

Corresponds to study #17 in Attachment A of transmittal memo on CBI HERO ID:4731538

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STUDY TITLE

Report

Paliogen Violet 5011

Reproduction/Developmental Toxicity Screening Test in Wistar Rats Oral Administration (Gavage)

TEST GUIDELINES

OECD 421 OPPTS 870.3550

AUTHORS



STUDY COMPLETION DATE

22 Apr 2013

TEST FACILITY

BASF SE

TEST FACILITY PROJECT IDENTIFICATION

Project No. 80R0223/11C162

SPONSOR

BASF SE

PART I OF III (REPORT SECTION AND SUMMARY TABLES)

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STATEME	NT OF NO DATA CONFIDENTI	IALITY C	LAIMS
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Submitter:		Date:	
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Typed Name of Company:		F	



GLP COMPLIANCE STATEMENT

This study was conducted in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act) which meet the United States Environmental Protection Agency Good Laboratory Practice Standards [40 CFR Part 160 (FIFRA) and Part 792 (TSCA)], with the exception that recognized differences exist between the GLP Principles/Standards of OECD and the Principles/Standards of FIFRA and TSCA.

Study Director:_	Date: 22 Epril 2013
Typed name of Study Director:	
Typed name of Laboratory:	BASF SE
To be filled for USA EPA subm	ission only:
Sponsor:	Date:
Typed Name of Sponsor:	
Typed Name of Company:	
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The following statement is for US EPA submissions only:

	988 8 F856855565 70			
	FLAGGING CRITERIA			
I have applied the criteria potential adverse effects to exceeds any of the applical	the results of the attached stud	161.34 for flagging studies for dy. This study neither meets nor		
Submitter:		Date:		
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SIGNATURE PAGE

Study Director:	Sp. 2013
Pathology:	17. Apr 2013
Management:	April, 2013



CONTRIBUTORS TO THE STUDY / SUPERVISORY LABORATORY PERSONNEL

Head of Experimental Toxicology and Ecology:	
Study Director:	
Pathology:	
Data Processing:	
Statistics:	
Quality Assurance Unit (QAU):	
Coordination QAU:	
Laboratory Mechanistic Tox. Rodent:	
Pathology:	
Histopathology:	



STATEMENT OF THE QUALITY ASSURANCE UNIT

The Quality Assurance Unit (QAU) inspected the study and reported any inspection results to the Study Director and to Management.

The final report reflects the raw data.

Phase of study	Date of inspection	Reported to Study Director and to Management	
	(mm-dd-yyyy)	(mm-dd-yyyy)	
Study Plan:	06-22-2012	06-22-2012	
Conduct of study:	07-09-2012	07-09-2012	
	08-02-2012	08-02-2012	
	08-08-2012	08-08-2012	
	08-14-2012	08-14-2012	
Report:	04-10-2013	04-10-2013	

Ludwigshafen, 22 April 2013





GLP CERTIFICATE (FROM THE COMPETENT AUTHORITY)



Gute Laborpraxis / Good Laboratory Practice

GLP-Bescheinigung / Statement of GLP Compliand (gem. /according to § 19 Abs. 1 Chemikaliengesetz)

Eine GLP-Inspektion zur Überwachung und der Einhaltung der GLP-Grundsätze gemäß Chemikaliengesetz bzw. Richtlinie 2004/9/EG wurde durchgeführt in:

Assessment of conformity with GLP according to Chemikaliengesetz and Directive 2004/9/EC

Prüfeinrichtung / Test facility





Prüfung nach Kategorien / Areas of Expertise (gem. / according ChemVWV-GLP Nr. 5.3/DECD guidance) 1,2,3,4,5,8,9

Kat. 9 - Biochemische und pathologische Untersuchungen zu Wirkmechanismen / Biochemical and pathological examinations concerning mode of action

> Datum der Inspektion / Date of Inspection (Tag.Monat Jahr / day.month year) 19.05.2009 & 06. bis 08.07.2009

Die genannte Prüfeinrichtung befindet sich im nationalen GLP-Überwachungsverfahren und wird regelmäßig auf Einhaltung der GLP-Grundsätze überwacht.

Auf der Grundlage des Inspektionsberichtes wird hiermit bestätigt, dass in dieser Prüfeinrichtung die oben genannten Prüfungen unter Einhaltung der GLP-Grundsätze durchgeführt werden können. Eine erneute behördliche Überprüfung der Einhaltung der GLP-Grundsätze durch die Prüfeinrichtung ist so rechtzeitig zu beantragen, dass die Folgeinspektion spätestens vier lahre nach dem Berighn der untersteinen. spätestens vier Jahre nach dem Beginn der o.g. Inspektion stattfinden kann. Ohne diesen Antrag wird die Prüfeinrichtung nach Ablauf der Frist aus dem deutschen GLP-Überwachungsprogrann genommen und diese GLP-Bescheinigung verliert ihre Gültigkeit:

The above mentioned test facility is included in the national GLP. Compliance. Programme and is inspected on a regular basis.

Based on the inspection report it can be confirmed, that the test facility is able to conduct the aforementioned studies in compliance with the Principles of GLP.

Verification of the compliance of the test facility with the Penicipes of the GLP has to be applied for in time to allow for a follow-up inspection to take place within four years after commencing the above mentioned inspection. Elapsing this term, the test facility will be taken out of the German GLP-Monitoring Programme and this GLP Certificate becomes invalid.

Unterschrift, Datum / Signature, Date

and function of responsible person)

(Name und Adresse der GLP-Überwachungsbehörde / Name and adress of the GLP Monitoring Authority)

Landesamt für Umwelt, Wasserwirtschaft und Gewerbeaufsicht



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STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

GLP COMPLIANCE STATEMENT

FLAGGING CRITERIA

SIGNATURE PAGE

CONTRIBUTORS TO THE STUDY / SUPERVISORY LABORATORY PERSONNEL

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- male (pre-mating)	IA 1
- female (pre-mating)	IA 2
- male (mating)	IA 3
- female (mating)	IA 4
- male (post-mating)	IA 5
- female (gestation)	IA 6
- female (lactation)	IA 7
Summary - Food consumption Per Day	
- male (pre-mating)	IA 8
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- males (pre-mating)	IA 12
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- male (mating)	IA 14
- female (gestation)	IA 15
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Part B: PATHOLOGY (MEAN VALUES AND SUMMARY TABLES)

Absolute weights - mean values (male)	IB 1
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Relative weights - mean values (male)	IB 3
Incidence of gross lesions	IB 4
Incidence of all microscopic findings	IB 5

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- male (mating)	IIA 9 – IIA 12
- female (mating)	IIA 13 – IIA 16
- male (post-mating)	IIA 17 – IIA 20
- female (gestation)	IIA 21 – IIA 24
- female (lactation)	IIA 25 – IIA 28
male (post-mating)female (gestation)	IIA 17 – IIA 20 IIA 21 – IIA 24

Individual Food Consumption [g/Day]

-	male (pre-mating)	IIA 29 – IIA 32
÷	female (pre-mating)	IIA 33 – IIA 36
	female (gestation)	IIA 37 – IIA 40
-	female (lactation)	IIA 41 – IIA 44

Individual Body Weights [g]

, , ,	
male (pre-mating)	IIA 45 – IIA 48
female (pre-mating)	IIA 49 – IIA 52
male (mating)	IIA 53 – IIA 56
female (mating)	IIA 57 – IIA 60
male (post-mating)	IIA 61 – IIA 64
female (gestation)	IIA 65 – IIA 68
female (lactation)	IIA 69 – IIA 72
	female (pre-mating) male (mating) female (mating) male (post-mating) female (gestation)

Individual Changes Body Weights [g]

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- Summary mating report
- Summary delivery report

2. Analyses of the test substance and test substance preparations

- Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)
- Stability of "Paliogen Violet 5011" in "Trinkwasser" Study No. 11L00365 (confidential)
- Concentration control and homogeneity of "Paliogen Violet 5011" in "drinking water"
 Study No. 12L00270 (confidential)
- Concentration control of "Paliogen Violet 5011" in "drinking water"
 Study No. 12L00332 (confidential)

3. Historical control data

Historical control data for reproduction toxicity data

THIS REPORT CONSISTS OF PART I, II AND III.



1. SUMMARY

1.1. METHODS

Paliogen Violet 5011 was administered orally via gavage to groups of 10 male and 10 female Wistar rats (F0 animals) at dose levels of 0 mg/kg bw/d (test group 0), 100 mg/kg bw/d (test group 1), 300 mg/kg bw/d (test group 2) and 1000 mg/kg bw/d (test group 3).

The objective of the study was to detect possible effects of the test substance on the integrity and performance of male and female reproductive systems including gonadal function, mating behavior, conception, gestation and parturition. Furthermore, it was intended to obtain information about the general toxicological profile including target organs and the no observed adverse effect level (NOAEL) after repeated oral administration. The duration of treatment covered a 2 week premating period and mating in both sexes (mating pairs were from the same dose group) as well as entire gestation and 4 days of lactation period in females up to one day prior to the day of schedule sacrifice of the animals.

1.2. OBSERVATIONS

The parents' and the pups' state of health was checked each day, and parental animals were examined for their mating and reproductive performances.

F0 animals were mated 13 days after the beginning of treatment to produce a litter (F1 generation pups). As soon as sperm was detected in the vaginal smear, mating was discontinued. F0 animals were examined for their reproductive performance including determinations of the number of implantations and the calculation of the postimplantation loss in all F0 females.

Food consumption of the F0 parents was determined regularly once weekly before the mating period, as well as in dams during gestation (days 0 - 7, 7 - 14, 14 - 20) and lactation (days 1 - 4).

In general, the body weights of F0 animals were determined once a week. However, during gestation and lactation, F0 females were weighed on gestation days (GD) 0, 7, 14 and 20, and on postnatal days (PND) 0 and 4.

The pups were sexed and examined for macroscopically evident changes on PND 0. They were weighed on PND 1 and PND 4 and their viability was recorded. At necropsy on PND 4, all pups were sacrificed under isoflurane anesthesia with CO₂ and examined macroscopically for external and visceral findings at necropsy.

All F0 parental animals were sacrificed by decapitation under isoflurane anesthesia, and were assessed by gross pathology. Weights of selected organs were recorded and a histopathological examination was performed.



1.3. RESULTS

1.3.1. Analyses

The various analyses:

- demonstrated the stability of the test substance in the vehicle (drinking water) over a period of 7 days at room temperature
- the correctness of the prepared concentrations and the homogeneity of the test substance preparations in drinking water

1.3.2. Effects

The following test substance-related adverse effects/findings were noted:

Test group 3: 1000 mg/kg bw/d

FO PARENTAL ANIMALS

CLINICAL EXAMINATIONS/ REPRODUCTIVE PERFORMANCE/ PATHOLOGY

No test substance-related adverse findings were observed.

F1 PUPS

CLINICAL EXAMINATIONS/ GROSS FINDINGS

No test substance-related adverse findings were observed.

Test group 2: 300 mg/kg bw/d

FO PARENTAL ANIMALS

CLINICAL EXAMINATIONS/ REPRODUCTIVE PERFORMANCE/ PATHOLOGY

No test substance-related adverse findings were observed.

F1 PUPS

CLINICAL EXAMINATIONS/ GROSS FINDINGS

No test substance-related adverse findings were observed.



Test group 1: 100 mg/kg bw/d

FO PARENTAL ANIMALS

CLINICAL EXAMINATIONS/ REPRODUCTIVE PERFORMANCE/ PATHOLOGY

No test substance-related adverse findings were observed.

F1 PUPS

CLINICAL EXAMINATIONS/ GROSS FINDINGS

No test substance-related adverse findings were observed.

1.4. CONCLUSION

Thus, under the conditions of this modified reproduction/developmental toxicity screening test the NOAEL (no observed adverse effect level) for **reproductive performance** and **fertility** was 1000 mg/kg bw/d.

The NOAEL for developmental toxicity in the F1 progeny was found to be 1000 mg/kg bw/d

The NOAEL for general, systemic toxicity was 1000 mg/kg bw/d.



2. INTRODUCTION

2.1. OBJECTIVES

The aim of this study was to obtain initial information on the possible effects of Paliogen Violet 5011 on the integrity and performance of the male and female reproductive systems including gonadal function, mating behavior, conception, gestation and parturition. Furthermore, information about the general toxicological profile including target organs and no-observed-adverse-effect-level (NOAEL) after repeated oral administration should be elucidated.

2.2. SELECTION OF DOSES

At the request of the sponsor, the following nominal dose levels were selected:

100 mg/kg body weight/day as low dose level

300 mg/kg body weight/day as mid dose level

1000 mg/kg body weight/day as high dose level

2.3. TEST GUIDELINES

The study was carried out in accordance with the requirements of the following test guidelines:

- OECD Guideline for the Testing of Chemicals; No. 421 (SIDS): Reproduction/Developmental Toxicity Screening Test, (27 Jul 1995)
- EPA, Health Effects Test Guidelines; OPPTS 870.3550: Reproduction/Developmental Toxicity Screening Test, (Jul 2000)



2.4. STUDY DATES

Date	Phase of study/ Examination	Study day	
26 Jun 2012	Study initiation date: signature of study director		
26 Jun 2012 Supply of animals/beginning of acclimatization period/experimental starting date		-6	
02 Jul 2012	End of acclimatization period and beginning of administration period	0	
15 Jul 2012 First mating of parental animals for the formation of F1 generation pups		13	
01 Aug 2012	End of administration period of males		
02 Aug 2012 Sacrifice* of parental males		31	
from 06 Aug 2012 Parturition of F1 generation pups postnatal day (PND) 0		from 35 onwards	
from 10 Aug 2012 Sacrifice of F1 litter PND 4		from 39 onwards	
27 Aug 2012 End of administration period of females		56	
28 Aug 2012 Sacrifice* of parental females		57	
07 Mar 2013 Experimental completion date (draft report to QAU**)			

Before necropsy food was withdrawn for about 16-20 hours.

2.5. RETENTION OF RECORDS

GLP-relevant records and materials are stored at BASF SE for at least the period of time specified in the GLP principles. Details concerning responsibilities or locations of archiving can be seen from the respective SOPs and from the raw data.

2.6. ANIMAL WELFARE

This study was performed in an AAALAC-approved laboratory in accordance with the German Animal Welfare Act and the effective European Council Directive.

^{**} QAU = Quality Assurance Unit



3. MATERIAL AND METHODS

3.1. TEST ITEM

The analyses of the test item (= test substance) have been carried out at Competence Center Analytics, BASF SE, 67056 Ludwigshafen, Germany.

The sponsor is responsible for compliance for all test substance information and their storage, except for those test substance investigations commissioned by the test facility.

Name of test substance: Paliogen Violet 5011

Test substance No.: 11/0223-1

Batch No. P 100012

CAS No.: 81-33-4

Purity: The characterization (Study no. 11L00104) showed the

expected values for the test substance

Homogeneity: given (visually)

Stability: The stability of the test substance under storage conditions

over the test period was guaranteed by the sponsor, and

the sponsor holds this responsibility

ADDITIONAL TEST ITEM INFORMATION

Date of production: 18 Nov 2010

Expiry date: 18 Nov 2020

Physical state/ appearance: solid, violet

Storage conditions: room temperature



3.2. TEST SYSTEM

Test system and strain: Wistar Rat; Crl:WI(Han)

All animals were free from clinical signs of disease at the start of the study. The females were nulliparous and non-pregnant at the beginning of the study. According to a written statement from the breeder, male and female animals were derived from different litters. This was

necessary to rule out the possibility of sibling mating

Reason for species selection: The rat is the preferred animal species for reproduction

studies according to the various test guidelines and the

Wistar strain was selected.

Age (at supply); sex: 10-11 weeks (males/females)

Supplier: Charles River Laboratories,

Identification: The rats of the parental generation (F0 animals) were

identified clearly by ear tattoo.

All live pups were identified by skin tattoo on PND 1.



3.3. HOUSING AND DIET

During the study period, the rats were housed individually in Makrolon type M III cages supplied by Becker & Co., Castrop-Rauxel, Germany (floor area of about 800 cm²), with the following exceptions:

- During overnight matings, male and female mating partners were housed together in Makrolon type M III cages.
- Pregnant animals and their litters were housed together until PND 4 (end of lactation).

Pregnant females were provided with nesting material (cellulose wadding) toward the end of gestation.

Dust-free wooden bedding was used in this study (the present supplier is documented in the raw data). Wooden gnawing blocks (Type NGM E-022) supplied by Abedd[®] Lab. and Vet. Service GmbH, Vienna, Austria, were added for environmental enrichment.

The cages with the test animals were arranged on the racks in such a way that uniform experimental conditions (ventilation and light) were ensured.

The animals were housed in a fully air-conditioned room. Central air-conditioning guaranteed a range of 20-24°C for temperature and of 30-70% for relative humidity and 15 air changes per hour. The day/night cycle was 12 hours (12 hours light from 06.00-18.00h, 12 hours dark from 18.00-06.00h). There were no or only minimal deviations from these limits.

The animal room was completely disinfected prior to the study using a disinfector ("AUTEX", fully automatic, formalin-ammonia-based terminal disinfector). The floor and the walls were cleaned once a week with water containing an appropriate disinfectant.

The food used was ground Kliba maintenance diet mouse-rat "GLP", meal, supplied by Provimi Kliba SA, Kaiseraugst, Switzerland. Food and drinking water (from water bottles) were available ad libitum.



3.4. TEST GROUPS AND DOSES/CONCENTRATIONS

F0 generation parental animals

Test group	Dose (mg/kg body weight/day)	Concentration (g/100ml)	Dose volume (ml/kg body weight/day)	Number of animals		Animal No.	
				Male	Female	Male	Female
0	0	0	10")	10	10	1 - 10	101 - 110
1	100	1.0	10**)	10	10	11 - 20	111 - 120
2	300	3.0	10")	10	10	21 - 30	121 - 130
3	1000	10.0	10**)	10	10	31 - 40	131 - 140

drinking water

3.5. TEST SUBSTANCE PREPARATIONS AND PREPARATION FREQUENCY

Paliogen Violet 5011 was applied as a suspension. To prepare this suspension, the appropriate amount of test substance was weighed out depending on the desired concentration. Then, drinking water was filled up to the desired volume, subsequently released with a high speed homogenizer. During administration of the test substance, preparations were kept homogeneous by stirring with a magnetic stirrer. The test substance preparations were produced at least once a week.

Test substance preparations in drinking water



3.6. ANALYSES

3.6.1. Analyses of the test substance preparations

The analyses of the test substance preparations were carried out as a separate study at the test facility Competence Center Analytics of BASF SE, 67056 Ludwigshafen, Germany, under the responsibility of a Study Director of this test facility. The study was carried out in compliance with the Principles of Good Laboratory Practice.

The stability of the test substance in drinking water for a period of 7 days at room temperature was proven before the start of the study (Project No.: 11L00365; see PART III, Supplement).

At the beginning of the administration period samples were taken from the lowest and highest concentration for homogeneity analysis (were also used for concentration control). From the mid concentration a concentration control analysis was carried out. At the end of the administration period concentration control analyses of the test substance preparations were performed in samples of all concentrations (PART III, Supplement).

3.6.2. Analytical methods

The methods used for the analytical investigations of the test substance preparations can be found in PART III (Supplement).

3.6.3. Food analyses

The supplier assayed the food used in the study for chemical and microbiological contaminants.

3.6.4. Drinking water analyses

The drinking water is regularly assayed for chemical contaminants by the municipal authorities of Frankenthal and by the Environmental Analytics Water/Steam Monitoring Department of BASF SE as well as for the presence of microorganisms by a contract laboratory.

3.6.5. Bedding and enrichment analyses

The bedding and the enrichment are regularly assayed for contaminants (chlorinated hydrocarbons and heavy metals).



3.7. EXPERIMENTAL PROCEDURE

3.7.1. F0 generation parental animals and their progeny

On the day of arrival the animals were subjected to an acclimatization period during which they received ground diet and drinking water ad libitum. The animals were distributed according to weight among the individual test groups, separated by sex. The weight variation of the animals used did not exceed 20 percent of the mean weight of each sex. The list of randomization instructions was compiled with a computer.

At the start of the administration period (study day 0) the rats were 11-12 weeks old.

After the acclimatization period, the test substance was administered orally via gavage to the F0 generation parental animals daily. The animals of the control group received vehicle (drinking water) only.

Fourteen days after the beginning of treatment, males and females from the same test group were mated overnight in a ratio of 1:1 (details of pairing see 3.7.2.).

3.7.2. Mating of F0 generation parental animals

In general, each of the male and female animals was mated overnight in a 1:1 ratio for a maximum of 2 weeks. Throughout the mating period, each female animal was paired with a predetermined male animal from the same test group.

The animals were paired by placing the female in the cage of the male mating partner from about 16.00 h until 07.00 - 09.00 h of the following morning. Deviations from the specified times were possible on weekends and public holidays and were reported in the raw data. A vaginal smear was prepared after each mating and examined for the presence of sperm. If sperm was detected, pairing of the animals was discontinued. The day on which sperm was detected was denoted gestation day (GD) 0 and the following day "GD 1".



3.8. CLINICAL EXAMINATIONS AND EXAMINATION OF REPRODUCTIVE PERFORMANCE

3.8.1. Parental animals

3.8.1.1. Mortality

A check for moribund and dead animals was made twice daily on working days and once daily on Saturdays, Sundays and public holidays. If animals were in a moribund state, they were sacrificed and necropsied.

3.8.1.2. Clinical observations

A cageside examination was conducted at least once daily for any signs of morbidity, pertinent behavioral changes and signs of overt toxicity. Abnormalities and changes were documented daily for each affected animal.

The parturition and lactation behavior of the dams was generally evaluated in the mornings in combination with the daily clinical inspection of the dams. Only particular findings (e.g. inability to deliver) were documented on an individual dam basis.

On weekdays (except public holidays) the parturition behavior of the dams was inspected in the afternoons in addition to the evaluations in the mornings.

The day of littering was considered the 24-hour period from about 15.00 h of one day until about 15.00 h of the following day.

3.8.1.3. Food consumption

Generally, food consumption was determined once a week for male and female parental animals, with the following exceptions:

- Food consumption was not determined during the mating period (male and female F0 animals).
- Food consumption of the F0 females with evidence of sperm was determined for GD 0-7, 7-14 and 14-20.
- Food consumption of F0 females, which gave birth to a litter was determined for PND 1-4

Food consumption was not determined in females without positive evidence of sperm (during the mating period of dams used in parallel) and females without litter (during the lactation period of dams used in parallel) and in males after the premating period.



3.8.1.4. Body weight data

In general, the body weight of the male and female parental animals was determined once a week at the same time of the day (in the morning) until sacrifice.

The body weight change of the animals was calculated from these results.

The following exceptions are notable for the female animals:

- During the mating period the parental females were weighed on the day of positive evidence of sperm (GD 0) and on GD 7, 14 and 20.
- Females with litter were weighed on the day of parturition (PND 0) and on PND 4.
- Females without litter, waiting for necropsy, were weighed weekly. These body weight
 data were solely used for the calculations of the dose volume; therefore these values
 are only documented in the Individual Tables (PART II).
- Females between PND 4 and sacrifice were weighed once a week.

3.8.1.5. Male reproduction data

The pairing partners, the number of mating days until vaginal sperm was detected in the female animals, and the gestational status of the females were recorded for F0 breeding pairs.

For the males, mating and fertility indices were calculated for F1 litters according to the following formulas:

*defined by a female with vaginal sperm or with implants in utero

^{*} defined by a female with implants in utero



3.8.1.6. Female reproduction and delivery data

The pairing partners, the number of mating days until vaginal sperm were detected and gestational status were recorded for F0 females.

For the females, mating, fertility and gestation indices were calculated for F1 litters according to the following formulas:

defined as the number of females with vaginal sperm or with implants in utero

- * defined as the number of females with implants in utero
- ** defined as the number of females with vaginal sperm or with implants in utero

* defined as the number of females with implants in utero

The total number of pups delivered and the number of liveborn and stillborn pups were noted, and the live birth index was calculated for F1 litters according to the following formula:

The implantations were counted¹ and the postimplantation loss (in %) was calculated according the following formula:

Post implantation loss (%) =
$$\frac{\text{number of implantations} - \text{number of pups delivered}}{\text{number of implantations}} \times 100$$

_

¹ To determine the number of implantation sites, the apparently non-pregnant uteri were stained for about 5 minutes in 1% ammonium sulfide solution according to the method of SALEWSKI (Salewski, E.; 1964). Then the uteri were rinsed carefully under NaCl solution. Thereafter the implantation sites were recorded for calculation of the postimplantation loss.



3.8.2. Litter/Pups

3.8.2.1. Litter data

3.8.2.1.1. Pup number and status at delivery

All pups delivered from the F0 parents were examined as soon as possible on the day of birth to determine the total number of pups and the number of liveborn and stillborn pups in each litter. Pups, which died before the first determination of their status on the day of birth, were defined as stillborn pups.

3.8.2.1.2. Pup viability/mortality

In general, a check was made for any dead or moribund pups twice daily on workdays (once in the morning and once in the afternoon) or as a rule, only in the morning on Saturdays, Sundays or public holidays.

The number and percentage of dead pups on the day of birth (PND 0) and of pups dying between PND 1 - 4 (lactation period) were determined. Pups which died accidentally or were sacrificed due to maternal death were not included in these calculations. The number of live pups/litter was calculated on the day after birth, and on lactation day 4. The viability index was calculated according to the following formula:

3.8.2.1.3. Sex ratio

On the day of birth (PND 0) the sex of the pups was determined by observing the distance between the anus and the base of the genital tubercle; normally, the anogenital distance is considerably greater in male than in female pups. The sex of the pups was finally confirmed at necropsy.

The sex ratio was calculated at day 0 and day 4 after birth according to the following formula:

Sex ratio = number of live male or female pups on day 0/4

number of live male and female pups on day 0/4



3.8.2.2. Pup clinical observations

The live pups were examined daily for clinical symptoms (including gross-morphological findings) during the clinical inspection of the dams.

3.8.2.3. Pup body weight data

The pups were weighed on the day after birth (PND 1) and on PND 4.

Pups' body weight change was calculated from these results.

The individual weights were always determined at about the same time of the day (in the morning).

In the summary tables pup body weights and pup body weight change are listed for males, females and males + females.

"Runts" were defined on the basis of the body weights on PND 1. "Runts" are pups that weigh less than 75% of the mean weight of the respective control pups.

3.8.2.4. Pup necropsy observations

All pups with scheduled sacrifice on PND 4 were sacrificed under isoflurane anesthesia with CO₂. All pups were examined externally and eviscerated; their organs were assessed macroscopically.

All stillborn pups and all pups that died before PND 4 were examined externally, eviscerated and their organs were assessed macroscopically.

All pups without notable findings or abnormalities were discarded after their macroscopic evaluation. Animals with notable findings or abnormalities were evaluated on a case-by-case basis, depending on the type of finding noted.



