"jz" file was used.
Supplemental Test Chemical Data (estradiol and norethynodrel standards were tested along with the test chemicals)			
Hamner Comp Data-27-Run 1.xls	27	6/18/2008	
Hamner Comp Data-28-Run 1.xls	28	6/18/2008	
Hamner Comp Data-29-Run 1.xls	29	6/18/2008	
Hamner Comp Data-30-Run 1.xls	30	6/23/2008	
Hamner Comp Data-31-Run 1.xls	31	6/19/2008	
Hamner Comp Data-32-Run 1.xls	32	6/19/2008	
Hamner Comp Data-33-Run 1.xls	33	6/23/2008	
Hamner Comp Data-34-Run 1.xls	34	6/19/2008	
Hamner Comp Data-35-Run 1.xls	35	6/26/2008	
Hamner Comp Data-36-Run 1.xls	36	6/23/2008	
Hamner Comp Data-37-Run 1.xls	37	6/24/2008	
Hamner Comp Data-38-Run 1.xls	38	6/24/2008	
Hamner Comp Data-39-Run 1.xls	39	6/24/2008	
Hamner Comp Data-40-Run 1.xls	40	6/24/2008	
Hamner Comp Data-41-Run 1.xls	41	6/26/2008	
Hamner Comp Data-42-Run 1.xls	42	6/26/2008	
Hamner Comp Data-43-Run 1.xls	43	6/26/2008	
Hamner Comp Data-44-Run 1.xls	44	6/26/2008	
Hamner Comp Data-45-Run 1.xls	45	6/26/2008	
Hamner Comp Data-26-Run 1.xls	46	6/26/2008	

APPENDIX C

Appendix C

Screening Results for Individual Parameters: Univariate Tolerance Intervals to Contain at Least 80% of Standard Curve or Weak Positive Test Runs with 95% Confidence

Two-sided tolerance intervals to contain at least 80% of test runs with 95% confidence were constructed for Top, Bottom, Hill slope, and $\log_{10}$RBA. One-sided tolerance intervals to contain at least 80% of test runs with 95% confidence were constructed for residual standard deviation, based on results of the acceptable test runs. For $\log_{10}$RBA, the tolerance intervals were calculated using runs, for which both the standard curve and weak positive runs were acceptable.

The tolerance intervals were applied to screen the model fit results for all test runs, independently for each parameter. Any parameter estimates outside of the tolerance interval were flagged. Tolerance intervals were not calculated for $\log_{10}$IC50. Tolerance intervals for Top, Bottom, Hill Slope and residual standard deviation were calculated separately for standard curve runs and weak positive runs.

The results of the tolerance bound screens are presented in Tables C-1 to C-5 below.

Table C-1. Acceptable test runs, used in the tolerance interval calculation for top, bottom, and Hill slope

Table C-2. Acceptable test run, not used in the tolerance interval calculation for top, bottom, and Hill slope

Table C-3. Unacceptable test runs, not used in the tolerance interval calculation for top, bottom, and Hill slope

Table C-4. Test runs used in the tolerance interval calculation for $\log_{10}$RBA

Table C-5. Acceptable test runs, used in the tolerance interval calculation for residual standard deviation

Table C-6. Unacceptable test runs, not used in the tolerance interval calculation for residual standard deviation

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
SC	**Hamner**	**SC 042308 New-Old**	Bottom	-2.057	0.161	-3.191	0.281	
			HillSlope	-1.052	0.023	-1.343	-0.658	
			LogIC50	-8.598	0.049	.	.	N/A
			Top	96.500	0.586	94.330	110.533	
SC	**Hamner**	**SC 042308 Old-Old**	Bottom	-1.373	2.758	-3.191	0.281	
			HillSlope	-1.059	0.117	-1.343	-0.658	
			LogIC50	-8.540	0.032	.	.	N/A
			Top	121.700	3.894	94.330	110.533	Above Limit
SC	**Hamner**	**SC 050508 Sialinized**	Bottom	-1.198	1.815	-3.191	0.281	
			HillSlope	-1.132	0.102	-1.343	-0.658	
			LogIC50	-8.856	0.027	.	.	N/A
			Top	98.590	2.358	94.330	110.533	
SC	**Hamner**	**SC 050508 Uncoated**	Bottom	-0.346	1.269	-3.191	0.281	
			HillSlope	-1.167	0.070	-1.343	-0.658	
			LogIC50	-8.766	0.017	.	.	N/A
			Top	107.700	1.605	94.330	110.533	
SC	**Hamner**	**SC 10/1**	Bottom	-1.089	1.851	-3.191	0.281	
			HillSlope	-1.141	0.099	-1.343	-0.658	
			LogIC50	-9.062	0.028	.	.	N/A
			Top	100.600	2.169	94.330	110.533	
SC	**Hamner**	**SC 10/10**	Bottom	-0.845	3.252	-3.191	0.281	
			HillSlope	-0.901	0.131	-1.343	-0.658	
			LogIC50	-9.115	0.050	.	.	N/A
			Top	104.100	4.485	94.330	110.533	
SC	**Hamner**	**SC 10/3**	Bottom	-5.195	2.199	-3.191	0.281	Below Limit
			HillSlope	-1.195	0.112	-1.343	-0.658	
			LogIC50	-9.029	0.027	.	.	N/A
			Top	102.700	2.540	94.330	110.533	
SC	**Hamner**	**SC 10/8**	Bottom	0.331	3.056	-3.191	0.281	Above Limit
			HillSlope	-0.979	0.140	-1.343	-0.658	
			LogIC50	-8.925	0.049	.	.	N/A
			Top	104.100	4.316	94.330	110.533	
SC	**Hamner**	**SC 10/9**	Bottom	0.951	2.109	-3.191	0.281	Above Limit
			HillSlope	-1.081	0.138	-1.343	-0.658	
			LogIC50	-9.116	0.037	.	.	N/A
			Top	102.000	4.780	94.330	110.533	
SC	**Hamner**	**SC 11/26**	Bottom	-0.230	3.626	-3.191	0.281	
			HillSlope	-1.207	0.205	-1.343	-0.658	
			LogIC50	-8.721	0.051	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	101.800	3.820	94.330	110.533	
SC	**Hamner**	**SC 11/27**	Bottom	0.591	2.702	-3.191	0.281	Above Limit
			HillSlope	-1.143	0.145	-1.343	-0.658	
			LogIC50	-8.988	0.039	.	.	N/A
			Top	102.900	3.329	94.330	110.533	
SC	**Hamner**	**TC 1 Run 1 SC UN (4/15)**	Bottom	-0.542	2.008	-3.191	0.281	
			HillSlope	-1.011	0.090	-1.343	-0.658	
			LogIC50	-8.825	0.029	.	.	N/A
			Top	103.000	2.331	94.330	110.533	
SC	**Hamner**	**TC 1 Run 2 SC UN (5/1)**	Bottom	0.168	8.581	-3.191	0.281	
			HillSlope	-1.778	0.866	-1.343	-0.658	Below Limit
			LogIC50	-8.367	0.120	.	.	N/A
			Top	87.120	6.491	94.330	110.533	Below Limit
SC	**Hamner**	**TC 1 Run 4 SC (5/18)**	Bottom	-1.168	5.266	-3.191	0.281	
			HillSlope	-1.373	0.290	-1.343	-0.658	Below Limit
			LogIC50	-8.581	0.051	.	.	N/A
			Top	101.100	4.615	94.330	110.533	
SC	**Hamner**	**TC 11 Run 1 SC (3/5)**	Bottom	-5.644	4.243	-3.191	0.281	Below Limit
			HillSlope	-0.720	0.106	-1.343	-0.658	
			LogIC50	-8.965	0.048	.	.	N/A
			Top	103.900	4.850	94.330	110.533	
SC	**Hamner**	**TC 11 Run 2 SC (3/6)**	Bottom	-2.399	4.860	-3.191	0.281	
			HillSlope	-1.054	0.230	-1.343	-0.658	
			LogIC50	-9.141	0.066	.	.	N/A
			Top	102.100	7.179	94.330	110.533	
SC	**Hamner**	**TC 11 Run 3 SC (3/10)**	Bottom	-0.025	1.830	-3.191	0.281	
			HillSlope	-1.030	0.100	-1.343	-0.658	
			LogIC50	-9.150	0.030	.	.	N/A
			Top	100.700	3.222	94.330	110.533	
SC	**Hamner**	**TC 12 Run 4 SC UN (3/17)**	Bottom	-0.667	2.425	-3.191	0.281	
			HillSlope	-1.001	0.122	-1.343	-0.658	
			LogIC50	-9.064	0.039	.	.	N/A
			Top	101.300	3.406	94.330	110.533	
SC	**Hamner**	**TC 12 Run 5 SC (3/24)**	Bottom	-1.910	2.407	-3.191	0.281	
			HillSlope	-0.851	0.093	-1.343	-0.658	
			LogIC50	-9.113	0.037	.	.	N/A
			Top	101.100	3.503	94.330	110.533	
SC	**Hamner**	**TC 13 Run 2 SC UN (5/29)**	Bottom	-8.992	4.143	-3.191	0.281	Below Limit
			HillSlope	-1.571	0.291	-1.343	-0.658	Below Limit

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-9.200	0.046	.	.	N/A
			Top	109.500	5.076	94.330	110.533	
SC	**Hamner**	**TC 13 Run 3 SC (5/30)**	Bottom	0.358	1.363	-3.191	0.281	Above Limit
			HillSlope	-0.917	0.073	-1.343	-0.658	
			LogIC50	-9.430	0.025	.	.	N/A
			Top	105.300	2.734	94.330	110.533	
SC	**Hamner**	**TC 14 Run 3 SC (4/10)**	Bottom	-2.192	0.384	-3.191	0.281	
			HillSlope	-1.094	0.026	-1.343	-0.658	
			LogIC50	-9.092	0.008	.	.	N/A
			Top	95.560	0.730	94.330	110.533	
SC	**Hamner**	**TC 14 Run 5 SC (4/16)**	Bottom	-2.970	3.617	-3.191	0.281	
			HillSlope	-0.841	0.117	-1.343	-0.658	
			LogIC50	-8.776	0.046	.	.	N/A
			Top	103.300	3.848	94.330	110.533	
SC	**Hamner**	**TC 14 Run 6 SC (4/17)**	Bottom	-3.085	2.257	-3.191	0.281	
			HillSlope	-1.101	0.108	-1.343	-0.658	
			LogIC50	-8.853	0.031	.	.	N/A
			Top	97.620	2.434	94.330	110.533	
SC	**Hamner**	**TC 15 Run 1 SC (3/11)**	Bottom	-0.538	1.698	-3.191	0.281	
			HillSlope	-1.056	0.087	-1.343	-0.658	
			LogIC50	-9.020	0.026	.	.	N/A
			Top	102.400	2.297	94.330	110.533	
SC	**Hamner**	**TC 15 Run 2 SC (3/12)**	Bottom	-0.671	0.964	-3.191	0.281	
			HillSlope	-1.007	0.055	-1.343	-0.658	
			LogIC50	-9.139	0.016	.	.	N/A
			Top	100.700	1.445	94.330	110.533	
SC	**Hamner**	**TC 16 Run 1 SC (3/18)**	Bottom	-0.122	1.257	-3.191	0.281	
			HillSlope	-0.992	0.062	-1.343	-0.658	
			LogIC50	-9.130	0.020	.	.	N/A
			Top	101.900	1.877	94.330	110.533	
SC	**Hamner**	**TC 16 Run 2 SC (3/26)**	Bottom	-1.042	1.194	-3.191	0.281	
			HillSlope	-0.996	0.062	-1.343	-0.658	
			LogIC50	-8.953	0.018	.	.	N/A
			Top	99.990	2.132	94.330	110.533	
SC	**Hamner**	**TC 16 Run 3 SC UN (3/27)**	Bottom	-0.625	2.097	-3.191	0.281	
			HillSlope	-1.084	0.108	-1.343	-0.658	
			LogIC50	-8.935	0.032	.	.	N/A
			Top	101.500	2.636	94.330	110.533	
SC	**Hamner**	**TC 16 Run 4 SC UN (4/2)**	Bottom	-2.321	1.304	-3.191	0.281	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-0.851	0.052	-1.343	-0.658	
			LogIC50	-8.969	0.019	.	.	N/A
			Top	105.500	2.037	94.330	110.533	
SC	**Hamner**	**TC 16 Run 5 SC (6/11)**	Bottom	-1.796	1.719	-3.191	0.281	
			HillSlope	-0.929	0.096	-1.343	-0.658	
			LogIC50	-9.626	0.032	.	.	N/A
			Top	104.600	3.996	94.330	110.533	
SC	**Hamner**	**TC 18 Run 2 SC (6/5)**	Bottom	-0.079	1.207	-3.191	0.281	
			HillSlope	-0.915	0.076	-1.343	-0.658	
			LogIC50	-9.724	0.024	.	.	N/A
			Top	107.900	3.463	94.330	110.533	
SC	**Hamner**	**TC 18 Run 3 SC (6/6)**	Bottom	-1.463	1.050	-3.191	0.281	
			HillSlope	-1.011	0.083	-1.343	-0.658	
			LogIC50	-9.836	0.023	.	.	N/A
			Top	107.300	3.625	94.330	110.533	
SC	**Hamner**	**TC 19 Run 4 SC (3/11)**	Bottom	-0.538	1.698	-3.191	0.281	
			HillSlope	-1.056	0.087	-1.343	-0.658	
			LogIC50	-9.020	0.026	.	.	N/A
			Top	102.400	2.297	94.330	110.533	
SC	**Hamner**	**TC 2 Run 1 SC (5/19)**	Bottom	-2.019	2.243	-3.191	0.281	
			HillSlope	-1.038	0.107	-1.343	-0.658	
			LogIC50	-8.726	0.033	.	.	N/A
			Top	102.000	2.441	94.330	110.533	
SC	**Hamner**	**TC 2 Run 10 SC (6/24)**	Bottom	-0.411	2.560	-3.191	0.281	
			HillSlope	-0.946	0.117	-1.343	-0.658	
			LogIC50	-9.144	0.041	.	.	N/A
			Top	103.100	3.910	94.330	110.533	
SC	**Hamner**	**TC 2 Run 3 SC UN (6/2)**	Bottom	-0.244	0.449	-3.191	0.281	
			HillSlope	-0.915	0.028	-1.343	-0.658	
			LogIC50	-9.710	0.009	.	.	N/A
			Top	107.600	1.258	94.330	110.533	
SC	**Hamner**	**TC 2 Run 8 SC UN (6/18)**	Bottom	-2.630	5.573	-3.191	0.281	
			HillSlope	-0.801	0.238	-1.343	-0.658	
			LogIC50	-9.485	0.095	.	.	N/A
			Top	106.100	12.250	94.330	110.533	
SC	**Hamner**	**TC 20 Run 5 SC (4/17)**	Bottom	-2.505	2.548	-3.191	0.281	
			HillSlope	-1.183	0.132	-1.343	-0.658	
			LogIC50	-8.812	0.033	.	.	N/A
			Top	100.700	2.732	94.330	110.533	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
SC	**Hamner**	**TC 3 Run 1 SC UN (4/14)**	Bottom	-0.563	7.829	-3.191	0.281	
			HillSlope	-0.927	0.290	-1.343	-0.658	
			LogIC50	-8.846	0.104	.	.	N/A
			Top	120.300	12.070	94.330	110.533	Above Limit
SC	**Hamner**	**TC 3 Run 10 SC UN (6/12)**	Bottom	-8.232	8.449	-3.191	0.281	Below Limit
			HillSlope	-0.869	0.332	-1.343	-0.658	
			LogIC50	-9.400	0.128	.	.	N/A
			Top	103.800	14.100	94.330	110.533	
SC	**Hamner**	**TC 3 Run 12 SC UN (6/16)**	Bottom	-0.985	5.058	-3.191	0.281	
			HillSlope	-0.730	0.159	-1.343	-0.658	
			LogIC50	-9.145	0.072	.	.	N/A
			Top	108.100	8.300	94.330	110.533	
SC	**Hamner**	**TC 3 Run 15 SC (6/24)**	Bottom	-0.411	2.560	-3.191	0.281	
			HillSlope	-0.946	0.117	-1.343	-0.658	
			LogIC50	-9.144	0.041	.	.	N/A
			Top	103.100	3.910	94.330	110.533	
SC	**Hamner**	**TC 3 Run 16 SC (6/25)**	Bottom	0.105	2.668	-3.191	0.281	
			HillSlope	-0.752	0.099	-1.343	-0.658	
			LogIC50	-9.331	0.043	.	.	N/A
			Top	107.300	5.316	94.330	110.533	
SC	**Hamner**	**TC 3 Run 2 SC UN (4/15)**	Bottom	-0.542	2.008	-3.191	0.281	
			HillSlope	-1.011	0.090	-1.343	-0.658	
			LogIC50	-8.825	0.029	.	.	N/A
			Top	103.000	2.331	94.330	110.533	
SC	**Hamner**	**TC 3 Run 4 SC UN (5/15)**	Bottom	-4.403	9.686	-3.191	0.281	Below Limit
			HillSlope	-0.971	0.336	-1.343	-0.658	
			LogIC50	-8.811	0.110	.	.	N/A
			Top	101.800	8.986	94.330	110.533	
SC	**Hamner**	**TC 3 Run 5 SC UN (5/16)**	Bottom	0.077	3.222	-3.191	0.281	
			HillSlope	-1.123	0.172	-1.343	-0.658	
			LogIC50	-8.727	0.046	.	.	N/A
			Top	99.990	3.371	94.330	110.533	
SC	**Hamner**	**TC 3 Run 6 SC UN (5/18)**	Bottom	0.525	4.416	-3.191	0.281	Above Limit
			HillSlope	-1.416	0.290	-1.343	-0.658	Below Limit
			LogIC50	-8.585	0.050	.	.	N/A
			Top	101.000	4.471	94.330	110.533	
SC	**Hamner**	**TC 3 Run 7 SC UN (5/23)**	Bottom	0.128	0.427	-3.191	0.281	
			HillSlope	-1.319	0.049	-1.343	-0.658	
			LogIC50	-9.495	0.009	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	101.100	0.776	94.330	110.533	
SC	**Hamner**	**TC 4 Run 1 SC UN (4/3)**	Bottom	-0.818	2.033	-3.191	0.281	
			HillSlope	-1.047	0.095	-1.343	-0.658	
			LogIC50	-8.762	0.029	.	.	N/A
			Top	108.600	2.605	94.330	110.533	
SC	**Hamner**	**TC 4 Run 2 SC (4/7)**	Bottom	-0.119	1.908	-3.191	0.281	
			HillSlope	-1.081	0.104	-1.343	-0.658	
			LogIC50	-9.064	0.031	.	.	N/A
			Top	100.700	2.662	94.330	110.533	
SC	**Hamner**	**TC 4 Run 3 SC (4/8)**	Bottom	2.568	1.803	-3.191	0.281	Above Limit
			HillSlope	-1.635	0.191	-1.343	-0.658	Below Limit
			LogIC50	-9.074	0.028	.	.	N/A
			Top	101.200	2.484	94.330	110.533	
SC	**Hamner**	**TC 4 Run 4 SC (4/9)**	Bottom	0.260	1.046	-3.191	0.281	
			HillSlope	-1.149	0.062	-1.343	-0.658	
			LogIC50	-9.043	0.017	.	.	N/A
			Top	101.200	1.434	94.330	110.533	
SC	**Hamner**	**TC 4 Run 5 SC UN (6/12)**	Bottom	-8.232	8.449	-3.191	0.281	Below Limit
			HillSlope	-0.869	0.332	-1.343	-0.658	
			LogIC50	-9.400	0.128	.	.	N/A
			Top	103.800	14.100	94.330	110.533	
SC	**Hamner**	**TC 4 Run 6 SC UN (6/25)**	Bottom	0.115	2.667	-3.191	0.281	
			HillSlope	-0.752	0.099	-1.343	-0.658	
			LogIC50	-9.331	0.043	.	.	N/A
			Top	107.300	5.313	94.330	110.533	
SC	**Hamner**	**TC 4 Run 7 SC UN (7/1)**	Bottom	-0.808	1.981	-3.191	0.281	
			HillSlope	-1.153	0.129	-1.343	-0.658	
			LogIC50	-9.337	0.034	.	.	N/A
			Top	101.400	3.393	94.330	110.533	
SC	**Hamner**	**TC 4 Run 8 SC UN (7/2)**	Bottom	1.182	3.223	-3.191	0.281	Above Limit
			HillSlope	-1.076	0.163	-1.343	-0.658	
			LogIC50	-9.040	0.048	.	.	N/A
			Top	117.600	5.726	94.330	110.533	Above Limit
SC	**Hamner**	**TC 5 Run 1 SC (3/26)**	Bottom	-0.783	0.638	-3.191	0.281	
			HillSlope	-1.075	0.035	-1.343	-0.658	
			LogIC50	-8.959	0.011	.	.	N/A
			Top	103.300	0.986	94.330	110.533	
SC	**Hamner**	**TC 5 Run 2 SC (3/27)**	Bottom	1.395	2.295	-3.191	0.281	Above Limit
			HillSlope	-1.152	0.141	-1.343	-0.658	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-9.022	0.036	.	.	N/A
			Top	102.600	3.626	94.330	110.533	
SC	**Hamner**	**TC 5 Run 3 SC (3/31)**	Bottom	-3.164	2.260	-3.191	0.281	
			HillSlope	-0.841	0.075	-1.343	-0.658	
			LogIC50	-8.836	0.029	.	.	N/A
			Top	101.900	2.518	94.330	110.533	
SC	**Hamner**	**TC 6 Run 1 SC UN (6/2)**	Bottom	-2.501	2.200	-3.191	0.281	
			HillSlope	-0.834	0.077	-1.343	-0.658	
			LogIC50	-8.898	0.030	.	.	N/A
			Top	103.400	3.115	94.330	110.533	
SC	**Hamner**	**TC 6 Run 2 SC (6/3)**	Bottom	-1.078	0.283	-3.191	0.281	
			HillSlope	-0.931	0.014	-1.343	-0.658	
			LogIC50	-9.138	0.005	.	.	N/A
			Top	101.900	0.419	94.330	110.533	
SC	**Hamner**	**TC 6 Run 3 SC (6/5)**	Bottom	-1.540	2.031	-3.191	0.281	
			HillSlope	-0.773	0.068	-1.343	-0.658	
			LogIC50	-9.098	0.029	.	.	N/A
			Top	104.300	3.019	94.330	110.533	
SC	**Hamner**	**TC 6 Run 4 SC (6/6)**	Bottom	-0.870	0.419	-3.191	0.281	
			HillSlope	-0.948	0.021	-1.343	-0.658	
			LogIC50	-9.133	0.007	.	.	N/A
			Top	103.800	0.754	94.330	110.533	
SC	**Hamner**	**TC 8 Run 5 SC (5/27)**	Bottom	-0.826	1.259	-3.191	0.281	
			HillSlope	-0.990	0.057	-1.343	-0.658	
			LogIC50	-8.967	0.019	.	.	N/A
			Top	103.100	1.648	94.330	110.533	
SC	**RTI**	**RTI Set 1 Run 1 SC (2/4)**	Bottom	-0.795	0.432	-3.191	0.281	
			HillSlope	-0.939	0.022	-1.343	-0.658	
			LogIC50	-9.150	0.007	.	.	N/A
			Top	106.000	1.030	94.330	110.533	
SC	**RTI**	**RTI Set 1 Run 2 SC (2/6)**	Bottom	0.149	1.450	-3.191	0.281	
			HillSlope	-1.110	0.085	-1.343	-0.658	
			LogIC50	-9.050	0.024	.	.	N/A
			Top	103.000	2.030	94.330	110.533	
SC	**RTI**	**RTI Set 1 Run 3 SC (2/7)**	Bottom	-1.120	1.030	-3.191	0.281	
			HillSlope	-0.903	0.046	-1.343	-0.658	
			LogIC50	-9.230	0.017	.	.	N/A
			Top	103.000	1.690	94.330	110.533	
SC	**RTI**	**RTI Set 2 Run 1 SC UN (2/21)**	Bottom	-1.220	1.270	-3.191	0.281	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-0.909	0.055	-1.343	-0.658	
			LogIC50	-9.140	0.020	.	.	N/A
			Top	101.000	1.900	94.330	110.533	
SC	**RTI**	**RTI Set 2 Run 2 SC (2/26)**	Bottom	-0.490	0.688	-3.191	0.281	
			HillSlope	-1.040	0.036	-1.343	-0.658	
			LogIC50	-9.120	0.011	.	.	N/A
			Top	104.000	1.200	94.330	110.533	
SC	**RTI**	**RTI Set 2 Run 3 SC (2/27)**	Bottom	-1.310	0.964	-3.191	0.281	
			HillSlope	-0.922	0.043	-1.343	-0.658	
			LogIC50	-9.160	0.015	.	.	N/A
			Top	108.000	1.820	94.330	110.533	
SC	**RTI**	**RTI Set 2 Run 4 SC (3/3)**	Bottom	-0.611	1.090	-3.191	0.281	
			HillSlope	-0.984	0.053	-1.343	-0.658	
			LogIC50	-9.160	0.018	.	.	N/A
			Top	102.000	1.650	94.330	110.533	
SC	**RTI**	**RTI Set 3 Run 1 SC (2/28)**	Bottom	-0.471	0.995	-3.191	0.281	
			HillSlope	-1.060	0.060	-1.343	-0.658	
			LogIC50	-9.090	0.018	.	.	N/A
			Top	97.200	1.640	94.330	110.533	
SC	**RTI**	**RTI Set 3 Run 2 SC (3/4)**	Bottom	-0.892	0.892	-3.191	0.281	
			HillSlope	-1.000	0.044	-1.343	-0.658	
			LogIC50	-9.100	0.014	.	.	N/A
			Top	100.000	1.290	94.330	110.533	
SC	**RTI**	**RTI Set 3 Run 3 SC (3/5)**	Bottom	-7.770	1.610	-3.191	0.281	Below Limit
			HillSlope	-1.020	0.062	-1.343	-0.658	
			LogIC50	-9.010	0.019	.	.	N/A
			Top	102.000	1.760	94.330	110.533	
SC	**RTI**	**RTI Set 4 Run 1 SC (3/6)**	Bottom	-1.096	1.813	-3.191	0.281	
			HillSlope	-0.895	0.073	-1.343	-0.658	
			LogIC50	-9.049	0.027	.	.	N/A
			Top	103.600	2.560	94.330	110.533	
SC	**RTI**	**RTI Set 4 Run 2 SC (3/11)**	Bottom	0.143	1.493	-3.191	0.281	
			HillSlope	-1.188	0.089	-1.343	-0.658	
			LogIC50	-8.942	0.023	.	.	N/A
			Top	101.400	1.880	94.330	110.533	
SC	**RTI**	**RTI Set 4 Run 3 SC UN (3/13)**	Bottom	-0.493	2.747	-3.191	0.281	
			HillSlope	-1.114	0.157	-1.343	-0.658	
			LogIC50	-8.990	0.044	.	.	N/A
			Top	96.100	3.483	94.330	110.533	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
SC	**RTI**	**RTI Set 4 Run 4 SC UN (3/18)**	Bottom	-0.105	4.373	-3.191	0.281	
			HillSlope	-1.013	0.212	-1.343	-0.658	
			LogIC50	-9.021	0.068	.	.	N/A
			Top	101.700	5.955	94.330	110.533	
SC	**RTI**	**RTI Set 4 Run 5 SC (4/3)**	Bottom	-1.924	1.811	-3.191	0.281	
			HillSlope	-0.834	0.069	-1.343	-0.658	
			LogIC50	-9.152	0.028	.	.	N/A
			Top	101.200	2.732	94.330	110.533	
SC	**RTI**	**RTI Set 5 Run 1 SC (3/17)**	Bottom	-1.140	1.460	-3.191	0.281	
			HillSlope	-0.952	0.065	-1.343	-0.658	
			LogIC50	-9.050	0.023	.	.	N/A
			Top	101.000	2.020	94.330	110.533	
SC	**RTI**	**RTI Set 5 Run 2 SC (3/27)**	Bottom	-3.930	2.000	-3.191	0.281	Below Limit
			HillSlope	-0.968	0.074	-1.343	-0.658	
			LogIC50	-8.760	0.024	.	.	N/A
			Top	102.000	1.970	94.330	110.533	
SC	**RTI**	**RTI Set 5 Run 3 SC (3/31)**	Bottom	-0.420	0.715	-3.191	0.281	
			HillSlope	-0.943	0.035	-1.343	-0.658	
			LogIC50	-9.220	0.012	.	.	N/A
			Top	108.000	1.440	94.330	110.533	
SC	**RTI**	**RTI Set 6 Run 1 SC (4/1)**	Bottom	-1.530	1.330	-3.191	0.281	
			HillSlope	-0.933	0.057	-1.343	-0.658	
			LogIC50	-9.020	0.020	.	.	N/A
			Top	101.000	1.790	94.330	110.533	
SC	**RTI**	**RTI Set 6 Run 2 SC UN (4/7)**	Bottom	-0.860	1.680	-3.191	0.281	
			HillSlope	-0.950	0.076	-1.343	-0.658	
			LogIC50	-9.130	0.027	.	.	N/A
			Top	102.000	2.500	94.330	110.533	
SC	**RTI**	**RTI Set 6 Run 3 SC (4/8)**	Bottom	-2.340	1.850	-3.191	0.281	
			HillSlope	-0.812	0.071	-1.343	-0.658	
			LogIC50	-9.120	0.029	.	.	N/A
			Top	95.100	2.960	94.330	110.533	
SC	**RTI**	**RTI Set 6 Run 4 SC (6/9)**	Bottom	-0.742	1.600	-3.191	0.281	
			HillSlope	-1.030	0.079	-1.343	-0.658	
			LogIC50	-8.990	0.025	.	.	N/A
			Top	99.100	2.080	94.330	110.533	
SC	**RTI**	**SC #2 8/23**	Bottom	-4.468	3.492	-3.191	0.281	Below Limit
			HillSlope	-0.665	0.087	-1.343	-0.658	
			LogIC50	-9.060	0.042	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerance Interval Lower Limit	Tolerance Interval Upper Limit	Status
			Top	106.700	4.920	94.330	110.533	
SC	RTI	SC #4 9/6	Bottom	-1.073	1.493	-3.191	0.281	
			HillSlope	-0.985	0.067	-1.343	-0.658	
			LogIC50	-8.912	0.022	.	.	N/A
			Top	101.100	1.834	94.330	110.533	
SC	RTI	SC #5 9/10	Bottom	-0.730	1.618	-3.191	0.281	
			HillSlope	-0.969	0.070	-1.343	-0.658	
			LogIC50	-8.924	0.024	.	.	N/A
			Top	102.600	2.036	94.330	110.533	
SC	RTI	SC #6 9/11	Bottom	-1.678	1.242	-3.191	0.281	
			HillSlope	-0.915	0.051	-1.343	-0.658	
			LogIC50	-9.009	0.019	.	.	N/A
			Top	100.500	1.642	94.330	110.533	
SC	RTI	SC #7 10/22	Bottom	-1.465	1.813	-3.191	0.281	
			HillSlope	-0.888	0.073	-1.343	-0.658	
			LogIC50	-9.051	0.028	.	.	N/A
			Top	101.500	2.514	94.330	110.533	
SC	TRL	SC 10/3	Bottom	-0.030	1.198	-3.191	0.281	
			HillSlope	-0.990	0.056	-1.343	-0.658	
			LogIC50	-9.010	0.019	.	.	N/A
			Top	101.700	1.618	94.330	110.533	
SC	TRL	SC 11/20	Bottom	0.438	1.828	-3.191	0.281	Above Limit
			HillSlope	-1.082	0.096	-1.343	-0.658	
			LogIC50	-8.995	0.028	.	.	N/A
			Top	104.000	2.469	94.330	110.533	
SC	TRL	SC 11/27	Bottom	0.685	1.397	-3.191	0.281	Above Limit
			HillSlope	-1.037	0.083	-1.343	-0.658	
			LogIC50	-9.245	0.031	.	.	N/A
			Top	102.100	2.178	94.330	110.533	
SC	TRL	SC 11/30	Bottom	-0.632	1.125	-3.191	0.281	
			HillSlope	-0.985	0.054	-1.343	-0.658	
			LogIC50	-9.132	0.018	.	.	N/A
			Top	102.000	1.680	94.330	110.533	
SC	TRL	SC 11/7	Bottom	-1.275	1.166	-3.191	0.281	
			HillSlope	-0.951	0.050	-1.343	-0.658	
			LogIC50	-8.961	0.017	.	.	N/A
			Top	100.800	1.489	94.330	110.533	
SC	TRL	SC 11/7a	Bottom	-1.275	1.166	-3.191	0.281	
			HillSlope	-0.951	0.050	-1.343	-0.658	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-8.961	0.017	.	.	N/A
			Top	100.800	1.489	94.330	110.533	
SC	**TRL**	**SC 12/12**	Bottom	-0.622	1.868	-3.191	0.281	
			HillSlope	-1.157	0.104	-1.343	-0.658	
			LogIC50	-8.883	0.028	.	.	N/A
			Top	101.700	2.422	94.330	110.533	
SC	**TRL**	**SC 9/12**	Bottom	-0.890	2.264	-3.191	0.281	
			HillSlope	-0.941	0.120	-1.343	-0.658	
			LogIC50	-9.455	0.041	.	.	N/A
			Top	102.400	4.474	94.330	110.533	
SC	**TRL**	**SC 9/21**	Bottom	-1.521	1.151	-3.191	0.281	
			HillSlope	-0.916	0.047	-1.343	-0.658	
			LogIC50	-8.977	0.017	.	.	N/A
			Top	102.100	1.501	94.330	110.533	
SC	**TRL**	**SC 9/24**	Bottom	-0.323	1.188	-3.191	0.281	
			HillSlope	-1.070	0.065	-1.343	-0.658	
			LogIC50	-9.141	0.019	.	.	N/A
			Top	102.200	1.779	94.330	110.533	
SC	**TRL**	**TC 1 RN012 SC (5/29) (yellow)**	Bottom	-3.713	0.889	-3.191	0.281	Below Limit
			HillSlope	-0.974	0.034	-1.343	-0.658	
			LogIC50	-8.515	0.010	.	.	N/A
			Top	100.500	0.719	94.330	110.533	
SC	**TRL**	**TC 1 TTN015 SC (5/8)(blue)**	Bottom	-1.938	0.958	-3.191	0.281	
			HillSlope	-0.984	0.040	-1.343	-0.658	
			LogIC50	-8.743	0.014	.	.	N/A
			Top	101.900	1.001	94.330	110.533	
SC	**TRL**	**TC 1 TTN018 SC (6/12) (blue)**	Bottom	-0.883	1.463	-3.191	0.281	
			HillSlope	-0.995	0.070	-1.343	-0.658	
			LogIC50	-8.999	0.022	.	.	N/A
			Top	103.600	2.400	94.330	110.533	
SC	**TRL**	**TC 1 TTN019 SC (6/16) (blue)**	Bottom	-0.338	1.581	-3.191	0.281	
			HillSlope	-1.018	0.078	-1.343	-0.658	
			LogIC50	-9.085	0.023	.	.	N/A
			Top	101.500	2.154	94.330	110.533	
SC	**TRL**	**TC 11 TTN002 SC (3/18) (blue)**	Bottom	-0.844	0.769	-3.191	0.281	
			HillSlope	-1.082	0.041	-1.343	-0.658	
			LogIC50	-8.893	0.017	.	.	N/A
			Top	99.780	0.969	94.330	110.533	
SC	**TRL**	**TC 11 TTN004 SC (4/7) (red)**	Bottom	-4.099	1.805	-3.191	0.281	Below Limit