3.8.3. Statistics of the clinical examinations

Statistical analyses were performed according to following tables:

Parameter	Statistical test	Markers in the tables	References
Food consumption (parental animals), body weight and body weight change (parental animals and pups; for the pup weights, the litter means were used), gestation days, implantation sites, pups delivered, live pups day x	Simultaneous comparison of all dose groups with the control group using the DUNNETT test (two-sided) for the hypothesis of equal means	* for p ≤ 0.05 ** for p ≤ 0.01	Dunnett, C.W. (1955): A multiple comparison procedure for comparing several treatments with a control. JASA, Vol. 50, 1096-1121 Dunnett, C.W. (1964). New tables for multiple comparisons with a control. Biometrics, Vol. 20, 482-491
Male and female mating indices, male and female fertility indices, gestation index, females delivering, females with liveborn pups, females with stillborn pups, females with all stillborn pups,	Pair-wise comparison of each dose group with the control group using FISHER'S EXACT test (one-sided) for the hypothesis of equal proportions †	* for p ≤ 0.05 ** for p ≤ 0.01	Siegel S. (1956): Non- parametric statistics for behavioural sciences. McGraw- Hill New York
Mating days until day 0 pc	Pair-wise comparison of the dose group with the control group using the WILCOXON test (one- sided+) with BONFERRONI-HOLM adjustment for the hypothesis of equal medians	* for p ≤0.05 ** for p ≤0.01	Siegel S. (1956): Non- parametric statistics for behavioral sciences. McGraw- Hill New York Holm (1979): A Simple Sequentially Rejective Multiple Test Procedure. Scand. J. Statist, 6, 65-70
Viability Index	Pair-wise comparison of the dose group with the control group using the WILCOXON test (one- sided-) with BONFERRONI-HOLM adjustment for the hypothesis of equal medians	* for p ≤0.05 ** for p ≤0.01	Siegel S. (1956): Non- parametric statistics for behavioral sciences. McGraw- Hill New York Holm (1979): A Simple Sequentially Rejective Multiple Test Procedure. Scand. J. Statist, 6, 65-70

Although the Fisher's exact test (one-sided+ and one-sided - separately) was chosen for all dichotomous endpoints, the Chi-Square test was performed accidentally for some endpoints (see Summary tables in part III). In this case the data for the parameters in the table above were separately re-analyzed with the Fisher's exact test using SAS ® Version 9.2 (included in raw data). Summary Delivery Table and Summary Mating Table in part I were created without statistics for the dichotomous data for clarity reasons, but any statistical significance concerning dichotomous data in part III and with SAS analysis are described in the textual part of the report.



3.9. PATHOLOGY

3.9.1. Necropsy

All animals were sacrificed by decapitation under isoflurane anesthesia. The exsanguinated animals were necropsied and assessed by gross pathology, special attention being given to the reproductive organs.

3.9.2. Weight parameters

Weight assessment was carried out on all animals. The following weights were determined:

- Anesthetized animals
- Epididymides
- 3. Testes

3.9.3. Organ / Tissue fixation

The following organs / tissues of all parental animals were preserved in neutral-buffered 4% formaldehyde or in modified Davidson's solution:

- 1. All gross lesions
- 2. Cervix
- Coagulating glands
- 4. Epididymides (modified Davidson's solution)
- 5. Ovaries (modified Davidson's solution)
- 6. Oviducts
- 7. Prostate gland
- 8. Seminal vesicles
- 9. Testes (modified Davidson's solution)
- 10. Uterus
- 11. Vagina



3.9.4. Histopathology

After the organs were fixed, processing, examination by light microscopy and evaluation of findings were performed according to the following table:

Organ samples		Test	group	
	0	1	2	3
Epididymides	A1			A1
2. Ovaries	A1		X =	A1
3. Testes	A1			A1

METHODS/SCOPE OF EXAMINATIONS:

A = Hematoxylin-eosin (H&E)

1 = all animals per group

Special attention was given on the stages of spermatogenesis in the testes.

3.9.5. Statistics of pathology

Parameters	Statistical test	Markers in the tables	References
Weight parameters	Non-parametric one-way analysis using KRUSKAL-WALLIS test (two-sided). If the resulting p-value was equal or less than 0.05, a pair wise comparison of each dose group with the control group was performed using the WILCOXON test for the hypothesis of equal medians	* for p ≤ 0.05 ** for p ≤ 0.01	HETTMANNSPERGER, T.P. (1984): Statistical Inference based on Ranks, John Wiley & Sons New York, 132-140. International Mathematical and Statistical Libraries, Inc., 2500 Park West Tower One, Houston, Texas 77042-3020, USA, nakl-1 - nakl-3 MILLER, R.G. (1981): Simultaneous Statistical Inference Springer-Verlag New York Inc., 165- 167 NIJENHUIS, A. and S.W. WILF (1978): Combinatorial Algorithms, Academic Press, New York, 32-33



4. RESULTS

Throughout the chapter "results", the term "significant" implies that the inter-group differences have attained *statistical* significance ($p \le 0.05$) when compared with the control group.

4.1. ANALYSES

4.1.1. Stability analysis

The stability of the test substance in drinking water was demonstrated over a period of 7 days at room temperature. As the mixtures were stored no longer than this time period, the stability was guaranteed (see PART III, Supplement).

4.1.2. Homogeneity control analyses

The samples were homogenous within the different levels of concentration.

4.1.3. Concentration control analyses

The concentration control analyses of all concentrations revealed that the values were in the expected range of the target concentrations, i.e. were always in a range of about 90-110% of the nominal concentrations. These results demonstrate the correctness of the concentrations of Paliogen Violet 5011 (PART III, Supplement).

4.1.4. Food analyses

On the basis of duration of use and the analytical findings with respect to chemical and microbiological contaminants the diet was found to be suitable. Fed. Reg. Vol. 44, No. 91 of 09 May 1979, p. 27354 (EPA), served as a guideline for maximum tolerable chemical contaminants. The number of microorganisms did not exceed 1×10⁵/g food. Individual results can be found in the archives of the Experimental Toxicology and Ecology of BASF SE.



4.1.5. Drinking water analyses

On the basis of the analytical findings the drinking water was found to be suitable. German "Trinkwasserverordnung" (Drinking Water Regulation) served as a guideline for maximum tolerable contaminants. Individual results can be found in the archives of the Experimental Toxicology and Ecology of BASF SE.

4.1.6. Bedding and enrichment analyses

On the basis of the analytical findings the bedding and the enrichment are found to be suitable. Levels given in Lab. Animal, Nov-Dec 1979, pp. 24-34, served as a guideline for maximum tolerable contaminants. Individual results are to be found in the archives of the Experimental Toxicology and Ecology of BASF SE.



4.2. CLINICAL EXAMINATIONS AND EXAMINATION OF REPRODUCTIVE PERFORMANCE

Summary tables of the results are given in the Appendix of PART I; individual values are given in Part A of PART II.

Descriptive statistical measures are calculated without rounding by the computer system using the original individual values. Any calculation of measures using the rounded values given in the tables may result in discrepancies in comparison with the measures calculated by the system.

4.2.1. Parental clinical examinations and examination of reproductive performance

4.2.1.1. Mortality

There were no mortalities in any of the test groups.

4.2.1.2. Clinical observations

(Tables IA1 – IA7)

All male and female animals of test group 2 (300 mg/kg bw/d) and 3 (1000 mg/kg bw/d) showed black discolored feces from study day 1 until the end of the administration period. During gestation period on study days 41-43 one female animal (No. 122) of test group 2 (300 mg/kg bw/d) showed palpable mass in the abdominal region. Because of a single occurrence and no other clinical observation in this animal this finding was assessed as being incidental.

Two sperm positive females of the control group (Nos. 106 and 107) and each one sperm positive female of test group 1, 2 and 3 (Nos. 111, 122 and 139 – 100, 300, 1000 mg/kg bw/d) did not deliver F1 pups.

4.2.1.3. Food consumption

(Tables IA8 - IA11)

Food consumption of the male animals in test group 1 (100 mg/kg bw/d) was slightly decreased in the premating phase from study days 7-13 (-5.9%) and in the entire premating phase (-5.9%). Because of a single incidence this finding was assessed as being incidental.

4.2.1.4. Body weight data

(Tables IA12 - IA21; Figures 4.2.1.4.1. - 4.2.1.4.4.)

Mean body weights of the F0 males and females in all test groups were comparable to the concurrent control group throughout the entire study period.

The mean body weight gain of the F0 males in test group 2 in the entire premating phase was statistically significantly decreased (-37.4%). The mean body weight gain of the F0 females in test group 1 in the gestation period from study day 7 to 14 was statistically significantly increased (+24.2%). Because of single incidences and no dose response relationship these findings were assessed as being incidental.

Figure 4.2.1.4.1.: Mean body weight of F0 males during premating

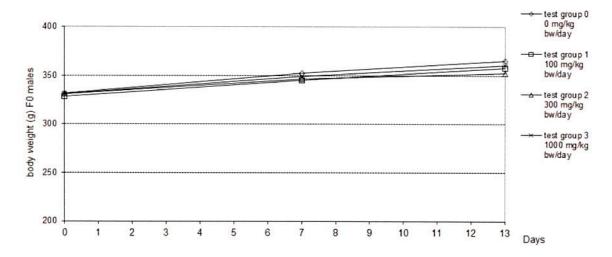


Figure 4.2.1.4.2.: Mean body weight of females during premating

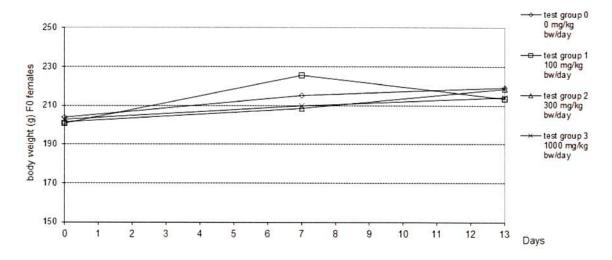


Figure 4.2.1.4.3.: Mean body weight of F0 females during gestation of F1 litter

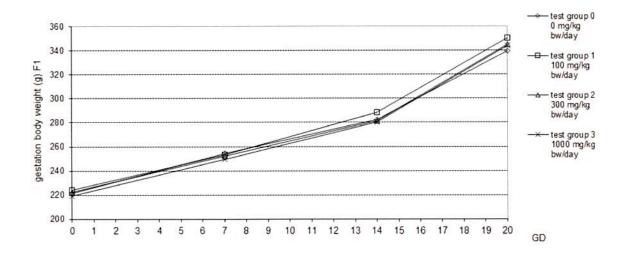
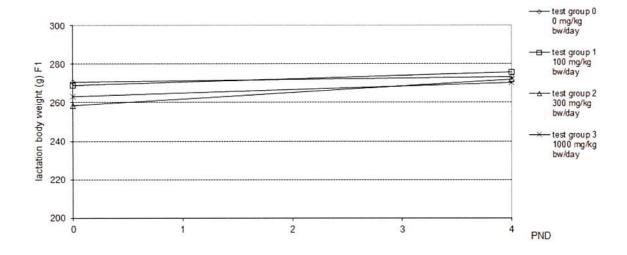


Figure 4.2.1.4.4.: Mean body weight of F0 females during lactation of F1 litter





4.2.1.5. Male reproduction data

(Table IA 22)

The male mating index was 100% in all test groups.

Fertility was proven for most of the F0 parental males within the scheduled mating interval to produce F1 litter.

Two males of the control group (Nos. 6 and 7 mated with females Nos. 106 and 107), one male of test group 1 (No. 11 mated with female No. 111 – 100 mg/kg bw/d), one male of test group 2 (No. 22 mated with female No. 122 – 300 mg/kg bw/d) and one male of test group 3 (No 39 mated with female No. 139 – 1000 mg/kg bw/d) did not generate F1 pups.

Thus, the male fertility index was 80% in the control group and 90% in all test groups. This reflects the normal range of biological variation inherent in the strain of rats used for this study (see Tab. 4.2.1.5.1.).

Tab. 4.2.1.5.1.: Male fertility indices for F0 males

	Test group 0 (0 mg/kg bw/d)	Test group 1 (100 mg/kg bw/d)	Test group 2 (300 mg/kg bw/d)	Test group 3 (1000 mg/kg bw/d)
Male fertility index [%]	80	90	90	90

^{*} $p \le 0.05$; ** $p \le 0.01$

4.2.1.6. Female reproduction and delivery data

(Tables IA22 - IA25)

4.2.1.6.1. Female mating index

The female mating index calculated after the mating period for F1 litter was 100% in all test groups.

The mean duration until sperm was detected (GD 0) was 2.7, 2.9, 3.1 and 3.2 days in test groups 0 - 3. This finding reflected the normal range of biological variation inherent in the strain of rats used for this study as all respective values were within the range of the historical control data (PART III, Supplement).

All sperm positive rats delivered pups or had implants in utero with the following exception:

- Control group females Nos. 106 and 107 (mated with male No. 6 and 7) did not become pregnant.
- Low-dose female No. 111 (mated with male No. 11) did not become pregnant.
- Mid-dose female No. 122 (mated with male No. 22) did not become pregnant.
- High-dose female No. 139 (mated with male No. 39) did not become pregnant.

4.2.1.6.2. Female fertility index

The female fertility index was 80% in the control group and 90% in all test groups (Tab. 4.2.1.6.2.1.). These values reflect the normal range of biological variation inherent in the strain of rats used for this study.

Tab. 4.2.1.6.2.1.: Fertility indices for F0 females

	Test group 0 (0 mg/kg bw/d)	Test group 1 (100 mg/kg bw/d)	Test group 2 (300 mg/kg bw/d)	Test group 3 (1000 mg/kg bw/d)
Female fertility index [%]	80	90	90	90

^{*} $p \le 0.05$; ** $p \le 0.01$

The mean duration of gestation was similar in all test groups (22.1 days in the control group, 22 days in test group 1, 22.2 days in test group 2 and 22 days in test group 3).

4.2.1.6.3. Gestation index

The gestation index was 100% in all test groups.



4.2.1.6.4. Live birth indices

The liveborn birth index was 98.8% in the control group, 96.5 in test group 1, 99.2 in test group 2 and 99.1% in test group 3. These values reflect the normal range of biological variation inherent in the strain of rats used for this study.

4.2.1.6.5. Postimplantation loss

The postimplantation loss was 8.86% in test group 0, 7.90% in test group 1, 1.78% in test group 2 and 4.28% in test group 3.

These findings reflected the normal range of biological variation inherent in the strain of rats used for this study as all respective values were within the range of the historical control data (PART III, Supplement).

4.2.2. F1 generation litter/pups

4.2.2.1. Litter data

(Tables IA25 - IA28)

4.2.2.1.1. Pup number and status at delivery

The mean number of delivered F1 pups was 10.6 in test group 0, 12.7 in test group 1, 13.1 in test group 2 and 12.7 in test group 3.

4.2.2.1.2. Pup viability/mortality

The viability index indicating pup mortality during lactation (PND 0 - 4) was 100% in all test groups.



4.2.2.1.3. Sex ratio

The sex distribution and sex ratios of live F1 pups on the day of birth and PND 4 did not show substantial differences between the control and the test substance-treated groups; slight differences were regarded to be spontaneous in nature (see Tab. 4.2.2.1.3.1.).

Tab. 4.2.2.1.3.1. Sex ratio of live F1 pups

PND 0	Test group 0 (0 mg/kg bw/d)	Test group 1 (100 mg/kg bw/d)	Test group 2 (300 mg/kg bw/d)	Test group 3 (1000 mg/kg bw/d)
Live males [%]	48.8	57.3	41.9	42.5
Live females [%]	51.2	42.7	58.1	57.5
PND 4				
Live males [%]	48.8	57.3	41.9	42.5
Live females [%]	51.2	42.7	58.1	57.5

Sex ratio data were calculated using the individual values concerning pup status (see PART II, Part A, Tabs. IIA-116 – IIA-153).

4.2.2.2. Pup clinical observations

(Tables IA29 - IA30)

The surviving F1 pups of any test group did not show adverse clinical signs up to scheduled sacrifice on PND 4.

4.2.2.3. Pup body weight data

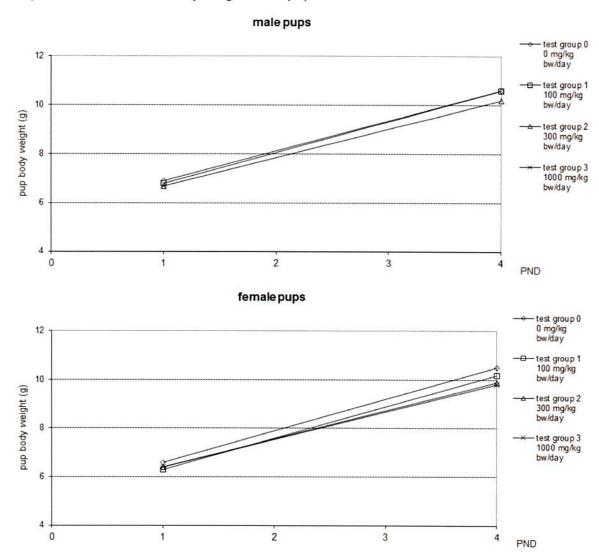
(Tables IA31 - IA33; Figure 4.2.2.3.1.)

Mean pup body weights/pup body weight changes of all pups in all test groups were comparable to the control group.

Two male runts were seen in test group 0. Each one female runt was seen in test group 1 and 2 (100 and 300 mg/kg bw/d).

These findings reflected the normal range of biological variation inherent in the strain of rats used for this study as all respective values were within the range of the historical control data (PART III, Supplement).

Figure 4.2.2.3.1. Mean body weight of F1 pups



4.2.2.4. Pup necropsy observations (Table IA34 – IA35)

One male and one female F1 pup of test group 1 showed post mortem autolysis. Each one female F1 pup of test group 2 and 3 (300 and 1000 mg/kg bw/d) showed an empty stomach.

This finding was assessed as being spontaneous in nature and without biological relevance.



4.3. PATHOLOGY

Summary tables of the results can be found in Part B of PART I; individual tables can be found in Part B of PART II.

4.3.1. Weight parameters

(Tables IB 1 - 3)

All mean weight parameters did not show significant differences when compared to the control groups.

4.3.2. Gross lesions

(Table IB 4)

The following relevant gross findings were observed (incidence is given in the table below):

		Male	animals			Female	e animal	s
Test group	0	1	2	3	0	1	2	3
(mg/kg bw/day)	(0)	(100)	(300)	(1000)	(0)	(100)	(300)	(1000)
No of animals	10	10	10	10	10	10	10	10
Glandular stomach Discoloration of contents			8	6				10
Jejunum Discoloration of contents			10	10			10	10
Colon Discoloration of contents			10	10			10	10

Several animals of test group 2 and 3 revealed a black discoloration of the contents of the glandular stomach, jejunum and colon. These findings are regarded to be treatment related.

All other gross lesions noted were single observations and they were regarded to have developed spontaneously and unrelated to compound and treatment.



4.3.3. Histopathology

(Tables IC 5)

The discoloration of the content in the digestive tract was regarded to be a consequence to the oral intake of the test substance which is of violet color. Therefore, the gross findings in the remaining animals were not investigated in addition.

All other findings noted were either single observations or they were biologically equally distributed between control and treatment group. All of them were considered to be incidental or spontaneous in origin and without any relation to treatment.



5. DISCUSSION

Paliogen Violet 5011 was administered orally by gavage to groups of 10 male and 10 female Wistar rats (F0 animals) at dose levels of 100, 300 and 1000 mg/kg bw/d.

Regarding <u>clinical examinations</u>, no signs of general systemic toxicity were observed in male or female parental animals of all test groups (100, 300 and 1000 mg/kg bw/d) during the entire study period. All male and female animals of test group 2 (300 mg/kg bw/d) and 3 (1000 mg/kg bw/d) showed black discolored feces from study day 1 until the end of the administration period. This finding was substance-related due to the dark violet color of the dye stuff.

Regarding <u>fertility</u> and <u>reproductive performance</u>, no signs of toxicity were observed in male or female parental animals of all test groups (100, 300 and 1000 mg/kg bw/d) during the entire study.

Regarding <u>developmental toxicity</u>, no signs of toxicity were observed in male or female pups of all test groups (100, 300 and 1000 mg/kg bw/d)

Regarding <u>pathology</u>, macroscopically black discoloration of the content of the digestive tract in numerous animals was observed. Beside the discoloration no signs of toxicity in the respective tissues were noted macroscopically. This finding is regarded to be a consequence to the oral intake of the violet test substance and therefore treatment related but not adverse in nature. All other findings were considered to be incidental or spontaneous in origin and without any relation to treatment.

6. CONCLUSION

Thus, under the conditions of this modified reproduction/developmental toxicity screening test the **NOAEL** (no observed adverse effect level) for **reproductive performance** and **fertility** was 1000 mg/kg bw/d

The **NOAEL** for **developmental toxicity** in the F1 progeny was found to be 1000 mg/kg bw/d.

The NOAEL for general, systemic toxicity was 1000 mg/kg bw/d.



7. REFERENCES

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SALEWSKI, E. Färbemethode zum makroskopischen Nachweis von Implantationsstellen am Uterus der Ratte. Naunyn-Schmiedeberg's Arch. exp. Path. Pharmak. 247, 367-368 (1964)



8. APPENDIX

The following list contains abbreviations and definitions generally used in reports for this study type. This report will not necessarily use all expressions listed below.

8.1. LIST OF ABBREVIATIONS USED IN TABLES CLINICAL EXAMINATIONS

% = percent

%dev = deviation in percent Animal No. = animal number

anm = animal

AT = after treatment
BT = before treatment
Bw or bw = body weight
cm = centimeter
Control = control animals

d = day

DCO = detailed clinical observation

F = female animals

FST = landing foot-splay test

g = weight in gram

GS F = grip strength forelimbs GS H = grip strength hindlimbs

h = hour

Interr. = beam Interrupts

Interv. = Interval kg or KG = kilogram

M = male animals or mean value

mg/kg bw/d = milligrams per kilogram bodyweight per day

mg or MG = milligram min. = minute

N = number of animals for determining M and SD

NaCl = sodium chloride

NAD = nothing abnormal detected

NM = not measured
ppm = parts per million
p.c. = post coitum
Rear = rearing

S.d. or SD = standard deviation

Vs = Versus

Deviation Vs Control = deviation versus control in percent



8.2. LIST OF ABBREVIATIONS USED IN TABLES PATHOLOGY

F = female animals

F1 = final sacrifice groups (main groups)

g = weight determination in grams

M = male animals (under sex); mean value (on weight level)

mg = weight determination in milligrams

mg/kg = milligram per kilogram

n = number of values measured for the determination of mean value and

standard deviation

NAD = number of animals without gross lesions

ppm = parts per million under dose level

SD = standard deviation

s = suspect weight (not included in the mean weights)

% = percentage related to the reference weight in relative organ weight

calculations

Codes for the status at necropsy:

P = planned sacrifice

K = sacrificed in a moribund state

S = spontaneous death

Codes used at finding level:

The codes are used for a grading system which takes into consideration either the severity or the number or the size of a microscopic finding.

	Severity	Number	Size
Grade 1	Minimal	Very few	Very small
Grade 2	Slight	Few	Small
Grade 3	Moderate	Moderate number	Moderate size
Grade 4	Marked; severe	Many	Large
Grade 5	Massive; extreme	Extensive number	Extensive size

Whenever a grading was not used, the microscopic finding was indicated to be present (P).



IA1	28-Feb-2013 12:00	ToxData® System 3.0

80R0223/11C162

Summary - Clinical Observation

Sex: Male - Phase: Pre-mating

			Test Group 0/ M	Test Group 1/ M	Test Group 2/ M	Test Group 3/ M
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
	Animals examined	z	10	10	10	10
	Animals with signs	z	0	0	10	10
day 0 -> 13	feces discolored feces	z	0	0	10	10
	normal NAD	z	10	10	10	10



28-Feb-2013 12:02 ToxData© System 3.0

80R0223/11C162

Study

Summary - Clinical Observation

Sex: Female - Phase: Pre-mating

			Toot Canana 0/ E	Toot Canan 4/ E	Toot Cross 2/ E	Toot C 2/ E
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
	Animals examined	z	10	10	10	10
	Animals with signs	z	0	0	10	10
13	feces discolored feces	z	0	0	10	10
	normal	z	10	10	10	01



0 mg/kg bw/d 100 mg/kg bw/d
10
0
0
10



28-Feb-2013 12:07 ToxData© System 3.0

80R0223/11C162

Summary - Clinical Observation

Sex: Female - Phase: Mating

			Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
Ā	Animals examined	z	10	10	10	10
Ā	nimals with signs	z	0	0	10	10
t fe	eces liscolored feces	z	0	0	10	10
ĮΣŽ	normal NAD	z	10	10	0	0



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dy	80R0223/11C162					28-Feb-2013 12:09	
						ToxData© System 3.0	
nmary - C	nmary - Clinical Observation						
Male - P	Male - Phase: Post-mating					ě	
			Test Group 0/ M 0 ma/ka bw/d	Test Group 1/ M 100 ma/kg bw/d	Test Group 2/ M 300 mg/kg bw/d	Test Group 3/ M 1000 mg/kg bw/d	
	Animals examined	z	10	10	10	10	
	Animals with signs	z	0	0	10	10	
	dead sacrificed scheduled	z	10	10	10	10	
۰ د ۲	feces discolored feces	z	0	0	10	10	
	normal NAD	z	10	10	0	0	



04-Mar-2013 12:19 ToxData© System 3.0

80R0223/11C162

Summary - Clinical Observation

Sex: Female - Phase: Gestation

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
Animals examined	z	10	10	10	10
Att. closes	z	0	0	10	10
Animais with signs	%	0.0	0.0	100.0	100.0
dead	z	2	-	-	-
sacrificed scheduled	%	20.0	10.0	10.0	10.0
feces	z	0	0	10	10
discolored feces	%	0.0	0.0	100.0	100.0
mass	z	0	0	-	0
palpable in abdomen	%	0.0	0.0	10.0	0.0
normal	z	10	10	0	0
NAD	%	100.0	100.0	0.0	0.0



						IA 7
Study	80R0223/11C162					04-Mar-2013 12:20
						ToxData© System 3.0
Summary - C	Summary - Clinical Observation					
Sex: Female -	Sex: Female - Phase: Lactation					
			Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
	Animals examined	z	8	6	6	6
		z	0	0	6	6
	Animais with signs	%	0.0	0.0	100.0	100.0
	dead	z	ھ	o	6	0
day 0 -> 23	sacrificed scheduled	%	100.0	100.0	100.0	100.0
	feces	z	0	0	6	6
	discolored feces	%	0.0	0.0	100.0	100.0
	normal	z	8	6	0	0
	NAD	%	100.0	100.0	0.0	0.0



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Summary Food Consumption Per Day

80R0223/11C162

Study

Sex: Male - Phase: Pre-mating

		Test Group 0/ M 0 mg/kg bw/d	Test Group 1/ M 100 mg/kg bw/d	Test Group 2/ M 300 mg/kg bw/d	Test Group 3/ M 1000 mg/kg bw/d
2 <- 0 p	Mean [g]	23.2 n	21.9	22.6	22.9
	S.d.	1.3	0.8	1.7	1.1
	z	10	10	10	10
	Deviation Vs Control		-5.7	-2.6	-1.5
d 7 -> 13	Mean [g]	23.5 n	22.2*	22.8	23.0
	S.d.	1.1	0.8	1.5	1.0
	z	10	10	10	10
	Deviation Vs Control		-5.9	-3.1	-2.4
d 0 -> 13	d 0 -> 13 Mean [g]	23.4 n	22.0*	22.7	22.9
	S.d.	1.2	2.0	1.6	1.0
	z	10	10	10	10
	Deviation Vs Control		-5.9	-2.9	-2.0

Statistic Profile = Dunnett test (two-sided), * p <=0.05, ** p <=0.01, X = Group excluded from statistics d = day; n=DUNNETT

					IA 9
Study	80R0223/11C162				28-Feb-2013 13:08
					ToxData© System 3.0
Summary	Summary Food Consumption Per Day				
Sex: Femal	Sex: Female - Phase: Pre-mating				
		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
2 <- 0 p	Mean [g]	16.6 n	16.3	16.1	16.4
	S.d.	0.7	1.2	0.8	1.1
	z	10	10	10	10
	Deviation Vs Control		-2.3	-3.4	-1.5
d 7 -> 13	Mean [g]	17.2 n	17.0	16.9	16.7
	S.d.	9.0	1.2	6.0	1.2
	z	10	10	10	10
	Deviation Vs Control		-1.0	-1.6	-2.7
d 0 -> 13	Mean [g]	16.9 n	16.6	16.5	16.6
	S.d.	9.0	1.2	2.0	1.0
	z	10	10	10	10
	Deviation Vs Control		-1.7	-2.4	-2.0

Statistic Profile = Dunnett test (two-sided), * p <=0.05, ** p <=0.01, X = Group excluded from statistics d = day; n=DUNNETT



IA 10	28-Feb-2013 13:10	oxData© System 3.0
		P

Summary Food Consumption Per Day

80R0223/11C162

Study

Sex: Female - Phase: Gestation

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
2 <- 0 p	Mean [g]	21.1n	21.2	20.9	20.6
	S.d.	1.1	1.7	1.6	6.0
	z	10	10	10	10
	Deviation Vs Control		0.8	-1.0	-2.4
d 7 -> 14	Mean [g]	22.1n	23.3	22.8	22.6
	S.d.	1.4	2.2	1.6	1.8
	z	10	10	1	10
	Deviation Vs Control		5.1	2.8	1.9
d 14 -> 20 Mean [g]	Mean [g]	22.5n	23.5	22.7	23.7
	S.d.	3.5	3.3	2.6	2.5
	z	10	10	10	10
	Deviation Vs Control		4.3	0.7	5.2
d 0 -> 20	Mean [g]	21.9n	22.6	22.1	22.2
	S.d.	1.7	2.1	1.3	1.5
	z	10	10	10	10
	Deviation Vs Control		3.5	6.0	1.5

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics <math>d = day; n = DUNNETT

<u>,</u>					
IA 11 28-Feb-2013 13:11 ToxData© System 3.0		Test Group 3/ F 1000 mg/kg bw/d	35.2	9.9	
		Test Group 2/ F 300 mg/kg bw/d	35.8 3.2	9.8	
		Test Group 1/ F 100 mg/kg bw/d	35.9 4.7	9.0	roup excluded from statistic
		Test Group 0/ F 0 mg/kg bw/d	32.9 n 7.0	8	p<=0.05, ** p <=0.01, X = G
80R0223/11C162	Summary Food Consumption Per Day Sex: Female - Phase: Lactation		Mean [g] S.d.	N Deviation Vs Control	Statistic Profile = Dunnett test (two-sided), * p<=0.05, ** p<=0.01, X = Group excluded from statistics d = day; n=DUNNETT
Study	Summary Food Consumption Sex. Female - Phase: Lactation		d1->4 Mear	N Devi	Statistic Profile = Dunnd = day; n=DUNNETT



IA 12 28-Feb-2013 13:21 ToxData© System 3.0

Summary Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Sex: Male - Phase: Pre-mating

		Test Group 0/ M	Test Group 1/ M	Test Group 2/ M	Test Group 3/ M
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
day 0	Mean	332.1n	328.5	331.5	331.3
	S.d.	9.2	6.6	10.4	11.2
	z	10	10	10	10
	Deviation Vs Control		-1.1	-0.2	-0.3
day 7	Mean	352.5 n	345.2	346.8	349.0
	S.d.	10.7	13.1	12.8	12.0
	z	10	10	10	10
	Deviation Vs Control		-2.1	-1.6	-1.0
day 13 Mean	Mean	365.5 n	358.1	352.4	360.4
	S.d.	11.3	14.2	19.4	15.7
	z	10	10	10	10
	Deviation Vs Control		-2.0	-3.6	4.1-

Statistic Profile = Dunnett test (two-sided), * p<=0.05, ** p <=0.01, X = Group excluded from statistics n=DUNNETT

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IA 13	28-Feb-2013 13:21	ToxData© System 3.0
	80R0223/11C162	

Study

Summary Body Weights - BW / Body Weights [g]

Sex: Female - Phase: Pre-mating

		Test Group 0/ F 0 ma/ka bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
day 0	Mean	203.9 n	200.9	201.6	202.9
¥8	S.d.	10.1	0.9	10.1	5.5
	z	10	10	10	10
	Deviation Vs Control		-1.5	-1.1	-0.5
day 7	Mean	215.4 n	225.8	208.7	209.9
	S.d.	11.5	49.9	12.2	8.0
	z	10	10	10	10
	Deviation Vs Control		4.8	-3.1	-2.6
day 13	day 13 Mean	219.3 n	213.6	218.5	214.1
E	S.d.	7.6	10.3	6.4	2.6
	z	10	10	10	10
	Deviation Vs Control		-2.6	-0.4	-2.4

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics n=DUNNETT



IA 14 28-Feb-2013 13:24 ToxData© System 3:0

Summary Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Sex: Male - Phase: Mating

		Test Group 0/ M 0 ma/ka bw/d	Test Group 1/ M 100 mg/kg bw/d	Test Group 2/ M 300 mg/kg bw/d	Test Group 3/ M 1000 mg/kg bw/d
day 8	Mean	376.0 n	369.4	367.6	372.5
	S.d.	13.6	15.1	15.0	16.2
	z	10	10	10	10
	Deviation Vs Control		-1.8	-2.2	6.0-

Statistic Profile = Dunnett test (two-sided), * p<=0.05, ** p<=0.01, X = Group excluded from statistics n=DUNNETT



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IA 15	28-Feb-2013 13:26	ToxData© System 3.0

80R0223/11C162

Study

Summary Body Weights - BW / Body Weights [g]

Sex: Female - Phase: Gestation

		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
day 0	Mean	221.4 n	224.0	222.5	219.3
6	S.d.	12.8	7.0	6.6	8.7
	z	8	6	o	6
	Deviation Vs Control		1.2	0.5	6.0-
day 7	Mean	254.2 n	253.3	252.1	249.7
	S.d.	13.2	8.6	8.7	8.6
	z	8	6	o	6
	Deviation Vs Control	The state of the s	-0.4	-0.8	-1.8
day 14	Mean	282.2 n	288.1	281.4	280.4
ri.	S.d.	14.1	10.6	12.4	7.6
	z	8	6	б	6
	Deviation Vs Control		2.1	-0.3	9.0-
day 20	Mean	339.4 n	350.6	345.3	343.8
	S.d.	28.9	8.6	20.3	14.9
	z	8	6	6	6
	Deviation Vs Control		3.3	1.8	1.3

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics n=DUNNETT



IA 16 28-Feb-2013 13:27 ToxData© System 3:0

Summary Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Sex: Female - Phase: Lactation

		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
day 0	day 0 Mean	270.8 n	269.1	258.3	263.1
	S.d.	11.8	11.8	8.7	14.5
	z	80	6	o	6
	Deviation Vs Control		9.0-	-4.6	-2.8
day 4	day 4 Mean	273.5 n	275.8	272.1	270.4
	S.d.	19.3	6.6	12.7	10.0
	z	80	6	6	6
	Deviation Vs Control		6.0	-0.5	-1.1

Statistic Profile = Dunnett test (two-sided), * p<=0.05, ** p <=0.01, X = Group excluded from statistics n=DUNNETT



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Summary Body Weights - BW / Body Weights [g]

80R0223/11C162

Sex: Male - Phase: Post-mating

		Test Group 0/ M 0 mg/kg bw/d	Test Group 1/ M 100 mg/kg bw/d	Test Group 2/ M 300 mg/kg bw/d	Test Group 3/ M 1000 mg/kg bw/d
day 0	Aean	388.4 n	381.3	381.0	382.3
S	.d.	13.3	17.9	20.8	20.4
Z	-	10	10	10	10
٥	Deviation Vs Control		-1.8	-1.9	-1.6

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics n=DUNNETT



IA 18 28-Feb-2013 13:31 ToxData© System 3.0

Summary Changes Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Sex: Male - Phase: Pre-mating

		Test Group 0/ M 0 mg/kg bw/d	Test Group 1/ M 100 mg/kg bw/d	Test Group 2/ M 300 mg/kg bw/d	Test Group 3/ M 1000 mg/kg bw/d
2 <- 0 p	Mean	20.4 n	16.7	15.2	17.8
	S.d.	3.6	4.7	9.7	4.4
	z	10	10	10	10
	Deviation Vs Control		-17.9	-25.1	-12.7
d 7 -> 13 Mean	Mean	13.0 n	12.9	5.6	11.4
	S.d.	4.2	2.9	11.1	5.9
	z	10	10	10	10
	Deviation Vs Control		-0.1	-56.6	-12.2
d 0 -> 13 Mean	Mean	33.3 n	29.7	20.9**	29.2
	S.d.	0.9	6.5	12.6	7.3
	z	10	10	10	10
	Deviation Vs Control		-11.0	-37.4	-12.5

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics d = day; n=DUNNETT

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IA 19	28-Feb-2013 13:31	ToxData@ System 3.0
	80R0223/11C162	

Study

Summary Changes Body Weights - BW / Body Weights [g]

Sex: Female - Phase: Pre-mating

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
7 <- 0 b	Mean	11.5n	24.9	7.1	6.9
	S.d.	5.5	47.9	6.5	4.9
	z	10	10	10	10
	Deviation Vs Control		116.2	-38.6	-39.7
d 7 -> 13	Mean	3.9 n	-12.2	8.6	4.2
	S.d.	8.0	50.4	10.0	12.8
	z	10	10	10	10
	Deviation Vs Control		-409.1	147.7	7.4
d 0 -> 13 Mean	Mean	15.4 n	12.7	16.8	11.2
	S.d.	6.7	8.9	9.9	10.4
	z	10	10	10	10
	Deviation Vs Control		-17.7	8.9	-27.7

Statistic Profile = Dunnett test (two-sided), * p <=0.05, ** p <=0.01, X = Group excluded from statistics d = day, n=DUNNETT



IA 20 28-Feb-2013 13:33 ToxData© System 3.0

Summary Changes Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Sex: Female - Phase: Gestation

		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
7 <- 0 b	Mean	32.8 n	29.3	29.6	30.4
	S.d.	7.5	2.9	5.8	5.1
	z	8	6	6	6
	Deviation Vs Control		-10.7	-10.0	-7.3
d 7 -> 14	Mean	28.0 n	34.7*	29.3	30.7
	S.d.	2.5	3.8	8.9	5.9
	z	80	6	6	6
	Deviation Vs Control	Comment of the Commen	24.2	4.8	9.7
d 14 -> 20	Mean	57.2n	62.5	63.9	63.4
	S.d.	17.6	6.8	8.6	8.1
	z	8	6	6	6
	Deviation Vs Control		9.3	11.7	10.8
d 0 -> 20	Mean	118.0n	126.6	122.8	124.5
	S.d.	25.1	7.2	19.2	11.9
	z	80	6	o	6
	Deviation Vs Control		7.3	4.0	5.5

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics d = day; n=DUNNETT

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IA 21	28-Feb-2013 13:34	ToxData© System 3.0
	80R0223/11C162	

Summary Changes Body Weights - BW / Body Weights [g]

Sex: Female - Phase: Lactation

		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
d 0 -> 4	Mean	2.7 n	6.7	13.8	7.3
	S.d.	13.1	16.2	10.8	14.6
	z	80	6	6	0
	Deviation Vs Control		150.5	413.5	170.4

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics d = day; n=DUNNETT



x+ 2.9 x+ 2.9 x+ 2.9 x+ 2.9 x+ 100.0 100.0					28-Feb-2013 13:37 ToxData© System 3.0
10 10 10 10 100 10 10 100.0 100.0 100.0 100.0 80.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
100.0 100.0	z	10	10	10	10
100.0 100.0 100.0 100.0 100.0 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	z	10	10	10	10
8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	%	100.0	100.0	100.0	100.0
80.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0	z	80	6	6	6
10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 80.0 90.0 90.0 90.0 90 11.3 1.1 3.2 4 11.0 10.0 90.0 90 100.0 0.0 0.0 0.0 0	%	80.0	0.06	0.06	0.06
10 10 10 10 10 10 10 10 10 10 10 10 10 1	z	10	10	10	10
100.0 100.0 100.0 100.0 100.0 100.0 8 9 9 9 9 90.0 90.0 90.0 90.0 90.0	z	10	10	10	10
80.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0	%	100.0	100.0	100.0	100.0
80.0 90.0 90.0 90.0 90.0 90.0 90.0 90.0	z	80	6	တ	6
10 10 10 10 10 10 10 10 10 10 10 10 10 1	%	80.0	0.06	0.06	90.0
31 3.1 3.1 3.2 4.1 3.2 4.1 3.2 4.1 3.2 4.1 3.2 4.1 3.2 4.1 4.1 3.2 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1	z	10	10	10	10
1.3 1.1 3.2 4 10 10 9 100.0 100.0 90.0 0 0 0 0 0 0 0 0 0	Mean	2.7 x+	2.9	3.1	3.2
10 10 9 100.0 100.0 90.0 90 0 0 0 0 0 0.0 0.0 0	S.d.	1.3	1.1	3.2	4.0
100.0 100.0 90.0 0 0 0 0.0 0.0 0.0	z	10	10	6	6
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%	100.0	100.0	0.06	0.06
0.0 0.0	z	0	0	0	0
	%	0.0	0.0	0.0	0.0

Statistic Profile = Wilcoxon with Bonferroni-Holm (one-sided+), * p<=0.05, ** p<=0.01, X = Group excluded from statistics x=WILCOX



IA 23 28-Feb-2013 13:44 ToxData© System 3.0

Summary Pregnancy Status Report - Reproduction F0

80R0223/11C162

Sex: Female

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
٠		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
No. of females at start	z	10	10	10	10
No. of females mated	z	10	10	10	10
Without evidence of mating	z	0	0	0	0
- Pregnant	z	0	0	0	0
- Not pregnant	z	0	0	0	0
Females with defined Day 0 pc	z	10	10	10	10
Pregnant	z	8	6	6	6
- sacrificed scheduled	z	80	6	6	6
Not pregnant	z	2	-	-	•
- sacrificed scheduled	z	2	_	-	
Pregnant, not delivering	z	0	0	0	0
Delivering	z	8	6	6	σ
With liveborn pups	z	80	6	6	6
	%	100.0	100.0	100.0	100.0
With all pups stillborn	z	0	0	0	0
	%	0:0	0.0	0.0	0.0



IA 24	28-Feb-2013 13:46	ToxData@ System 3.0

80R0223/11C162

Study

Summary Delivery Report

Sex: Female

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
No. of females at start	z	10	10	10	10
No. of females mated	Z	10	10	10	10
Pregnant	Z	8	6	6	6
Dead	Z	0	0	0	0
Without delivery	z	2	_	-	-
- Pregnant	z	0	0	0	0
- Not pregnant	z	2	1	1	-
Delivering	Z	8	6	6	6
	%	100.0	100.0	100.0	100.0
With liveborn pups	z	8	6	6	6
Gestation Index	%	100.0	100.0	100.0	100.0
Gestation days	Mean	22.1 n	22.0	22.2	22.0
	S.d.	0.4	0.0	0.4	0.5
	z	8	6	6	6
With stillborn pups	z	•	ဇ	_	
	%	12.5	33.3	11.1	11.1
With all pups stillborn	z	0	0	0	0
	%	0.0	0.0	0.0	0.0

Statistic Profile = Dunnett test (two-sided), * p <=0.05, ** p <=0.01, X = Group excluded from statistics n=DUNNETT



Summary Litter Report - Pup Status				01-Mar-2013 06:40 ToxData© System 3.0
Sex: Female				
		- 15		
	Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
Total number of litters N	8	6	6	6
	ω	6	6	6
	100.0	100.0	100.0	100.0
With stillborn pups N	F		_	-
	12.5	33.3	11.1	11.1
With all pups stillborn N	0	0	0	0
	0.0	0.0	0.0	0.0
Implantation Sites N	94	124	120	119
Mean	11.8 n	13.8	13.3	13.2
S.d.	4.5	1.5	2.4	0.8
Pups delivered N	85	114	118	114
Mean	10.6 n	12.7	13.1	12.7
S.d.	4.2	1.6	2.5	1.2
Postimplantation Loss Mean%	8.86	7.90	1.78	4.28
	84	110	117	113
	98.8	96.5	99.2	99.1
Pups stillborn N	F	4	_	•
	1.2	3.5	8.0	6.0
Perinatal Loss Mean%	0.89	3.56	0.62	0.93



													1. Con 1.
IA 26 01-Mar-2013 08:40 ToxData© System 3.0			Test Group 3/ F 1000 mg/kg bw/d	6	114	1	0.9	113	99.1	113	99.1	0	
			Test Group 2/ F 300 mg/kg bw/d	6	118	•	0.8	117	99.2	117	99.2	0	
			Test Group 1/ F 100 mg/kg bw/d	6	114	4	3.5	110	96.5	110	96.5	0	No.
			Test Group 0/ F 0 mg/kg bw/d	8	85	•	1.2	84	98.8	84	98.8	0	Statistic Profile = Dunnett test (two-sided), * p<=0.05, ** p <=0.01, X = Group excluded from statistics
2162	60			z	z	z	%	z	%	z	%	z	ided), * p<=0.05, ** p
80R0223/11C162	Summary Litter Report - Dead Pups	ale		Litters with liveborn pups	rered	Dead	2 THE RESIDENCE OF THE	9		sacrificed scheduled / Dead		Litters not surviving Day 4	Profile = Dunnett test (two-si
Study	Summan	Sex: Female		Litters with	Pups delivered	stillborn / Dead		Alive / Alive		sacrificed		Litters not	Statistic



IA 27 01-Mar-2013 08:42 ToxData© System 3.0		Test Group 3/ F 1000 mg/kg bw/d	6	114	0	0	0	0	113	100.0	0.0
		Test Group 2/ F 300 ma/ka bw/d	6	118	0	0	0	0	117	100.0	0.0
		Test Group 1/ F 100 ma/kg bw/d	6	114	0	0	0	0	110	100.0	0.0
		Test Group 0/ F 0 ma/ka bw/d	8	85	0	0	0	0	84	100.0 x-	0.0
110.182	ied		z	z	z	%	Z	%	z	Mean%	S.d.
Study 80R0223/11C162	Summary Litter Report - Pups Died	Sex: Female	Litters with liveborn pups	Pups delivered	Day 0		Days 1 To 4		Pups surviving days 0 To 4	Viability Index	



					DC 75	-			-				1 1	Report, Project No.: 80/K0223/110
IA 28 01-Mar-2013 08:40 ToxData© System 3.0			Test Group 3/ F 1000 mg/kg bw/d	6	114	12.6	1.3	12.6	1.3	42.5	57.5	42.5	57.5	
			Test Group 2/ F 300 mg/kg bw/d	6	118	13.0	2.3	13.0	2.3	41.9	58.1	41.9	58.1	
			Test Group 1/ F 100 mg/kg bw/d	6	114	12.2	1.8	12.2	1.8	57.3	42.7	57.3	42.7	100 NATE:
			Test Group 0/ F 0 ma/ka bw/d	80	85	10.5 n	4.1	10.5 n	4.1	48.8	51.2	48.8	51.2	<=0.01, X = Group excluded fi
80R0223/11C162	Pups/Litter			z	z	Mean	S.d.	Mean	S.d.	%	%	%	%	.wo-sided), * p<=0.05, ** p
Study 80R022	Summary Litter Report - Live Pups/Litter	Sex: Female		Litters with liveborn pups	Pups delivered	Day 0		Day 4		% Live male Day 0	% Live female Day 0	% Live male Day 4	% Live female Day 4	Statistic Profile = Dunnett test (two-sided), * p<=0.05, ** p <=0.01, X = Group excluded from statistics n=DUNNETT



						IA 29	
Study	80R0223/11C162					28-Feb-2013 14:01	
						ToxData© System 3.0	
Summary - C	Summary - Clinical Observation						
Sex: Male - P	Sex: Male - Phase: Lactation Pup						
			Test Group 0/ M	Test Group 1/ M	Test Group 2/ M	Test Group 3/ M	
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d	
	Animals examined	z	42	64	49	49	
	Animals with signs	z	-	-	0	1	
dav 0 -> 4	reproduction	z	-		0	-	
	not assessed (died)						
	normal NAD	z	41	63	49	48	



Study	80R0223/11C162					IA 30 28-Feb-2013 14:01	
						ToxData© System 3.0	
Summary - C	Summary - Clinical Observation						
•							
Sex: Female	Sex: Female - Phase: Lactation Pup						
			Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F	
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d	
	Animals examined	z	43	90	69	65	2 1
	Animals with signs	z	0	8	1	0	
day 0 -> 4	reproduction not assessed (died)	z	0	8	-	0	
	normal NAD	z	43	47	89	65	



IASI	28-Feb-2013 14:07	ToxData@ System 3.0

Summary Pup Report Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Phase: Lactation Pup

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
day 1 Runt	Males	2	0	0	0
	Females	0	-	1	0
day 1 Males	Mean	6.9 n	8.9	6.7	6.7
ŭ.	S.d.	0.5	0.3	8.0	0.3
	z	80	6	6	6
	Deviation Vs Control		-1.9	-2.9	-2.5
day 1 Females	Mean	6.6n	6.3	6.4	6.4
	S.d.	0.7	0.4	2.0	0.2
	z	8	6	6	6
	Deviation Vs Control		-4.2	-3.4	-4.1
day 1 Males + Females	Mean	6.8 n	9.9	6.5	6.5
	S.d.	9.0	0.3	2.0	0.2
	z	80	6	6	6
	Deviation Vs Control		-2.7	-3.7	-3.6

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics n=DUNNETT



IA 32 28-Feb-2013 14:07 ToxData© System 3.0

Summary Pup Report Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Phase: Lactation Pup

		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
day 4 Males	Mean	10.6 n	10.6	10.2	10.1
	S.d.	1.0	0.8	1.1	9.0
	z	8	6	6	6
	Deviation Vs Control		0.1	-3.9	-4.6
day 4 Females	Mean	10.5 n	10.2	6.6	8.6
	S.d.	1.3	0.8	1.0	0.5
	z	80	6	6	6
	Deviation Vs Control		-2.9	-5.9	-6.8
day 4 Males + Females	Mean	10.5 n	10.4	10.0	6.6
	S.d.	1.7	2.0	1.	0.5
	z	80	6	6	6
	Deviation Vs Control		-1.2	4.9	-5.7

Statistic Profile = Dunnett test (two-sided), * p <=0.05, ** p <=0.01, X = Group excluded from statistics n=DUNNETT

IA 33	28-Feb-2013 14:08	FoxData@ System 3.0
	(4	Tox

Summary Pup Changes Report Body Weights - BW / Body Weights [g]

80R0223/11C162

Study

Phase: Lactation Pup

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
d 1 -> 4 Males	Mean	3.7 n	3.9	3.5	3.4
	S.d.	9.0	9.0	0.4	0.4
	z	8	6	o	6
	Deviation Vs Control		3.9	-5.6	-8.4
d 1 -> 4 Females	Mean	3.9 n	3.8	3.5	3.4
	S.d.	0.7	9.0	0.4	0.4
	z	80	6	6	6
	Deviation Vs Control		9.0-	-10.2	-11.5
d 1 -> 4 Males + Females	Mean	3.8n	3.8	3.5	3.4
	S.d.	9.0	0.5	0.4	0.4
	z	80	6	6	6
	Deviation Vs Control		1.6	-7.2	-9.5

Statistic Profile = Dunnett test (two-sided), * p <= 0.05, ** p <= 0.01, X = Group excluded from statistics d = day, n=DUNNETT



Summary - Pup Necropsy Observation

Sex: Male - Phase: Lactation Pup

80R0223/11C162

Study

Report; Project No.: 80R0223/11C162

28-Feb-2013 14:10 ToxData© System 3.0

		Test Group 0/ M	Test Group 1/ M	Test Group 2/ M	Test Group 3/ M
And the last last last last last last last last		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
Animals examined	z	42	64	49	49
Atim closeic A	z	0	-	0	0
Animais with signs	%	0.0	1.6	0.0	0.0
-> 4 General	z	0		0	0
Post mortem autolysis	% s	0.0	1.6	0.0	0.0
normal	z	42	63	49	49
NAD	%	100.0	98.4	100.0	100.0



						IA 35
Study	80R0223/11C162					28-Feb-2013 14:10
						ToxData© System 3.0
Summary - F	Summary - Pup Necropsy Observation					
Sev. Female	Sey: Female , Phase: Lactation Pun					35
			Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
	Animals examined	z	43	90	69	65
		z	0	-	-	-
	Animais with signs	%	0.0	2.0	1.4	1.5
	General	z	0	-	0	0
day 0 -> 4	Post mortem autolysis	%	0.0	2.0	0.0	0.0
·	Stomach	z	0	0	1	1
	empty	%	0.0	0.0	1.4	1.5
	normal	z	43	49	89	64
	NAD	%	100.0	98.0	98.6	98.5



BASF			ATHOLOGY RE			OR0223/11C162
Reproduction/Developme Rats - Oral Administra				ng Test in W:	istar 10.	Apr.2013 SIBU
ABSOLUTE WEIGHTS - ME	AN VA	LUES (MALE)			
Sacrifice			F1			
Sex			M			
Group			0	1	2	3
Terminal body weight	g g	М	375.93	368.26	364.3	369.25
	- 8	dev	100	98	97	98
		SD	12.333	15.587	21.722	20.835
		n	10	10	10	10
Epididymides	a	м	1.139	1.067	1.12	1.123
	_	dev	100	94	98	99
		SD	0.083	0.151	0.077	0.081
		n	10	10	10	10
Testes	g	M	3.644	3.427	3.518	3.63
	8		100	94	97	100
		SD	0.122	0.539	0.294	0.312
		n	10	10	10	10

*: P <= 0.05, **: P <= 0.01 Kruskal-Wallis H and Wilcoxon test, two sided



BASF		PAT	HOLOGY REPO	RT	IB-	2/5 0R0223/11C162
Reproduction/Developmen Rats - Oral Administrat				Test in Wi	star 10.7	Apr.2013 SIBU
ABSOLUTE WEIGHTS - MEAN	VAI	LUES (FE	MALE)			
Sacrifice			F1			
Sex			F			
Group			0	1	2	3
	• • • •					
Terminal body weight	g	M	251.07	247.78	253.51	248.53
Semi-Antonio 2014 Antonio Seni e-le Constituto del 🖷 — Giant di Sina di Sina Seni estato i	96	dev	100	99	101	99
		SD	15.016	10.561	28.391	8.589
		n	10	10	10	10
*******	• • • •					

*: P <= 0.05, **: P <= 0.01 Kruskal-Wallis H and Wilcoxon test, two sided



BASF Reproduction/DevelopmeRats - Oral Administrative WEIGHTS - MEX	ation	Toxio (Gava	ige)	7.5.5.05		3- 3/5 80R0223/11C162 Apr.2013 SIBU
Sacrifice Sex Group			F1 M 0	1	2	3
Terminal body weight	8	M dev n	100.0 100 10	100.0 100 10	100.0 100 10	100.0 100 10
Epididymides	8	M dev SD n	0.303 100 0.018 10	0.29 96 0.043	0.309 102 0.03 10	0.305 101 0.028 10
Testes	& & &	M dev SD n	0.97 100 0.042 10	0.932 96 0.151	0.968 100 0.092 10	0.986 102 0.107 10

^{*:} $P \le 0.05$, **: $P \le 0.01$ Kruskal-Wallis H and Wilcoxon test, two sided