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
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Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-0.980	0.070	-1.343	-0.658	
			LogIC50	-8.812	0.023	.	.	N/A
			Top	99.830	1.820	94.330	110.533	
SC	**TRL**	**TC 11 TTN006 SC (4/16) (blue)**	Bottom	-2.223	0.994	-3.191	0.281	
			HillSlope	-0.887	0.039	-1.343	-0.658	
			LogIC50	-8.971	0.014	.	.	N/A
			Top	104.800	1.526	94.330	110.533	
SC	**TRL**	**TC 11 TTN017 SC (5/14)(yellow)**	Bottom	-1.642	0.406	-3.191	0.281	
			HillSlope	-0.980	0.018	-1.343	-0.658	
			LogIC50	-8.857	0.006	.	.	N/A
			Top	102.500	0.567	94.330	110.533	
SC	**TRL**	**TC 12 RN013 SC (6/11) (yellow)**	Bottom	-0.737	1.136	-3.191	0.281	
			HillSlope	-0.961	0.052	-1.343	-0.658	
			LogIC50	-9.057	0.019	.	.	N/A
			Top	105.100	1.924	94.330	110.533	
SC	**TRL**	**TC 12 TTN001 SC (3/12) (blue)**	Bottom	-1.395	0.389	-3.191	0.281	
			HillSlope	-0.987	0.017	-1.343	-0.658	
			LogIC50	-8.854	0.006	.	.	N/A
			Top	102.500	0.567	94.330	110.533	
SC	**TRL**	**TC 12 TTN003 SC (3/28)(yellow)**	Bottom	-1.417	0.877	-3.191	0.281	
			HillSlope	-0.970	0.037	-1.343	-0.658	
			LogIC50	-8.827	0.012	.	.	N/A
			Top	101.700	1.002	94.330	110.533	
SC	**TRL**	**TC 12 TTN006 SC (4/16) (blue)**	Bottom	-2.223	0.994	-3.191	0.281	
			HillSlope	-0.887	0.039	-1.343	-0.658	
			LogIC50	-8.971	0.014	.	.	N/A
			Top	104.800	1.526	94.330	110.533	
SC	**TRL**	**TC 15 RN002 SC (4/9) (yellow)**	Bottom	-2.493	1.996	-3.191	0.281	
			HillSlope	-0.983	0.084	-1.343	-0.658	
			LogIC50	-8.702	0.029	.	.	N/A
			Top	97.750	1.930	94.330	110.533	
SC	**TRL**	**TC 16 TTN007 SC (4/21) (green)**	Bottom	-1.992	0.742	-3.191	0.281	
			HillSlope	-0.961	0.033	-1.343	-0.658	
			LogIC50	-8.806	0.011	.	.	N/A
			Top	97.970	0.928	94.330	110.533	
SC	**TRL**	**TC 16 TTN008 SC (4/22) (green)**	Bottom	-0.796	0.868	-3.191	0.281	
			HillSlope	-1.034	0.042	-1.343	-0.658	
			LogIC50	-8.876	0.013	.	.	N/A
			Top	104.600	1.218	94.330	110.533	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
SC	TRL	TC 16 TTN009 SC (4/23) (blue)	Bottom	-0.962	1.111	-3.191	0.281	
			HillSlope	-1.080	0.055	-1.343	-0.658	
			LogIC50	-8.848	0.016	.	.	N/A
			Top	101.300	1.294	94.330	110.533	
SC	TRL	TC 19 TTN005 SC (4/14)(yellow)	Bottom	-1.357	0.553	-3.191	0.281	
			HillSlope	-0.946	0.023	-1.343	-0.658	
			LogIC50	-8.946	0.008	.	.	N/A
			Top	100.900	0.697	94.330	110.533	
SC	TRL	TC 2 RN007 SC (5/7) (yellow)	Bottom	-2.658	0.727	-3.191	0.281	
			HillSlope	-0.939	0.030	-1.343	-0.658	
			LogIC50	-8.722	0.010	.	.	N/A
			Top	98.230	0.807	94.330	110.533	
SC	TRL	TC 2 RN008 SC (5/12) (green)	Bottom	-0.858	1.678	-3.191	0.281	
			HillSlope	-1.080	0.075	-1.343	-0.658	
			LogIC50	-8.709	0.021	.	.	N/A
			Top	101.300	1.756	94.330	110.533	
SC	TRL	TC 2 RN009 SC (5/13) (blue)	Bottom	-3.426	1.052	-3.191	0.281	Below Limit
			HillSlope	-0.886	0.036	-1.343	-0.658	
			LogIC50	-8.675	0.013	.	.	N/A
			Top	100.800	0.992	94.330	110.533	
SC	TRL	TC 2 RN013 SC (6/11) (yellow)	Bottom	-0.737	1.136	-3.191	0.281	
			HillSlope	-0.961	0.052	-1.343	-0.658	
			LogIC50	-9.057	0.019	.	.	N/A
			Top	105.100	1.924	94.330	110.533	
SC	TRL	TC 4 RN003 SC (4/16) (yellow)	Bottom	-1.967	5.144	-3.191	0.281	
			HillSlope	-0.994	0.215	-1.343	-0.658	
			LogIC50	-8.811	0.068	.	.	N/A
			Top	100.900	5.356	94.330	110.533	
SC	TRL	TC 4 TTN010 SC (4/28) (yellow)	Bottom	-7.585	5.662	-3.191	0.281	Below Limit
			HillSlope	-0.900	0.145	-1.343	-0.658	
			LogIC50	-8.296	0.045	.	.	N/A
			Top	102.700	2.977	94.330	110.533	
SC	TRL	TC 4 TTN011 SC (4/29) (yellow)	Bottom	-6.006	3.495	-3.191	0.281	Below Limit
			HillSlope	-1.011	0.124	-1.343	-0.658	
			LogIC50	-8.249	0.034	.	.	N/A
			Top	104.300	2.159	94.330	110.533	
SC	TRL	TC 4 TTN012 SC (4/30) (yellow)	Bottom	-1.744	1.404	-3.191	0.281	
			HillSlope	-1.034	0.063	-1.343	-0.658	
			LogIC50	-8.688	0.019	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
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Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	99.570	1.397	94.330	110.533	
SC	TRL	TC 4 TTN013 SC (5/5) (yellow)	Bottom	-1.254	0.596	-3.191	0.281	
			HillSlope	-1.009	0.027	-1.343	-0.658	
			LogIC50	-8.873	0.009	.	.	N/A
			Top	101.000	0.707	94.330	110.533	
SC	TRL	TC 5 TTN007 SC (4/21) (green)	Bottom	-1.992	0.742	-3.191	0.281	
			HillSlope	-0.961	0.033	-1.343	-0.658	
			LogIC50	-8.806	0.011	.	.	N/A
			Top	97.970	0.928	94.330	110.533	
SC	TRL	TC 5 TTN008 SC (4/22) (green)	Bottom	-0.796	0.868	-3.191	0.281	
			HillSlope	-1.034	0.042	-1.343	-0.658	
			LogIC50	-8.876	0.013	.	.	N/A
			Top	104.600	1.218	94.330	110.533	
SC	TRL	TC 5 TTN009 SC (4/23) (blue)	Bottom	-0.962	1.111	-3.191	0.281	
			HillSlope	-1.080	0.055	-1.343	-0.658	
			LogIC50	-8.848	0.016	.	.	N/A
			Top	101.300	1.294	94.330	110.533	
SC	TRL	TC 6 RN004 SC (4/24) (blue)	Bottom	-1.391	0.791	-3.191	0.281	
			HillSlope	-0.940	0.032	-1.343	-0.658	
			LogIC50	-8.945	0.011	.	.	N/A
			Top	101.000	0.927	94.330	110.533	
SC	TRL	TC 6 RN005 SC (5/1) (blue)	Bottom	-2.306	1.551	-3.191	0.281	
			HillSlope	-1.005	0.067	-1.343	-0.658	
			LogIC50	-8.577	0.020	.	.	N/A
			Top	103.400	1.684	94.330	110.533	
SC	TRL	TC 6 RN006 SC (5/6) (green)	Bottom	-2.348	1.040	-3.191	0.281	
			HillSlope	-0.973	0.042	-1.343	-0.658	
			LogIC50	-8.690	0.015	.	.	N/A
			Top	100.100	1.014	94.330	110.533	
WP	Hamner	TC 1 Run 1 WP UN (4/15)	Bottom	13.230	4.830	-19.110	21.930	
			HillSlope	-1.034	0.210	-1.405	-0.570	
			LogIC50	-5.979	0.067	.	.	N/A
			Top	107.200	4.680	74.035	125.652	
WP	Hamner	TC 1 Run 5 WP (5/22)	Bottom	-15.340	14.570	-19.110	21.930	
			HillSlope	-0.593	0.151	-1.405	-0.570	
			LogIC50	-6.007	0.070	.	.	N/A
			Top	110.900	7.481	74.035	125.652	
WP	Hamner	TC 11 Run 1 WP (3/5)	Bottom	-4.276	2.931	-19.110	21.930	
			HillSlope	-1.061	0.128	-1.405	-0.570	