BASF	PATH	OLOGY	REPOR	RT			0.00	B- 80R022	4/5 3/11C162
Reproduction/Developmental Rats - Oral Administration	Toxicity (Gavage)	Scree	ning	Test	in Wi	star	10	.Apr.2	013 SIBU
INCIDENCE OF GROSS LESIONS									
Sacrifice	F1								
Sex	М				F				
Group			2	3	0	1	2	3	
Animals in selected group									
No abnormalities	8	9	7.	*	8	9	•	٠	
General Observations		20							
No offspring	2	i	i	1			110		
Not pregnant		•6			2	1	1	i	
Colon									
Discoloration of contents		**	10	10			10	10	
Discording of Contents			10	10	2.0	•	10	10	
Epididymides					0.00				
Organ size reduced	r.	1							
Glandular stomach			14	2					
Discoloration of contents			8	6			00.00	10	
Jejunum									
Discoloration of contents			10	10			10	10	
Oviducts									
Cyst								1	
Testes								54	
Organ size reduced		1		•	•	•		•	
Uterus									
Dilation	07 D•						1	12	



BASF		PATHO	LOGY I	REPOR	TS			- TO	B- 808023	5/5 23/11c162
Reproduction/Dev Rats - Oral Admi			Scree	ning	Test	in Wi	star			2013 SIBU
INCIDENCE OF ALL	MICROSCOPIC FI	NDING	SS							
Sacrifice		F1								
Sex		M				F O				
Group		0	1	2	3	0	1	2	3	
Animals in selec	ted group	10	10	10		10	10	10	10	
Epididymides	exam.	10			10					
Infiltration,	lymphoid, (m)f	4			5					
Ovaries	exam.					10			10	
Corpora lutea	present		•			10	•		10	
Testes	exam.	10	21		10			•		

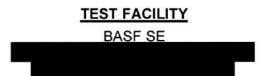


STUDY TITLE

Report

Paliogen Violet 5011

Modified Reproduction/Developmental Toxicity Screening Test in Wistar Rats Oral Administration (Gavage)



TEST FACILITY PROJECT IDENTIFICATION

Project No. 80R0223/11C162

PART II OF III
(TABLES SECTION, INDIVIDUAL VALUES)

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Part B: PATHOLOGY (INDIVIDUAL VALUES)

Absolute weights - individual values

Relative weights - individual values

IIB-1 - IIB-8

IIB-9 - IIB-16

Single animal sheet (gross lesions and microscopic findings)

IIB-17 - IIB-63



IIA 1	28-Feb-2013 14:25	ToxData© System 3.0			FirstLastDuration Day Day [Days]	
					Remark	
					Modifier	
					Sign	
	80R0223/11C162		bservation	D)	Sign Type	
	80R022		Individual Signs - Clinical Observation	Sex: Male - Phase: Pre-mating	Animal	
	Study		Individual Si	Sex: Male - Pł	Dose	
						71 - 1



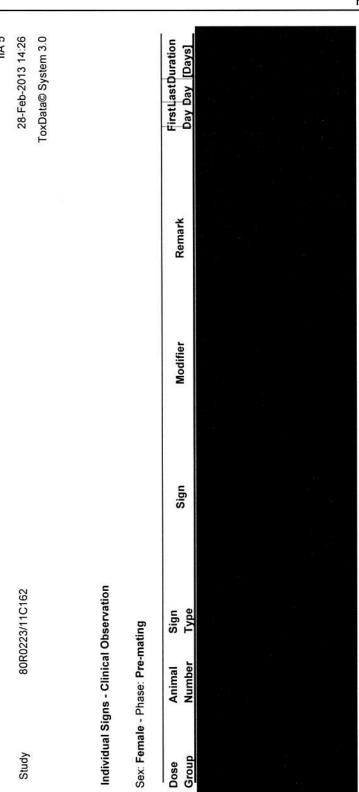
IIA 2	28-Feb-2013 14:26	ToxData© System 3.0			FirstLastDuration Day Day [Days]	
					Remark	
					Modifier	
					Sign	
	80R0223/11C162		bservation	<u> </u>	Sign Type	
	80R02		Individual Signs - Clinical Observation	Sex: Male - Phase: Pre-mating	Animal Number	
	Study		Individual Sig	Sex: Male - Ph	Dose Group	



							IIA 3
Study	80R022;	80R0223/11C162					28-Feb-2013 14:26
							ToxData© System 3.0
Individual Signs - Clinical Observation	s - Clinical Ok	servation	_				
Sex: Male - Phase: Pre-mating	se: Pre-mating	_					
Dose	Animal	Sign		Sign	Modifier	Remark	FirstLastDuration



28-Feb-2013 14:26 ToxData© System 3.0 FirstLastDuration Day Day [Days] Remark Modifier Sign Individual Signs - Clinical Observation 80R0223/11C162 Sign Type Sex: Male - Phase: Pre-mating Number Animal Dose Study

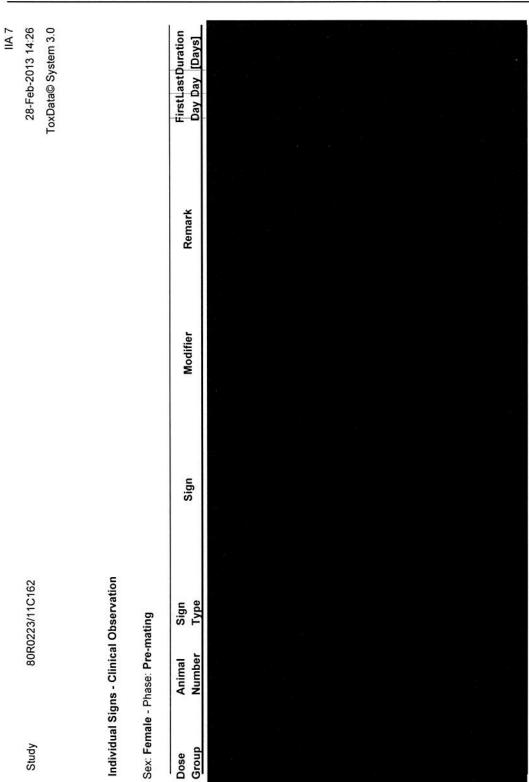


PG=Pregnant; NPI=GD 0; No Implants; No Pups



							 _
IIA 6	28-Feb-2013 14:26	ToxData© System 3.0				FirstLastDuration Day Day [Days]	
						Remark	
						Modifier	
						Sign	
	80R0223/11C162			Observation	ating	Sign Type	
	80R0			Individual Signs - Clinical Observation	Sex: Female - Phase: Pre-mating	Animal	
	Study		O	Individual S	Sex: Female	Dose	

PG=Pregnant; NPI=GD 0; No Implants; No Pups



PG=Pregnant; NPI=GD 0; No Implants; No Pups



28-Feb-2013 14:26 ToxData© System 3.0 **FirstLastDuration** Day Day [Days] Remark Modifier Sign Individual Signs - Clinical Observation 80R0223/11C162 Sign Sex: Female - Phase: Pre-mating Animal Number Study Group Dose

PG=Pregnant; NPI=GD 0; No Implants; No Pups

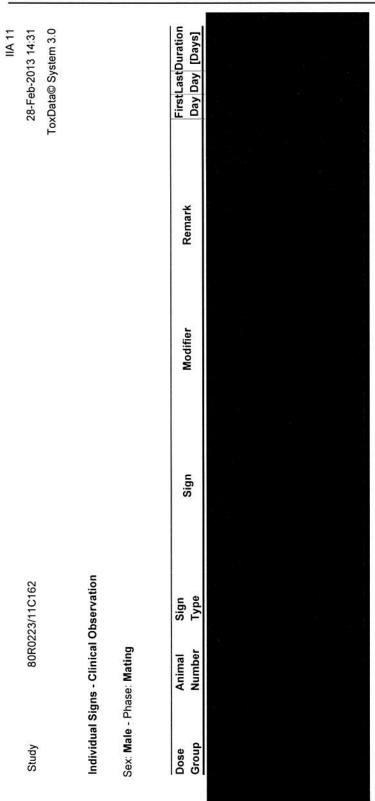


IIA 9	28-Feb-2013 14:31	ToxData© System 3.0			FirstLastDuration Day Day [Days]	
					Remark	
					Modifier	
					Sign	
	80R0223/11C162		Observation		Sign Type	
	80R02		Individual Signs - Clinical Observation	Sex: Male - Phase: Mating	Animal Number	
	Study		Individual (Sex: Male -	Dose	



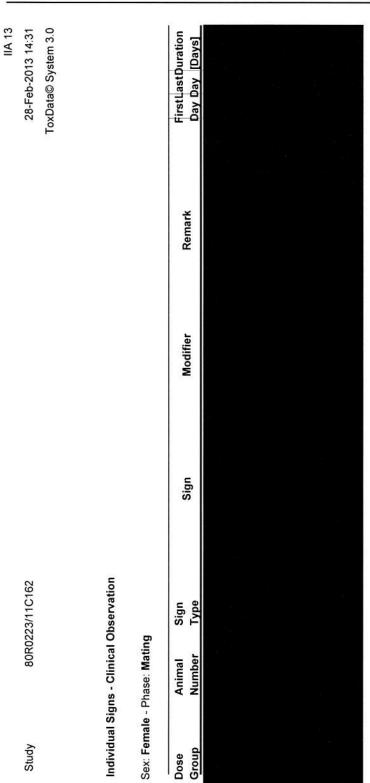
Study 80R0223/11C162 Individual Signs - Clinical Observation Sex: Male - Phase: Mating	80R0223/11C162				
ividual Signs - Clinical Ob: Male - Phase: Mating					28-Feb-2013 14:31
lividual Signs - Clinical Ob: :: Male - Phase: Mating				Е	ToxData© System 3.0
c Male - Phase: Mating	servation				
Dose Animal Group Number	Sign Type	Sign	Modifier	Remark	FirstLastDuration Day Day [Days]







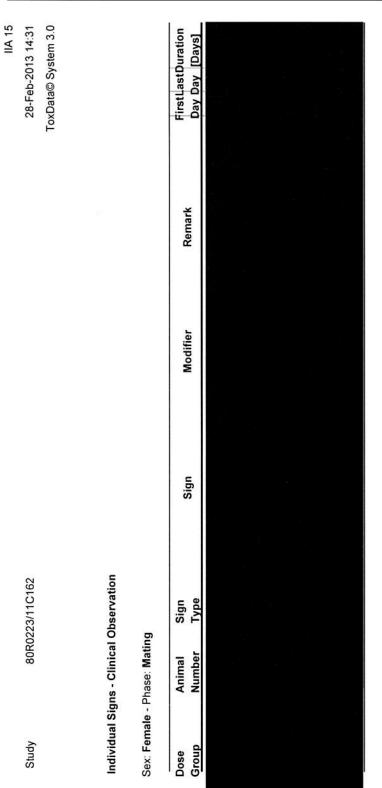
	80R0223/11C162				28-Feb-2013 14:31
				Ess	ToxData© System 3.0
Clinical C	Individual Signs - Clinical Observation				
Sex: Male - Phase: Mating					
Animal Number	Sign Type	Sign	Modifier	Remark	FirstLastDuration Day Day [Days]

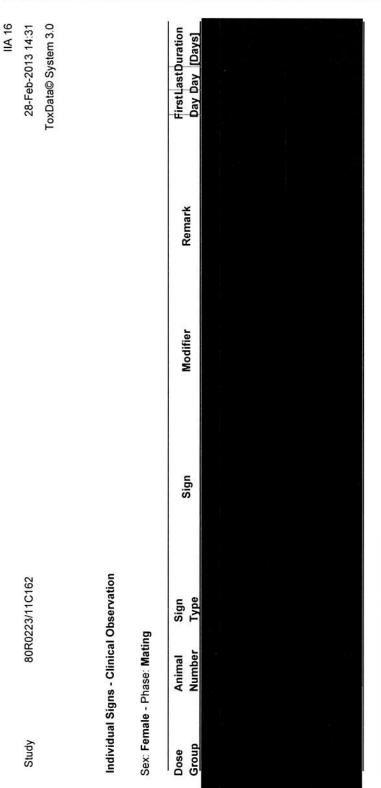


PG=Pregnant; NPI=GD 0; No Implants; No Pups

-				or months to	1022-973	
IIA 14	28-Feb-2013 14:31	ToxData© System 3.0			FirstLastDuration Day Day [Days]	
					Remark	
					Modifier	
					Sign	
	80R0223/11C162		bservation		Sign Type	
	80R02		Individual Signs - Clinical Observation	Sex: Female - Phase: Mating	Animal Number	
	Study		Individual S	Sex: Female	Dose	

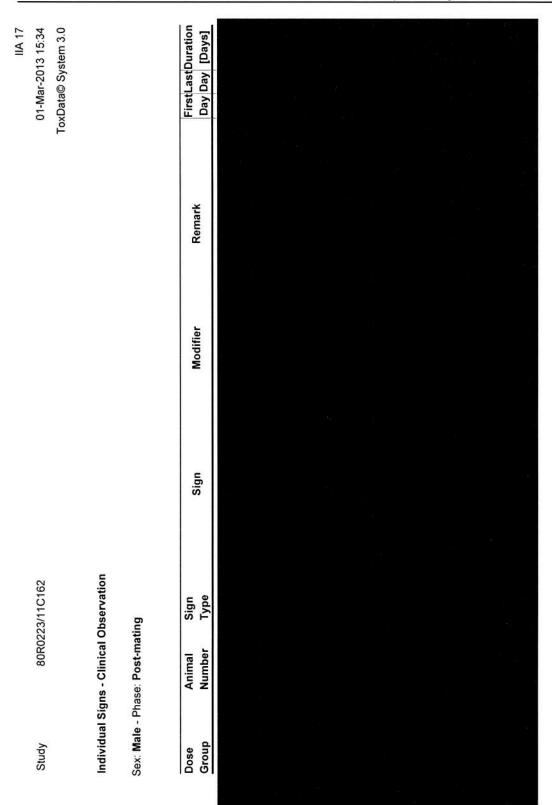
PG=Pregnant; NPI=GD 0; No Implants; No Pups





PG=Pregnant; NPI=GD 0; No Implants; No Pups







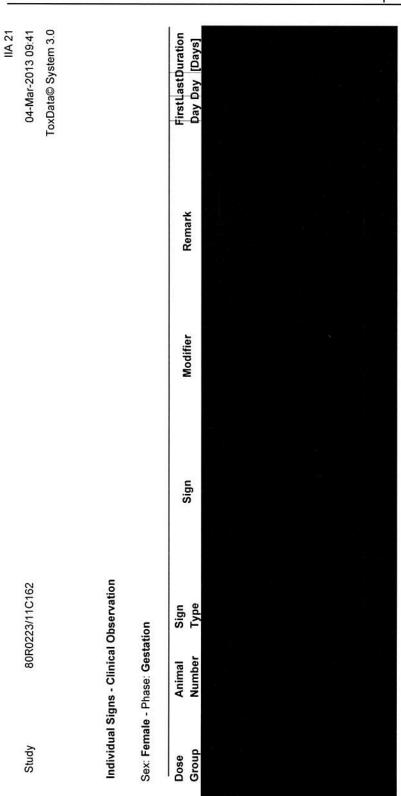
FirstLastDuration Day Day [Days] IIA 18 ToxData© System 3.0 01-Mar-2013 15:34 Remark Modifier Sign Individual Signs - Clinical Observation 80R0223/11C162 Sign Type Sex: Male - Phase: Post-mating Animal Number Dose Group Study



IIA 19 FirstLastDuration 01-Mar-2013 15:34 ToxData© System 3.0 Day Day [Days] Remark Modifier Sign Individual Signs - Clinical Observation 80R0223/11C162 Sign Type Sex: Male - Phase: Post-mating Animal Number Study Group Dose



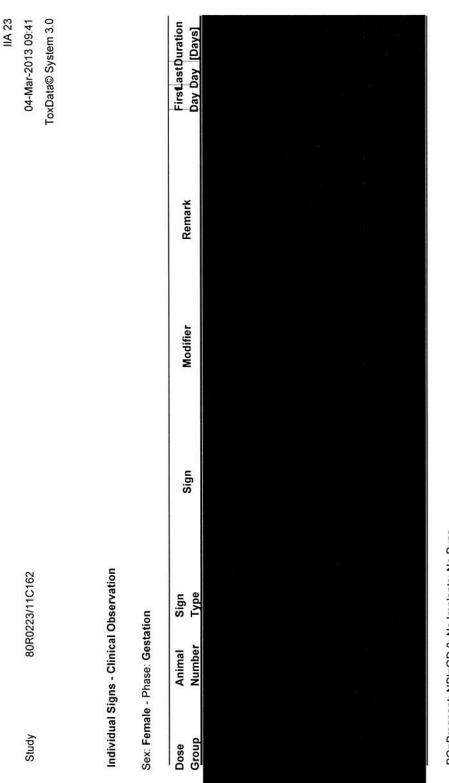
						IIA 20
Study	80R02	80R0223/11C162				01-Mar-2013 15:34
					TO	ToxData© System 3.0
Individual Signs - Clinical Observation	ıs - Clinical O	bservation				
Sex: Male - Phase: Post-mating	se: Post-mati	Bu				
Dose	Animal	Sign	Sign	Modifier	Remark	FirstLastDuration
		odf.				Grand for for



PG=Pregnant; NPI=GD 0; No Implants; No Pups

_								Rep
IIA 22	04-Mar-2013 09:41	ToxData© System 3.0			FirstLastDuration Day Day [Days]			
					Remark			
					Modifier			
					Sign			
	80R0223/11C162		bservation	ion	Sign Type			
	80R02		Individual Signs - Clinical Observation	Sex: Female - Phase: Gestation	Animal Number			
	Study		Individual	Sex: Femal	Dose			

PG=Pregnant; NPI=GD 0; No Implants; No Pups

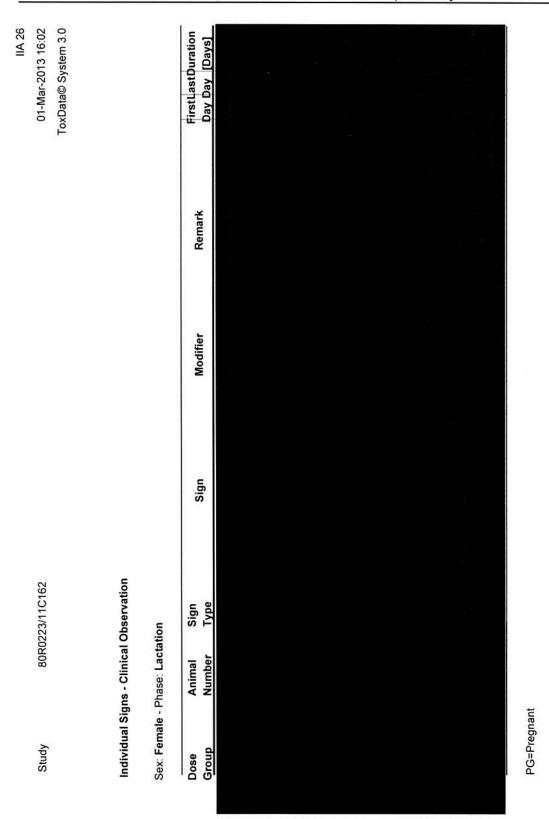


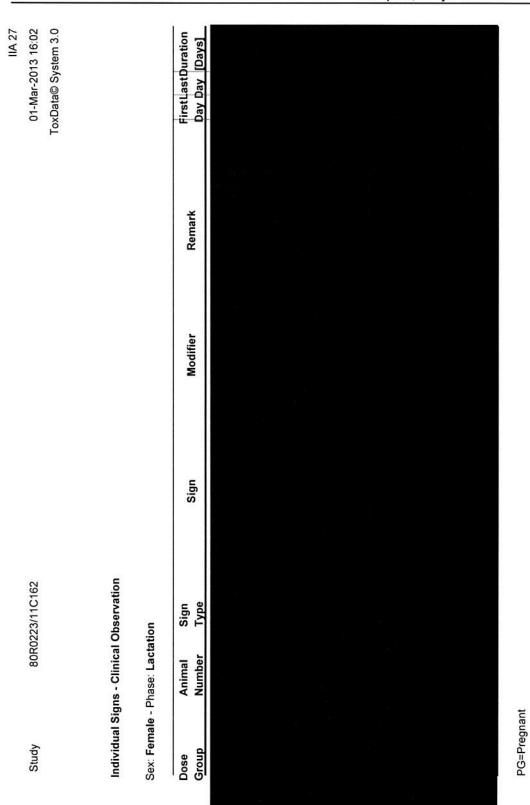
PG=Pregnant; NPI=GD 0; No Implants; No Pups

					#E - U - U	73	1100
IIA 24	04-Mar-2013 09:41	ToxData© System 3.0			FirstLastDuration Day Day [Days]		
					Remark		
					Modifier		
					Sign		
	80R0223/11C162		Observation	ion	Sign Type		
	80R02		Individual Signs - Clinical Observation	Sex: Female - Phase: Gestation	Animal Number		
	Study		Individual S	Sex: Female	Dose		

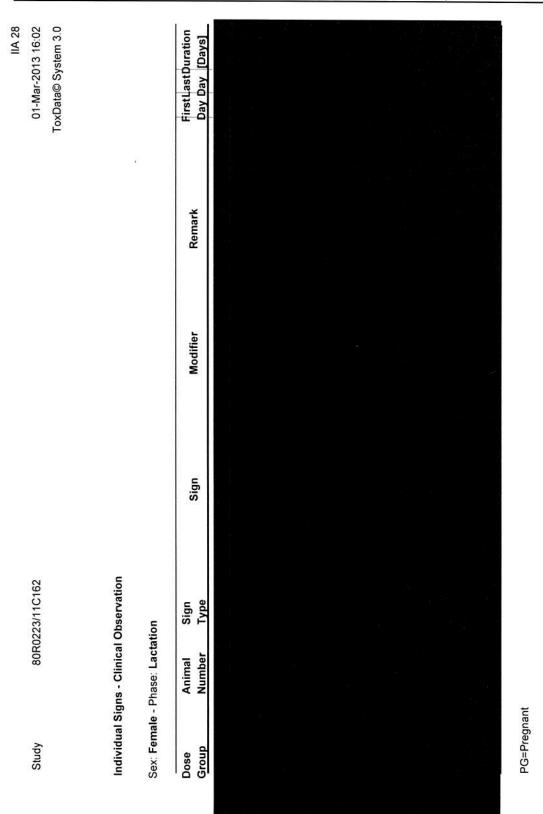
PG=Pregnant; NPI=GD 0; No Implants; No Pups

FirstLastDuration Day Day [Days] 01-Mar-2013 16:02 ToxData© System 3.0 Remark Modifier Sign Individual Signs - Clinical Observation 80R0223/11C162 Sign Type Sex: Female - Phase: Lactation Animal Number PG=Pregnant Study Group Dose

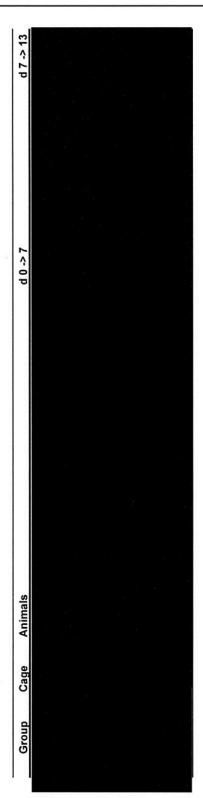








IIA 29 04-Mar-2013 08:19 ToxData© System 3.0



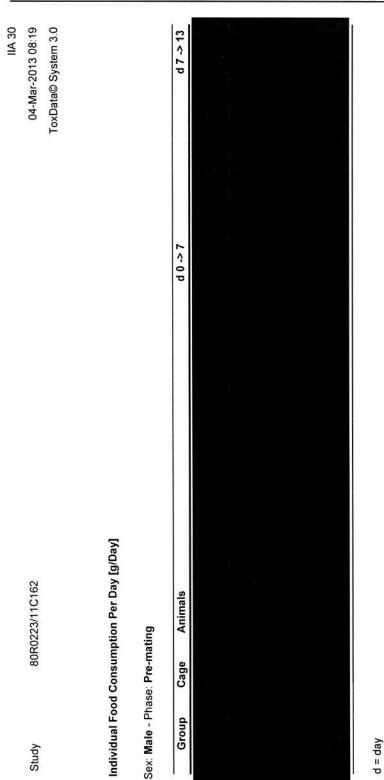
Individual Food Consumption Per Day [g/Day]

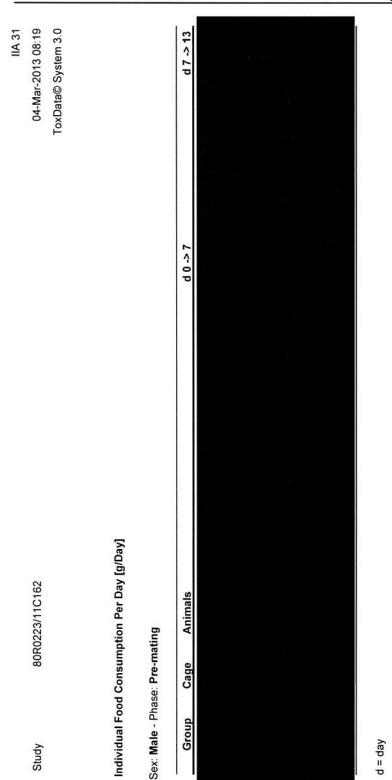
Sex: Male - Phase: Pre-mating

80R0223/11C162

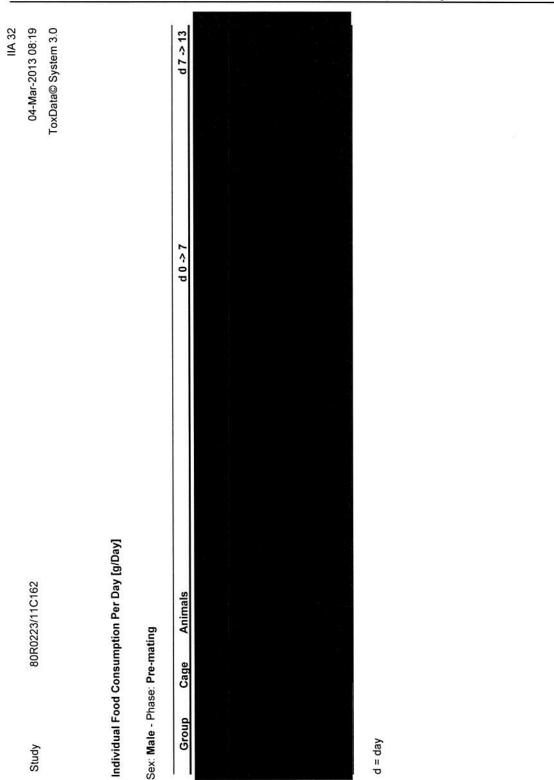
Study

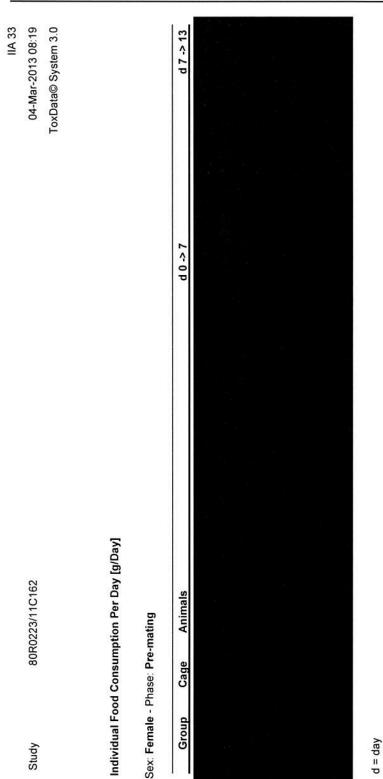
d = day



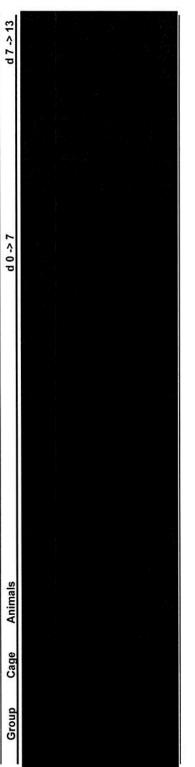




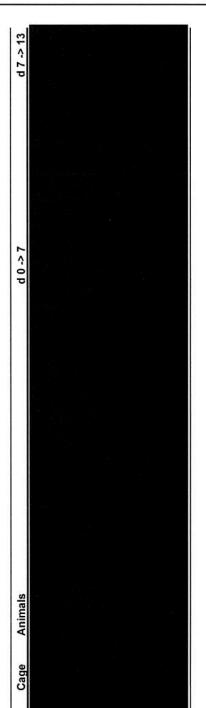




IIA 34 04-Mar-2013 08:19 ToxData© System 3.0 Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Sex: Female - Phase: Pre-mating Study



IIA 35 04-Mar-2013 08:19 ToxData© System 3:0



Individual Food Consumption Per Day [g/Day]

Sex: Female - Phase: Pre-mating

Group

Study

80R0223/11C162

d = day

IIA 36 04-Mar-2013 08:19 ToxData© System 3.0 Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Animals Sex: Female - Phase: Pre-mating Cage Group d = day Study

04-Mar-2013 09:38 ToxData© System 3.0 d 14 -> 20 d 7 -> 14 d 0 -> 7 Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Animals Sex: Female - Phase: Gestation Cage Group d = day Study

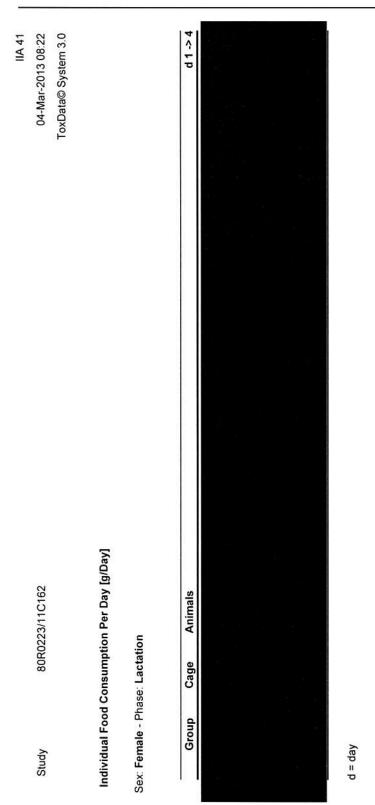
IIA 38 04-Mar-2013 09:38 ToxData© System 3.0 d 14 -> 20 d 7 -> 14 d 0 -> 7 Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Animals Sex: Female - Phase: Gestation Cage Group Study

d = day

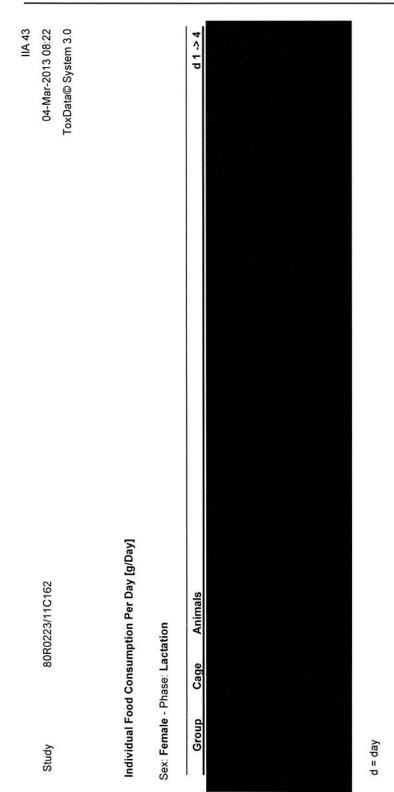
04-Mar-2013 09:38 ToxData© System 3.0 d 14 -> 20 d 7 -> 14 d 0 -> 7 Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Animals Sex: Female - Phase: Gestation Cage Group d = day

IIA 40 ToxData© System 3.0 04-Mar-2013 09:38 d 14 -> 20 d 7 -> 14 2 <- 0 b Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Animals Sex: Female - Phase: Gestation Cage Group Study

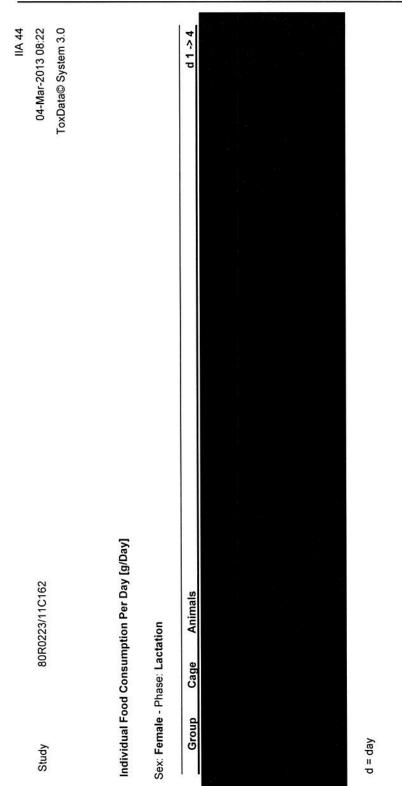
d = day



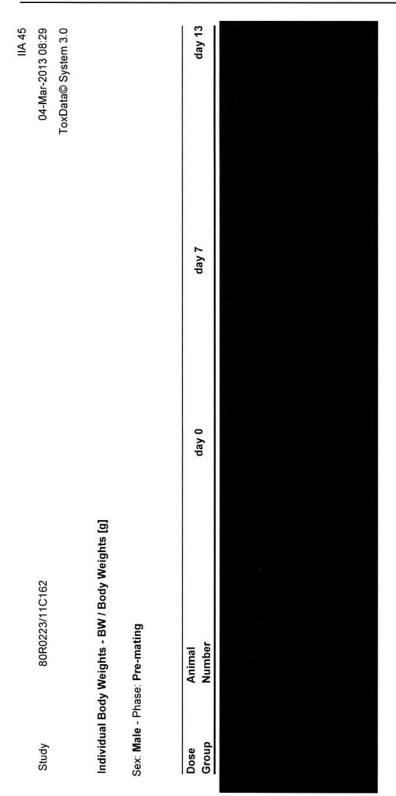
IIA 42 04-Mar-2013 08:22 ToxData© System 3.0 d1->4 Individual Food Consumption Per Day [g/Day] 80R0223/11C162 Animals Sex: Female - Phase: Lactation Cage Group Study



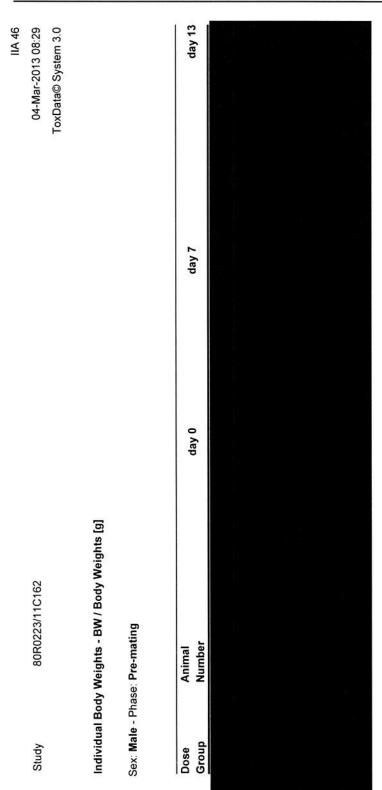




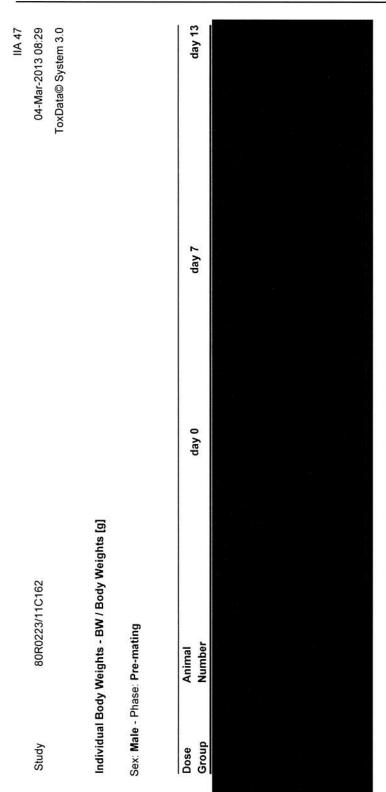




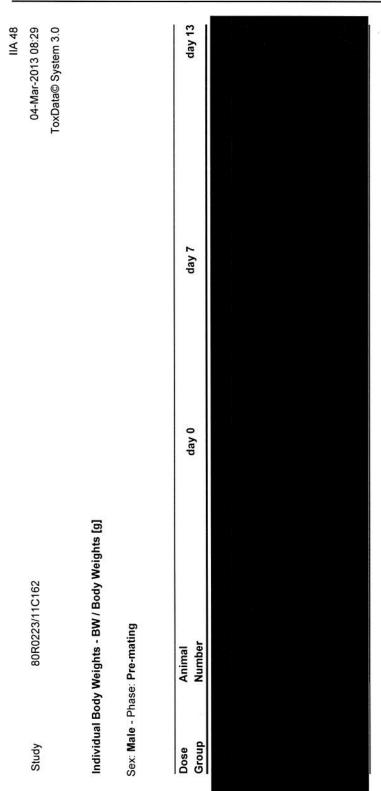




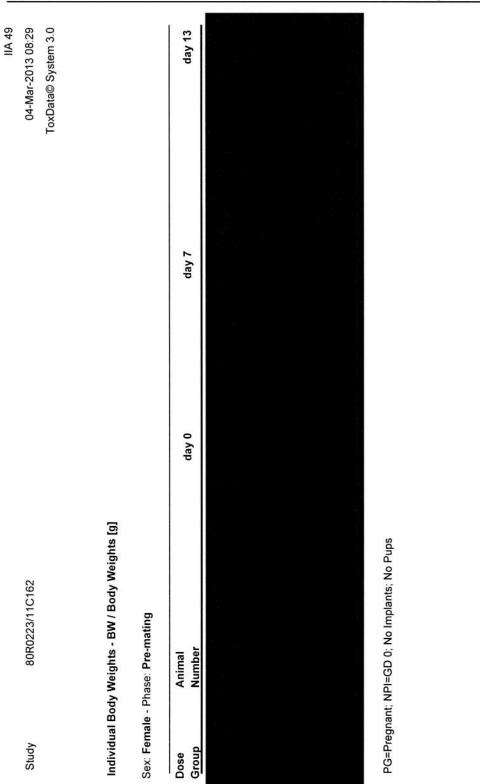


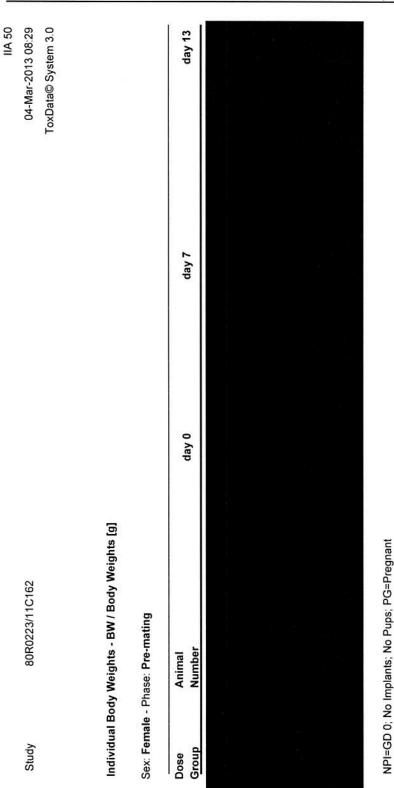


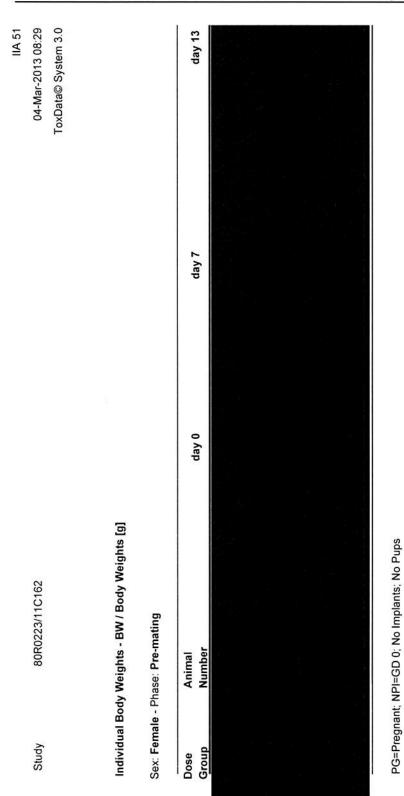




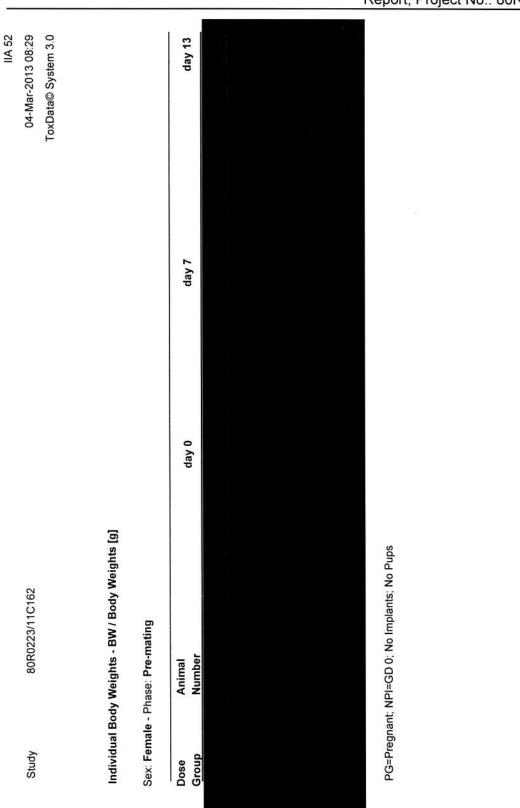




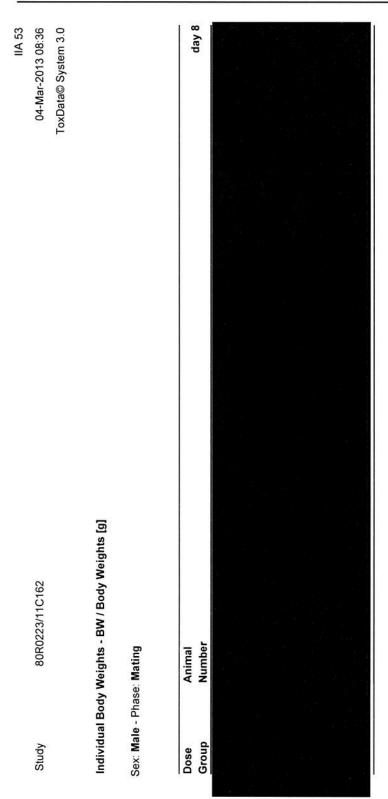




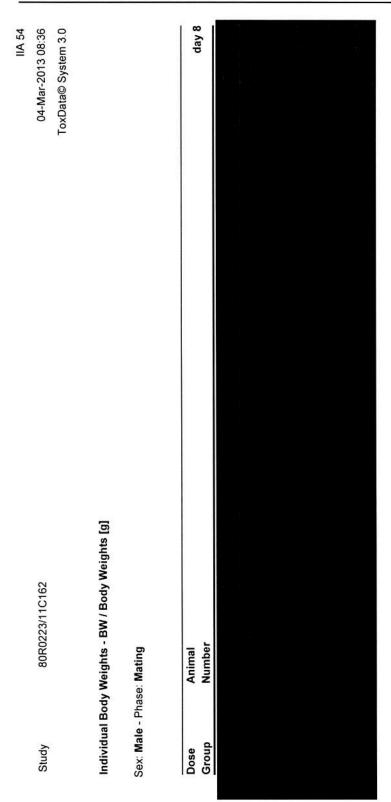




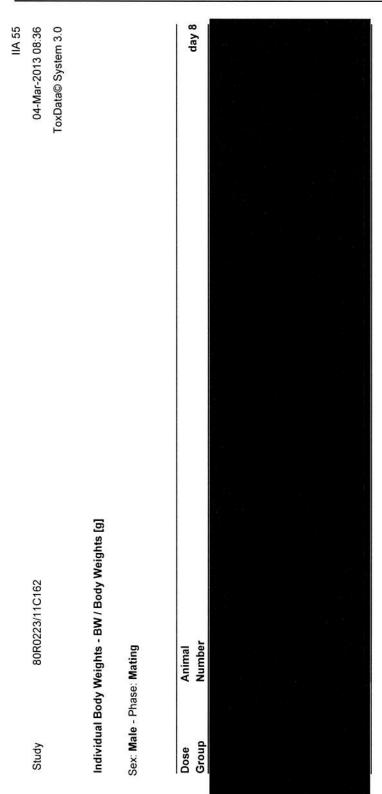




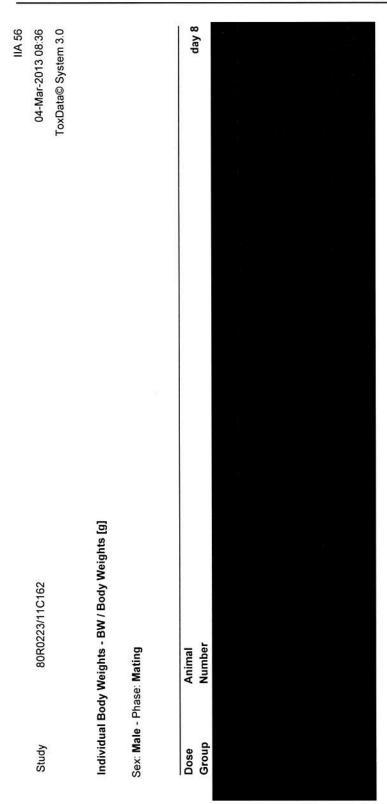


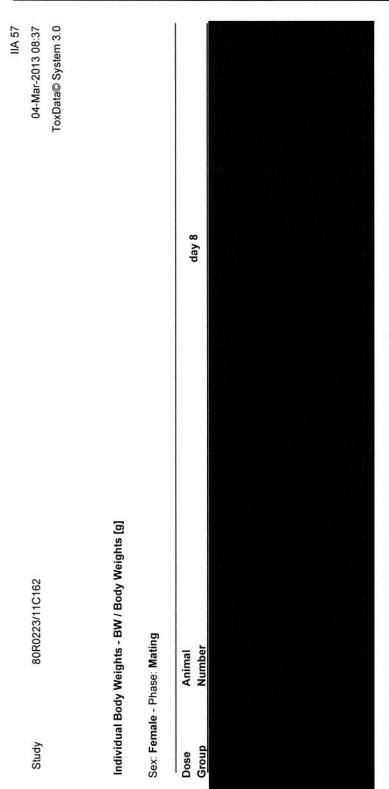






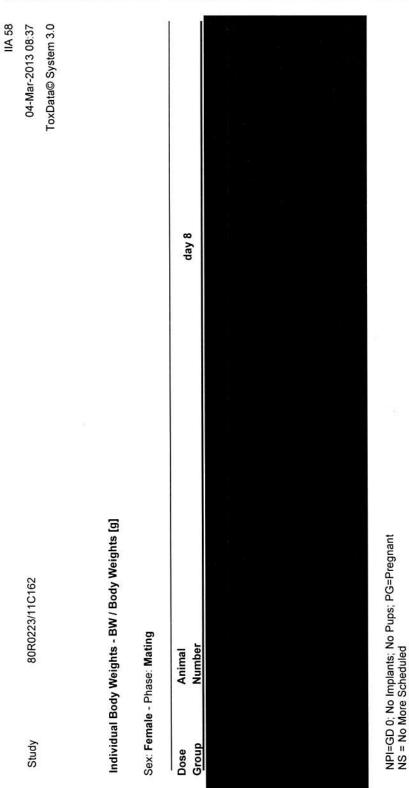


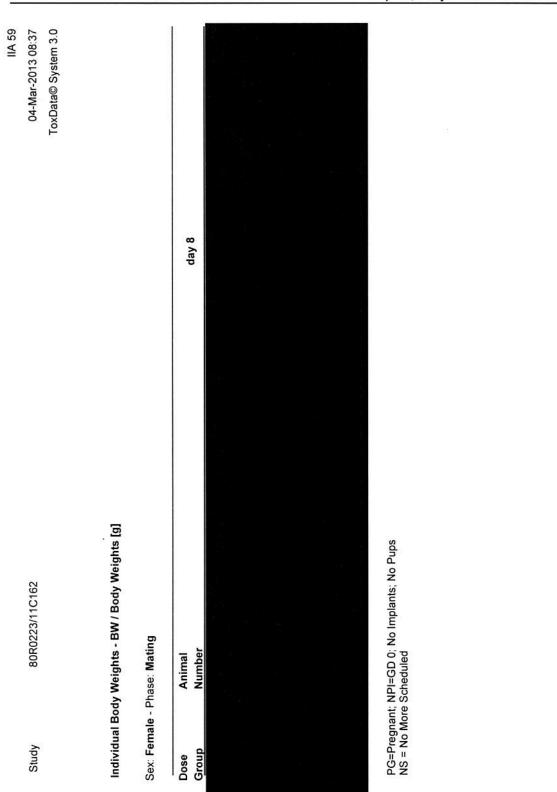


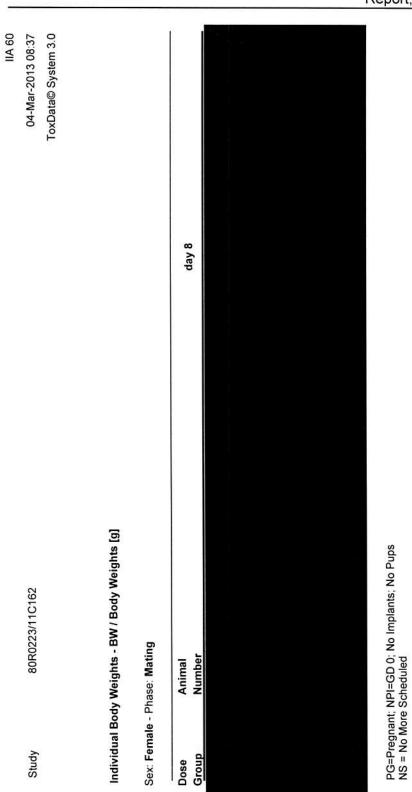


PG=Pregnant; NPI=GD 0; No Implants; No Pups NS = No More Scheduled

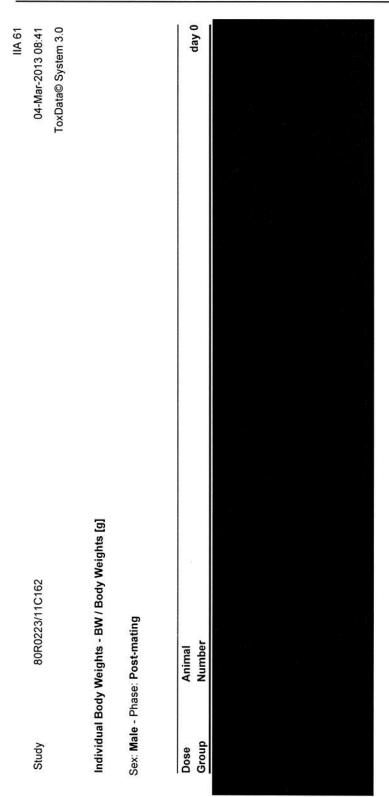


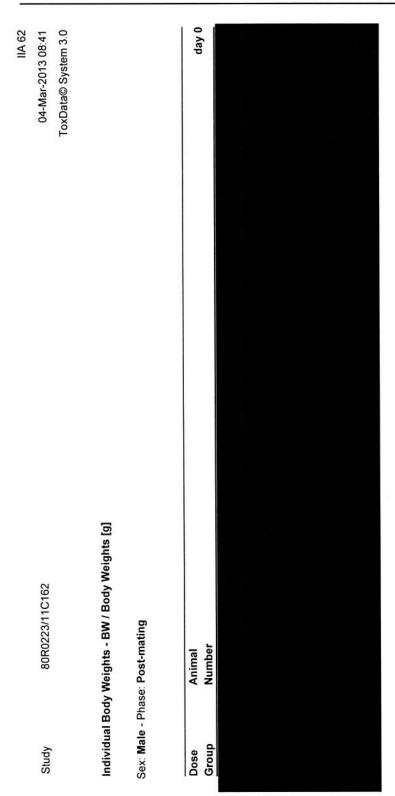








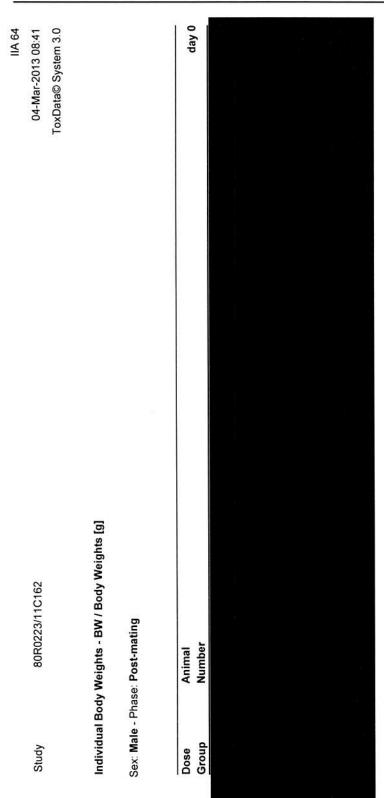


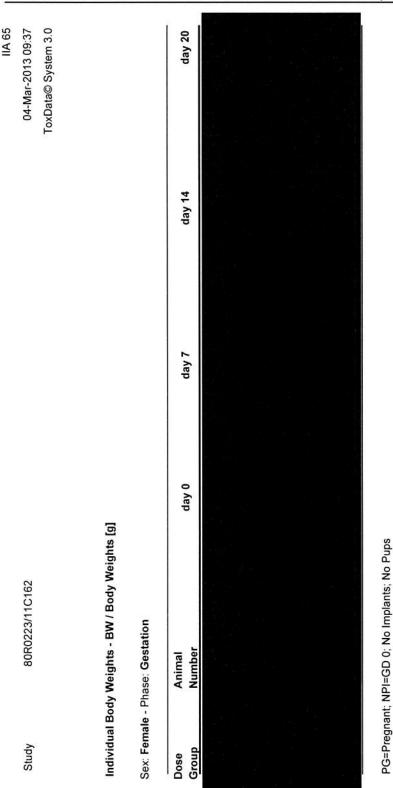




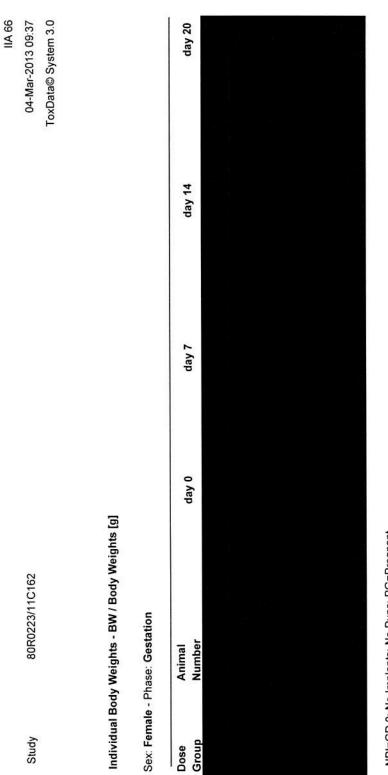
day 0 IIA 63 ToxData© System 3.0 04-Mar-2013 08:41 Individual Body Weights - BW / Body Weights [g] 80R0223/11C162 Sex: Male - Phase: Post-mating Animal Number Study Group Dose