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Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-6.150	0.037	.	.	N/A
			Top	101.800	3.101	74.035	125.652	
WP	**Hamner**	**TC 11 Run 2 WP (3/6)**	Bottom	-2.262	7.097	-19.110	21.930	
			HillSlope	-0.770	0.159	-1.405	-0.570	
			LogIC50	-6.116	0.072	.	.	N/A
			Top	118.500	6.704	74.035	125.652	
WP	**Hamner**	**TC 11 Run 3 WP (3/10)**	Bottom	3.782	1.848	-19.110	21.930	
			HillSlope	-1.187	0.093	-1.405	-0.570	
			LogIC50	-6.159	0.023	.	.	N/A
			Top	98.830	1.593	74.035	125.652	
WP	**Hamner**	**TC 12 Run 4 WP UN (3/17)**	Bottom	2.875	1.873	-19.110	21.930	
			HillSlope	-0.848	0.071	-1.405	-0.570	
			LogIC50	-6.182	0.029	.	.	N/A
			Top	98.260	2.080	74.035	125.652	
WP	**Hamner**	**TC 12 Run 5 WP (3/24)**	Bottom	2.778	2.074	-19.110	21.930	
			HillSlope	-0.939	0.092	-1.405	-0.570	
			LogIC50	-6.268	0.033	.	.	N/A
			Top	98.120	2.510	74.035	125.652	
WP	**Hamner**	**TC 14 Run 3 WP (4/10)**	Bottom	7.734	3.033	-19.110	21.930	
			HillSlope	-1.258	0.165	-1.405	-0.570	
			LogIC50	-6.239	0.036	.	.	N/A
			Top	100.600	2.805	74.035	125.652	
WP	**Hamner**	**TC 14 Run 5 WP (4/16)**	Bottom	25.000	3.425	-19.110	21.930	Above Limit
			HillSlope	-1.344	0.266	-1.405	-0.570	
			LogIC50	-5.937	0.057	.	.	N/A
			Top	94.190	2.437	74.035	125.652	
WP	**Hamner**	**TC 14 Run 6 WP (4/17)**	Bottom	0.941	9.593	-19.110	21.930	
			HillSlope	-0.789	0.260	-1.405	-0.570	
			LogIC50	-5.934	0.096	.	.	N/A
			Top	83.930	4.934	74.035	125.652	
WP	**Hamner**	**TC 15 Run 1 WP (3/11)**	Bottom	3.599	2.387	-19.110	21.930	
			HillSlope	-1.093	0.116	-1.405	-0.570	
			LogIC50	-6.291	0.033	.	.	N/A
			Top	93.780	2.229	74.035	125.652	
WP	**Hamner**	**TC 15 Run 2 WP (3/12)**	Bottom	5.243	1.750	-19.110	21.930	
			HillSlope	-1.009	0.073	-1.405	-0.570	
			LogIC50	-6.260	0.023	.	.	N/A
			Top	100.700	1.708	74.035	125.652	
WP	**Hamner**	**TC 16 Run 1 WP (3/18)**	Bottom	1.779	1.173	-19.110	21.930	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-1.077	0.057	-1.405	-0.570	
			LogIC50	-6.253	0.018	.	.	N/A
			Top	101.900	1.278	74.035	125.652	
WP	**Hamner**	**TC 16 Run 2 WP (3/26)**	Bottom	-1.969	4.695	-19.110	21.930	
			HillSlope	-0.723	0.123	-1.405	-0.570	
			LogIC50	-5.987	0.048	.	.	N/A
			Top	97.660	4.667	74.035	125.652	
WP	**Hamner**	**TC 16 Run 3 WP UN (3/27)**	Bottom	9.322	3.692	-19.110	21.930	
			HillSlope	-1.205	0.155	-1.405	-0.570	
			LogIC50	-6.098	0.041	.	.	N/A
			Top	117.800	3.013	74.035	125.652	
WP	**Hamner**	**TC 16 Run 4 WP UN (4/2)**	Bottom	8.854	2.011	-19.110	21.930	
			HillSlope	-1.216	0.121	-1.405	-0.570	
			LogIC50	-6.298	0.029	.	.	N/A
			Top	95.560	1.956	74.035	125.652	
WP	**Hamner**	**TC 16 Run 5 WP (6/11)**	Bottom	8.428	4.180	-19.110	21.930	
			HillSlope	-1.345	0.225	-1.405	-0.570	
			LogIC50	-5.852	0.042	.	.	N/A
			Top	105.400	3.396	74.035	125.652	
WP	**Hamner**	**TC 18 Run 2 WP (6/5)**	Bottom	10.400	5.670	-19.110	21.930	
			HillSlope	-1.065	0.221	-1.405	-0.570	
			LogIC50	-5.944	0.064	.	.	N/A
			Top	100.800	3.928	74.035	125.652	
WP	**Hamner**	**TC 2 Run 1 WP (5/19)**	Bottom	13.380	5.479	-19.110	21.930	
			HillSlope	-1.195	0.196	-1.405	-0.570	
			LogIC50	-5.751	0.056	.	.	N/A
			Top	141.400	4.457	74.035	125.652	Above Limit
WP	**Hamner**	**TC 2 Run 3 WP UN (6/2)**	Bottom	12.730	3.771	-19.110	21.930	
			HillSlope	-1.346	0.230	-1.405	-0.570	
			LogIC50	-6.101	0.047	.	.	N/A
			Top	98.600	2.833	74.035	125.652	
WP	**Hamner**	**TC 2 Run 4 WP UN (6/3)**	Bottom	12.610	1.859	-19.110	21.930	
			HillSlope	-1.164	0.102	-1.405	-0.570	
			LogIC50	-5.951	0.024	.	.	N/A
			Top	83.740	1.098	74.035	125.652	
WP	**Hamner**	**TC 2 Run 5 WP UN (6/7)**	Bottom	27.840	7.729	-19.110	21.930	Above Limit
			HillSlope	-1.231	0.417	-1.405	-0.570	
			LogIC50	-5.466	0.129	.	.	N/A
			Top	104.600	4.108	74.035	125.652	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
WP	**Hamner**	**TC 2 Run 8 WP UN (6/18)**	Bottom	-1.645	13.200	-19.110	21.930	
			HillSlope	-0.958	0.502	-1.405	-0.570	
			LogIC50	-6.609	0.198	.	.	N/A
			Top	71.490	8.541	74.035	125.652	Below Limit
WP	**Hamner**	**TC 20 Run 5 WP (4/17)**	Bottom	0.989	10.020	-19.110	21.930	
			HillSlope	-0.789	0.260	-1.405	-0.570	
			LogIC50	-5.875	0.096	.	.	N/A
			Top	87.740	5.157	74.035	125.652	
WP	**Hamner**	**TC 3 Run 11 WP UN (6/13)**	Bottom	-24.600	14.130	-19.110	21.930	Below Limit
			HillSlope	-0.907	0.366	-1.405	-0.570	
			LogIC50	-6.205	0.130	.	.	N/A
			Top	78.000	6.045	74.035	125.652	
WP	**Hamner**	**TC 3 Run 2 WP UN (4/15)**	Bottom	13.230	4.830	-19.110	21.930	
			HillSlope	-1.034	0.210	-1.405	-0.570	
			LogIC50	-5.979	0.067	.	.	N/A
			Top	107.200	4.680	74.035	125.652	
WP	**Hamner**	**TC 4 Run 1 WP UN (4/3)**	Bottom	2.235	1.717	-19.110	21.930	
			HillSlope	-1.025	0.075	-1.405	-0.570	
			LogIC50	-6.022	0.024	.	.	N/A
			Top	108.100	1.762	74.035	125.652	
WP	**Hamner**	**TC 4 Run 2 WP (4/7)**	Bottom	7.508	2.193	-19.110	21.930	
			HillSlope	-1.220	0.121	-1.405	-0.570	
			LogIC50	-6.223	0.033	.	.	N/A
			Top	113.500	2.446	74.035	125.652	
WP	**Hamner**	**TC 4 Run 3 WP (4/8)**	Bottom	-1.255	5.849	-19.110	21.930	
			HillSlope	-0.974	0.170	-1.405	-0.570	
			LogIC50	-6.224	0.056	.	.	N/A
			Top	116.300	5.042	74.035	125.652	
WP	**Hamner**	**TC 4 Run 4 WP (4/9)**	Bottom	5.315	4.889	-19.110	21.930	
			HillSlope	-0.866	0.207	-1.405	-0.570	
			LogIC50	-6.416	0.084	.	.	N/A
			Top	105.300	7.102	74.035	125.652	
WP	**Hamner**	**TC 5 Run 1 WP (3/26)**	Bottom	8.385	4.132	-19.110	21.930	
			HillSlope	-1.015	0.161	-1.405	-0.570	
			LogIC50	-6.148	0.049	.	.	N/A
			Top	96.600	3.125	74.035	125.652	
WP	**Hamner**	**TC 5 Run 2 WP (3/27)**	Bottom	10.550	3.867	-19.110	21.930	
			HillSlope	-0.922	0.113	-1.405	-0.570	
			LogIC50	-5.977	0.043	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	113.300	2.918	74.035	125.652	
WP	**Hamner**	**TC 5 Run 3 WP (3/31)**	Bottom	7.911	4.551	-19.110	21.930	
			HillSlope	-1.055	0.175	-1.405	-0.570	
			LogIC50	-5.846	0.047	.	.	N/A
			Top	94.490	2.536	74.035	125.652	
WP	**Hamner**	**TC 6 Run 2 WP (6/3)**	Bottom	5.961	3.345	-19.110	21.930	
			HillSlope	-1.030	0.142	-1.405	-0.570	
			LogIC50	-6.289	0.042	.	.	N/A
			Top	90.160	2.659	74.035	125.652	
WP	**Hamner**	**TC 6 Run 3 WP (6/5)**	Bottom	3.562	1.202	-19.110	21.930	
			HillSlope	-1.183	0.076	-1.405	-0.570	
			LogIC50	-6.226	0.019	.	.	N/A
			Top	89.620	1.282	74.035	125.652	
WP	**Hamner**	**TC 6 Run 4 WP (6/6)**	Bottom	9.222	2.117	-19.110	21.930	
			HillSlope	-0.988	0.080	-1.405	-0.570	
			LogIC50	-6.270	0.026	.	.	N/A
			Top	104.500	1.926	74.035	125.652	
WP	**Hamner**	**TC 8 Run 5 WP (5/27)**	Bottom	6.623	2.107	-19.110	21.930	
			HillSlope	-0.982	0.072	-1.405	-0.570	
			LogIC50	-6.092	0.023	.	.	N/A
			Top	105.100	1.582	74.035	125.652	
WP	**Hamner**	**WP 10/1**	Bottom	-3.770	5.680	-19.110	21.930	
			HillSlope	-1.111	0.168	-1.405	-0.570	
			LogIC50	-6.088	0.045	.	.	N/A
			Top	112.000	3.799	74.035	125.652	
WP	**Hamner**	**WP 10/10**	Bottom	-3.125	5.888	-19.110	21.930	
			HillSlope	-1.214	0.247	-1.405	-0.570	
			LogIC50	-5.967	0.052	.	.	N/A
			Top	94.010	4.023	74.035	125.652	
WP	**Hamner**	**WP 10/3**	Bottom	-1.783	4.167	-19.110	21.930	
			HillSlope	-0.996	0.187	-1.405	-0.570	
			LogIC50	-6.075	0.057	.	.	N/A
			Top	110.200	4.574	74.035	125.652	
WP	**Hamner**	**WP 10/8**	Bottom	-3.949	9.164	-19.110	21.930	
			HillSlope	-0.657	0.121	-1.405	-0.570	
			LogIC50	-5.867	0.062	.	.	N/A
			Top	118.100	5.288	74.035	125.652	
WP	**Hamner**	**WP 10/9**	Bottom	-1.008	2.418	-19.110	21.930	
			HillSlope	-1.104	0.145	-1.405	-0.570	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-6.088	0.036	.	.	N/A
			Top	96.980	3.116	74.035	125.652	
WP	**Hamner**	**WP 11/26**	Bottom	1.117	3.400	-19.110	21.930	
			HillSlope	-1.030	0.118	-1.405	-0.570	
			LogIC50	-6.014	0.030	.	.	N/A
			Top	122.500	4.186	74.035	125.652	
WP	**Hamner**	**WP 11/27**	Bottom	4.461	3.073	-19.110	21.930	
			HillSlope	-1.203	0.178	-1.405	-0.570	
			LogIC50	-6.395	0.044	.	.	N/A
			Top	95.630	3.151	74.035	125.652	
WP	**RTI**	**RTI Set 1 Run 1 WP (2/4)**	Bottom	-0.143	3.290	-19.110	21.930	
			HillSlope	-1.010	0.097	-1.405	-0.570	
			LogIC50	-6.260	0.034	.	.	N/A
			Top	98.900	1.110	74.035	125.652	
WP	**RTI**	**RTI Set 1 Run 2 WP (2/6)**	Bottom	2.400	3.410	-19.110	21.930	
			HillSlope	-0.712	0.069	-1.405	-0.570	
			LogIC50	-6.010	0.036	.	.	N/A
			Top	106.000	2.060	74.035	125.652	
WP	**RTI**	**RTI Set 1 Run 3 WP (2/7)**	Bottom	3.430	2.500	-19.110	21.930	
			HillSlope	-0.842	0.094	-1.405	-0.570	
			LogIC50	-6.270	0.039	.	.	N/A
			Top	102.000	3.110	74.035	125.652	
WP	**RTI**	**RTI Set 2 Run 1 WP UN (2/21)**	Bottom	-3.650	3.250	-19.110	21.930	
			HillSlope	-0.880	0.099	-1.405	-0.570	
			LogIC50	-6.210	0.037	.	.	N/A
			Top	99.800	2.820	74.035	125.652	
WP	**RTI**	**RTI Set 2 Run 2 WP (2/26)**	Bottom	-1.920	1.590	-19.110	21.930	
			HillSlope	-0.785	0.053	-1.405	-0.570	
			LogIC50	-6.280	0.023	.	.	N/A
			Top	102.000	1.890	74.035	125.652	
WP	**RTI**	**RTI Set 2 Run 3 WP (2/27)**	Bottom	-3.000	1.930	-19.110	21.930	
			HillSlope	-0.866	0.054	-1.405	-0.570	
			LogIC50	-6.240	0.019	.	.	N/A
			Top	103.000	1.710	74.035	125.652	
WP	**RTI**	**RTI Set 2 Run 4 WP (3/3)**	Bottom	-3.310	2.930	-19.110	21.930	
			HillSlope	-0.773	0.075	-1.405	-0.570	
			LogIC50	-6.280	0.032	.	.	N/A
			Top	103.000	2.800	74.035	125.652	
WP	**RTI**	**RTI Set 3 Run 1 WP (2/28)**	Bottom	-3.810	3.310	-19.110	21.930	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-0.834	0.087	-1.405	-0.570	
			LogIC50	-6.220	0.032	.	.	N/A
			Top	89.100	2.110	74.035	125.652	
WP	**RTI**	**RTI Set 3 Run 2 WP (3/4)**	Bottom	0.554	2.140	-19.110	21.930	
			HillSlope	-1.030	0.100	-1.405	-0.570	
			LogIC50	-6.200	0.031	.	.	N/A
			Top	93.600	2.050	74.035	125.652	
WP	**RTI**	**RTI Set 3 Run 3 WP (3/5)**	Bottom	-10.900	1.890	-19.110	21.930	
			HillSlope	-0.992	0.077	-1.405	-0.570	
			LogIC50	-6.040	0.024	.	.	N/A
			Top	95.900	1.670	74.035	125.652	
WP	**RTI**	**RTI Set 4 Run 1 WP (3/6)**	Bottom	-1.841	2.392	-19.110	21.930	
			HillSlope	-0.799	0.079	-1.405	-0.570	
			LogIC50	-6.169	0.033	.	.	N/A
			Top	96.840	2.460	74.035	125.652	
WP	**RTI**	**RTI Set 4 Run 2 WP (3/11)**	Bottom	0.463	2.349	-19.110	21.930	
			HillSlope	-1.160	0.106	-1.405	-0.570	
			LogIC50	-5.950	0.026	.	.	N/A
			Top	99.150	1.695	74.035	125.652	
WP	**RTI**	**RTI Set 4 Run 3 WP UN (3/13)**	Bottom	-0.981	0.733	-19.110	21.930	
			HillSlope	-0.942	0.031	-1.405	-0.570	
			LogIC50	-6.059	0.012	.	.	N/A
			Top	95.290	0.805	74.035	125.652	
WP	**RTI**	**RTI Set 4 Run 4 WP UN (3/18)**	Bottom	-0.177	3.576	-19.110	21.930	
			HillSlope	-0.952	0.158	-1.405	-0.570	
			LogIC50	-6.062	0.053	.	.	N/A
			Top	93.400	3.368	74.035	125.652	
WP	**RTI**	**RTI Set 4 Run 5 WP (4/3)**	Bottom	-1.868	1.574	-19.110	21.930	
			HillSlope	-0.783	0.051	-1.405	-0.570	
			LogIC50	-6.356	0.022	.	.	N/A
			Top	96.290	1.994	74.035	125.652	
WP	**RTI**	**RTI Set 5 Run 1 WP (3/17)**	Bottom	-1.950	1.600	-19.110	21.930	
			HillSlope	-0.799	0.055	-1.405	-0.570	
			LogIC50	-6.160	0.023	.	.	N/A
			Top	93.100	1.550	74.035	125.652	
WP	**RTI**	**RTI Set 5 Run 2 WP (3/27)**	Bottom	-3.790	3.080	-19.110	21.930	
			HillSlope	-1.080	0.151	-1.405	-0.570	
			LogIC50	-5.870	0.041	.	.	N/A
			Top	95.900	2.490	74.035	125.652	

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Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
WP	**RTI**	**RTI Set 5 Run 3 WP (3/31)**	Bottom	-0.251	1.060	-19.110	21.930	
			HillSlope	-0.961	0.049	-1.405	-0.570	
			LogIC50	-6.290	0.017	.	.	N/A
			Top	96.600	1.220	74.035	125.652	
WP	**RTI**	**RTI Set 6 Run 1 WP (4/1)**	Bottom	-1.070	2.020	-19.110	21.930	
			HillSlope	-1.020	0.115	-1.405	-0.570	
			LogIC50	-6.200	0.037	.	.	N/A
			Top	81.700	2.120	74.035	125.652	
WP	**RTI**	**RTI Set 6 Run 2 WP UN (4/7)**	Bottom	-1.280	1.450	-19.110	21.930	
			HillSlope	-0.926	0.065	-1.405	-0.570	
			LogIC50	-6.220	0.022	.	.	N/A
			Top	95.500	1.760	74.035	125.652	
WP	**RTI**	**RTI Set 6 Run 3 WP (4/8)**	Bottom	-1.130	2.830	-19.110	21.930	
			HillSlope	-0.876	0.121	-1.405	-0.570	
			LogIC50	-6.290	0.049	.	.	N/A
			Top	85.800	2.930	74.035	125.652	
WP	**RTI**	**RTI Set 6 Run 4 WP (6/9)**	Bottom	-2.360	1.770	-19.110	21.930	
			HillSlope	-0.920	0.071	-1.405	-0.570	
			LogIC50	-6.220	0.026	.	.	N/A
			Top	88.000	1.610	74.035	125.652	
WP	**RTI**	**WP #2 8/23**	Bottom	1.858	3.510	-19.110	21.930	
			HillSlope	-0.811	0.128	-1.405	-0.570	
			LogIC50	-6.126	0.053	.	.	N/A
			Top	91.090	3.455	74.035	125.652	
WP	**RTI**	**WP #4 9/6**	Bottom	2.773	4.885	-19.110	21.930	
			HillSlope	-0.846	0.119	-1.405	-0.570	
			LogIC50	-5.883	0.043	.	.	N/A
			Top	99.370	2.642	74.035	125.652	
WP	**RTI**	**WP #5 9/10**	Bottom	2.897	2.776	-19.110	21.930	
			HillSlope	-1.008	0.127	-1.405	-0.570	
			LogIC50	-5.949	0.040	.	.	N/A
			Top	101.000	2.594	74.035	125.652	
WP	**RTI**	**WP #6 9/11**	Bottom	-2.259	1.293	-19.110	21.930	
			HillSlope	-0.911	0.051	-1.405	-0.570	
			LogIC50	-6.070	0.018	.	.	N/A
			Top	96.870	1.237	74.035	125.652	
WP	**RTI**	**WP #7 10/22**	Bottom	-0.257	2.112	-19.110	21.930	
			HillSlope	-1.042	0.106	-1.405	-0.570	
			LogIC50	-6.091	0.032	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	93.010	2.041	74.035	125.652	
WP	TRL	TC 1 TTN015 WP (5/8)(blue)	Bottom	0.342	1.972	-19.110	21.930	
			HillSlope	-1.187	0.104	-1.405	-0.570	
			LogIC50	-5.910	0.025	.	.	N/A
			Top	98.220	1.684	74.035	125.652	
WP	TRL	TC 1 TTN018 WP (6/12) (blue)	Bottom	1.560	2.951	-19.110	21.930	
			HillSlope	-1.303	0.156	-1.405	-0.570	
			LogIC50	-6.129	0.030	.	.	N/A
			Top	102.400	2.190	74.035	125.652	
WP	TRL	TC 1 TTN019 WP (6/16) (blue)	Bottom	-5.181	3.747	-19.110	21.930	
			HillSlope	-0.857	0.093	-1.405	-0.570	
			LogIC50	-6.131	0.033	.	.	N/A
			Top	97.220	2.409	74.035	125.652	
WP	TRL	TC 11 TTN002 WP (3/18)(blue)	Bottom	3.929	3.401	-19.110	21.930	
			HillSlope	-1.174	0.137	-1.405	-0.570	
			LogIC50	-6.010	0.038	.	.	N/A
			Top	105.500	2.304	74.035	125.652	
WP	TRL	TC 11 TTN006 WP (4/16) (blue)	Bottom	-5.888	2.207	-19.110	21.930	
			HillSlope	-0.864	0.052	-1.405	-0.570	
			LogIC50	-6.081	0.018	.	.	N/A
			Top	103.300	1.430	74.035	125.652	
WP	TRL	TC 11 TTN017 WP (5/14)(yellow)	Bottom	-5.214	2.749	-19.110	21.930	
			HillSlope	-0.821	0.059	-1.405	-0.570	
			LogIC50	-5.975	0.021	.	.	N/A
			Top	100.700	1.515	74.035	125.652	
WP	TRL	TC 12 RN001 WP (4/2) (yellow)	Bottom	3.260	2.815	-19.110	21.930	
			HillSlope	-0.989	0.140	-1.405	-0.570	
			LogIC50	-5.951	0.042	.	.	N/A
			Top	80.510	1.921	74.035	125.652	
WP	TRL	TC 12 RN013 WP (6/11) (yellow)	Bottom	-1.602	1.238	-19.110	21.930	
			HillSlope	-0.865	0.038	-1.405	-0.570	
			LogIC50	-6.231	0.013	.	.	N/A
			Top	102.700	1.129	74.035	125.652	
WP	TRL	TC 12 TTN001 WP (3/12) (blue)	Bottom	5.133	1.885	-19.110	21.930	
			HillSlope	-1.153	0.074	-1.405	-0.570	
			LogIC50	-5.949	0.019	.	.	N/A
			Top	105.000	1.228	74.035	125.652	
WP	TRL	TC 12 TTN003 WP (3/28)(yellow)	Bottom	2.304	2.607	-19.110	21.930	
			HillSlope	-0.935	0.101	-1.405	-0.570	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-6.059	0.035	.	.	N/A
			Top	99.040	2.451	74.035	125.652	
WP	**TRL**	**TC 12 TTN006 WP (4/16) (blue)**	Bottom	-5.888	2.207	-19.110	21.930	
			HillSlope	-0.864	0.052	-1.405	-0.570	
			LogIC50	-6.081	0.018	.	.	N/A
			Top	103.300	1.430	74.035	125.652	
WP	**TRL**	**TC 15 RN002 WP (4/9) (yellow)**	Bottom	6.463	4.892	-19.110	21.930	
			HillSlope	-1.233	0.258	-1.405	-0.570	
			LogIC50	-5.775	0.051	.	.	N/A
			Top	87.830	2.443	74.035	125.652	
WP	**TRL**	**TC 16 TTN007 WP (4/21) (green)**	Bottom	-0.397	1.529	-19.110	21.930	
			HillSlope	-0.985	0.067	-1.405	-0.570	
			LogIC50	-5.914	0.021	.	.	N/A
			Top	97.690	1.315	74.035	125.652	
WP	**TRL**	**TC 16 TTN008 WP (4/22) (green)**	Bottom	-2.750	1.639	-19.110	21.930	
			HillSlope	-0.970	0.048	-1.405	-0.570	
			LogIC50	-5.962	0.015	.	.	N/A
			Top	106.300	1.021	74.035	125.652	
WP	**TRL**	**TC 16 TTN009 WP (4/23) (blue)**	Bottom	-1.554	0.797	-19.110	21.930	
			HillSlope	-1.119	0.040	-1.405	-0.570	
			LogIC50	-6.389	0.009	.	.	N/A
			Top	106.500	0.826	74.035	125.652	
WP	**TRL**	**TC 19 TTN005 WP (4/14)(yellow)**	Bottom	-0.431	1.512	-19.110	21.930	
			HillSlope	-0.973	0.054	-1.405	-0.570	
			LogIC50	-6.180	0.018	.	.	N/A
			Top	101.500	1.335	74.035	125.652	
WP	**TRL**	**TC 2 RN007 WP (5/7) (yellow)**	Bottom	0.108	4.700	-19.110	21.930	
			HillSlope	-1.229	0.232	-1.405	-0.570	
			LogIC50	-5.855	0.048	.	.	N/A
			Top	83.790	2.348	74.035	125.652	
WP	**TRL**	**TC 2 RN008 WP (5/12) (green)**	Bottom	-1.926	3.132	-19.110	21.930	
			HillSlope	-0.991	0.107	-1.405	-0.570	
			LogIC50	-5.816	0.031	.	.	N/A
			Top	99.040	1.917	74.035	125.652	
WP	**TRL**	**TC 2 RN009 WP (5/13) (blue)**	Bottom	-2.440	3.957	-19.110	21.930	
			HillSlope	-1.098	0.223	-1.405	-0.570	
			LogIC50	-5.704	0.049	.	.	N/A
			Top	91.730	3.420	74.035	125.652	
WP	**TRL**	**TC 2 RN013 WP (6/11) (yellow)**	Bottom	-1.602	1.238	-19.110	21.930	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerence Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-0.865	0.038	-1.405	-0.570	
			LogIC50	-6.231	0.013	.	.	N/A
			Top	102.700	1.129	74.035	125.652	
WP	**TRL**	**TC 4 RN003 WP (4/16) (yellow)**	Bottom	12.810	3.474	-19.110	21.930	
			HillSlope	-0.939	0.138	-1.405	-0.570	
			LogIC50	-5.821	0.044	.	.	N/A
			Top	116.700	4.686	74.035	125.652	
WP	**TRL**	**TC 4 TTN010 WP (4/28) (yellow)**	Bottom	-22.640	17.620	-19.110	21.930	Below Limit
			HillSlope	-0.874	0.179	-1.405	-0.570	
			LogIC50	-5.310	0.057	.	.	N/A
			Top	108.100	2.213	74.035	125.652	
WP	**TRL**	**TC 4 TTN011 WP (4/29) (yellow)**	Bottom	-5.587	5.575	-19.110	21.930	
			HillSlope	-0.981	0.149	-1.405	-0.570	
			LogIC50	-5.326	0.051	.	.	N/A
			Top	95.160	1.793	74.035	125.652	
WP	**TRL**	**TC 4 TTN012 WP (4/30) (yellow)**	Bottom	-4.160	4.826	-19.110	21.930	
			HillSlope	-0.922	0.124	-1.405	-0.570	
			LogIC50	-5.867	0.038	.	.	N/A
			Top	98.920	2.422	74.035	125.652	
WP	**TRL**	**TC 4 TTN013 WP (5/5) (yellow)**	Bottom	0.712	1.286	-19.110	21.930	
			HillSlope	-0.982	0.057	-1.405	-0.570	
			LogIC50	-6.086	0.019	.	.	N/A
			Top	99.980	1.311	74.035	125.652	
WP	**TRL**	**TC 4 TTN014 WP (5/7) (yellow)**	Bottom	-6.238	10.690	-19.110	21.930	
			HillSlope	-0.755	0.172	-1.405	-0.570	
			LogIC50	-5.729	0.055	.	.	N/A
			Top	89.980	3.418	74.035	125.652	
WP	**TRL**	**TC 5 TTN007 WP (4/21) (green)**	Bottom	-0.397	1.529	-19.110	21.930	
			HillSlope	-0.985	0.067	-1.405	-0.570	
			LogIC50	-5.914	0.021	.	.	N/A
			Top	97.690	1.315	74.035	125.652	
WP	**TRL**	**TC 5 TTN008 WP (4/22) (green)**	Bottom	-2.750	1.639	-19.110	21.930	
			HillSlope	-0.970	0.048	-1.405	-0.570	
			LogIC50	-5.962	0.015	.	.	N/A
			Top	106.300	1.021	74.035	125.652	
WP	**TRL**	**TC 5 TTN009 WP (4/23) (blue)**	Bottom	-1.554	0.797	-19.110	21.930	
			HillSlope	-1.119	0.040	-1.405	-0.570	
			LogIC50	-6.389	0.009	.	.	N/A
			Top	106.500	0.826	74.035	125.652	

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
WP	**TRL**	**TC 6 RN004 WP (4/24) (blue)**	Bottom	0.183	2.049	-19.110	21.930	
			HillSlope	-1.138	0.080	-1.405	-0.570	
			LogIC50	-5.983	0.020	.	.	N/A
			Top	97.640	1.267	74.035	125.652	
WP	**TRL**	**TC 6 RN005 WP (5/1) (blue)**	Bottom	3.968	4.105	-19.110	21.930	
			HillSlope	-1.267	0.182	-1.405	-0.570	
			LogIC50	-5.818	0.039	.	.	N/A
			Top	101.900	2.333	74.035	125.652	
WP	**TRL**	**TC 6 RN006 WP (5/6) (green)**	Bottom	-0.872	1.790	-19.110	21.930	
			HillSlope	-1.086	0.082	-1.405	-0.570	
			LogIC50	-5.862	0.022	.	.	N/A
			Top	97.470	1.413	74.035	125.652	
WP	**TRL**	**WP 10/3**	Bottom	5.615	3.520	-19.110	21.930	
			HillSlope	-1.249	0.179	-1.405	-0.570	
			LogIC50	-5.991	0.039	.	.	N/A
			Top	90.960	2.180	74.035	125.652	
WP	**TRL**	**WP 11/20**	Bottom	2.708	5.159	-19.110	21.930	
			HillSlope	-1.103	0.200	-1.405	-0.570	
			LogIC50	-5.992	0.052	.	.	N/A
			Top	97.080	3.422	74.035	125.652	
WP	**TRL**	**WP 11/27**	Bottom	13.330	4.478	-19.110	21.930	
			HillSlope	-0.983	0.163	-1.405	-0.570	
			LogIC50	-5.945	0.054	.	.	N/A
			Top	100.500	3.054	74.035	125.652	
WP	**TRL**	**WP 11/30**	Bottom	8.509	4.775	-19.110	21.930	
			HillSlope	-0.785	0.115	-1.405	-0.570	
			LogIC50	-6.098	0.051	.	.	N/A
			Top	112.300	4.003	74.035	125.652	
WP	**TRL**	**WP 11/7a**	Bottom	7.615	3.833	-19.110	21.930	
			HillSlope	-0.758	0.097	-1.405	-0.570	
			LogIC50	-5.981	0.045	.	.	N/A
			Top	114.400	3.972	74.035	125.652	
WP	**TRL**	**WP 12/12**	Bottom	15.090	4.447	-19.110	21.930	
			HillSlope	-1.011	0.155	-1.405	-0.570	
			LogIC50	-5.944	0.054	.	.	N/A
			Top	113.400	3.375	74.035	125.652	
WP	**TRL**	**WP 9/12**	Bottom	8.870	4.168	-19.110	21.930	
			HillSlope	-1.093	0.136	-1.405	-0.570	
			LogIC50	-5.863	0.042	.	.	N/A

Table C-1. ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	122.100	2.862	74.035	125.652	
WP	**TRL**	**WP 9/21**	Bottom	3.787	2.369	-19.110	21.930	
			HillSlope	-1.015	0.085	-1.405	-0.570	
			LogIC50	-6.009	0.025	.	.	N/A
			Top	99.350	1.623	74.035	125.652	
WP	**TRL**	**WP 9/24**	Bottom	5.616	3.552	-19.110	21.930	
			HillSlope	-0.803	0.096	-1.405	-0.570	
			LogIC50	-5.940	0.040	.	.	N/A
			Top	104.100	2.708	74.035	125.652	

Table C-2 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Run - Not Used in Computing Tolerance Intervals

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
WP	**Hamner**	**TC 1 Run 2 WP UN (5/1)**	Bottom	-1.43E13	1.502E13	-19.110	21.930	Below Limit
			HillSlope	-0.481	0.209	-1.405	-0.570	Above Limit
			LogIC50	-5.174	0.283	.	.	N/A
			Top	85.410	11.970	74.035	125.652	

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
SC	**Hamner**	**SC 9/11**	Bottom	-80.380	384.100	-3.191	0.281	Below Limit
			HillSlope	.	.	-1.343	-0.658	Missing
			LogIC50	.	.	.	.	N/A
			Top	100.000	50.400	94.330	110.533	
SC	**Hamner**	**TC 1 Run 3 SC (5/7)**	Bottom	-3.11E12	9.991E12	-3.191	0.281	Below Limit
			HillSlope	-0.024	0.046	-1.343	-0.658	Above Limit
			LogIC50	-9.071	0.348	.	.	N/A
			Top	600.500	958.700	94.330	110.533	Above Limit
SC	**Hamner**	**TC 1 Run 5 SC (5/22)**	Bottom	-4.073	4.693	-3.191	0.281	Below Limit
			HillSlope	-0.962	0.176	-1.343	-0.658	
			LogIC50	-8.531	0.055	.	.	N/A
			Top	96.820	3.951	94.330	110.533	
SC	**Hamner**	**TC 10 Run 1 SC (5/21)**	Bottom	-24.200	25.240	-3.191	0.281	Below Limit
			HillSlope	-0.495	0.188	-1.343	-0.658	Above Limit
			LogIC50	-8.554	0.097	.	.	N/A
			Top	106.600	9.921	94.330	110.533	
SC	**Hamner**	**TC 18 Run 1 SC (6/4)**	Bottom	-2.688	1.292	-3.191	0.281	
			HillSlope	-0.442	0.078	-1.343	-0.658	Above Limit
			LogIC50	-10.340	0.044	.	.	N/A
			Top	.	.	94.330	110.533	Missing
SC	**Hamner**	**TC 2 Run 2 SC UN (5/28)**	Bottom	.	.	-3.191	0.281	Missing
			HillSlope	.	.	-1.343	-0.658	Missing
			LogIC50	.	.	.	.	N/A
			Top	72.590	15.610	94.330	110.533	Below Limit
SC	**Hamner**	**TC 2 Run 4 SC UN (6/3)**	Bottom	-3.546	2.448	-3.191	0.281	Below Limit
			HillSlope	-0.612	0.097	-1.343	-0.658	Above Limit
			LogIC50	-9.814	0.044	.	.	N/A
			Top	127.200	14.180	94.330	110.533	Above Limit
SC	**Hamner**	**TC 2 Run 5 SC UN (6/7)**	Bottom	-0.119	1.314	-3.191	0.281	
			HillSlope	-1.694	0.175	-1.343	-0.658	Below Limit
			LogIC50	-9.435	0.022	.	.	N/A
			Top	98.630	2.342	94.330	110.533	
SC	**Hamner**	**TC 2 Run 6 SC UN (6/9)**	Bottom	-1.607	1.208	-3.191	0.281	
			HillSlope	-0.582	0.089	-1.343	-0.658	Above Limit
			LogIC50	-10.290	0.036	.	.	N/A
			Top	258.600	118.600	94.330	110.533	Above Limit
SC	**Hamner**	**TC 2 Run 7 SC UN (6/17)**	Bottom	6.705	2.279	-3.191	0.281	Above Limit

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	-2.572	0.422	-1.343	-0.658	Below Limit
			LogIC50	-9.177	0.037	.	.	N/A
			Top	104.300	3.304	94.330	110.533	
SC	**Hamner**	**TC 2 Run 9 SC (6/23)**	Bottom	-144.200	99.030	-3.191	0.281	Below Limit
			HillSlope	.	.	-1.343	-0.658	Missing
			LogIC50	-9.264	0.380	.	.	N/A
			Top	.	.	94.330	110.533	Missing
SC	**Hamner**	**TC 23 Run 7 SC UN (5/27)**	Bottom	.	.	-3.191	0.281	Missing
			HillSlope	.	.	-1.343	-0.658	Missing
			LogIC50	.	.	.	.	N/A
			Top	72.590	15.610	94.330	110.533	Below Limit
SC	**Hamner**	**TC 3 Run 11 SC UN (6/23)**	Bottom	-32.410	4.213	-3.191	0.281	Below Limit
			HillSlope	-1.718	0.264	-1.343	-0.658	Below Limit
			LogIC50	-9.424	0.042	.	.	N/A
			Top	97.060	4.125	94.330	110.533	
SC	**Hamner**	**TC 3 Run 13 SC UN (6/19)**	Bottom	-3.396	4.385	-3.191	0.281	Below Limit
			HillSlope	-0.449	0.130	-1.343	-0.658	Above Limit
			LogIC50	-9.903	0.063	.	.	N/A
			Top	182.700	76.950	94.330	110.533	Above Limit
SC	**Hamner**	**TC 3 Run 14 SC (6/23)**	Bottom	-144.200	99.030	-3.191	0.281	Below Limit
			HillSlope	.	.	-1.343	-0.658	Missing
			LogIC50	-9.264	0.380	.	.	N/A
			Top	.	.	94.330	110.533	Missing
SC	**Hamner**	**TC 3 Run 3 SC UN (5/7)**	Bottom	-3.758	23.950	-3.191	0.281	Below Limit
			HillSlope	-0.644	0.543	-1.343	-0.658	Above Limit
			LogIC50	-9.033	0.265	.	.	N/A
			Top	105.100	30.300	94.330	110.533	
SC	**Hamner**	**TC 3 Run 8 SC UN (5/23)**	Bottom	0.371	0.571	-3.191	0.281	Above Limit
			HillSlope	-1.929	0.093	-1.343	-0.658	Below Limit
			LogIC50	-9.498	0.009	.	.	N/A
			Top	100.300	1.049	94.330	110.533	
SC	**Hamner**	**TC 3 Run 9 SC UN (5/28)**	Bottom	7.896	3.690	-3.191	0.281	Above Limit
			HillSlope	-2.431	0.588	-1.343	-0.658	Below Limit
			LogIC50	-9.148	0.055	.	.	N/A
			Top	113.100	5.378	94.330	110.533	Above Limit
SC	**RTI**	**SC #1 8/21**	Bottom	-1.64E13	3.097E13	-3.191	0.281	Below Limit
			HillSlope	-0.749	0.454	-1.343	-0.658	

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	-7.595	0.365	.	.	N/A
			Top	101.300	14.120	94.330	110.533	
SC	**RTI**	**SC #3 8/28**	Bottom	-1.63E13	1.461E13	-3.191	0.281	Below Limit
			HillSlope	-0.519	0.167	-1.343	-0.658	Above Limit
			LogIC50	-7.682	0.243	.	.	N/A
			Top	89.630	10.320	94.330	110.533	Below Limit
SC	**TRL**	**TC 12 RN001 SC (4/2) (yellow)**	Bottom	-8.053	3.339	-3.191	0.281	Below Limit
			HillSlope	-0.644	0.067	-1.343	-0.658	Above Limit
			LogIC50	-8.810	0.032	.	.	N/A
			Top	103.000	3.091	94.330	110.533	
SC	**TRL**	**TC 4 TTN014 SC (5/7) (yellow)**	Bottom	-9.366	4.477	-3.191	0.281	Below Limit
			HillSlope	-0.673	0.086	-1.343	-0.658	
			LogIC50	-8.639	0.037	.	.	N/A
			Top	103.600	3.810	94.330	110.533	
WP	**Hamner**	**NOR2 10/8**	Bottom	-138.200	1.619	-19.110	21.930	Below Limit
			HillSlope	-0.221	0.038	-1.405	-0.570	Above Limit
			LogIC50	-5.531	0.203	.	.	N/A
			Top	176.000	1.774	74.035	125.652	Above Limit
WP	**Hamner**	**TC 1 Run 3 WP (5/7)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	-4.950	3.959	.	.	N/A
			Top	63.390	10.350	74.035	125.652	Below Limit
WP	**Hamner**	**TC 1 Run 4 WP (5/18)**	Bottom	13.750	9.074	-19.110	21.930	
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	.	.	.	.	N/A
			Top	74.460	5.739	74.035	125.652	
WP	**Hamner**	**TC 10 Run 1 WP (5/21)**	Bottom	25.260	8.092	-19.110	21.930	Above Limit
			HillSlope	-1.502	0.759	-1.405	-0.570	Below Limit
			LogIC50	-6.034	0.123	.	.	N/A
			Top	82.800	5.665	74.035	125.652	
WP	**Hamner**	**TC 13 Run 2 WP UN (5/29)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	.	.	.	.	N/A
			Top	.	.	74.035	125.652	Missing
WP	**Hamner**	**TC 13 Run 3 WP (5/30)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	.	.	.	.	N/A

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			Top	.	.	74.035	125.652	Missing
WP	**Hamner**	**TC 18 Run 1 WP (6/4)**	Bottom	-4.754	2.570	-19.110	21.930	
			HillSlope	-0.530	0.036	-1.405	-0.570	Above Limit
			LogIC50	-5.954	0.019	.	.	N/A
			Top	95.200	1.492	74.035	125.652	
WP	**Hamner**	**TC 18 Run 3 WP (6/6)**	Bottom	26.280	3.907	-19.110	21.930	Above Limit
			HillSlope	-4.049	2.743	-1.405	-0.570	Below Limit
			LogIC50	-6.119	0.099	.	.	N/A
			Top	89.170	5.240	74.035	125.652	
WP	**Hamner**	**TC 2 Run 10 WP (6/24)**	Bottom	45.230	5.207	-19.110	21.930	Above Limit
			HillSlope	-2.006	0.862	-1.405	-0.570	Below Limit
			LogIC50	-5.104	0.263	.	.	N/A
			Top	98.640	2.656	74.035	125.652	
WP	**Hamner**	**TC 2 Run 2 WP UN (5/28)**	Bottom	-5.18E13	2.224E13	-19.110	21.930	Below Limit
			HillSlope	-0.079	0.027	-1.405	-0.570	Above Limit
			LogIC50	-4.777	0.435	.	.	N/A
			Top	663.200	175.000	74.035	125.652	Above Limit
WP	**Hamner**	**TC 2 Run 6 WP UN (6/9)**	Bottom	-79.720	101.100	-19.110	21.930	Below Limit
			HillSlope	-0.053	0.097	-1.405	-0.570	Above Limit
			LogIC50	-7.743	1.736	.	.	N/A
			Top	.	.	74.035	125.652	Missing
WP	**Hamner**	**TC 2 Run 7 WP UN (6/17)**	Bottom	-101.900	317.000	-19.110	21.930	Below Limit
			HillSlope	-0.434	0.275	-1.405	-0.570	Above Limit
			LogIC50	-5.056	0.124	.	.	N/A
			Top	109.200	7.692	74.035	125.652	
WP	**Hamner**	**TC 2 Run 9 WP (6/23)**	Bottom	40.780	8.005	-19.110	21.930	Above Limit
			HillSlope	-0.936	0.278	-1.405	-0.570	
			LogIC50	-4.919	0.232	.	.	N/A
			Top	120.000	4.251	74.035	125.652	
WP	**Hamner**	**TC 23 Run 7 WP UN (5/27)**	Bottom	-5.18E13	2.224E13	-19.110	21.930	Below Limit
			HillSlope	-0.079	0.027	-1.405	-0.570	Above Limit
			LogIC50	-4.777	0.435	.	.	N/A
			Top	663.200	175.000	74.035	125.652	Above Limit
WP	**Hamner**	**TC 3 Run 1 WP UN (4/14)**	Bottom	5.547	28.250	-19.110	21.930	
			HillSlope	-0.351	0.319	-1.405	-0.570	Above Limit
			LogIC50	-6.522	0.177	.	.	N/A
			Top	94.280	33.780	74.035	125.652	

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
WP	**Hamner**	**TC 3 Run 10 WP UN (6/12)**	Bottom	-4.78E12	8.115E12	-19.110	21.930	Below Limit
			HillSlope	-0.379	0.216	-1.405	-0.570	Above Limit
			LogIC50	-4.927	0.232	.	.	N/A
			Top	103.800	14.160	74.035	125.652	
WP	**Hamner**	**TC 3 Run 12 WP UN (6/16)**	Bottom	16.580	8.939	-19.110	21.930	
			HillSlope	-0.574	0.319	-1.405	-0.570	
			LogIC50	-6.948	0.146	.	.	N/A
			Top	93.950	20.930	74.035	125.652	
WP	**Hamner**	**TC 3 Run 13 WP UN (6/19)**	Bottom	17.550	12.680	-19.110	21.930	
			HillSlope	-0.328	0.255	-1.405	-0.570	Above Limit
			LogIC50	-6.745	0.106	.	.	N/A
			Top	701.200	3726.000	74.035	125.652	Above Limit
WP	**Hamner**	**TC 3 Run 14 WP (6/23)**	Bottom	40.780	8.005	-19.110	21.930	Above Limit
			HillSlope	-0.936	0.278	-1.405	-0.570	
			LogIC50	-4.919	0.232	.	.	N/A
			Top	120.000	4.251	74.035	125.652	
WP	**Hamner**	**TC 3 Run 15 WP (6/24)**	Bottom	45.230	5.207	-19.110	21.930	Above Limit
			HillSlope	-2.006	0.862	-1.405	-0.570	Below Limit
			LogIC50	-5.104	0.263	.	.	N/A
			Top	98.640	2.656	74.035	125.652	
WP	**Hamner**	**TC 3 Run 16 WP (6/25)**	Bottom	-2.142E7	3.706E12	-19.110	21.930	Below Limit
			HillSlope	-0.234	0.168	-1.405	-0.570	Above Limit
			LogIC50	-4.942	0.067	.	.	N/A
			Top	119.400	15.590	74.035	125.652	
WP	**Hamner**	**TC 3 Run 3 WP UN (5/7)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	-4.950	3.959	.	.	N/A
			Top	63.390	10.350	74.035	125.652	Below Limit
WP	**Hamner**	**TC 3 Run 4 WP UN (5/15)**	Bottom	25.800	6.804	-19.110	21.930	Above Limit
			HillSlope	-1.725	0.788	-1.405	-0.570	Below Limit
			LogIC50	-6.187	0.137	.	.	N/A
			Top	109.000	7.053	74.035	125.652	
WP	**Hamner**	**TC 3 Run 5 WP UN (5/16)**	Bottom	8.334	5.728	-19.110	21.930	
			HillSlope	-1.656	0.479	-1.405	-0.570	Below Limit
			LogIC50	-6.102	0.067	.	.	N/A
			Top	91.520	4.007	74.035	125.652	
WP	**Hamner**	**TC 3 Run 6 WP UN (5/18)**	Bottom	13.750	9.074	-19.110	21.930	

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	.	.	.	.	N/A
			Top	74.460	5.739	74.035	125.652	
WP	**Hamner**	**TC 3 Run 7 WP UN (5/23)**	Bottom	6.206	1.251	-19.110	21.930	
			HillSlope	-2.779	0.210	-1.405	-0.570	Below Limit
			LogIC50	-6.151	0.013	.	.	N/A
			Top	87.290	0.746	74.035	125.652	
WP	**Hamner**	**TC 3 Run 8 WP UN (5/23)**	Bottom	0.809	7.172	-19.110	21.930	
			HillSlope	-0.716	0.130	-1.405	-0.570	
			LogIC50	-6.122	0.068	.	.	N/A
			Top	127.400	6.355	74.035	125.652	Above Limit
WP	**Hamner**	**TC 3 Run 9 WP UN (5/28)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	.	.	.	.	N/A
			Top	.	.	74.035	125.652	Missing
WP	**Hamner**	**TC 4 Run 5 WP UN (6/12)**	Bottom	-2.12E13	1.656E13	-19.110	21.930	Below Limit
			HillSlope	-0.212	0.047	-1.405	-0.570	Above Limit
			LogIC50	-5.065	0.398	.	.	N/A
			Top	130.600	14.910	74.035	125.652	Above Limit
WP	**Hamner**	**TC 4 Run 6 WP UN (6/25)**	Bottom	-5.629E7	1.723E12	-19.110	21.930	Below Limit
			HillSlope	-0.234	0.082	-1.405	-0.570	Above Limit
			LogIC50	-4.943	0.069	.	.	N/A
			Top	119.400	15.030	74.035	125.652	
WP	**Hamner**	**TC 4 Run 7 WP UN (7/1)**	Bottom	-5.9E12	2.067E13	-19.110	21.930	Below Limit
			HillSlope	-0.131	0.047	-1.405	-0.570	Above Limit
			LogIC50	-5.018	0.124	.	.	N/A
			Top	176.700	31.530	74.035	125.652	Above Limit
WP	**Hamner**	**TC 4 Run 8 WP UN (7/2)**	Bottom	36.340	21.520	-19.110	21.930	Above Limit
			HillSlope	-0.937	0.551	-1.405	-0.570	
			LogIC50	-4.777	0.353	.	.	N/A
			Top	132.100	7.900	74.035	125.652	Above Limit
WP	**Hamner**	**TC 6 Run 1 WP UN (6/2)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	.	.	.	.	N/A
			Top	.	.	74.035	125.652	Missing
WP	**Hamner**	**WP 9/11**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing