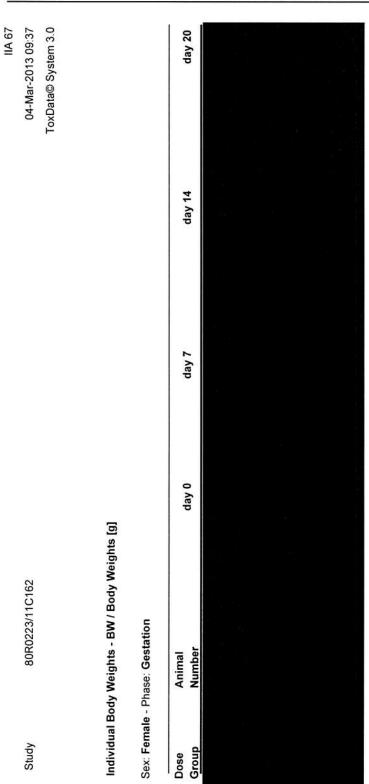






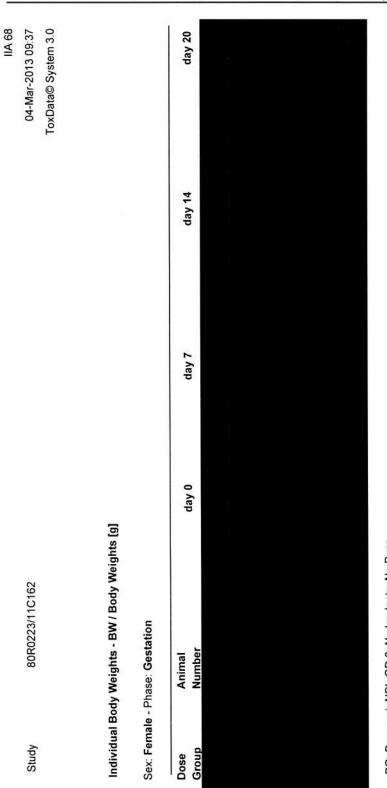


NPI=GD 0; No Implants; No Pups; PG=Pregnant



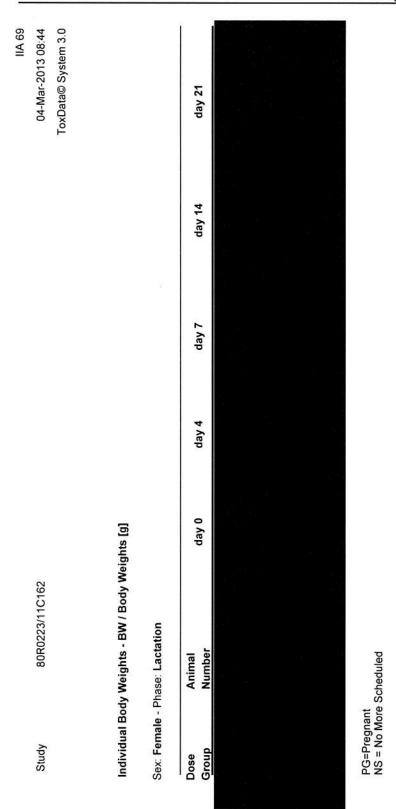
PG=Pregnant; NPI=GD 0; No Implants; No Pups



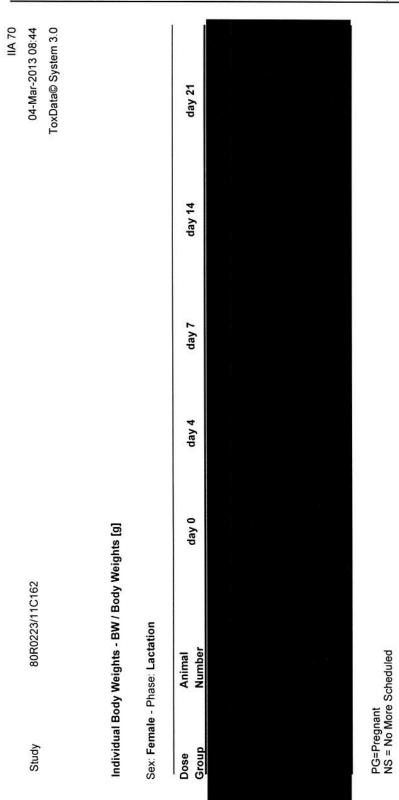


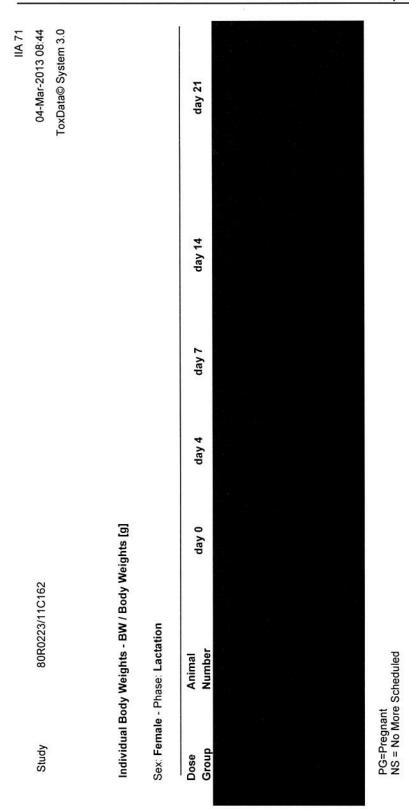
PG=Pregnant; NPI=GD 0; No Implants; No Pups



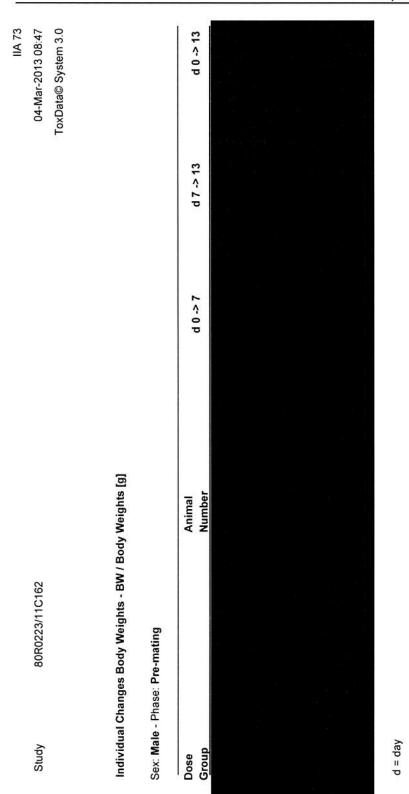




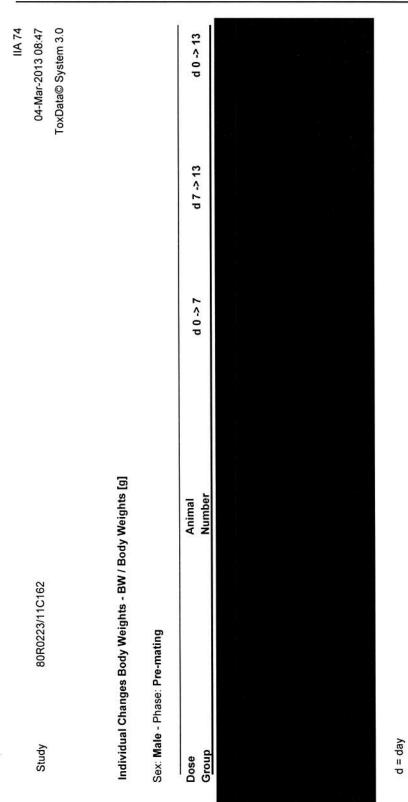


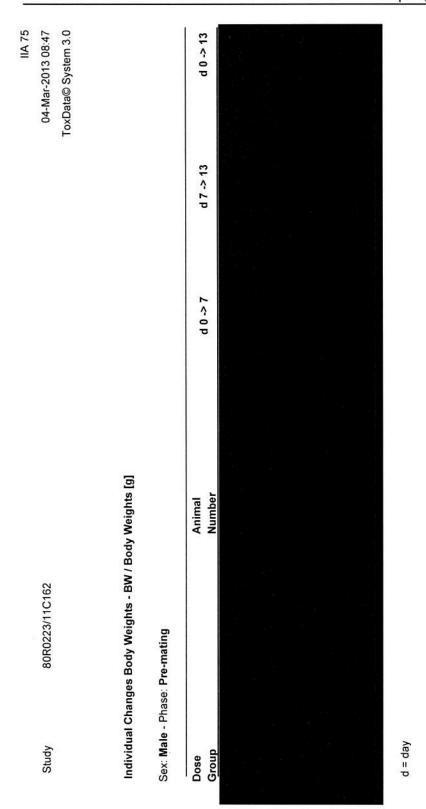


IIA 72 04-Mar-2013 08:44 ToxData© System 3.0 day 21 day 14 day 7 day 4 day 0 Individual Body Weights - BW / Body Weights [g] 80R0223/11C162 Sex: Female - Phase: Lactation Animal Number PG=Pregnant NS = No More Scheduled Study Dose Group

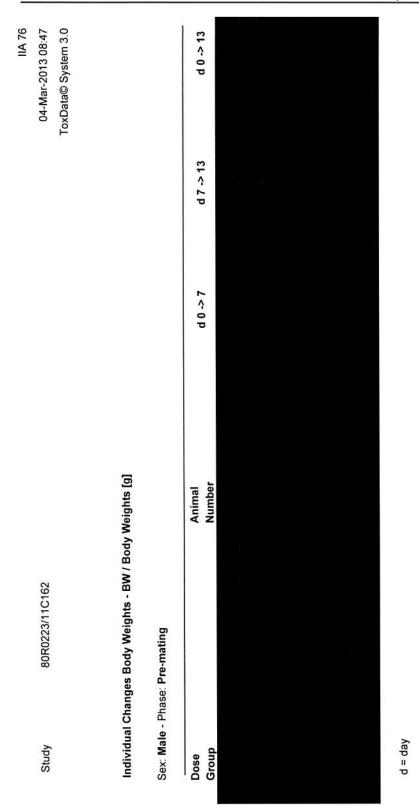


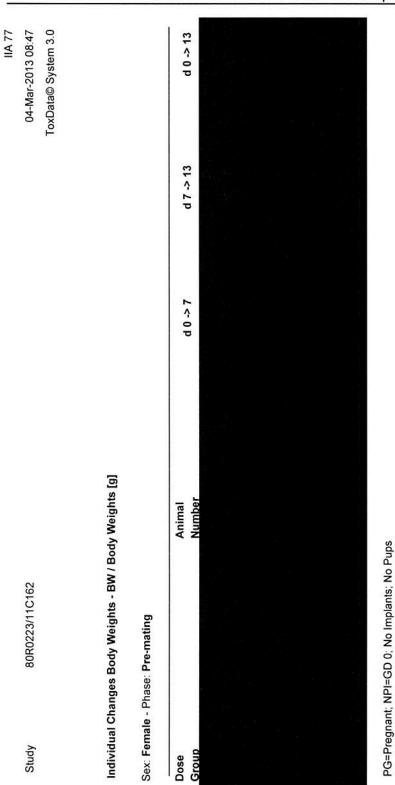




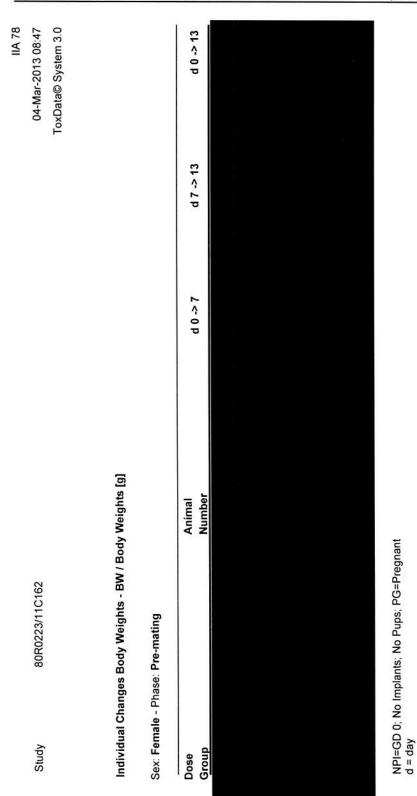


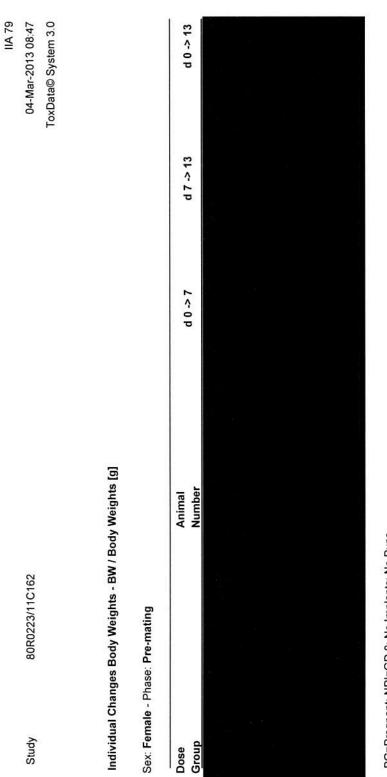




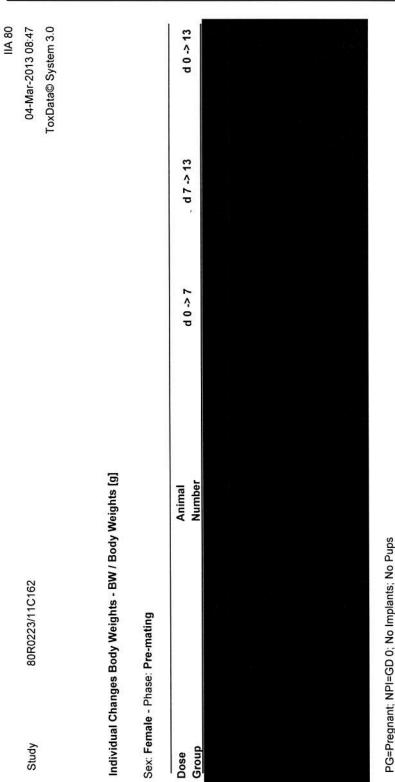


PG=Pregnant; NPI=GD 0; No Implants; No Pups d = day

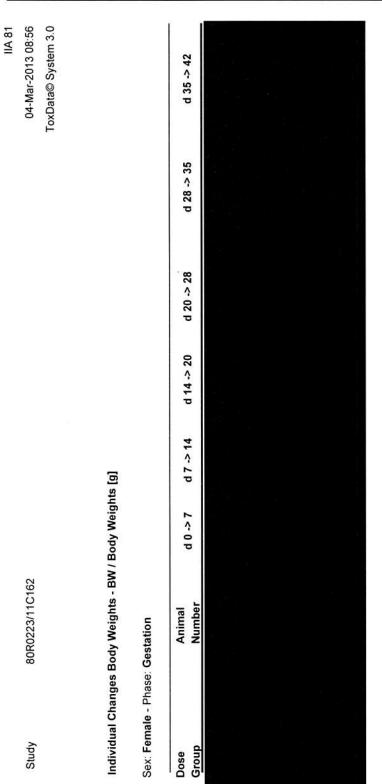




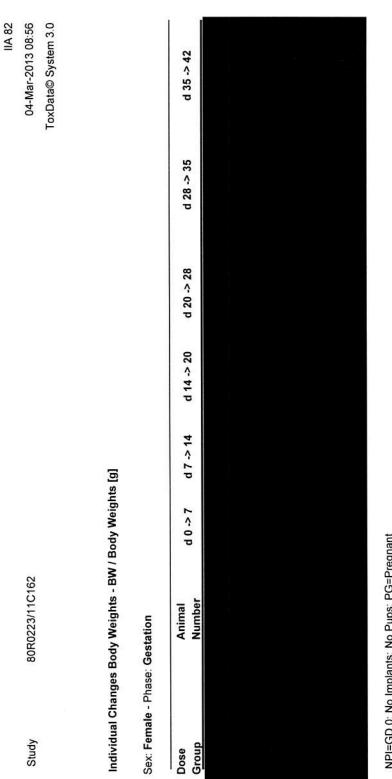
PG=Pregnant; NPI=GD 0; No Implants; No Pups d = day



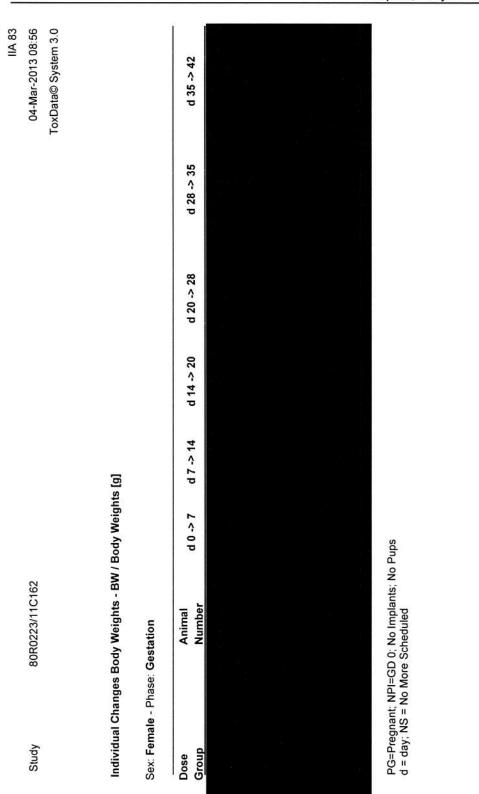
PG=Pregnant; NPI=GD 0; No Implants; No Pups d = day



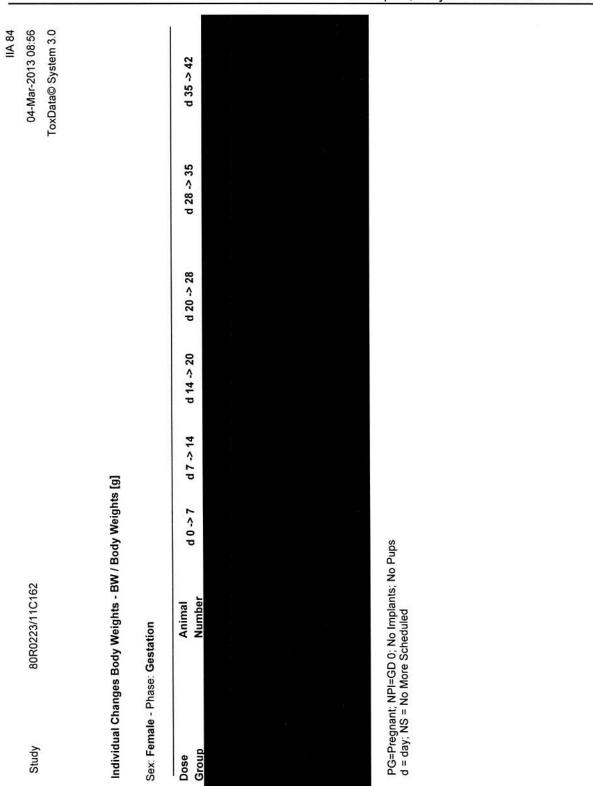
PG=Pregnant; NPI=GD 0; No Implants; No Pups d = day; NS = No More Scheduled

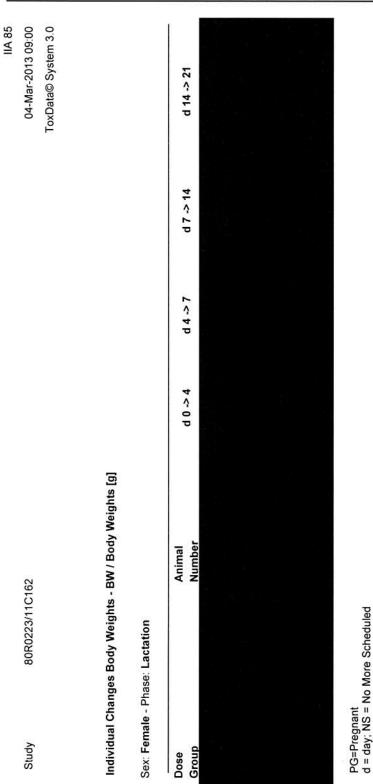


NPI=GD 0; No Implants; No Pups; PG=Pregnant d = day; NS = No More Scheduled

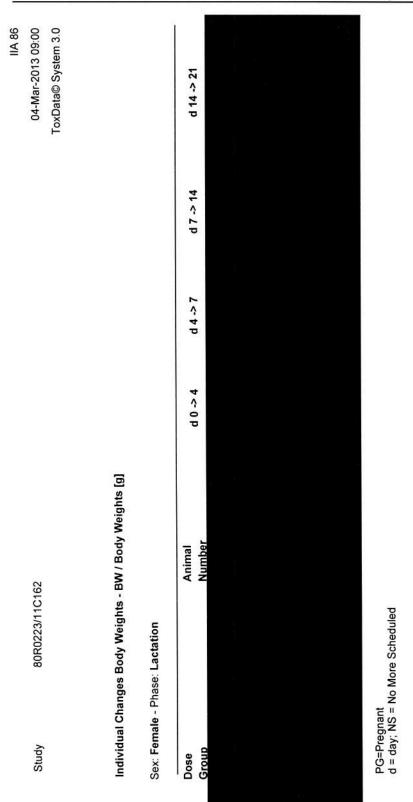




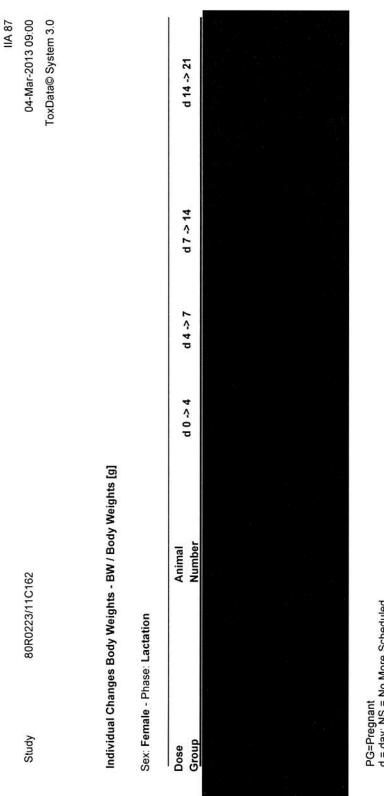












PG=Pregnant d = day; NS = No More Scheduled



IIA 88 04-Mar-2013 09:00	ToxData© System 3.0			d 14 -> 21		
				d7 -> 14		
				d 4 -> 7		
				d 0 -> 4		
80R0223/11C162		ly Weights - BW / Body Weights [g]	station	Animal Number		scheduled
Study 80F		Individual Changes Body Weights	Sex: Female - Phase: Lactation	Dose		PG=Pregnant d = day; NS = No More Scheduled



Study	80R0223/11C162							IIA 89 04-Mar-2013 09:43
								ToxData© System 3.0
Individual Coupling Report	pling Report							
Sex: Female								
Group	Female Male	Pre-mating Date	Mating Date	Mating Insemination Mating Date Date Days	ation Mating Date Days	Delivery Date	Delivery Gestation Date Days	Pregnant Status



Study	80R0223/11C162							IIA 90 04-Mar-2013 09:43 ToxData© System 3.0	
Individual Coupling Report	pling Report								
Sex: Female									
Group	Female Male	Pre-mating Date	Mating	Mating Insemination Mating Date Date Days	ation Mating Date Days	Delivery Date	Delivery Gestation Date Days	Pregnant Status	المعران



IIA 91	04-Mar-2013 09:43	ToxData© System 3.0			Pregnant Status	
					Delivery Gestation Date Days	
					Delivery Date	
					ation Mating Date Days	
					Mating Insemination Mating Date Date Days	
					Mating Date	
					Pre-mating Date	
	80R0223/11C162				Male	
	80R022		ipling Report		Female	
	Study		Individual Coupling Report	Sex: Female	Group	
						Jackson and the state of the st



IIA 92 04-Mar-2013 09:43 ToxData© System 3.0		Pregnant Status	
		Delivery Gestation Date Days	
		Delivery Date	
		ation Mating Date Days	
		Mating Insemination Mating Date Date Days	
		Mating Date	
		Pre-mating Date	
80R0223/11C162		Male	
80R022:	Individual Coupling Report	Female	
Study	Individual Co Sex: Female	Group	

04-Mar-2013 09:44
ToxData© System 3.0

80R0223/11C162

Study

Individual Delivery Report

Sex: Female

Post Implantation Loss Live Birth Index Implantation Sites Pregnant Gestation Dead Alive Total Status Days N N N Days Female Group

IIA 94 ToxData© System 3.0 Post Implantation Loss Live Birth Index 04-Mar-2013 09:44 Pregnant Gestation Dead Alive Total Implantation Sites
Status Days N N N N 80R0223/11C162 Individual Delivery Report Female Group Sex: Female Study

IIA 95 04-Mar-2013 09:44 ToxData© System 3.0

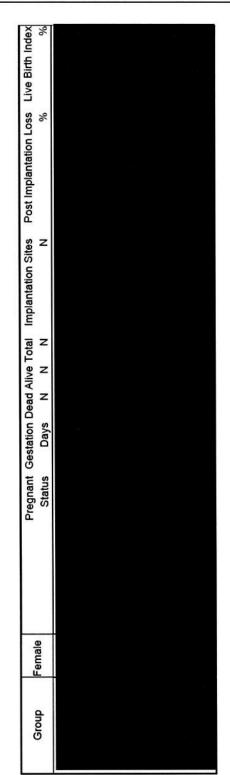
Post Implantation Loss Live Birth Index Implantation Sites Pregnant Gestation Dead Alive Total Status Days N N N Female Group