Table C-3 ER Binding Assay Performance and Data Interpretation Criteria
Parameter Estimates Based on Prism Outputs - Without Outlier
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Top, Bottom and Hill Slope As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Unacceptable Runs

Chemical	Laboratory	run	Parameter	Estimate	Std Error Estimate	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Status
			LogIC50	.	.	.	.	N/A
			Top	.	.	74.035	125.652	Missing
WP	**RTI**	**WP #1 8/21**	Bottom	-5.59E13	1.773E13	-19.110	21.930	Below Limit
			HillSlope	-0.402	0.172	-1.405	-0.570	Above Limit
			LogIC50	-5.188	0.300	.	.	N/A
			Top	124.600	14.380	74.035	125.652	
WP	**RTI**	**WP #3 8/28**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	-0.299	0.048	-1.405	-0.570	Above Limit
			LogIC50	-5.365	0.163	.	.	N/A
			Top	96.200	8.301	74.035	125.652	
WP	**TRL**	**TC 1 RN012 WP (5/29) (yellow)**	Bottom	-51.370	34.090	-19.110	21.930	Below Limit
			HillSlope	-0.492	0.104	-1.405	-0.570	Above Limit
			LogIC50	-5.606	0.047	.	.	N/A
			Top	101.900	3.527	74.035	125.652	
WP	**TRL**	**TC 11 TTN004 WP (4/7) (red)**	Bottom	.	.	-19.110	21.930	Missing
			HillSlope	.	.	-1.405	-0.570	Missing
			LogIC50	-6.270	0.162	.	.	N/A
			Top	.	.	74.035	125.652	Missing
WP	**TRL**	**WP 11/7**	Bottom	6.560	3.192	-19.110	21.930	
			HillSlope	-0.722	0.099	-1.405	-0.570	
			LogIC50	-6.473	0.066	.	.	N/A
			Top	64.770	1.424	74.035	125.652	Below Limit

Table C-4 ER Binding Assay Performance and Data Interpretation Criteria
Log10(IC50), Log10(RBA) and Associated Standard Errors- Based on Prism Outputs - Without Outliers
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Log_{10}RBA, As Calculated Using the Results from Acceptable Standard Curve and Weak Positive Runs

Laboratory	run	Log10IC50 SC+	Log10IC50 WP+	Log10RBA	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Acceptability (SC/WP)++	Status+++
Hamner	042308 New-Old	-8.598(0.049)		.(.)	-3.230	-2.622	AC/MS	Missing
	042308 Old-Old	-8.540(0.032)		.(.)	-3.230	-2.622	AC/MS	Missing
	050508 Sialinized	-8.856(0.027)		.(.)	-3.230	-2.622	AC/MS	Missing
	050508 Uncoated	-8.766(0.017)		.(.)	-3.230	-2.622	AC/MS	Missing
	10/1	-9.062(0.028)	-6.088(0.045)	-2.974(0.053)	-3.230	-2.622	AC/AC	
	10/10	-9.115(0.050)	-5.967(0.052)	-3.148(0.072)	-3.230	-2.622	AC/AC	
	10/3	-9.029(0.027)	-6.075(0.057)	-2.954(0.064)	-3.230	-2.622	AC/AC	
	10/8	-8.925(0.049)	-5.867(0.062)	-3.058(0.079)	-3.230	-2.622	AC/AC	
	10/9	-9.116(0.037)	-6.088(0.036)	-3.028(0.052)	-3.230	-2.622	AC/AC	
	11/26	-8.721(0.051)	-6.014(0.030)	-2.707(0.059)	-3.230	-2.622	AC/AC	
	11/27	-8.988(0.039)	-6.395(0.044)	-2.593(0.058)	-3.230	-2.622	AC/AC	Above Limit
	9/11	.(.)	.(.)	.(.)	-3.230	-2.622	BD/BD	Missing
	NOR2 10/8		-5.531(0.203)	.(.)	-3.230	-2.622	MS/BD	Missing
	TC 1 Run 1 UN (4/15)	-8.825(0.029)	-5.979(0.067)	-2.846(0.073)	-3.230	-2.622	AC/AC	
	TC 1 Run 2 UN (5/1)	-8.367(0.120)	-5.174(0.283)	-3.193(0.307)	-3.230	-2.622	AC/AC	
	TC 1 Run 3 (5/7)	-9.071(0.348)	-4.950(3.959)	-4.121(3.974)	-3.230	-2.622	BD/BD	Below Limit
	TC 1 Run 4 (5/18)	-8.581(0.051)	.(.)	.(.)	-3.230	-2.622	AC/BD	Missing
	TC 1 Run 5 (5/22)	-8.531(0.055)	-6.007(0.070)	-2.524(0.089)	-3.230	-2.622	BD/AC	Above Limit
	TC 10 Run 1 (5/21)	-8.554(0.097)	-6.034(0.123)	-2.520(0.157)	-3.230	-2.622	BD/BD	Above Limit
	TC 11 Run 1 (3/5)	-8.965(0.048)	-6.150(0.037)	-2.815(0.061)	-3.230	-2.622	AC/AC	
	TC 11 Run 2 (3/6)	-9.141(0.066)	-6.116(0.072)	-3.025(0.098)	-3.230	-2.622	AC/AC	
	TC 11 Run 3 (3/10)	-9.150(0.030)	-6.159(0.023)	-2.991(0.038)	-3.230	-2.622	AC/AC	
	TC 12 Run 4 UN (3/17)	-9.064(0.039)	-6.182(0.029)	-2.882(0.049)	-3.230	-2.622	AC/AC	
	TC 12 Run 5 (3/24)	-9.113(0.037)	-6.268(0.033)	-2.845(0.050)	-3.230	-2.622	AC/AC	
	TC 13 Run 2 UN (5/29)	-9.200(0.046)	.(.)	.(.)	-3.230	-2.622	AC/BD	Missing
	TC 13 Run 3 (5/30)	-9.430(0.025)	.(.)	.(.)	-3.230	-2.622	AC/BD	Missing
	TC 14 Run 3 (4/10)	-9.092(0.008)	-6.239(0.036)	-2.853(0.037)	-3.230	-2.622	AC/AC	
	TC 14 Run 5 (4/16)	-8.776(0.046)	-5.937(0.057)	-2.839(0.073)	-3.230	-2.622	AC/AC	
	TC 14 Run 6 (4/17)	-8.853(0.031)	-5.934(0.096)	-2.919(0.101)	-3.230	-2.622	AC/AC	
	TC 15 Run 1 (3/11)	-9.020(0.026)	-6.291(0.033)	-2.729(0.042)	-3.230	-2.622	AC/AC	
	TC 15 Run 2 (3/12)	-9.139(0.016)	-6.260(0.023)	-2.879(0.029)	-3.230	-2.622	AC/AC	
	TC 16 Run 1 (3/18)	-9.130(0.020)	-6.253(0.018)	-2.877(0.027)	-3.230	-2.622	AC/AC	
	TC 16 Run 2 (3/26)	-8.953(0.018)	-5.987(0.048)	-2.966(0.052)	-3.230	-2.622	AC/AC	
	TC 16 Run 3 UN (3/27)	-8.935(0.032)	-6.098(0.041)	-2.837(0.052)	-3.230	-2.622	AC/AC	
	TC 16 Run 4 UN (4/2)	-8.969(0.019)	-6.298(0.029)	-2.671(0.035)	-3.230	-2.622	AC/AC	
	TC 16 Run 5 (6/11)	-9.626(0.032)	-5.852(0.042)	-3.774(0.053)	-3.230	-2.622	AC/AC	Below Limit
	TC 18 Run 1 (6/4)	-10.340(0.044)	-5.954(0.019)	-4.386(0.048)	-3.230	-2.622	BD/BD	Below Limit

+: Blank - No response, missing (.) - Curve not fittable
++: AC - Acceptable run, BD - Bad run, MS - No Response
+++: MS - Missing RBA

Table C-4 ER Binding Assay Performance and Data Interpretation Criteria
Log10(IC50), Log10(RBA) and Associated Standard Errors- Based on Prism Outputs - Without Outliers
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Log_{10}RBA, As Calculated Using the Results from Acceptable Standard Curve and Weak Positive Runs

Laboratory	run	Log10IC50 SC+	Log10IC50 WP+	Log10RBA	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Acceptability (SC/WP)++	Status+++
	TC 18 Run 2 (6/5)	-9.724(0.024)	-5.944(0.064)	-3.780(0.068)	-3.230	-2.622	AC/AC	Below Limit
	TC 18 Run 3 (6/6)	-9.836(0.023)	-6.119(0.099)	-3.717(0.102)	-3.230	-2.622	AC/BD	Below Limit
	TC 19 Run 4 (3/11)	-9.020(0.026)		.(.)	-3.230	-2.622	AC/MS	Missing
	TC 2 Run 1 (5/19)	-8.726(0.033)	-5.751(0.056)	-2.975(0.065)	-3.230	-2.622	AC/AC	
	TC 2 Run 10 (6/24)	-9.144(0.041)	-5.104(0.263)	-4.040(0.266)	-3.230	-2.622	AC/BD	Below Limit
	TC 2 Run 2 UN (5/28)	.(.)	-4.777(0.435)	.(.)	-3.230	-2.622	BD/BD	Missing
	TC 2 Run 3 UN (6/2)	-9.710(0.009)	-6.101(0.047)	-3.609(0.048)	-3.230	-2.622	AC/AC	Below Limit
	TC 2 Run 4 UN (6/3)	-9.814(0.044)	-5.951(0.024)	-3.863(0.050)	-3.230	-2.622	BD/AC	Below Limit
	TC 2 Run 5 UN (6/7)	-9.435(0.022)	-5.466(0.129)	-3.969(0.130)	-3.230	-2.622	BD/AC	Below Limit
	TC 2 Run 6 UN (6/9)	-10.290(0.036)	-7.743(1.736)	-2.547(1.736)	-3.230	-2.622	BD/BD	Above Limit
	TC 2 Run 7 UN (6/17)	-9.177(0.037)	-5.056(0.124)	-4.121(0.129)	-3.230	-2.622	BD/BD	Below Limit
	TC 2 Run 8 UN (6/18)	-9.485(0.095)	-6.609(0.198)	-2.876(0.220)	-3.230	-2.622	AC/AC	
	TC 2 Run 9 (6/23)	-9.264(0.380)	-4.919(0.232)	-4.345(0.445)	-3.230	-2.622	BD/BD	Below Limit
	TC 20 Run 5 (4/17)	-8.812(0.033)	-5.875(0.096)	-2.937(0.102)	-3.230	-2.622	AC/AC	
	TC 23 Run 7 UN (5/27)	.(.)	-4.777(0.435)	.(.)	-3.230	-2.622	BD/BD	Missing
	TC 3 Run 1 UN (4/14)	-8.846(0.104)	-6.522(0.177)	-2.324(0.205)	-3.230	-2.622	AC/BD	Above Limit
	TC 3 Run 10 UN (6/12)	-9.400(0.128)	-4.927(0.232)	-4.473(0.265)	-3.230	-2.622	AC/BD	Below Limit
	TC 3 Run 11 UN (6/13)		-6.205(0.130)	.(.)	-3.230	-2.622	MS/AC	Missing
	TC 3 Run 11 UN (6/23)	-9.424(0.042)		.(.)	-3.230	-2.622	BD/MS	Missing
	TC 3 Run 12 UN (6/16)	-9.145(0.072)	-6.948(0.146)	-2.197(0.163)	-3.230	-2.622	AC/BD	Above Limit
	TC 3 Run 13 UN (6/19)	-9.903(0.063)	-6.745(0.106)	-3.158(0.123)	-3.230	-2.622	BD/BD	
	TC 3 Run 14 (6/23)	-9.264(0.380)	-4.919(0.232)	-4.345(0.445)	-3.230	-2.622	BD/BD	Below Limit
	TC 3 Run 15 (6/24)	-9.144(0.041)	-5.104(0.263)	-4.040(0.266)	-3.230	-2.622	AC/BD	Below Limit
	TC 3 Run 16 (6/25)	-9.331(0.043)	-4.942(0.067)	-4.389(0.079)	-3.230	-2.622	AC/BD	Below Limit
	TC 3 Run 2 UN (4/15)	-8.825(0.029)	-5.979(0.067)	-2.846(0.073)	-3.230	-2.622	AC/AC	
	TC 3 Run 3 UN (5/7)	-9.033(0.265)	-4.950(3.959)	-4.083(3.968)	-3.230	-2.622	BD/BD	Below Limit
	TC 3 Run 4 UN (5/15)	-8.811(0.110)	-6.187(0.137)	-2.624(0.176)	-3.230	-2.622	AC/BD	
	TC 3 Run 5 UN (5/16)	-8.727(0.046)	-6.102(0.067)	-2.625(0.082)	-3.230	-2.622	AC/BD	
	TC 3 Run 6 UN (5/18)	-8.585(0.050)	.(.)	.(.)	-3.230	-2.622	AC/BD	Missing
	TC 3 Run 7 UN (5/23)	-9.495(0.009)	-6.151(0.013)	-3.344(0.016)	-3.230	-2.622	AC/BD	Below Limit
	TC 3 Run 8 UN (5/23)	-9.498(0.009)	-6.122(0.068)	-3.376(0.068)	-3.230	-2.622	BD/BD	Below Limit
	TC 3 Run 9 UN (5/28)	-9.148(0.055)	.(.)	.(.)	-3.230	-2.622	BD/BD	Missing
	TC 4 Run 1 UN (4/3)	-8.762(0.029)	-6.022(0.024)	-2.740(0.038)	-3.230	-2.622	AC/AC	
	TC 4 Run 2 (4/7)	-9.064(0.031)	-6.223(0.033)	-2.841(0.045)	-3.230	-2.622	AC/AC	
	TC 4 Run 3 (4/8)	-9.074(0.028)	-6.224(0.056)	-2.850(0.063)	-3.230	-2.622	AC/AC	
	TC 4 Run 4 (4/9)	-9.043(0.017)	-6.416(0.084)	-2.627(0.085)	-3.230	-2.622	AC/AC	
	TC 4 Run 5 UN (6/12)	-9.400(0.128)	-5.065(0.398)	-4.335(0.419)	-3.230	-2.622	AC/BD	Below Limit

+: Blank - No response, missing (.) - Curve not fittable
++: AC - Acceptable run, BD - Bad run, MS - No Response
+++: MS - Missing RBA

Table C-4 ER Binding Assay Performance and Data Interpretation Criteria
Log10(IC50), Log10(RBA) and Associated Standard Errors- Based on Prism Outputs - Without Outliers
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Log_{10}RBA, As Calculated Using the Results from Acceptable Standard Curve and Weak Positive Runs

Laboratory	run	Log10IC50 SC+	Log10IC50 WP+	Log10RBA	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Acceptability (SC/WP)++	Status+++
	TC 4 Run 6 UN (6/25)	-9.331(0.043)	-4.943(0.069)	-4.388(0.081)	-3.230	-2.622	AC/BD	Below Limit
	TC 4 Run 7 UN (7/1)	-9.337(0.034)	-5.018(0.124)	-4.319(0.128)	-3.230	-2.622	AC/BD	Below Limit
	TC 4 Run 8 UN (7/2)	-9.040(0.048)	-4.777(0.353)	-4.263(0.357)	-3.230	-2.622	AC/BD	Below Limit
	TC 5 Run 1 (3/26)	-8.959(0.011)	-6.148(0.049)	-2.811(0.050)	-3.230	-2.622	AC/AC	
	TC 5 Run 2 (3/27)	-9.022(0.036)	-5.977(0.043)	-3.045(0.056)	-3.230	-2.622	AC/AC	
	TC 5 Run 3 (3/31)	-8.836(0.029)	-5.846(0.047)	-2.990(0.056)	-3.230	-2.622	AC/AC	
	TC 6 Run 1 UN (6/2)	-8.898(0.030)	.(.)	.(.)	-3.230	-2.622	AC/BD	Missing
	TC 6 Run 2 (6/3)	-9.138(0.005)	-6.289(0.042)	-2.849(0.042)	-3.230	-2.622	AC/AC	
	TC 6 Run 3 (6/5)	-9.098(0.029)	-6.226(0.019)	-2.872(0.035)	-3.230	-2.622	AC/AC	
	TC 6 Run 4 (6/6)	-9.133(0.007)	-6.270(0.026)	-2.863(0.027)	-3.230	-2.622	AC/AC	
	TC 8 Run 5 (5/27)	-8.967(0.019)	-6.092(0.023)	-2.875(0.029)	-3.230	-2.622	AC/AC	
RTI	#1 8/21	-7.595(0.365)	-5.188(0.300)	-2.407(0.472)	-3.230	-2.622	BD/BD	Above Limit
	#2 8/23	-9.060(0.042)	-6.126(0.053)	-2.934(0.068)	-3.230	-2.622	AC/AC	
	#3 8/28	-7.682(0.243)	-5.365(0.163)	-2.317(0.293)	-3.230	-2.622	BD/BD	Above Limit
	#4 9/6	-8.912(0.022)	-5.883(0.043)	-3.029(0.048)	-3.230	-2.622	AC/AC	
	#5 9/10	-8.924(0.024)	-5.949(0.040)	-2.975(0.047)	-3.230	-2.622	AC/AC	
	#6 9/11	-9.009(0.019)	-6.070(0.018)	-2.939(0.026)	-3.230	-2.622	AC/AC	
	#7 10/22	-9.051(0.028)	-6.091(0.032)	-2.960(0.042)	-3.230	-2.622	AC/AC	
	RTI Set 1 Run 1 (2/4)	-9.150(0.007)	-6.260(0.034)	-2.890(0.035)	-3.230	-2.622	AC/AC	
	RTI Set 1 Run 2 (2/6)	-9.050(0.024)	-6.010(0.036)	-3.040(0.043)	-3.230	-2.622	AC/AC	
	RTI Set 1 Run 3 (2/7)	-9.230(0.017)	-6.270(0.039)	-2.960(0.043)	-3.230	-2.622	AC/AC	
	RTI Set 2 Run 1 UN (2/21)	-9.140(0.020)	-6.210(0.037)	-2.930(0.042)	-3.230	-2.622	AC/AC	
	RTI Set 2 Run 2 (2/26)	-9.120(0.011)	-6.280(0.023)	-2.840(0.025)	-3.230	-2.622	AC/AC	
	RTI Set 2 Run 3 (2/27)	-9.160(0.015)	-6.240(0.019)	-2.920(0.024)	-3.230	-2.622	AC/AC	
	RTI Set 2 Run 4 (3/3)	-9.160(0.018)	-6.280(0.032)	-2.880(0.037)	-3.230	-2.622	AC/AC	
	RTI Set 3 Run 1 (2/28)	-9.090(0.018)	-6.220(0.032)	-2.870(0.037)	-3.230	-2.622	AC/AC	
	RTI Set 3 Run 2 (3/4)	-9.100(0.014)	-6.200(0.031)	-2.900(0.034)	-3.230	-2.622	AC/AC	
	RTI Set 3 Run 3 (3/5)	-9.010(0.019)	-6.040(0.024)	-2.970(0.031)	-3.230	-2.622	AC/AC	
	RTI Set 4 Run 1 (3/6)	-9.049(0.027)	-6.169(0.033)	-2.880(0.043)	-3.230	-2.622	AC/AC	
	RTI Set 4 Run 2 (3/11)	-8.942(0.023)	-5.950(0.026)	-2.992(0.035)	-3.230	-2.622	AC/AC	
	RTI Set 4 Run 3 UN (3/13)	-8.990(0.044)	-6.059(0.012)	-2.931(0.046)	-3.230	-2.622	AC/AC	
	RTI Set 4 Run 4 UN (3/18)	-9.021(0.068)	-6.062(0.053)	-2.959(0.087)	-3.230	-2.622	AC/AC	
	RTI Set 4 Run 5 (4/3)	-9.152(0.028)	-6.356(0.022)	-2.796(0.036)	-3.230	-2.622	AC/AC	
	RTI Set 5 Run 1 (3/17)	-9.050(0.023)	-6.160(0.023)	-2.890(0.032)	-3.230	-2.622	AC/AC	
	RTI Set 5 Run 2 (3/27)	-8.760(0.024)	-5.870(0.041)	-2.890(0.048)	-3.230	-2.622	AC/AC	
	RTI Set 5 Run 3 (3/31)	-9.220(0.012)	-6.290(0.017)	-2.930(0.021)	-3.230	-2.622	AC/AC	
	RTI Set 6 Run 1 (4/1)	-9.020(0.020)	-6.200(0.037)	-2.820(0.042)	-3.230	-2.622	AC/AC	

+: Blank - No response, missing (.) - Curve not fittable
++: AC - Acceptable run, BD - Bad run, MS - No Response
+++: MS - Missing RBA

Table C-4 ER Binding Assay Performance and Data Interpretation Criteria
Log10(IC50), Log10(RBA) and Associated Standard Errors- Based on Prism Outputs - Without Outliers
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Log_{10}RBA, As Calculated Using the Results from Acceptable Standard Curve and Weak Positive Runs

Laboratory	run	Log10IC50 SC+	Log10IC50 WP+	Log10RBA	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Acceptability (SC/WP)++	Status+++
	RTI Set 6 Run 2 UN (4/7)	-9.130(0.027)	-6.220(0.022)	-2.910(0.035)	-3.230	-2.622	AC/AC	
	RTI Set 6 Run 3 (4/8)	-9.120(0.029)	-6.290(0.049)	-2.830(0.057)	-3.230	-2.622	AC/AC	
	RTI Set 6 Run 4 (6/9)	-8.990(0.025)	-6.220(0.026)	-2.770(0.036)	-3.230	-2.622	AC/AC	
TRL	10/3	-9.010(0.019)	-5.991(0.039)	-3.019(0.043)	-3.230	-2.622	AC/AC	
	11/20	-8.995(0.028)	-5.992(0.052)	-3.003(0.059)	-3.230	-2.622	AC/AC	
	11/27	-9.245(0.031)	-5.945(0.054)	-3.300(0.062)	-3.230	-2.622	AC/AC	Below Limit
	11/30	-9.132(0.018)	-6.098(0.051)	-3.034(0.054)	-3.230	-2.622	AC/AC	
	11/7	-8.961(0.017)	-6.473(0.066)	-2.488(0.068)	-3.230	-2.622	AC/BD	Above Limit
	11/7a	-8.961(0.017)	-5.981(0.045)	-2.980(0.048)	-3.230	-2.622	AC/AC	
	12/12	-8.883(0.028)	-5.944(0.054)	-2.939(0.061)	-3.230	-2.622	AC/AC	
	9/12	-9.455(0.041)	-5.863(0.042)	-3.592(0.059)	-3.230	-2.622	AC/AC	Below Limit
	9/21	-8.977(0.017)	-6.009(0.025)	-2.968(0.030)	-3.230	-2.622	AC/AC	
	9/24	-9.141(0.019)	-5.940(0.040)	-3.201(0.045)	-3.230	-2.622	AC/AC	
	TC 1 RN012 (5/29) (yellow)	-8.515(0.010)	-5.606(0.047)	-2.909(0.048)	-3.230	-2.622	AC/BD	
	TC 1 TTN015 (5/8)(blue)	-8.743(0.014)	-5.910(0.025)	-2.833(0.028)	-3.230	-2.622	AC/AC	
	TC 1 TTN018 (6/12) (blue)	-8.999(0.022)	-6.129(0.030)	-2.870(0.037)	-3.230	-2.622	AC/AC	
	TC 1 TTN019 (6/16) (blue)	-9.085(0.023)	-6.131(0.033)	-2.954(0.040)	-3.230	-2.622	AC/AC	
	TC 11 TTN002 (3/18) (blue)	-8.893(0.017)		.(.)	-3.230	-2.622	AC/MS	Missing
	TC 11 TTN002 (3/18)(blue)		-6.010(0.038)	.(.)	-3.230	-2.622	MS/AC	Missing
	TC 11 TTN004 (4/7) (red)	-8.812(0.023)	-6.270(0.162)	-2.542(0.164)	-3.230	-2.622	AC/BD	Above Limit
	TC 11 TTN006 (4/16) (blue)	-8.971(0.014)	-6.081(0.018)	-2.890(0.023)	-3.230	-2.622	AC/AC	
	TC 11 TTN017 (5/14)(yellow)	-8.857(0.006)	-5.975(0.021)	-2.882(0.022)	-3.230	-2.622	AC/AC	
	TC 12 RN001 (4/2) (yellow)	-8.810(0.032)	-5.951(0.042)	-2.859(0.053)	-3.230	-2.622	BD/AC	
	TC 12 RN013 (6/11) (yellow)	-9.057(0.019)	-6.231(0.013)	-2.826(0.023)	-3.230	-2.622	AC/AC	
	TC 12 TTN001 (3/12) (blue)	-8.854(0.006)	-5.949(0.019)	-2.905(0.020)	-3.230	-2.622	AC/AC	
	TC 12 TTN003 (3/28)(yellow)	-8.827(0.012)	-6.059(0.035)	-2.768(0.037)	-3.230	-2.622	AC/AC	
	TC 12 TTN006 (4/16) (blue)	-8.971(0.014)	-6.081(0.018)	-2.890(0.023)	-3.230	-2.622	AC/AC	
	TC 15 RN002 (4/9) (yellow)	-8.702(0.029)	-5.775(0.051)	-2.927(0.059)	-3.230	-2.622	AC/AC	
	TC 16 TTN007 (4/21) (green)	-8.806(0.011)	-5.914(0.021)	-2.892(0.024)	-3.230	-2.622	AC/AC	
	TC 16 TTN008 (4/22) (green)	-8.876(0.013)	-5.962(0.015)	-2.914(0.019)	-3.230	-2.622	AC/AC	
	TC 16 TTN009 (4/23) (blue)	-8.848(0.016)	-6.389(0.009)	-2.459(0.019)	-3.230	-2.622	AC/AC	Above Limit
	TC 19 TTN005 (4/14)(yellow)	-8.946(0.008)	-6.180(0.018)	-2.766(0.020)	-3.230	-2.622	AC/AC	
	TC 2 RN007 (5/7) (yellow)	-8.722(0.010)	-5.855(0.048)	-2.867(0.049)	-3.230	-2.622	AC/AC	
	TC 2 RN008 (5/12) (green)	-8.709(0.021)	-5.816(0.031)	-2.893(0.038)	-3.230	-2.622	AC/AC	
	TC 2 RN009 (5/13) (blue)	-8.675(0.013)	-5.704(0.049)	-2.971(0.051)	-3.230	-2.622	AC/AC	
	TC 2 RN013 (6/11) (yellow)	-9.057(0.019)	-6.231(0.013)	-2.826(0.023)	-3.230	-2.622	AC/AC	
	TC 4 RN003 (4/16) (yellow)	-8.811(0.068)	-5.821(0.044)	-2.990(0.080)	-3.230	-2.622	AC/AC	

+: Blank - No response, missing (.) - Curve not fittable
++: AC - Acceptable run, BD - Bad run, MS - No Response
+++: MS - Missing RBA

Table C-4 ER Binding Assay Performance and Data Interpretation Criteria
Log10(IC50), Log10(RBA) and Associated Standard Errors- Based on Prism Outputs - Without Outliers
Tolerance Interval to Contain at Least 80% of Test Runs with 95% Confidence for Log_{10}RBA, As Calculated Using the Results from Acceptable Standard Curve and Weak Positive Runs

Laboratory	run	Log10IC50 SC+	Log10IC50 WP+	Log10RBA	Tolerence Interval Lower Limit	Tolerence Interval Upper Limit	Acceptability (SC/WP)++	Status+++
	TC 4 TTN010 (4/28) (yellow)	-8.296(0.045)	-5.310(0.057)	-2.986(0.073)	-3.230	-2.622	AC/AC	
	TC 4 TTN011 (4/29) (yellow)	-8.249(0.034)	-5.326(0.051)	-2.923(0.061)	-3.230	-2.622	AC/AC	
	TC 4 TTN012 (4/30) (yellow)	-8.688(0.019)	-5.867(0.038)	-2.821(0.042)	-3.230	-2.622	AC/AC	
	TC 4 TTN013 (5/5) (yellow)	-8.873(0.009)	-6.086(0.019)	-2.787(0.021)	-3.230	-2.622	AC/AC	
	TC 4 TTN014 (5/7) (yellow)	-8.639(0.037)	-5.729(0.055)	-2.910(0.066)	-3.230	-2.622	BD/AC	
	TC 5 TTN007 (4/21) (green)	-8.806(0.011)	-5.914(0.021)	-2.892(0.024)	-3.230	-2.622	AC/AC	
	TC 5 TTN008 (4/22) (green)	-8.876(0.013)	-5.962(0.015)	-2.914(0.019)	-3.230	-2.622	AC/AC	
	TC 5 TTN009 (4/23) (blue)	-8.848(0.016)	-6.389(0.009)	-2.459(0.019)	-3.230	-2.622	AC/AC	Above Limit
	TC 6 RN004 (4/24) (blue)	-8.945(0.011)	-5.983(0.020)	-2.962(0.023)	-3.230	-2.622	AC/AC	
	TC 6 RN005 (5/1) (blue)	-8.577(0.020)	-5.818(0.039)	-2.759(0.044)	-3.230	-2.622	AC/AC	
	TC 6 RN006 (5/6) (green)	-8.690(0.015)	-5.862(0.022)	-2.828(0.026)	-3.230	-2.622	AC/AC	

+: Blank - No response, missing (.) - Curve not fittable
++: AC - Acceptable run, BD - Bad run, MS - No Response
+++: MS - Missing RBA

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
One-sided Upper Tolerance Limit to Contain at Least 80% of Test Runs with 95% Confidence
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
SC	SC 042308 New-Old	7.0290	10.4715	
	SC 042308 Old-Old	5.4800	10.4715	
	SC 050508 Sialinized	4.1040	10.4715	
	SC 050508 Uncoated	2.8870	10.4715	
	SC 10/1	3.7580	10.4715	
	SC 10/10	6.4400	10.4715	
	SC 10/3	4.6330	10.4715	
	SC 10/8	5.9920	10.4715	
	SC 10/9	5.1000	10.4715	
	SC 11/26	8.2300	10.4715	
	SC 11/27	6.0920	10.4715	
	TC 1 Run 1 SC UN (4/15)	4.2460	10.4715	
	TC 1 Run 2 SC UN (5/1)	19.8200	10.4715	Above Limit
	TC 1 Run 4 SC (5/18)	8.7160	10.4715	
	TC 11 Run 1 SC (3/5)	6.0820	10.4715	
	TC 11 Run 2 SC (3/6)	9.9740	10.4715	
	TC 11 Run 3 SC (3/10)	4.3860	10.4715	
	TC 12 Run 4 SC UN (3/17)	5.5330	10.4715	
	TC 12 Run 5 SC (3/24)	4.9070	10.4715	
	TC 13 Run 2 SC UN (5/29)	9.9530	10.4715	
	TC 13 Run 3 SC (5/30)	3.3250	10.4715	
	TC 14 Run 3 SC (4/10)	0.8246	10.4715	
	TC 14 Run 5 SC (4/16)	6.1700	10.4715	
	TC 14 Run 6 SC (4/17)	4.6060	10.4715	
	TC 15 Run 1 SC (3/11)	3.9450	10.4715	
	TC 15 Run 2 SC (3/12)	2.2450	10.4715	
	TC 16 Run 1 SC (3/18)	2.9440	10.4715	
	TC 16 Run 2 SC (3/26)	2.5530	10.4715	
	TC 16 Run 3 SC UN (3/27)	4.8290	10.4715	
	TC 16 Run 4 SC UN (4/2)	2.4890	10.4715	
	TC 16 Run 5 SC (6/11)	4.3540	10.4715	
	TC 18 Run 2 SC (6/5)	3.1970	10.4715	
	TC 18 Run 3 SC (6/6)	2.9900	10.4715	
	TC 19 Run 4 SC (3/11)	3.9450	10.4715	
	TC 2 Run 1 SC (5/19)	4.5480	10.4715	
	TC 2 Run 10 SC (6/24)	5.8430	10.4715	
	TC 2 Run 3 SC UN (6/2)	1.1860	10.4715	
	TC 2 Run 8 SC UN (6/18)	12.3800	10.4715	Above Limit
	TC 20 Run 5 SC (4/17)	5.4030	10.4715	

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
One-sided Upper Tolerance Limit to Contain at Least 80% of Test Runs with 95% Confidence
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
	TC 3 Run 1 SC UN (4/14)	16.3800	10.4715	Above Limit
	TC 3 Run 10 SC UN (6/12)	17.4600	10.4715	Above Limit
	TC 3 Run 12 SC UN (6/16)	9.1300	10.4715	
	TC 3 Run 15 SC (6/24)	5.8430	10.4715	
	TC 3 Run 16 SC (6/25)	5.3680	10.4715	
	TC 3 Run 2 SC UN (4/15)	4.2460	10.4715	
	TC 3 Run 4 SC UN (5/15)	16.2200	10.4715	Above Limit
	TC 3 Run 5 SC UN (5/16)	6.9500	10.4715	
	TC 3 Run 6 SC UN (5/18)	8.4960	10.4715	
	TC 3 Run 7 SC UN (5/23)	1.2310	10.4715	
	TC 4 Run 1 SC UN (4/3)	4.2940	10.4715	
	TC 4 Run 2 SC (4/7)	4.5890	10.4715	
	TC 4 Run 3 SC (4/8)	5.2040	10.4715	
	TC 4 Run 4 SC (4/9)	2.5890	10.4715	
	TC 4 Run 5 SC UN (6/12)	17.4600	10.4715	Above Limit
	TC 4 Run 6 SC UN (6/25)	5.3670	10.4715	
	TC 4 Run 7 SC UN (7/1)	5.3830	10.4715	
	TC 4 Run 8 SC UN (7/2)	7.9760	10.4715	
	TC 5 Run 1 SC (3/26)	1.4610	10.4715	
	TC 5 Run 2 SC (3/27)	5.6560	10.4715	
	TC 5 Run 3 SC (3/31)	3.9620	10.4715	
	TC 6 Run 1 SC UN (6/2)	3.9540	10.4715	
	TC 6 Run 2 SC (6/3)	0.6114	10.4715	
	TC 6 Run 3 SC (6/5)	3.7700	10.4715	
	TC 6 Run 4 SC (6/6)	0.9429	10.4715	
	TC 8 Run 5 SC (5/27)	2.7750	10.4715	
	RTI Set 1 Run 1 SC (2/4)	0.9680	10.4715	
	RTI Set 1 Run 2 SC (2/6)	3.5300	10.4715	
	RTI Set 1 Run 3 SC (2/7)	2.3300	10.4715	
	RTI Set 2 Run 1 SC UN (2/21)	2.7700	10.4715	
	RTI Set 2 Run 2 SC (2/26)	1.6500	10.4715	
	RTI Set 2 Run 3 SC (2/27)	2.1800	10.4715	
	RTI Set 2 Run 4 SC (3/3)	2.5500	10.4715	
	RTI Set 3 Run 1 SC (2/28)	2.3300	10.4715	
	RTI Set 3 Run 2 SC (3/4)	2.0600	10.4715	
	RTI Set 3 Run 3 SC (3/5)	3.0400	10.4715	
	RTI Set 4 Run 1 SC (3/6)	3.8160	10.4715	
	RTI Set 4 Run 2 SC (3/11)	3.6290	10.4715	
	RTI Set 4 Run 3 SC UN (3/13)	6.4560	10.4715	

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
One-sided Upper Tolerance Limit to Contain at Least 80% of Test Runs with 95% Confidence
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
	RTI Set 4 Run 4 SC UN (3/18)	9.9760	10.4715	
	RTI Set 4 Run 5 SC (4/3)	3.6770	10.4715	
	RTI Set 5 Run 1 SC (3/17)	3.2000	10.4715	
	RTI Set 5 Run 2 SC (3/27)	3.6100	10.4715	
	RTI Set 5 Run 3 SC (3/31)	1.6900	10.4715	
	RTI Set 6 Run 1 SC (4/1)	2.8200	10.4715	
	RTI Set 6 Run 2 SC UN (4/7)	3.8000	10.4715	
	RTI Set 6 Run 3 SC (4/8)	3.4600	10.4715	
	RTI Set 6 Run 4 SC (6/9)	3.6000	10.4715	
	SC #2 8/23	5.1520	10.4715	
	SC #4 9/6	3.1840	10.4715	
	SC #5 9/10	3.4450	10.4715	
	SC #6 9/11	2.5830	10.4715	
	SC #7 10/22	3.7590	10.4715	
	SC 10/3	2.6790	10.4715	
	SC 11/20	4.3400	10.4715	
	SC 11/27	3.3220	10.4715	
	SC 11/30	2.6210	10.4715	
	SC 11/7	2.4640	10.4715	
	SC 11/7a	2.4640	10.4715	
	SC 12/12	4.3770	10.4715	
	SC 9/12	5.6580	10.4715	
	SC 9/21	2.3820	10.4715	
	SC 9/24	2.9280	10.4715	
	TC 1 RN012 SC (5/29) (yellow)	1.4640	10.4715	
	TC 1 TTN015 SC (5/8)(blue)	1.8650	10.4715	
	TC 1 TTN018 SC (6/12) (blue)	3.2470	10.4715	
	TC 1 TTN019 SC (6/16) (blue)	3.3680	10.4715	
	TC 11 TTN002 SC (3/18) (blue)	1.7270	10.4715	
	TC 11 TTN004 SC (4/7) (red)	3.3330	10.4715	
	TC 11 TTN006 SC (4/16) (blue)	1.9960	10.4715	
	TC 11 TTN017 SC (5/14)(yellow)	0.8379	10.4715	
	TC 12 RN013 SC (6/11) (yellow)	2.5200	10.4715	
	TC 12 TTN001 SC (3/12) (blue)	0.8074	10.4715	
	TC 12 TTN003 SC (3/28)(yellow)	1.7810	10.4715	
	TC 12 TTN006 SC (4/16) (blue)	1.9960	10.4715	
	TC 15 RN002 SC (4/9) (yellow)	3.7210	10.4715	
	TC 16 TTN007 SC (4/21) (green)	1.4410	10.4715	
	TC 16 TTN008 SC (4/22) (green)	1.9020	10.4715	

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
One-sided Upper Tolerance Limit to Contain at Least 80% of Test Runs with 95% Confidence
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
	TC 16 TTN009 SC (4/23) (blue)	2.4650	10.4715	
	TC 19 TTN005 SC (4/14)(yellow)	1.1570	10.4715	
	TC 2 RN007 SC (5/7) (yellow)	1.3000	10.4715	
	TC 2 RN008 SC (5/12) (green)	3.2430	10.4715	
	TC 2 RN009 SC (5/13) (blue)	1.7580	10.4715	
	TC 2 RN013 SC (6/11) (yellow)	2.5200	10.4715	
	TC 4 RN003 SC (4/16) (yellow)	9.7190	10.4715	
	TC 4 TTN010 SC (4/28) (yellow)	6.1070	10.4715	
	TC 4 TTN011 SC (4/29) (yellow)	4.3480	10.4715	
	TC 4 TTN012 SC (4/30) (yellow)	2.7870	10.4715	
	TC 4 TTN013 SC (5/5) (yellow)	1.2720	10.4715	
	TC 5 TTN007 SC (4/21) (green)	1.4410	10.4715	
	TC 5 TTN008 SC (4/22) (green)	1.9020	10.4715	
	TC 5 TTN009 SC (4/23) (blue)	2.4650	10.4715	
	TC 6 RN004 SC (4/24) (blue)	1.5010	10.4715	
	TC 6 RN005 SC (5/1) (blue)	2.8190	10.4715	
	TC 6 RN006 SC (5/6) (green)	1.9300	10.4715	
WP	TC 1 Run 1 WP UN (4/15)	8.3000	13.3601	
	TC 1 Run 2 WP UN (5/1)	29.8000	13.3601	Above Limit
	TC 1 Run 5 WP (5/22)	7.2470	13.3601	
	TC 11 Run 1 WP (3/5)	5.7290	13.3601	
	TC 11 Run 2 WP (3/6)	9.9240	13.3601	
	TC 11 Run 3 WP (3/10)	3.4760	13.3601	
	TC 12 Run 4 WP UN (3/17)	3.5310	13.3601	
	TC 12 Run 5 WP (3/24)	4.3720	13.3601	
	TC 14 Run 3 WP (4/10)	5.3310	13.3601	
	TC 14 Run 5 WP (4/16)	5.7590	13.3601	
	TC 14 Run 6 WP (4/17)	9.1540	13.3601	
	TC 15 Run 1 WP (3/11)	4.4380	13.3601	
	TC 15 Run 2 WP (3/12)	3.1520	13.3601	
	TC 16 Run 1 WP (3/18)	2.4190	13.3601	
	TC 16 Run 2 WP (3/26)	5.2960	13.3601	
	TC 16 Run 3 WP UN (3/27)	6.3110	13.3601	
	TC 16 Run 4 WP UN (4/2)	4.0410	13.3601	
	TC 16 Run 5 WP (6/11)	6.4480	13.3601	
	TC 18 Run 2 WP (6/5)	7.9870	13.3601	
	TC 2 Run 1 WP (5/19)	8.4500	13.3601	
	TC 2 Run 3 WP UN (6/2)	6.5340	13.3601	
	TC 2 Run 4 WP UN (6/3)	2.6130	13.3601	

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
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Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
	TC 2 Run 5 WP UN (6/7)	10.5700	13.3601	
	TC 2 Run 8 WP UN (6/18)	15.6500	13.3601	Above Limit
	TC 20 Run 5 WP (4/17)	9.5700	13.3601	
	TC 3 Run 11 WP UN (6/13)	12.2900	13.3601	
	TC 3 Run 2 WP UN (4/15)	8.3000	13.3601	
	TC 4 Run 1 WP UN (4/3)	3.6150	13.3601	
	TC 4 Run 2 WP (4/7)	4.9500	13.3601	
	TC 4 Run 3 WP (4/8)	8.8930	13.3601	
	TC 4 Run 4 WP (4/9)	10.5300	13.3601	
	TC 5 Run 1 WP (3/26)	6.0530	13.3601	
	TC 5 Run 2 WP (3/27)	5.2270	13.3601	
	TC 5 Run 3 WP (3/31)	5.7220	13.3601	
	TC 6 Run 2 WP (6/3)	5.0890	13.3601	
	TC 6 Run 3 WP (6/5)	2.5110	13.3601	
	TC 6 Run 4 WP (6/6)	3.3480	13.3601	
	TC 8 Run 5 WP (5/27)	2.9860	13.3601	
	WP 10/1	7.6720	13.3601	
	WP 10/10	7.4850	13.3601	
	WP 10/3	8.6080	13.3601	
	WP 10/8	5.7550	13.3601	
	WP 10/9	4.8100	13.3601	
	WP 11/26	4.7870	13.3601	
	WP 11/27	6.2850	13.3601	
	RTI Set 1 Run 1 WP (2/4)	3.0300	13.3601	
	RTI Set 1 Run 2 WP (2/6)	2.8600	13.3601	
	RTI Set 1 Run 3 WP (2/7)	4.9500	13.3601	
	RTI Set 2 Run 1 WP UN (2/21)	4.9500	13.3601	
	RTI Set 2 Run 2 WP (2/26)	2.8600	13.3601	
	RTI Set 2 Run 3 WP (2/27)	2.4600	13.3601	
	RTI Set 2 Run 4 WP (3/3)	4.1400	13.3601	
	RTI Set 3 Run 1 WP (2/28)	3.6500	13.3601	
	RTI Set 3 Run 2 WP (3/4)	4.1500	13.3601	
	RTI Set 3 Run 3 WP (3/5)	3.5900	13.3601	
	RTI Set 4 Run 1 WP (3/6)	4.0740	13.3601	
	RTI Set 4 Run 2 WP (3/11)	3.9960	13.3601	
	RTI Set 4 Run 3 WP UN (3/13)	1.3770	13.3601	
	RTI Set 4 Run 4 WP UN (3/18)	6.8170	13.3601	
	RTI Set 4 Run 5 WP (4/3)	2.5710	13.3601	
	RTI Set 5 Run 1 WP (3/17)	2.6200	13.3601	

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
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As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
	RTI Set 5 Run 2 WP (3/27)	5.9200	13.3601	
	RTI Set 5 Run 3 WP (3/31)	2.2400	13.3601	
	RTI Set 6 Run 1 WP (4/1)	4.0600	13.3601	
	RTI Set 6 Run 2 WP UN (4/7)	2.8600	13.3601	
	RTI Set 6 Run 3 WP (4/8)	5.2900	13.3601	
	RTI Set 6 Run 4 WP (6/9)	3.0600	13.3601	
	WP #2 8/23	5.8250	13.3601	
	WP #4 9/6	4.8770	13.3601	
	WP #5 9/10	5.5090	13.3601	
	WP #6 9/11	2.3950	13.3601	
	WP #7 10/22	4.3660	13.3601	
	TC 1 TTN015 WP (5/8)(blue)	3.7950	13.3601	
	TC 1 TTN018 WP (6/12) (blue)	4.8870	13.3601	
	TC 1 TTN019 WP (6/16) (blue)	4.2770	13.3601	
	TC 11 TTN002 WP (3/18)(blue)	5.1720	13.3601	
	TC 11 TTN006 WP (4/16) (blue)	2.5550	13.3601	
	TC 11 TTN017 WP (5/14)(yellow)	2.6930	13.3601	
	TC 12 RN001 WP (4/2) (yellow)	4.3270	13.3601	
	TC 12 RN013 WP (6/11) (yellow)	1.5520	13.3601	
	TC 12 TTN001 WP (3/12) (blue)	2.7870	13.3601	
	TC 12 TTN003 WP (3/28)(yellow)	4.5670	13.3601	
	TC 12 TTN006 WP (4/16) (blue)	2.5550	13.3601	
	TC 15 RN002 WP (4/9) (yellow)	6.3930	13.3601	
	TC 16 TTN007 WP (4/21) (green)	2.8400	13.3601	
	TC 16 TTN008 WP (4/22) (green)	2.0450	13.3601	
	TC 16 TTN009 WP (4/23) (blue)	1.3330	13.3601	
	TC 19 TTN005 WP (4/14)(yellow)	2.5280	13.3601	
	TC 2 RN007 WP (5/7) (yellow)	6.1460	13.3601	
	TC 2 RN008 WP (5/12) (green)	4.2680	13.3601	
	TC 2 RN009 WP (5/13) (blue)	6.4810	13.3601	
	TC 2 RN013 WP (6/11) (yellow)	1.5520	13.3601	
	TC 4 RN003 WP (4/16) (yellow)	5.1400	13.3601	
	TC 4 TTN010 WP (4/28) (yellow)	4.9200	13.3601	
	TC 4 TTN011 WP (4/29) (yellow)	4.8580	13.3601	
	TC 4 TTN012 WP (4/30) (yellow)	4.9820	13.3601	
	TC 4 TTN013 WP (5/5) (yellow)	2.6170	13.3601	
	TC 4 TTN014 WP (5/7) (yellow)	5.2420	13.3601	
	TC 5 TTN007 WP (4/21) (green)	2.8400	13.3601	
	TC 5 TTN008 WP (4/22) (green)	2.0450	13.3601	