Sex: Female

80R0223/11C162

Study

IIA 96 04-Mar-2013 09:44 ToxData© System 3.0

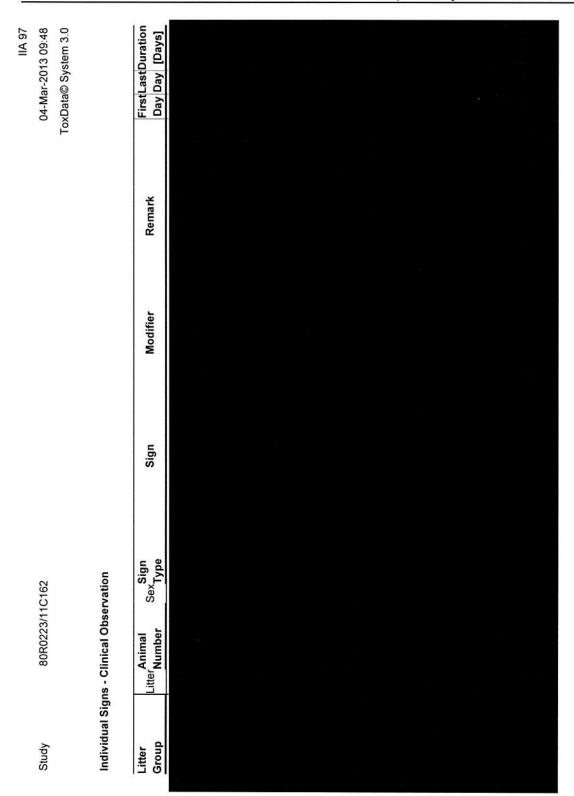


Sex: Female

80R0223/11C162

Study

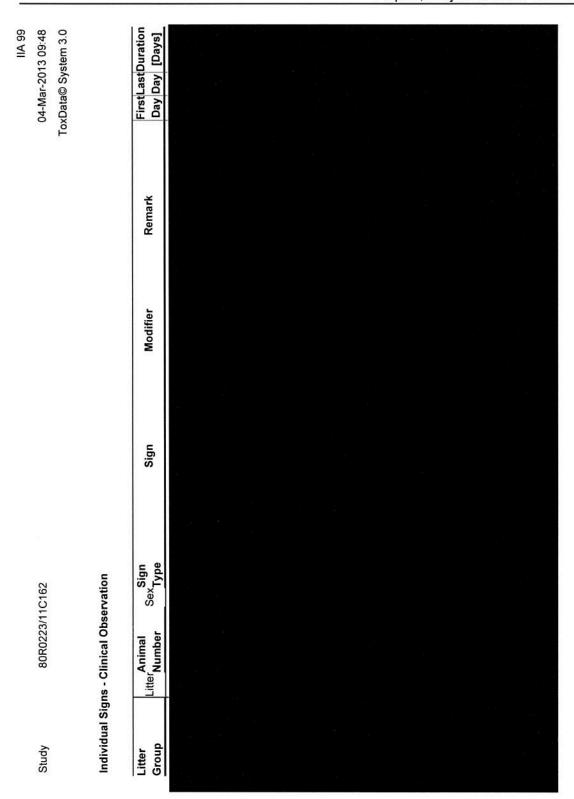






04-Mar-2013 09:48 ToxData@ System 3.0 FirstLastDuration Day Day [Days] Remark Modifier Sign Sex_Type Individual Signs - Clinical Observation 80R0223/11C162 Animal itter Number Group Study Litter

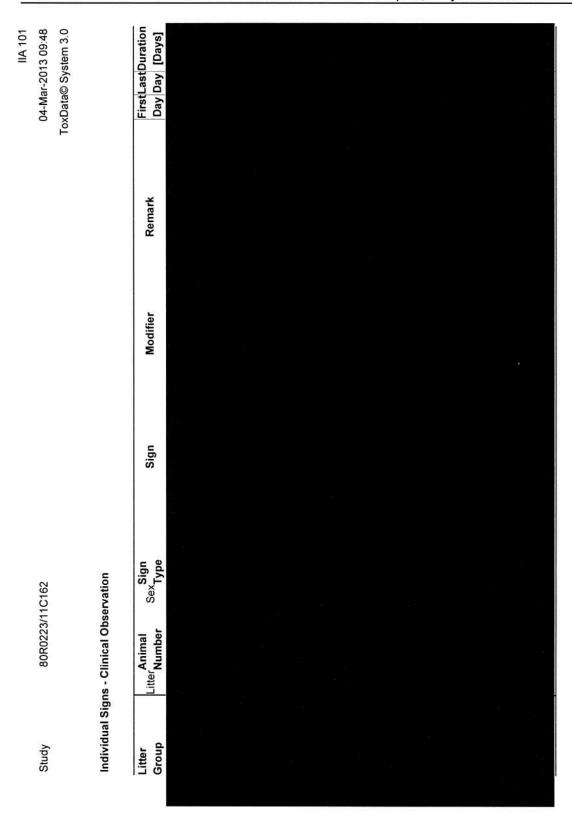


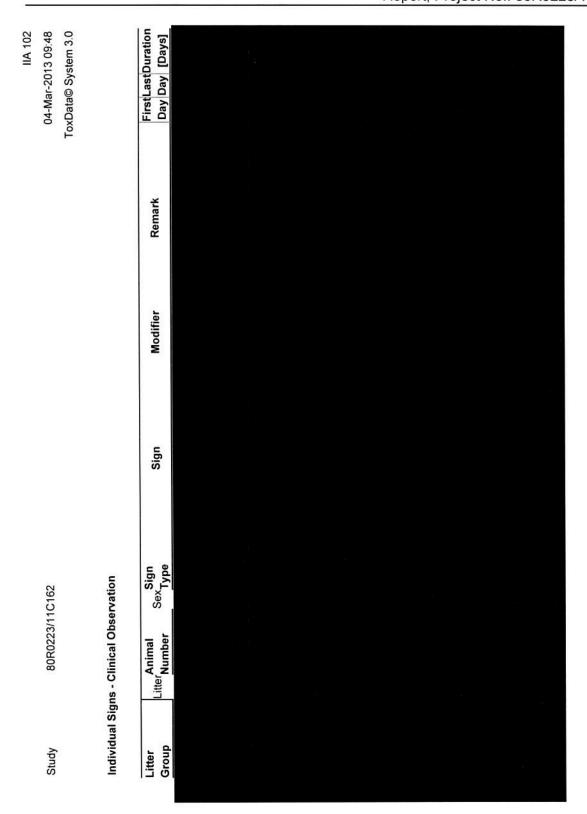




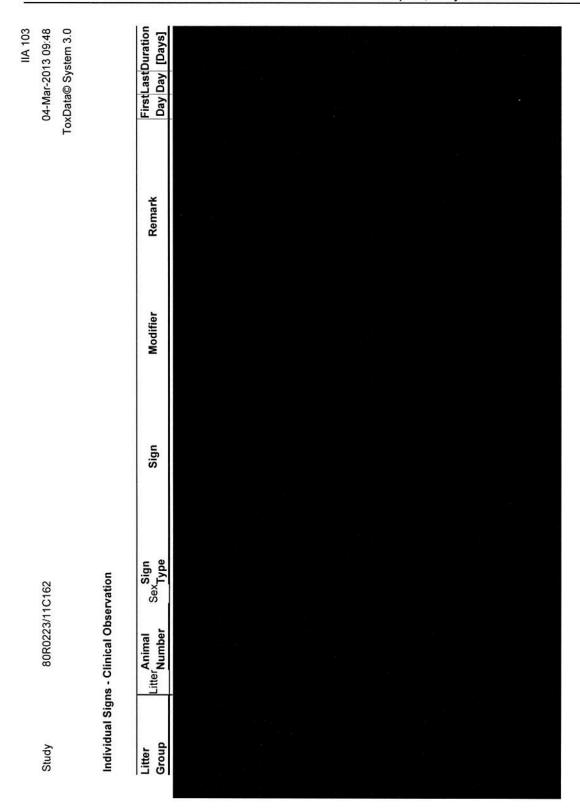
FirstLastDuration 04-Mar-2013 09:48 ToxData© System 3.0 Day Day [Days] Remark Modifier Sign Sex_Type Individual Signs - Clinical Observation 80R0223/11C162 Litter Number Animal Group Study Litter

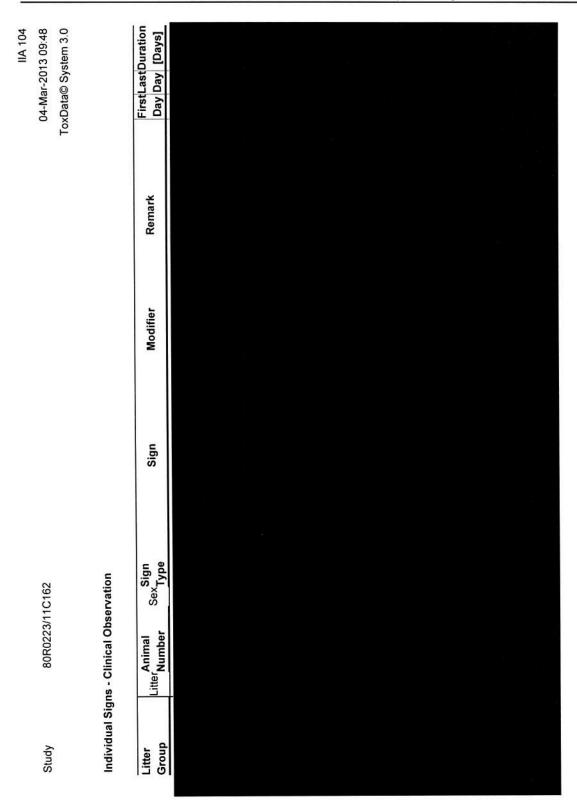




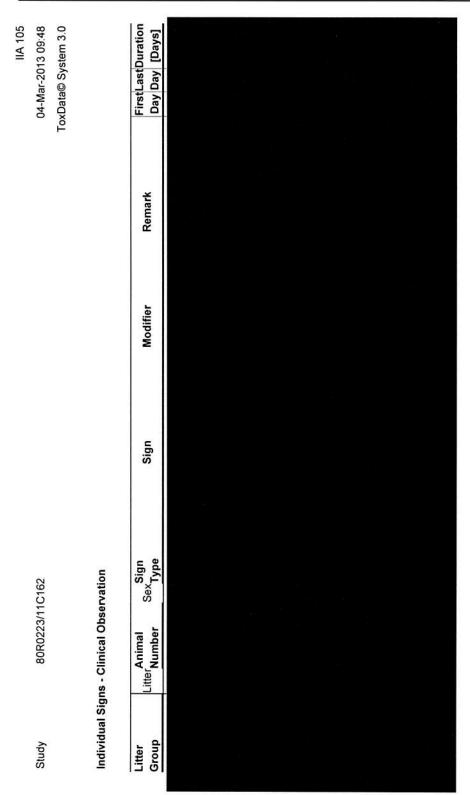








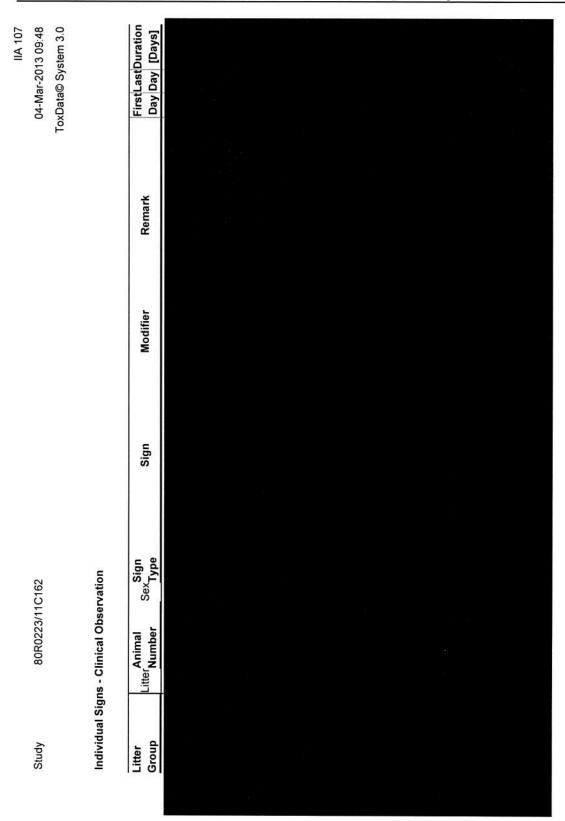




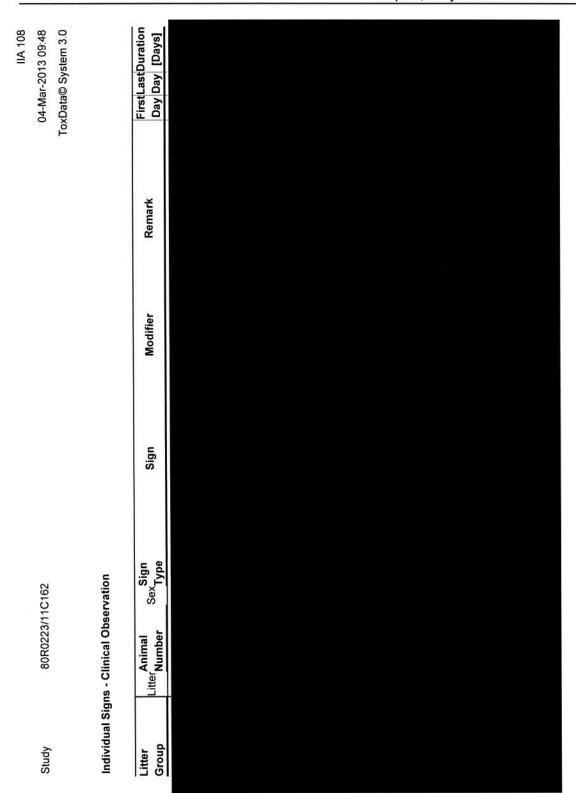


04-Mar-2013 09:48 ToxData© System 3.0 FirstLastDuration Day Day [Days] Remark Modifier Sign Sex_Type Individual Signs - Clinical Observation 80R0223/11C162 Litter Animal Group Study Litter

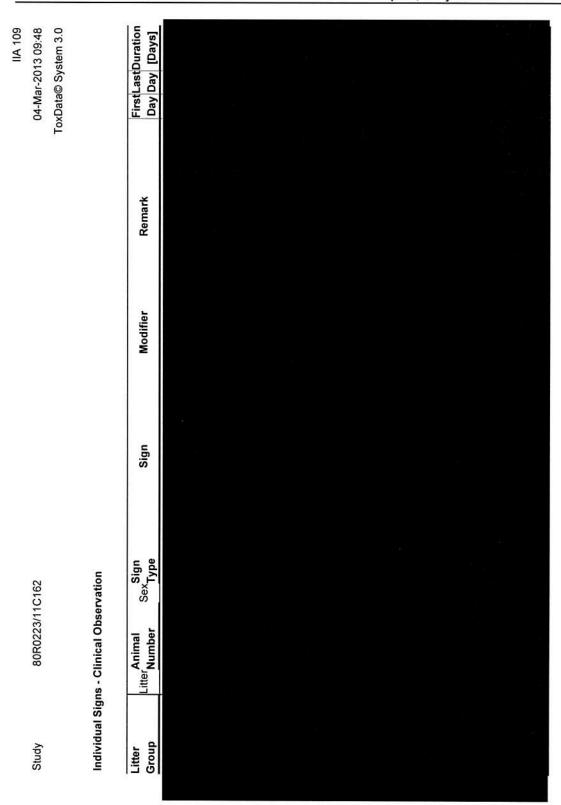




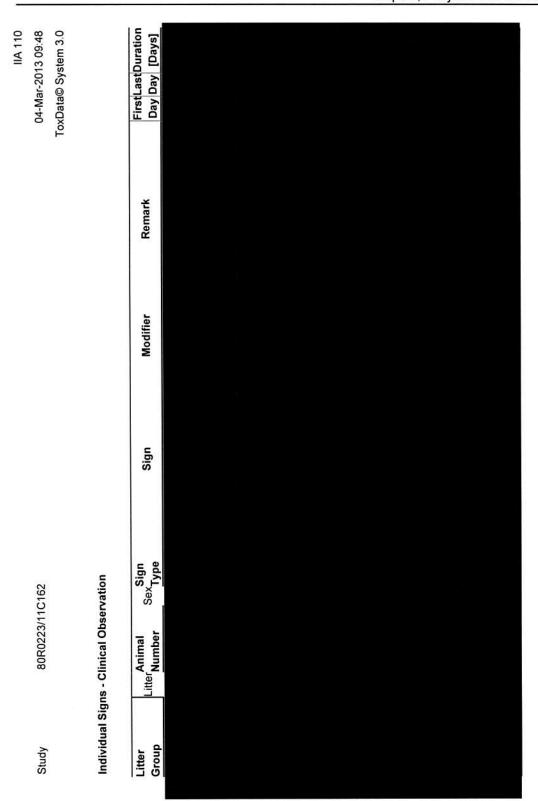








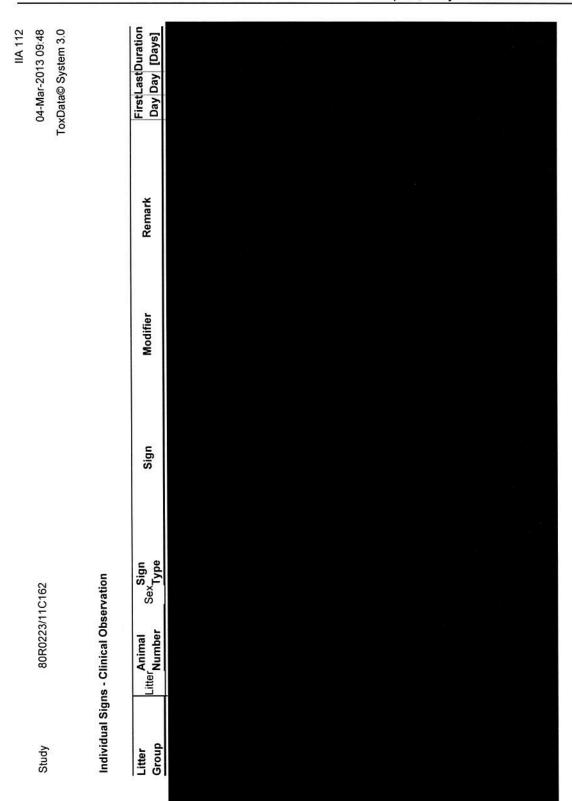


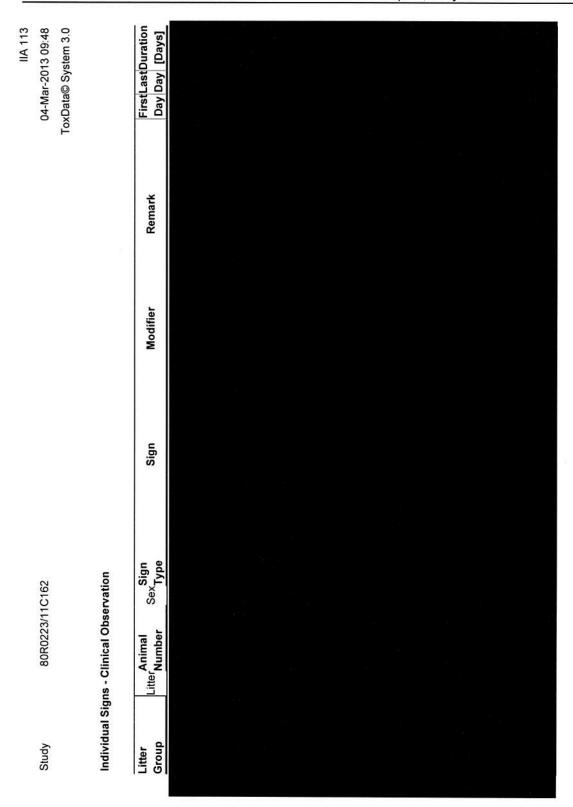




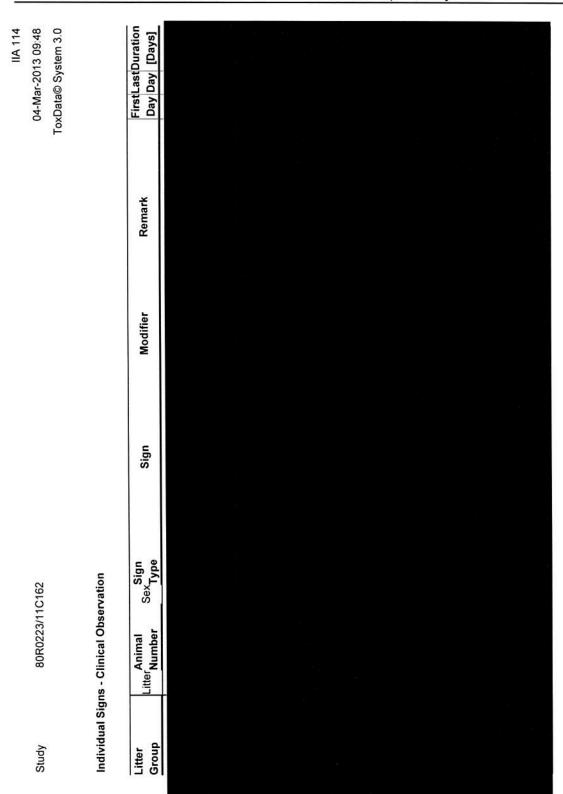
FirstLastDuration Day Day [Days] IIA 111 04-Mar-2013 09:48 ToxData© System 3.0 Remark Modifier Sign Sex_Type Individual Signs - Clinical Observation 80R0223/11C162 Animal Litter Number Study Group Litter



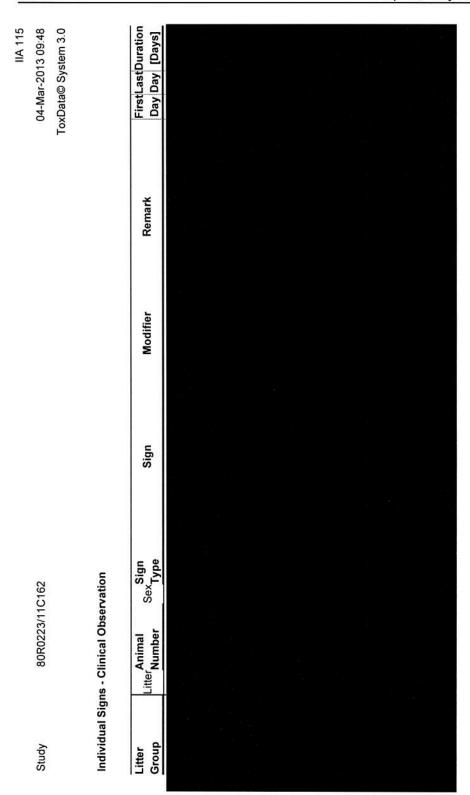






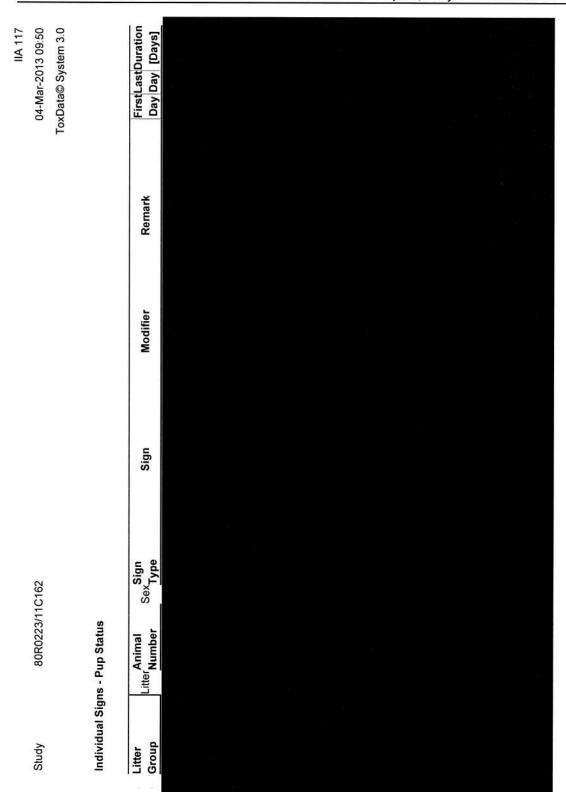




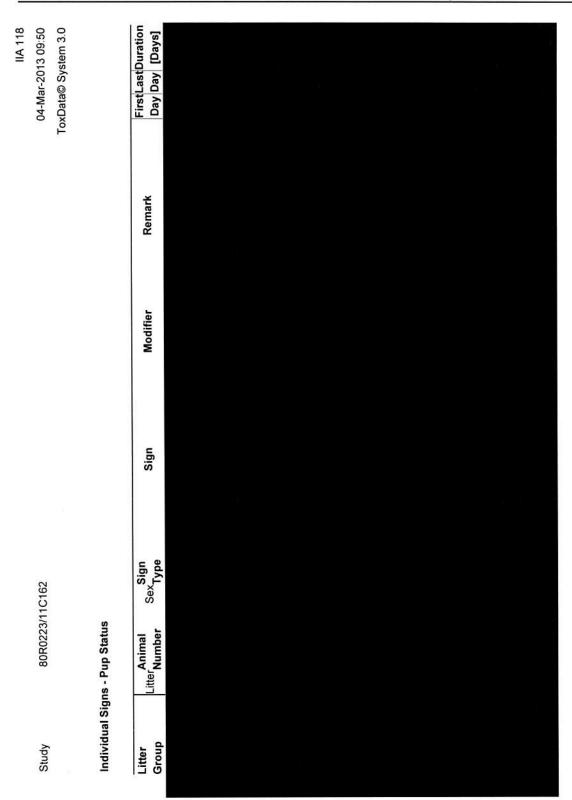


IIA 116 04-Mar-2013 09:50 ToxData© System 3.0 FirstLastDuration Day Day [Days] Remark Modifier Sign Sex_Type 80R0223/11C162 Individual Signs - Pup Status Animal Litter Number Group Study Litter