Table C-5 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
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As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Acceptable Runs - Used to Obtain Tolerance Intervals

Chemical	run	Residual Standard Deviation	Tolerence Interval Upper Limit	Status
	TC 5 TTN009 WP (4/23) (blue)	1.3330	13.3601	
	TC 6 RN004 WP (4/24) (blue)	2.9140	13.3601	
	TC 6 RN005 WP (5/1) (blue)	5.9590	13.3601	
	TC 6 RN006 WP (5/6) (green)	3.1500	13.3601	
	WP 10/3	5.3180	13.3601	
	WP 11/20	7.2540	13.3601	
	WP 11/27	6.0310	13.3601	
	WP 11/30	5.8390	13.3601	
	WP 11/7a	5.0750	13.3601	
	WP 12/12	6.5050	13.3601	
	WP 9/12	6.1140	13.3601	
	WP 9/21	3.1770	13.3601	
	WP 9/24	4.5790	13.3601	

Table C-6 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
One-sided Upper Tolerance Limit to Contain at Least 80% of Test Runs with 95% Confidence
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Bad Runs

Chemical	run	Residual Standard Deviation	log_syx	T_U	Status
SC	SC 9/11	86.950	4.46533	2.34866	Above Limit
	TC 1 Run 3 SC (5/7)	29.640	3.38912	2.34866	Above Limit
	TC 1 Run 5 SC (5/22)	6.150	1.81645	2.34866	
	TC 10 Run 1 SC (5/21)	8.326	2.11938	2.34866	
	TC 18 Run 1 SC (6/4)	3.016	1.10393	2.34866	
	TC 2 Run 2 SC UN (5/28)	54.090	3.99065	2.34866	Above Limit
	TC 2 Run 4 SC UN (6/3)	4.526	1.50984	2.34866	
	TC 2 Run 5 SC UN (6/7)	4.144	1.42166	2.34866	
	TC 2 Run 6 SC UN (6/9)	2.390	0.87129	2.34866	
	TC 2 Run 7 SC UN (6/17)	7.600	2.02815	2.34866	
	TC 2 Run 9 SC (6/23)	7.048	1.95274	2.34866	
	TC 23 Run 7 SC UN (5/27)	54.090	3.99065	2.34866	Above Limit
	TC 3 Run 11 SC UN (6/23)	8.010	2.08069	2.34866	
	TC 3 Run 13 SC UN (6/19)	5.341	1.67541	2.34866	
	TC 3 Run 14 SC (6/23)	7.048	1.95274	2.34866	
	TC 3 Run 3 SC UN (5/7)	30.770	3.42654	2.34866	Above Limit
	TC 3 Run 8 SC UN (5/23)	1.914	0.64920	2.34866	
	TC 3 Run 9 SC UN (5/28)	12.210	2.50226	2.34866	Above Limit
	SC #1 8/21	44.520	3.79594	2.34866	Above Limit
	SC #3 8/28	27.120	3.30027	2.34866	Above Limit
	TC 12 RN001 SC (4/2) (yellow)	3.609	1.28343	2.34866	
	TC 4 TTN014 SC (5/7) (yellow)	4.413	1.48455	2.34866	
WP	NOR2 10/8	19.300	2.96011	2.59228	Above Limit
	TC 1 Run 3 WP (5/7)	39.650	3.68009	2.59228	Above Limit
	TC 1 Run 4 WP (5/18)	12.830	2.55179	2.59228	
	TC 10 Run 1 WP (5/21)	12.120	2.49486	2.59228	
	TC 13 Run 2 WP UN (5/29)	.	.	2.59228	Not Fittable
	TC 13 Run 3 WP (5/30)	.	.	2.59228	Not Fittable
	TC 18 Run 1 WP (6/4)	1.581	0.45806	2.59228	
	TC 18 Run 3 WP (6/6)	11.630	2.45359	2.59228	
	TC 2 Run 10 WP (6/24)	8.583	2.14978	2.59228	
	TC 2 Run 2 WP UN (5/28)	88.740	4.48571	2.59228	Above Limit
	TC 2 Run 6 WP UN (6/9)	5.419	1.68991	2.59228	
	TC 2 Run 7 WP UN (6/17)	7.297	1.98746	2.59228	
	TC 2 Run 9 WP (6/23)	8.743	2.16825	2.59228	

Table C-6 ER Binding Assay Performance and Data Interpretation Criteria
Residual Standard Deviations Based on Prism Outputs - Without Outliers
One-sided Upper Tolerance Limit to Contain at Least 80% of Test Runs with 95% Confidence
As Calculated Using the Results from Acceptable Standard Curve or Weak Positive Runs
Bad Runs

Chemical	run	Residual Standard Deviation	log_syx	T_U	Status
	TC 23 Run 7 WP UN (5/27)	88.740	4.48571	2.59228	Above Limit
	TC 3 Run 1 WP UN (4/14)	10.210	2.32337	2.59228	
	TC 3 Run 10 WP UN (6/12)	21.740	3.07915	2.59228	Above Limit
	TC 3 Run 12 WP UN (6/16)	10.280	2.33020	2.59228	
	TC 3 Run 13 WP UN (6/19)	7.590	2.02683	2.59228	
	TC 3 Run 14 WP (6/23)	8.743	2.16825	2.59228	
	TC 3 Run 15 WP (6/24)	8.583	2.14978	2.59228	
	TC 3 Run 16 WP (6/25)	6.000	1.79176	2.59228	
	TC 3 Run 3 WP UN (5/7)	39.650	3.68009	2.59228	Above Limit
	TC 3 Run 4 WP UN (5/15)	16.780	2.82019	2.59228	Above Limit
	TC 3 Run 5 WP UN (5/16)	10.540	2.35518	2.59228	
	TC 3 Run 6 WP UN (5/18)	12.830	2.55179	2.59228	
	TC 3 Run 7 WP UN (5/23)	2.166	0.77288	2.59228	
	TC 3 Run 8 WP UN (5/23)	8.016	2.08144	2.59228	
	TC 3 Run 9 WP UN (5/28)	.	.	2.59228	Not Fittable
	TC 4 Run 5 WP UN (6/12)	24.650	3.20478	2.59228	Above Limit
	TC 4 Run 6 WP UN (6/25)	5.997	1.79126	2.59228	
	TC 4 Run 7 WP UN (7/1)	13.130	2.57490	2.59228	
	TC 4 Run 8 WP UN (7/2)	17.430	2.85819	2.59228	Above Limit
	TC 6 Run 1 WP UN (6/2)	.	.	2.59228	Not Fittable
	WP 9/11	.	.	2.59228	Not Fittable
	WP #1 8/21	46.380	3.83687	2.59228	Above Limit
	WP #3 8/28	14.380	2.66584	2.59228	Above Limit
	TC 1 RN012 WP (5/29) (yellow)	3.769	1.32681	2.59228	
	TC 11 TTN004 WP (4/7) (red)	12.530	2.52813	2.59228	
	WP 11/7	2.091	0.73764	2.59228	

APPENDIX D

Appendix D. Binding Classifications of Runs

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria Prism Results for Each (Kept) Test Run - without Outlier. Voting Results for Each Test Run.

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
1	**Hamner**	TC 1 Run 3 (5/7)	-8.229(0.371)	-0.421(0.333)	94.070(12.570)	-60.410(98.380)	-6.00000	-25.8447	.	.	2
		TC 1 Run 4 (5/18)	.(.)	-0.190(0.118)	.(.)	.(.)	-6.00000	.	-10.665	-10.6650	1
		TC 1 Run 5 (5/22)	-9.420(0.225)	-0.722(0.267)	73.590(2.890)	0.283(5.363)	-6.00000	0.8056	.	.	2
1	**RTI**	RTI Set 4 Run 1 TC 1 (3/6)	-9.129(0.018)	-0.880(0.051)	90.920(2.323)	-1.423(0.511)	-5.00000	-1.3959	.	.	2
		RTI Set 4 Run 2 TC 1 (3/11)	-9.049(0.012)	-0.886(0.031)	96.290(1.266)	-1.592(0.577)	-6.00671	-1.3729	.	.	2
		RTI Set 4 Run 3 TC 1 UN (3/13)	-9.111(0.029)	-0.936(0.071)	83.890(1.770)	-1.640(1.315)	-6.00000	-1.4810	.	.	2
		RTI Set 4 Run 4 TC 1 UN (3/18)	-9.013(0.024)	-1.129(0.076)	84.140(1.878)	-1.000(1.038)	-6.00000	-0.9492	.	.	2
		RTI Set 4 Run 5 TC 1 (4/3)	-9.221(0.023)	-1.064(0.066)	82.710(1.380)	-0.185(0.965)	-6.00671	-0.1364	.	.	2
1	**TRL**	TC 1 TTN015 (5/8)(blue)	-9.879(0.173)	-0.610(0.238)	.(.)	-2.452(1.268)	-5.00000	.	-2.873	-2.8733	1
		TC 1 TTN019 (6/16) (blue)	.(.)	-0.997(0.072)	.(.)	-1.667(0.558)	-5.00000	.	-1.930	-1.9300	1
2	**Hamner**	TC 2 Run 1 (5/19)	-9.406(0.186)	-0.557(0.207)	116.300(16.080)	-6.903(8.032)	-5.00000	-6.5343	.	.	2
		TC 2 Run 10 (6/24)	-8.630(0.086)	-0.740(0.123)	99.590(3.245)	-6.730(3.499)	-5.00000	-6.4788	.	.	2
		TC 2 Run 3 UN (6/2)	-9.304(0.042)	-0.890(0.076)	129.100(1.720)	0.803(1.642)	-5.00000	0.8151	.	.	2
		TC 2 Run 7 UN (6/17)	-8.582(0.178)	-0.466(0.145)	96.510(7.463)	4.449(6.929)	-5.00000	6.3365	.	.	2
		TC 2 Run 8 UN (6/18)	-10.410(0.385)	-0.453(0.207)	65.640(10.990)	-6.908(6.632)	-5.00000	-5.9843	.	.	2
		TC 2 Run 9 (6/23)	-8.744(0.037)	-0.628(0.041)	129.700(1.842)	7.626(1.190)	-5.00000	7.9146	.	.	2
2	**RTI**	RTI Set 5 Run 1 TC 2 (3/17)	-9.320(0.030)	-0.982(0.104)	89.000(4.430)	-0.280(0.519)	-4.00000	-0.2797	.	.	2
		RTI Set 5 Run 2 TC 2 (3/27)	-8.940(0.036)	-1.150(0.119)	88.600(1.560)	-4.170(1.760)	-6.04027	-4.1092	.	.	2
		RTI Set 5 Run 3 TC 2 (3/31)	-9.500(0.012)	-0.927(0.029)	91.300(1.080)	-0.465(0.468)	-6.04027	-0.3947	.	.	2
2	**TRL**	TC 2 RN007 (5/7) (yellow)	-9.008(0.014)	-1.065(0.033)	74.660(1.079)	-1.155(0.287)	-5.00671	-1.1461	.	.	2
		TC 2 RN008 (5/12) (green)	-8.774(0.006)	-1.037(0.014)	103.700(0.476)	-2.703(0.149)	-4.00000	-2.7021	.	.	2
		TC 2 RN009 (5/13) (blue)	-8.732(0.024)	-1.044(0.057)	85.000(1.839)	-1.937(0.604)	-4.00000	-1.9356	.	.	2
3	**Hamner**	TC 3 Run 14 (6/23)	-9.489(0.152)	-0.825(0.245)	111.600(4.641)	7.858(7.006)	-7.00000	8.4805	.	.	2
		TC 3 Run 15 (6/24)	-9.652(0.157)	-0.853(0.234)	86.910(3.031)	-1.253(4.875)	-7.00000	-0.5889	.	.	2
		TC 3 Run 16 (6/25)	-9.449(0.128)	-0.713(0.181)	93.740(3.336)	7.122(5.966)	-7.00000	8.6215	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
3	RTI	RTI Set 4 Run 1 TC 3 (3/6)	-9.755(0.095)	-0.939(0.387)	106.700(72.600)	0.452(0.749)	-4.00000	0.4520	.	.	2
		RTI Set 4 Run 2 TC 3 (3/11)	-9.639(0.028)	-1.167(0.104)	95.320(1.836)	0.273(1.788)	-7.00671	0.3617	.	.	2
		RTI Set 4 Run 3 TC 3 UN (3/13)	-9.767(0.057)	-1.090(0.170)	76.520(2.548)	-0.402(2.590)	-7.00000	-0.2616	.	.	2
		RTI Set 4 Run 4 TC 3 UN (3/18)	-9.766(0.047)	-1.027(0.143)	92.330(3.149)	-1.053(2.809)	-7.00000	-0.8906	.	.	2
		RTI Set 4 Run 5 TC 3 (4/3)	-10.080(0.030)	-1.207(0.079)	66.690(0.931)	-0.349(0.860)	-7.00671	-0.3091	.	.	2
3	TRL	TC 3 RN009 (5/13) (blue)	-9.141(0.019)	-1.020(0.060)	82.200(1.862)	-2.756(0.441)	-3.00000	-2.7563	.	.	2
		TC 3 RN012 (5/29) (yellow)	-9.160(0.023)	-0.858(0.056)	89.750(3.025)	-4.019(0.501)	-3.00000	-4.0183	.	.	2
		TC 3 TTN015 (5/8) (blue)	-9.627(0.046)	-1.247(0.158)	62.590(2.283)	-1.050(0.352)	-4.03356	-1.0499	.	.	2
		TC 3 TTN018 (6/12) (blue)	-10.010(0.018)	-1.177(0.121)	59.930(3.715)	-3.789(0.167)	-3.00000	-3.7892	.	.	2
		TC 3 TTN019 (6/16) (blue)	.(.)	-1.033(0.098)	.(.)	-1.156(0.498)	-3.00000	.	7.633	-1.1667	1
4	Hamner	TC 4 Run 2 (4/7)	-10.580(0.070)	-0.659(0.086)	80.190(1.636)	-4.669(3.480)	-8.00000	-1.6950	.	.	2
		TC 4 Run 3 (4/8)	-10.480(0.067)	-0.608(0.072)	111.400(2.097)	-3.361(3.835)	-8.00000	-0.3429	.	.	2
		TC 4 Run 4 (4/9)	-10.320(0.069)	-0.676(0.093)	97.100(1.947)	-0.012(4.034)	-8.00000	2.7136	.	.	2
4	RTI	RTI Set 2 Run 1 TC4 UN (2/21)	-9.030(0.013)	-0.857(0.029)	99.800(1.720)	-2.240(0.283)	-4.00000	-2.2353	.	.	2
		RTI Set 2 Run 2 TC 4 (2/26)	-9.740(0.020)	-0.863(0.077)	147.000(34.900)	-0.964(0.194)	-4.00000	-1.0479	.	.	2
		RTI Set 2 Run 3 TC 4 (2/27)	-9.780(0.039)	-0.847(0.165)	114.000(42.200)	-0.878(0.479)	-4.00000	-0.8770	.	.	2
		RTI Set 2 Run 4 TC 4 (3/3)	-9.570(0.022)	-1.020(0.068)	101.000(1.560)	-0.401(1.500)	-7.00671	-0.1498	.	.	2
4	TRL	TC 4 RN003 (4/16) (yellow)	-8.932(0.077)	-1.609(1.155)	97.820(7.235)	0.738(5.031)	-5.00000	0.7379	.	.	2
		TC 4 TTN010 (4/28) (yellow)	-8.574(0.047)	-1.555(0.158)	75.270(2.173)	-4.651(0.705)	-5.00000	-4.6507	.	.	2
		TC 4 TTN011 (4/29) (yellow)	-8.524(0.042)	-1.000(0.097)	96.250(2.827)	-8.776(1.363)	-5.00000	-8.7363	.	.	2
		TC 4 TTN012 (4/30) (yellow)	-9.088(0.011)	-1.039(0.051)	98.250(1.698)	-1.981(0.384)	-5.00000	-1.9744	.	.	2
		TC 4 TTN013 (5/5) (yellow)	-9.425(0.011)	-1.016(0.031)	90.360(1.670)	-1.419(0.127)	-5.00000	-1.4155	.	.	2
		TC 4 TTN014 (5/7) (yellow)	.(.)	.(.)	.(.)	-0.557(3.264)	-5.00000	.	-1.310	-1.3100	1
5	Hamner	TC 5 Run 1 (3/26)	-7.727(0.034)	-0.678(0.050)	101.500(1.407)	1.973(1.685)	-5.03356	3.3413	.	.	2
		TC 5 Run 2 (3/27)	-7.952(0.051)	-0.806(0.098)	97.770(2.144)	1.608(2.485)	-5.03356	2.0399	.	.	2
		TC 5 Run 3 (3/31)	-7.013(0.045)	-0.786(0.080)	91.200(1.740)	0.699(1.852)	-4.00000	1.1601	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
5	RTI	RTI Set 2 Run 1 TC5 UN (2/21)	-7.050(0.054)	-1.110(0.206)	92.000(2.310)	1.250(2.330)	-4.00000	1.2959	.	.	2
		RTI Set 2 Run 2 TC 5 (2/26)	-7.130(0.018)	-0.925(0.046)	90.400(0.776)	0.737(0.689)	-4.00000	0.8076	.	.	2
		RTI Set 2 Run 3 TC 5 (2/27)	.(.)	.(.)	80.500(2.020)	3.820(1.950)	-4.00000	.	1.300	1.3000	1
		RTI Set 2 Run 4 TC 5 (3/3)	-7.140(0.029)	-1.200(0.119)	97.800(1.670)	2.420(1.520)	-4.00000	2.4357	.	.	2
5	TRL	TC 5 TTN007 (4/21) (green)	-6.458(0.053)	-0.823(0.093)	93.940(1.680)	0.800(2.390)	-4.00000	1.7774	.	.	2
		TC 5 TTN008 (4/22) (green)	-6.518(0.031)	-1.030(0.069)	102.300(1.139)	2.095(1.449)	-4.00000	2.3287	.	.	2
		TC 5 TTN009 (4/23) (blue)	-6.444(0.024)	-0.970(0.050)	102.200(0.904)	-0.280(1.196)	-4.00000	0.1384	.	.	2
6	Hamner	TC 6 Run 2 (6/3)	-6.311(0.074)	-1.064(0.205)	89.160(1.830)	10.350(4.910)	-5.00000	13.4434	.	.	2
		TC 6 Run 3 (6/5)	-6.303(0.030)	-1.064(0.078)	93.160(0.802)	12.450(1.925)	-5.00000	15.2390	.	.	2
		TC 6 Run 4 (6/6)	-6.262(0.042)	-1.058(0.127)	95.390(1.255)	2.270(3.565)	-5.00000	6.5866	.	.	2
6	RTI	RTI Set 6 Run 1 TC 6 (4/1)	-6.170(0.065)	-1.090(0.273)	81.600(1.760)	10.700(5.200)	-5.01678	15.3171	.	.	2
		RTI Set 6 Run 2 TC 6 UN (4/7)	-6.290(0.028)	-1.120(0.100)	87.400(1.630)	0.855(1.960)	-4.50000	1.9664	.	.	2
		RTI Set 6 Run 3 TC 6 (4/8)	-6.250(0.040)	-1.210(0.145)	73.700(1.540)	1.560(2.300)	-4.50000	2.6860	.	.	2
		RTI Set 6 Run 4 TC 6 (6/9)	-6.230(0.028)	-1.030(0.092)	87.000(1.480)	1.140(2.160)	-4.50000	2.9927	.	.	2
6	TRL	TC 6 RN004 (4/24) (blue)	-5.877(0.035)	-1.104(0.152)	98.010(1.199)	0.494(3.652)	-4.00000	1.3379	.	.	2
		TC 6 RN005 (5/1) (blue)	.(.)	.(.)	99.470(1.804)	18.500(9.151)	-5.00000	.	18 503	18.5033	1
		TC 6 RN006 (5/6) (green)	-5.764(0.069)	-0.889(0.229)	103.400(1.846)	-1.356(14.500)	-5.00671	16.3898	.	.	2
7	Hamner	TC 7 Run 2 (6/3)	-5.255(0.086)	-1.061(0.239)	86.170(1.964)	2.878(4.768)	-3.00000	3.3153	.	.	2
		TC 7 Run 3 (6/5)	.(.)	.(.)	92.610(1.600)	5.505(2.932)	-3.00000	.	7 990	3.0200	1
		TC 7 Run 4 (6/6)	-5.172(0.053)	-0.991(0.149)	99.200(1.836)	0.532(4.088)	-3.00000	1.2245	.	.	2
7	RTI	RTI Set 6 Run 1 TC 7 (4/1)	-4.720(0.045)	-1.310(0.162)	84.200(1.040)	5.620(2.450)	-3.00000	6.1739	.	.	2
		RTI Set 6 Run 2 TC 7 UN (4/7)	-4.660(0.021)	-1.330(0.113)	98.000(1.360)	2.500(2.300)	-3.00000	3.0897	.	.	2
		RTI Set 6 Run 3 TC 7 (4/8)	-4.640(0.027)	-1.300(0.134)	87.400(1.420)	7.680(2.510)	-3.00000	8.3569	.	.	2
		RTI Set 6 Run 4 TC 7 (6/9)	-4.480(0.018)	-1.190(0.078)	92.000(1.030)	0.535(2.020)	-3.00000	2.3618	.	.	2
7	TRL	TC 7 RN004 (4/24) (blue)	-3.743(0.066)	-0.981(0.283)	101.700(1.243)	-23.530(25.440)	-3.00000	2.7264	.	.	2
		TC 7 RN005 (5/1) (blue)	-3.513(0.048)	-0.518(0.094)	104.100(1.921)	-1623E9(4.56E12)	-3.00000	4.3738	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
		TC 7 RN006 (5/6) (green)	-3.697(0.066)	-1.012(0.274)	98.060(0.973)	-11.370(19.990)	-3.00000	10.6350	.	.	2
8	**Hamner**	TC 8 Run 3 (5/19)	-5.727(0.320)	-1.958(2.395)	140.800(4.488)	6.444(10.050)	-4.00000	6.4706	.	.	2
		TC 8 Run 4 (5/22)	-5.910(0.115)	-0.491(0.143)	86.420(4.087)	-19.010(19.980)	-4.00000	-0.1204	.	.	2
		TC 8 Run 5 (5/27)	-5.912(0.038)	-1.224(0.169)	97.690(1.193)	1.970(2.212)	-4.00000	2.4083	.	.	2
8	**RTI**	RTI Set 4 Run 2 TC 8 (3/11)	-5.932(0.020)	-0.964(0.088)	89.330(1.883)	-4.092(3.265)	-4.72483	3.9639	.	.	2
		RTI Set 4 Run 3 TC 8 UN (3/13)	-6.291(0.093)	-0.836(0.228)	64.340(3.230)	-5.887(10.690)	-4.70000	4.9298	.	.	2
		RTI Set 4 Run 4 TC 8 UN (3/18)	-6.861(0.068)	-0.772(0.169)	84.400(6.737)	3.443(3.577)	-4.70000	5.7328	.	.	2
		RTI Set 4 Run 5 TC 8 (4/3)	-6.785(0.036)	-0.872(0.069)	61.350(1.380)	-3.532(1.707)	-4.72483	1.0056	.	.	2
9	**Hamner**	TC 9 Run 7 (7/1)	-9.764(0.075)	-0.694(0.138)	67.350(1.593)	26.180(3.114)	-8.00671	29.3330	.	.	2
		TC 9 Run 8 (7/2)	-10.190(0.177)	-0.766(0.284)	82.570(4.380)	30.270(4.458)	-8.00671	30.9374	.	.	2
9	**RTI**	RTI Set 3 Run 1 TC 9 (2/28)	-4.360(0.314)	-0.685(0.175)	92.600(1.680)	45.800(4.180)	-4.00000	48.2849	.	.	2
		RTI Set 3 Run 2 TC 9 (3/4)	.(.)	.(.)	92.000(1.770)	45.300(1.600)	-4.00000	.	42.163	42.1633	1
		RTI Set 3 Run 3 TC 9 (3/5)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	58.467	57.4933	1
9	**TRL**	TC 9 TTN010 (4/28) (yellow)	-4.368(0.425)	-0.867(0.165)	106.400(1.697)	48.070(2.064)	-3.00000	48.2030	.	.	2
		TC 9 TTN011 (4/29) (yellow)	-4.366(0.182)	-0.789(0.222)	93.070(1.913)	38 190(4.833)	-3.00000	39.4176	.	.	2
		TC 9 TTN012 (4/30) (yellow)	-5.462(0.101)	-2.159(0.455)	88.810(1.689)	16 990(2.801)	-3.00000	24.8000	30.067	16.9000	2
10	**Hamner**	TC 10 Run 1 (5/21)	-5.181(0.191)	-1.299(1.193)	77.870(3.795)	5.781(15.890)	-4.00000	8.9789	.	.	2
		TC 10 Run 2 UN (6/2)	-5.057(0.090)	-0.886(0.183)	117.600(3.181)	-1.332(5.929)	-3.00000	0.0114	.	.	2
		TC 10 Run 8 (6/23)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	59.850	59.8500	1
10	**RTI**	RTI Set 5 Run 1 TC 10 (3/17)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	72.587	72.5867	1
		RTI Set 5 Run 2 TC 10 (3/27)	-3.970(0.048)	-3.570(4.110)	86.900(2.370)	11.700(5.480)	-3.00000	11.7465	.	.	2
		RTI Set 5 Run 3 TC 10 (3/31)	-3.690(0.051)	-1.190(0.323)	86.800(1.500)	11.800(10.300)	-3.00000	21.9442	.	.	2
10	**TRL**	TC 10 RN008 (5/12) (green)	.(.)	.(.)	96.680(1.438)	44 220(43.250)	-3.00000	.	44.227	44.2267	1
		TC 10 RN009 (5/13) (blue)	-3.903(0.146)	-1.975(3.083)	89.320(1.443)	5.871(11.560)	-3.00000	7.3834	.	.	2
11	**Hamner**	TC 11 Run 1 (3/5)	-5.718(0.084)	-1.027(0.239)	102.500(2.748)	4.116(5.693)	-4.00000	5.5750	.	.	2
		TC 11 Run 2 (3/6)	-5.822(0.059)	-0.942(0.153)	107.200(2.330)	-6.696(4.775)	-4.00000	-4.5655	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
		TC 11 Run 3 (3/10)	-5.931(0.051)	-0.741(0.080)	115.900(1.893)	1.866(3.469)	-4.00000	4.8674	.	.	2
11	RTI	RTI Set 1 Run 1 TC 11 (2/4)	-6.080(0.041)	-0.882(0.089)	105.000(1.520)	2.970(2.440)	-4.00000	4.2226	.	.	2
		RTI Set 1 Run 2 TC 11 (2/6)	-5.940(0.032)	-0.820(0.063)	106.000(1.120)	1.430(2.120)	-4.00000	3.7031	.	.	2
		RTI Set 1 Run 3 TC 11 (2/7)	-6.100(0.022)	-0.944(0.059)	90.800(0.738)	2.340(1.250)	-4.00000	3.4001	.	.	2
11	TRL	TC 11 RN008 (5/12) (green)	-5.296(0.062)	-1.022(0.187)	88.680(1.774)	1.400(5.204)	-4.00000	6.3030	.	.	2
		TC 11 TTN002 (3/18) (blue)	-5.551(0.028)	-0.841(0.056)	104.300(0.890)	-1.660(2.431)	-4.00000	3.1141	.	.	2
		TC 11 TTN006 (4/16) (blue)	-5.672(0.035)	-0.939(0.082)	100.000(1.154)	-1.333(2.647)	-4.00000	1.3892	.	.	2
12	Hamner	TC 12 Run 1 (3/5)	-7.546(0.075)	-1.110(0.183)	99.220(3.741)	1.486(2.720)	-4.00000	1.4967	.	.	2
		TC 12 Run 2 (3/6)	-7.683(0.075)	-0.886(0.152)	112.500(4.976)	-10.850(3.400)	-4.00000	-10.7883	.	.	2
		TC 12 Run 5 (3/24)	-7.790(0.040)	-1.021(0.100)	89.780(1.841)	0.918(1.424)	-4.00000	0.9329	.	.	2
12	RTI	RTI Set 1 Run 1 TC 12 (2/4)	-7.320(0.028)	-1.220(0.089)	100.000(1.340)	-0.601(1.260)	-4.00000	-0.5923	.	.	2
		RTI Set 1 Run 2 TC 12 (2/6)	-7.480(0.012)	-1.160(0.030)	105.000(0.556)	-0.775(0.391)	-4.00000	-0.7656	.	.	2
		RTI Set 1 Run 3 TC 12 (2/7)	-7.630(0.008)	-1.030(0.017)	93.900(0.366)	-1.110(0.246)	-4.00000	-1.1255	.	.	2
12	TRL	TC 12 RN001 (4/2) (yellow)	-6.591(0.038)	-1.023(0.080)	91.600(1.159)	-1.795(1.494)	-4.00000	-1.5354	.	.	2
		TC 12 TTN001 (3/12) (blue)	-7.039(0.017)	-1.048(0.056)	102.800(0.843)	-0.657(0.804)	-4.00000	-0.5923	.	.	2
		TC 12 TTN003 (3/28)(yellow)	-6.840(0.035)	-1.161(0.127)	94.370(1.498)	0.250(1.631)	-4.00000	0.3029	.	.	2
		TC 12 TTN006 (4/16) (blue)	-6.816(0.021)	-0.904(0.047)	103.300(0.921)	-2.107(1.043)	-4.00000	-1.8147	.	.	2
13	Hamner	TC 13 Run 1 (5/21)	-7.779(0.158)	-1.301(0.651)	86.280(3.865)	12.530(7.065)	-6.04027	12.9419	.	.	2
		TC 13 Run 3 (5/30)	-7.639(0.050)	-0.966(0.098)	77.610(1.384)	6.735(1.413)	-5.02013	7.0612	.	.	2
		TC 13 Run 4 (6/6)	-7.416(0.073)	-1.774(0.298)	90.540(1.938)	6.685(1.941)	-4.00000	6.6852	.	.	2
13	RTI	RTI Set 6 Run 1 TC 13 (4/1)	-7.300(0.055)	-1.440(0.261)	74.300(1.360)	1.480(1.140)	-4.00000	1.4864	.	.	2
		RTI Set 6 Run 2 TC 13 UN (4/7)	-7.380(0.014)	-1.530(0.075)	91.700(0.971)	0.483(0.818)	-5.00000	0.5079	.	.	2
		RTI Set 6 Run 3 TC 13 (4/8)	-7.490(0.032)	-1.540(0.150)	72.400(1.330)	0.188(1.400)	-5.00671	0.2117	.	.	2
		RTI Set 6 Run 4 TC 13 (6/9)	-7.400(0.014)	-1.380(0.060)	87.400(0.705)	-0.865(0.742)	-5.00671	-0.8041	.	.	2
13	TRL	TC 13 RN005 (5/1) (blue)	-5.847(0.106)	-2.064(1.400)	96.810(1.985)	2.624(3.892)	-4.00000	2.6385	.	.	2
		TC 13 RN006 (5/6) (green)	-5.664(0.057)	-2.113(0.358)	95.610(1.025)	1.111(2.428)	-4.00000	1.1425	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
14	**Hamner**	TC 14 Run 3 (4/10)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	96 103	96.1033	0
		TC 14 Run 5 (4/16)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	80.650	80.6500	0
		TC 14 Run 6 (4/17)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	81 945	81.9450	0
14	**RTI**	RTI Set 3 Run 1 TC 14 (2/28)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	75.667	75.6667	0
		RTI Set 3 Run 2 TC 14 (3/4)	.(.)	.(.)	.(.)	.(.)	-4.50000	.	59.933	59.9333	1
		RTI Set 3 Run 3 TC 14 (3/5)	.(.)	.(.)	.(.)	.(.)	-4.50000	.	68.900	68.9000	1
14	**TRL**	TC 14 TTN010 (4/28) (yellow)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	58.800	58.8000	1
		TC 14 TTN011 (4/29) (yellow)	.(.)	.(.)	91.490(15.420)	.(.)	-5.00000	.	37.350	37.3500	1
		TC 14 TTN012 (4/30) (yellow)	-5.337(0.141)	-0.810(0.338)	85.220(4.321)	-663E9(4.56E12)	-5.00000	19.1917	.	.	2
		TC 14 TTN013 (5/5) (yellow)	-5.484(0.105)	-0.768(0.149)	72.670(4.895)	-134E11(4.55E12)	-5.00000	19.3652	.	.	2
15	**Hamner**	TC 15 Run 1 (3/11)	-5.599(0.038)	-0.779(0.060)	92.160(1.100)	-2.904(1.875)	-3.00000	-1.7917	.	.	2
		TC 15 Run 2 (3/12)	-5.512(0.044)	-0.767(0.067)	103.800(1.394)	-0.804(2.308)	-3.00000	0.3554	.	.	2
		TC 15 Run 3 (3/17)	-5.601(0.046)	-0.878(0.083)	90.680(1.292)	-1.014(2.086)	-3.00000	-0.4169	.	.	2
15	**RTI**	RTI Set 1 Run 1 TC 15 (2/4)	-5.320(0.042)	-0.968(0.095)	97.500(1.290)	0.072(2.170)	-3.00000	0.6507	.	.	2
		RTI Set 1 Run 2 TC 15 (2/6)	-5.220(0.051)	-1.000(0.130)	101.000(1.660)	-1.320(2.860)	-3.00000	-0.7101	.	.	2
		RTI Set 1 Run 3 TC 15 (2/7)	-5.400(0.052)	-0.801(0.088)	93.900(1.500)	-1.740(2.750)	-3.00000	-0.4053	.	.	2
15	**TRL**	TC 15 RN002 (4/9) (yellow)	-4.999(0.040)	-1.006(0.123)	89.980(1.221)	-5.029(2.731)	-3.00000	-3.7691	.	.	2
		TC 15 TTN002 (3/18) (blue)	-5.410(0.045)	-0.926(0.088)	105.700(1.504)	-2.167(2.423)	-3.00000	-1.5789	.	.	2
		TC 15 TTN004 (4/7) (red)	-5.206(0.022)	-0.920(0.061)	104.100(0.778)	-13.160(2.958)	-4.03356	-2.7595	.	.	2
		TC 15 TTN006 (4/16) (blue)	-4.947(0.040)	-0.903(0.066)	99.890(0.831)	-2.236(1.950)	-3.00000	-0.4009	.	.	2
		TC 15 TTN017 (5/14) (yellow)	-4.997(0.033)	-1.026(0.101)	109.900(1.175)	-0.792(2.230)	-3.00000	0.0417	.	.	2
16	**Hamner**	TC 16 Run 1 (3/18)	-5.579(0.040)	-1.392(0.133)	101.300(1.155)	1.515(2.474)	-4.03356	2.1763	.	.	2
		TC 16 Run 2 (3/26)	-5.474(0.091)	-1.353(0.274)	111.500(2.824)	2.622(6.122)	-4.03356	3.5569	.	.	2
		TC 16 Run 3 UN (3/27)	-5.520(0.048)	-1.542(0.176)	108.900(1.088)	11.300(2.775)	-4.00000	11.5862	.	.	2
		TC 16 Run 4 UN (4/2)	-5.746(0.052)	-1.741(0.339)	89.380(1.081)	8.863(2.199)	-4.00000	8.9389	.	.	2
16	**RTI**	RTI Set 2 Run 1 TC16 UN (2/21)	-5.870(0.022)	-1.460(0.134)	89.200(0.780)	-1.430(1.040)	-3.00000	-1.4198	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
		RTI Set 2 Run 2 TC 16 (2/26)	-5.220(0.052)	-1.860(0.431)	93.900(1.230)	-0.448(2.500)	-4.00000	0.0271	.	.	2
		RTI Set 2 Run 3 TC 16 (2/27)	-5.720(0.118)	-0.865(0.217)	73.000(2.250)	-5.500(7.650)	-4.00000	0.2145	.	.	2
		RTI Set 2 Run 4 TC 16 (3/3)	-5.220(0.020)	-1.920(0.220)	89.700(1.590)	-1.570(2.340)	-4.00000	-1.0336	.	.	2
16	**TRL**	TC 16 TTN007 (4/21) (green)	.(.)	.(.)	99.900(0.968)	-0.210(1.389)	-3.00000	.	2.220	-2.6400	1
		TC 16 TTN008 (4/22) (green)	-5.116(0.020)	-1.649(0.197)	106.000(0.796)	-1.466(1.208)	-3.00000	-1.4336	.	.	2
		TC 16 TTN009 (4/23) (blue)	.(.)	.(.)	102.100(0.953)	-2.331(1.372)	-3.00000	.	-0 236	-4.4255	1
17	**Hamner**	TC 17 Run 2 (4/3)	-5.586(0.053)	-0.332(0.059)	114.400(3.202)	-1166E9(4.54E12)	-5.03356	16.2363	.	.	2
		TC 17 Run 4 (4/8)	-5.548(0.089)	-0.934(0.258)	116.600(1.698)	10.740(14.740)	-5.03356	28.0174	.	.	2
		TC 17 Run 5 (4/10)	-5.709(0.179)	-1.122(0.541)	91.290(2.635)	31.540(5.812)	-4.00000	31.8603	.	.	2
17	**RTI**	RTI Set 3 Run 1 TC 17 (2/28)	.(.)	.(.)	85.500(1.310)	14.300(4.520)	-4.00000	.	21.200	12.0333	1
		RTI Set 3 Run 2 TC 17 (3/4)	-5.560(0.032)	-2.490(0.411)	88.100(2.270)	15.800(2.210)	-4.00000	15.8461	.	.	2
		RTI Set 3 Run 3 TC 17 (3/5)	-5.560(0.030)	-2.480(0.386)	83.100(2.210)	6.780(3.000)	-4.52349	7.0496	.	.	2
17	**TRL**	TC 17 RN003 (4/16) (yellow)	-5.324(0.080)	-1.225(0.251)	105.500(2.774)	-2.228(6.566)	-4.00000	0.1419	.	.	2
		TC 17 TTN008 (4/22) (green)	-5.398(0.012)	-1.026(0.030)	108.900(0.486)	-4.390(1.063)	-4.00000	-0.6683	.	.	2
		TC 17 TTN009 (4/23) (blue)	-5.404(0.058)	-2.001(0.248)	101.700(1.240)	12.870(2.523)	-4.00000	12.9700	.	.	2
		TC 17 TTN010 (4/28)(yellow)	-5.087(0.072)	-1.473(0.250)	104.300(1.592)	31.080(3.432)	-4.00000	31.7153	.	.	2
18	**Hamner**	TC 18 Run 2 (6/5)	-6.459(0.258)	-0.336(0.127)	127.600(13.120)	16.580(12.620)	-4.00000	23.2889	.	.	2
		TC 18 Run 3 (6/6)	-5.087(0.161)	-0.465(0.167)	113.700(4.105)	-13.080(36.140)	-4.00000	16.8454	.	.	2
18	**RTI**	RTI Set 5 Run 1 TC 18 (3/17)	.(.)	.(.)	.(.)	.(.)	-7.00000	.	83.050	79.1933	.
		RTI Set 5 Run 2 TC 18 (3/27)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	86.080	79.2033	0
		RTI Set 5 Run 3 TC 18 (3/31)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	93.020	89.0833	0
18	**TRL**	TC 18 RN004 (4/24) (blue)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	81.395	74.7350	1
		TC 18 RN005 (5/1) (blue)	.(.)	.(.)	.(.)	.(.)	-7.00000	.	65.130	65.1300	.
		TC 18 RN006 (5/6) (green)	.(.)	.(.)	93.020(1.346)	.(.)	-3.00000	.	33.210	33.2100	1
19	**Hamner**	TC 19 Run 2 (3/6)	.(.)	.(.)	115.800(3.315)	-6.500(18.460)	-3.00000	.	-6 500	-6.5000	1
		TC 19 Run 3 (3/10)	-3.786(0.053)	-0.828(0.157)	111.600(1.329)	-22.680(17.180)	-3.00000	5.3608	.	.	2

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
		TC 19 Run 4 (3/11)	-4.035(0.045)	-0.746(0.112)	96.570(1.102)	-17.470(11.170)	-3.00000	4.9720	.	.	2
19	**RTI**	RTI Set 1 Run 1 TC 19 (2/4)	-3.840(0.065)	-1.130(0.393)	97.500(1.370)	-8.400(15.100)	-3.00000	4.3628	.	.	2
		RTI Set 1 Run 2 TC 19 (2/6)	-3.760(0.067)	-0.810(0.220)	103.000(1.390)	-41.600(39.100)	-3.00000	1.1918	.	.	2
		RTI Set 1 Run 3 TC 19 (2/7)	-3.910(0.036)	-0.701(0.091)	98.000(0.823)	-35.700(16.600)	-3.00000	3.4534	.	.	2
19	**TRL**	TC 19 TTN001 (3/12) (blue)	.(.)	.(.)	100.000(0.958)	.(.)	-3.00000	.	6.587	6.5867	1
		TC 19 TTN007 (4/21) (green)	.(.)	.(.)	98.730(0.692)	12.030(139.700)	-3.00000	.	12.713	12.7133	1
20	**Hamner**	TC 20 Run 2 (4/10)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	99.863	96.8900	0
		TC 20 Run 4 (4/16)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	90.077	85.2333	0
		TC 20 Run 5 (4/17)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	86.470	81.3067	0
20	**RTI**	RTI Set 3 Run 1 TC 20 (2/28)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	87.767	85.6333	0
		RTI Set 3 Run 2 TC 20 (3/4)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	74.800	74.8000	1
		RTI Set 3 Run 3 TC 20 (3/5)	.(.)	.(.)	.(.)	.(.)	-6.00000	.	31.200	31.2000	1
20	**TRL**	TC 20 TTN015 (5/8) (blue)	.(.)	.(.)	62.720(2.975)	16.120(4.705)	-5.00000	.	21.667	7.8000	1
		TC 20 TTN018 (6/12) (blue)	.(.)	.(.)	59.410(3.324)	24.140(4.204)	-5.00000	.	27.900	16.0000	1
21	**Hamner**	TC 21 Run 1 (3/11)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	92 967	91.3000	0
		TC 21 Run 2 (3/12)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	101.080	98.3600	0
		TC 21 Run 3 (3/17)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	92 200	57.9000	1
21	**RTI**	RTI Set 1 Run 1 TC 21 (2/4)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	86.033	86.0333	0
		RTI Set 1 Run 2 TC 21 (2/6)	.(.)	.(.)	.(.)	.(.)	-5.00000	.	97.950	84.2500	0
		RTI Set 1 Run 3 TC 21 (2/7)	.(.)	.(.)	.(.)	.(.)	-6.00000	.	92.400	87.0333	0
21	**TRL**	TC 21 TTN006 (4/16) (blue)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	102.490	97.0100	0
22	**Hamner**	TC 22 Run 1 (3/26)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	93.405	82.4750	0
		TC 22 Run 2 (3/27)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	94 193	93.5000	0
		TC 22 Run 3 (3/31)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	93 137	88.5000	0
22	**RTI**	RTI Set 2 Run 2 TC 22 (2/26)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	64.467	64.4667	1
		RTI Set 2 Run 3 TC 22 (2/27)	.(.)	.(.)	.(.)	.(.)	-4.00000	.	51.867	51.8667	1

Table D-1. Estrogen Receptor Binding Assay Performance and Data Interpretation Criteria
Prism Results for Each (Kept) Test Run - without Outlier
Voting Results for Each Test Run

Classification code: 0 - non-binder, 1- equivocal, 2 - binder, missing - nontestable

Chemcial Code	Laboratory	Test Run	LogIC50	HILLSLOPE	TOP	BOTTOM	Highest Concentration (Log10)	Curve at Lowest Point	Mean at Highest Concentration	Lowest Mean	Voting Result+
		RTI Set 2 Run 4 TC 22 (3/3)	-4.500(0.029)	-0.991(0.136)	95.700(1.300)	-0.495(7.470)	-3.70000	14.0810	.	.	2
22	TRL	TC 22 TTN007 (4/21) (green)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	82.453	75.4000	0
		TC 22 TTN008 (4/22) (green)	-3.280(1.727)	-1.860(7.516)	104.000(1.148)	35.960(93.610)	-3.00000	40.9157	.	.	2
		TC 22 TTN009 (4/23) (blue)	.(.)	.(.)	.(.)	.(.)	-3.00000	.	78.845	78.8446	0
23	Hamner	TC 23 Run 1 (4/15)	-4.818(0.159)	-0.798(0.255)	107.300(3.415)	10.610(11.660)	-3.00000	12.9098	.	.	2
		TC 23 Run 6 (5/27)	-5.228(0.032)	-0.870(0.071)	102.700(0.929)	3.720(3.092)	-4.03356	11.0766	.	.	2
		TC 23 Run 8 (6/11)	-5.564(0.023)	-1.690(0.084)	86.620(0.686)	-3.531(1.157)	-4.03356	-3.1907	.	.	2
23	RTI	RTI Set 4 Run 2 TC 23 (3/11)	-5.158(0.023)	-1.169(0.095)	88.370(1.647)	3.875(1.654)	-3.51678	5.0815	.	.	2
		RTI Set 4 Run 3 TC 23 UN(3/13)	-5.469(0.054)	-1.011(0.139)	65.290(2.293)	2.462(2.389)	-3.51007	4.4422	.	.	2
		RTI Set 4 Run 4 TC 23 UN(3/18)	-5.369(0.064)	-1.389(0.270)	70.630(3.034)	4.851(2.334)	-3.00000	4.9250	.	.	2
		RTI Set 4 Run 5 TC 23 (4/3)	-5.342(0.028)	-1.033(0.092)	96.860(2.520)	4.437(1.502)	-3.00000	4.7782	.	.	2
23	TRL	TC 23 RN009 (5/13) (blue)	-4.817(0.141)	-0.458(0.154)	83.340(3.167)	-19.560(27.270)	-3.00000	4.5962	.	.	2
		TC 23 RN012 (5/29)(yellow)	-4.648(0.245)	-1.245(0.573)	65.890(2.975)	0.864(8.201)	-3.00000	2.6003	.	.	2
		TC 23 TTN015 (5/8) (blue)	.(.)	.(.)	61.320(1.790)	10.620(3.246)	-3.00000	.	11.333	9.9000	1