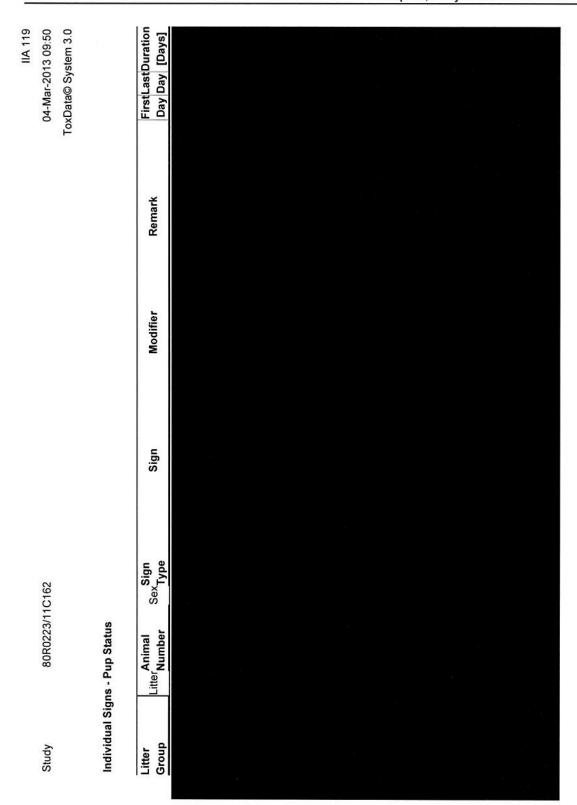




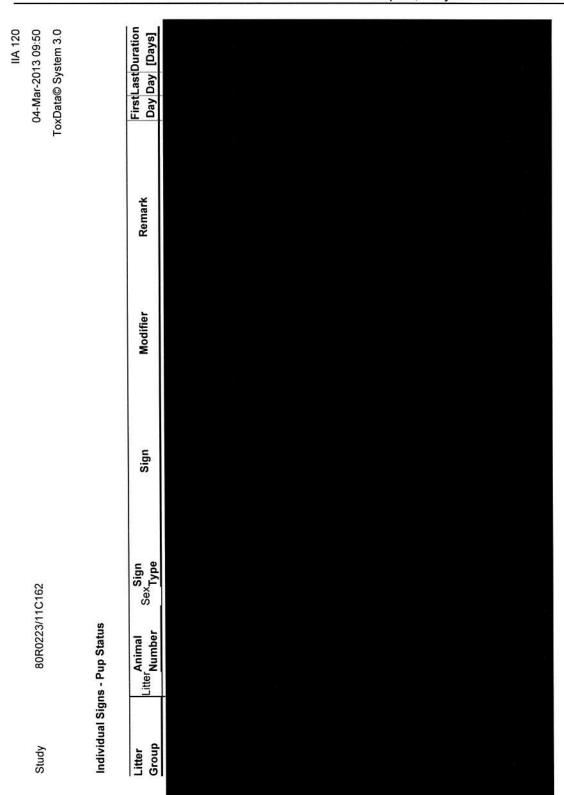




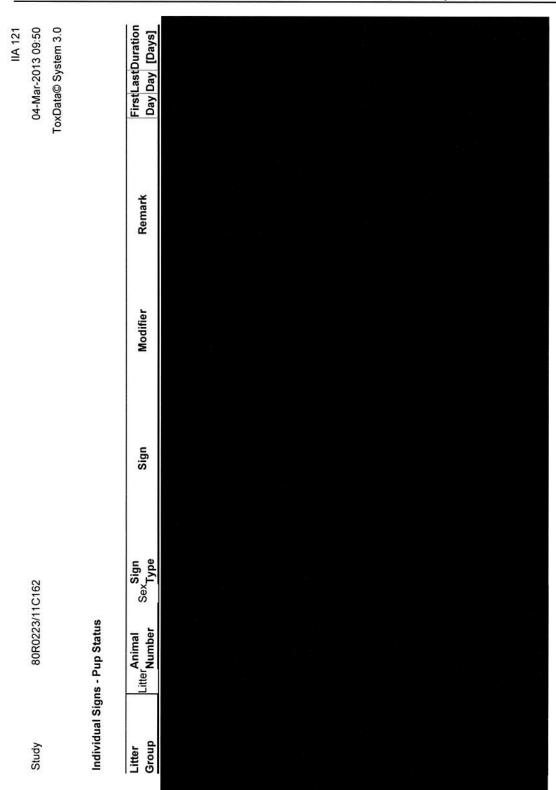




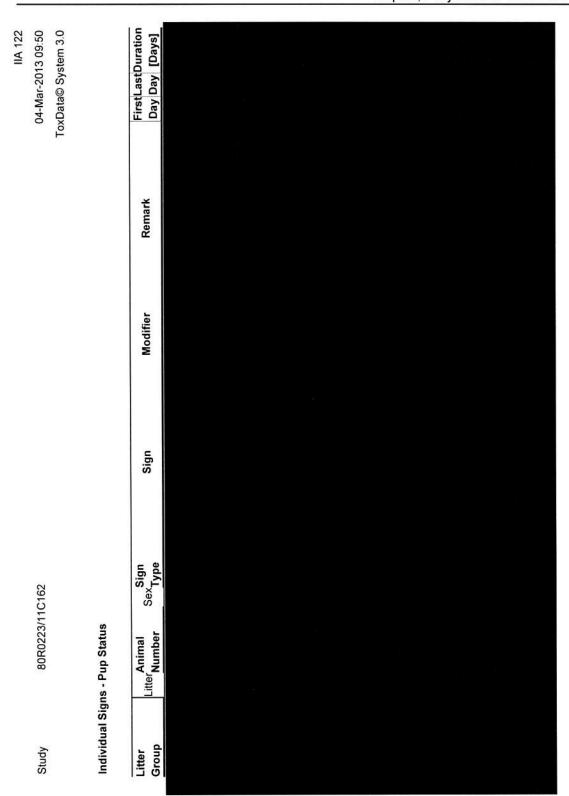






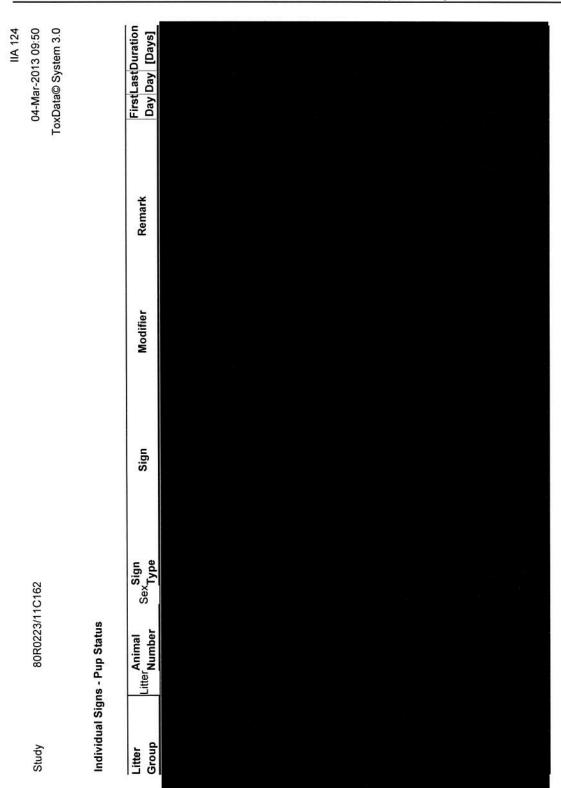




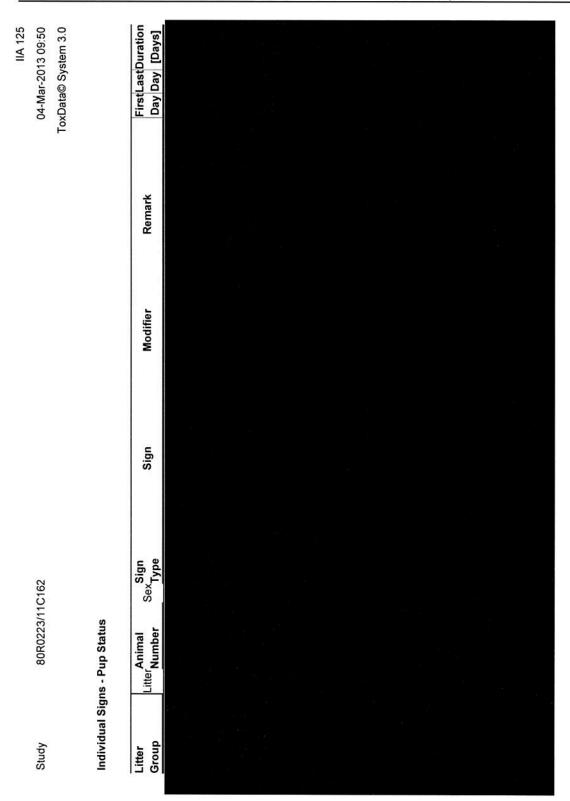


IIA 123	04-Mar-2013 09:50	ToxData© System 3.0		Remark FirstLastDuration Day Day [Days]	-
				Modifier	
				Sign	
	1C162			Sex Type	I
	80R0223/11		Individual Signs - Pup Status	Animal Litter Number	
	Study		Individual Si	Litter Group	

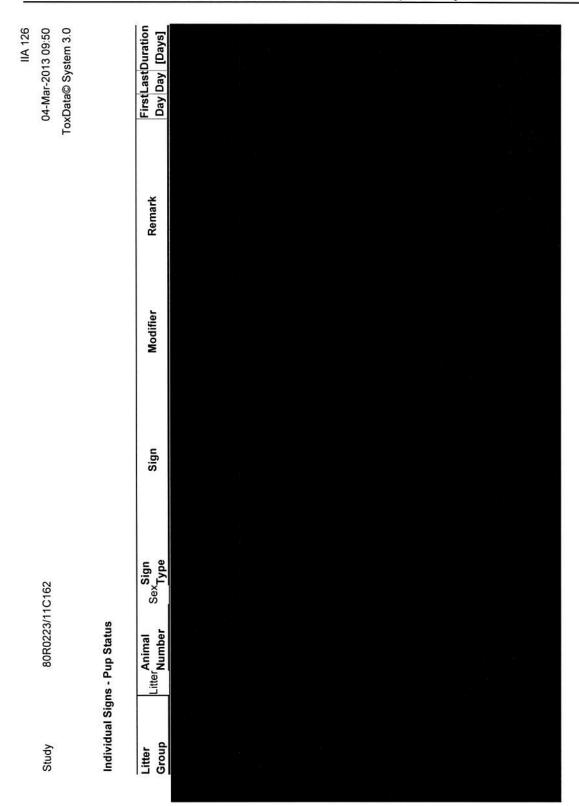




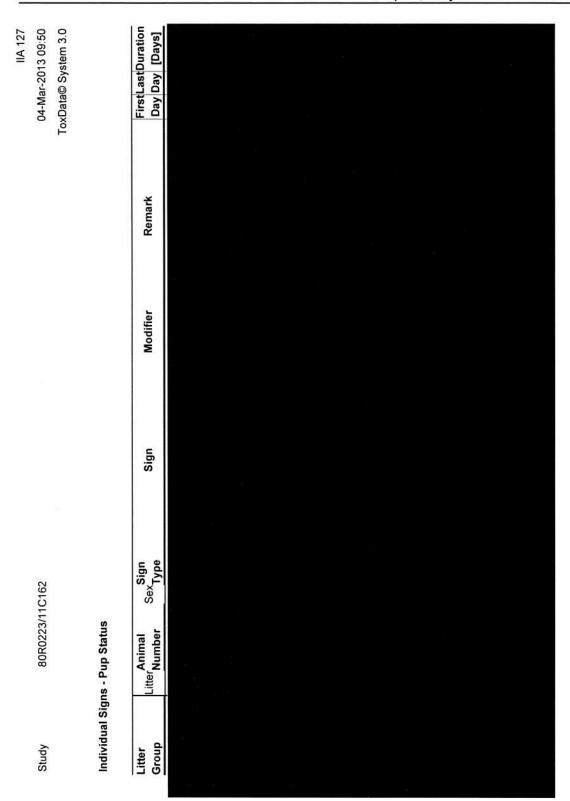




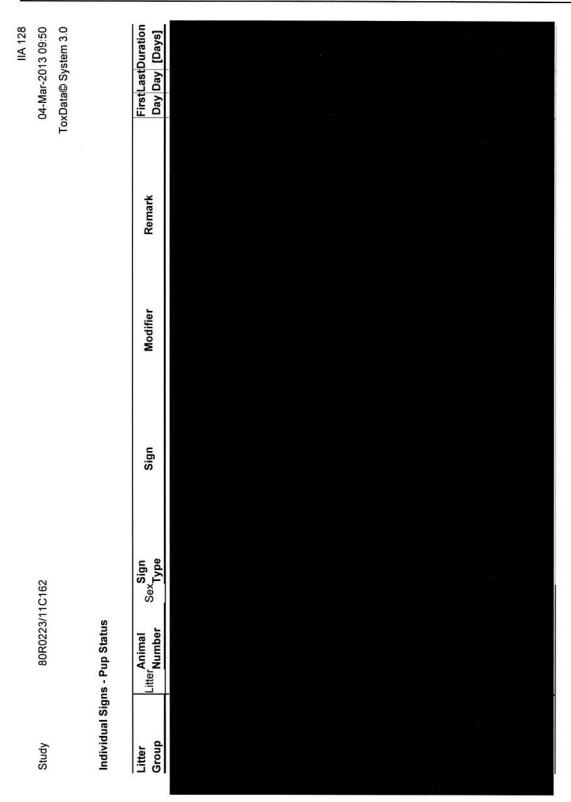




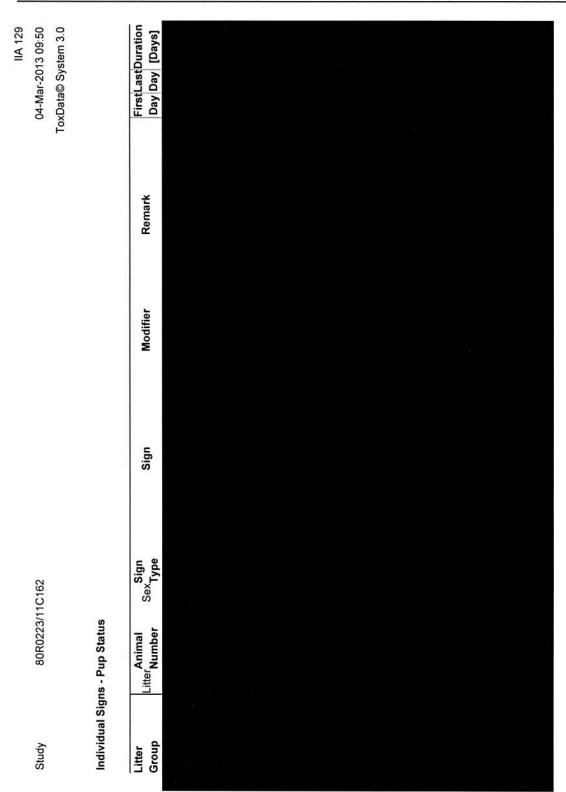




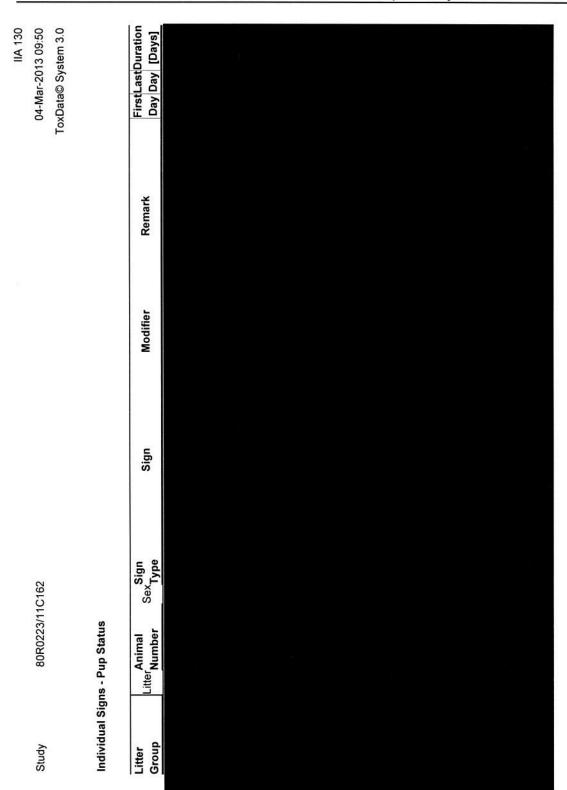




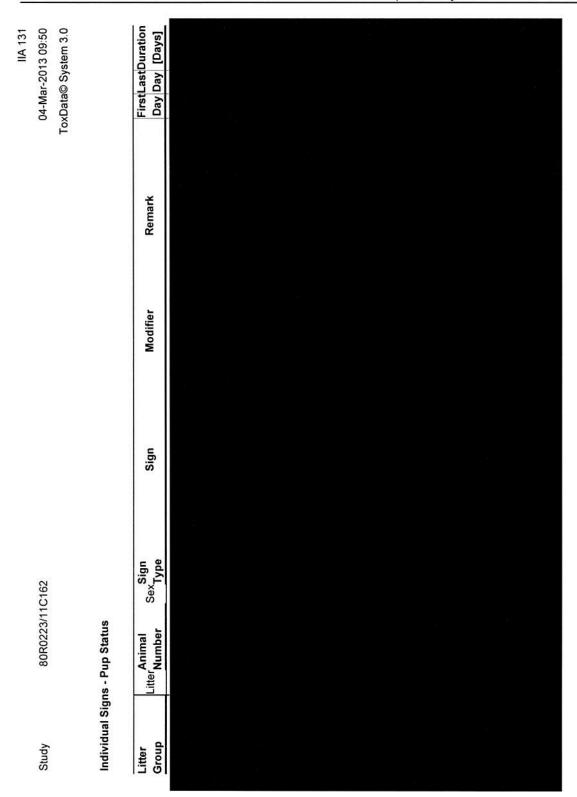




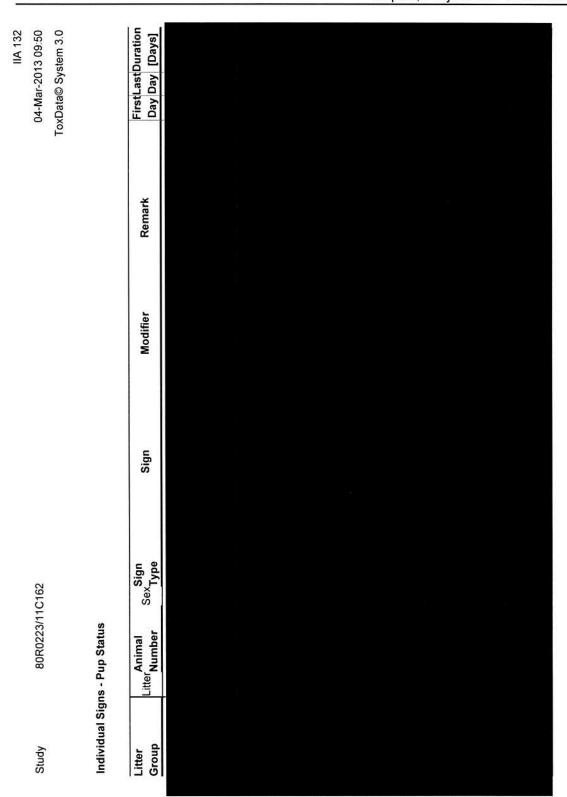








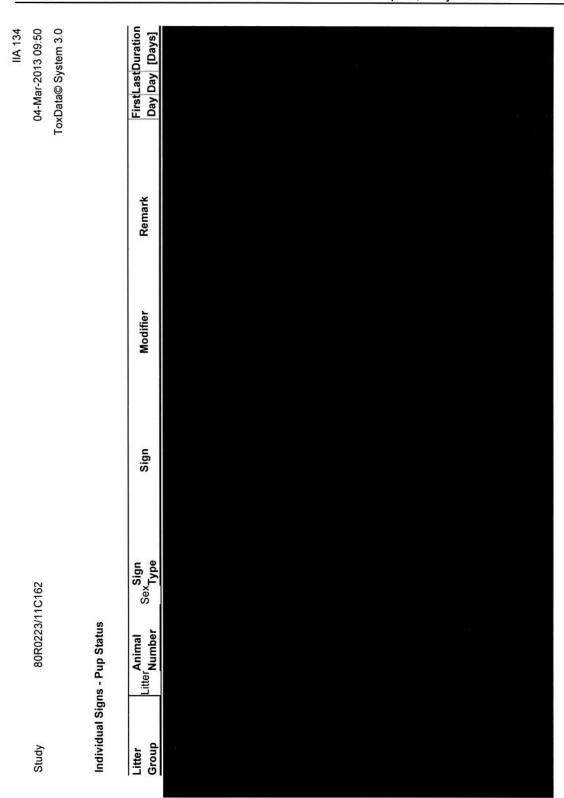




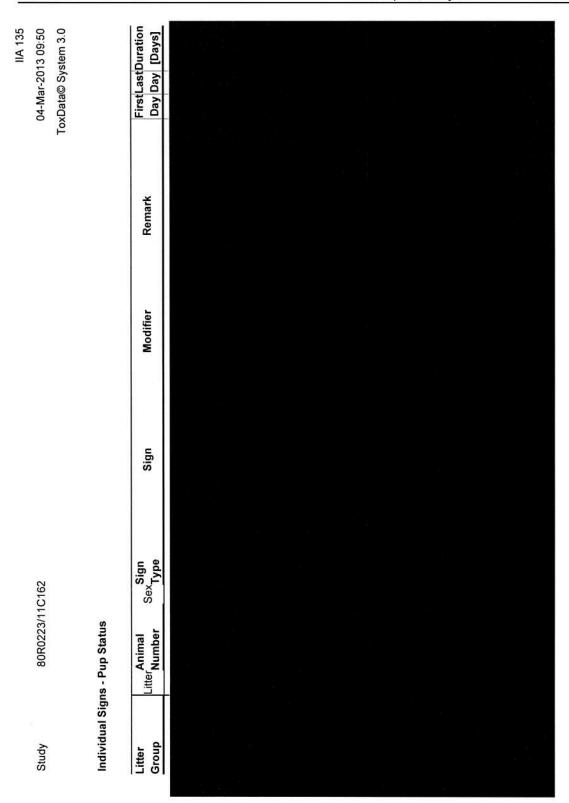


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IIA 133	04-Mar-2013 09:50	ToxData© System 3.0		FirstLastDuration Day Day [Days]	
				Remark	
				Modifier	
				Sign	
	1C162			Sex Type	
	80R0223/11C162		Individual Signs - Pup Status	Animal Litter Number	
	Study		Individual Si	Litter Group	





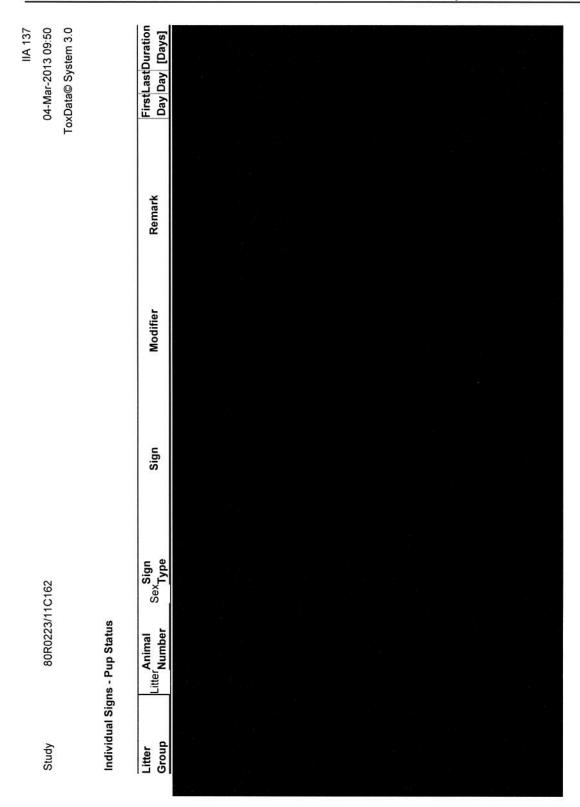




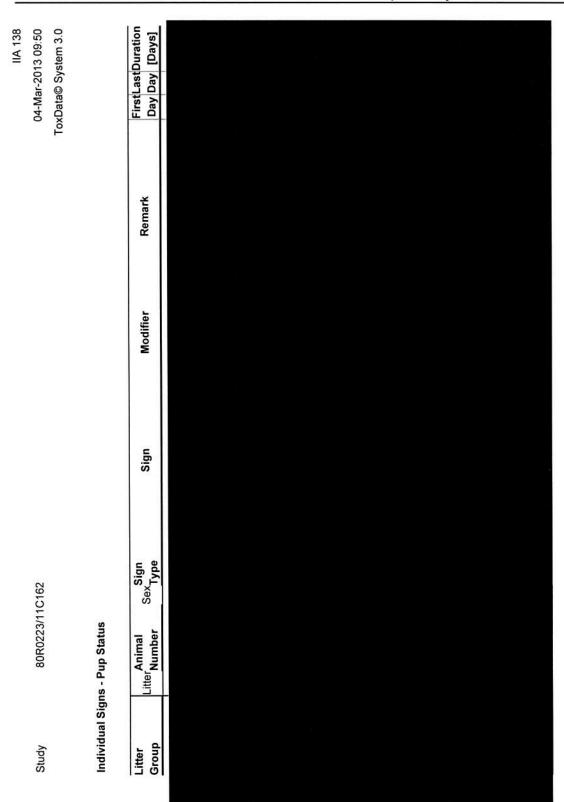


ToxData© System 3.0 FirstLastDuration 04-Mar-2013 09:50 Day Day [Days] Remark Modifier Sign Sex_Type 80R0223/11C162 Individual Signs - Pup Status Animal Litter Number Group Study Litter

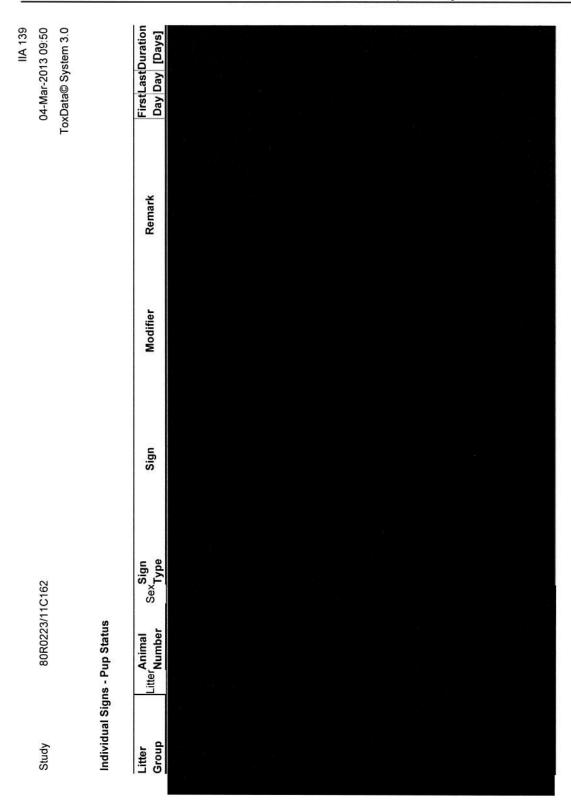




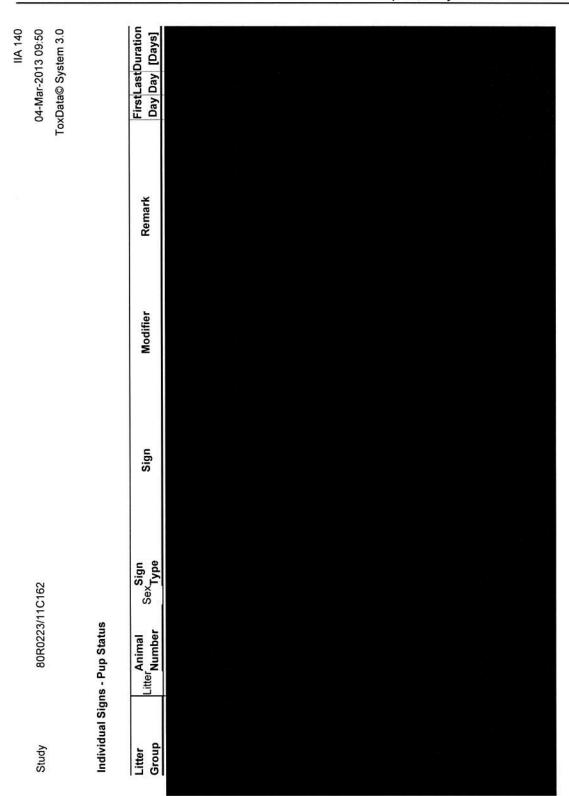




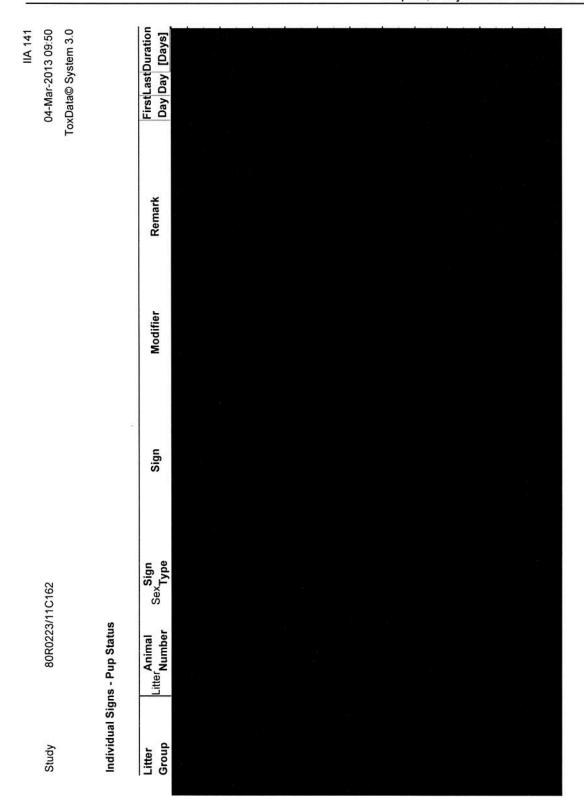










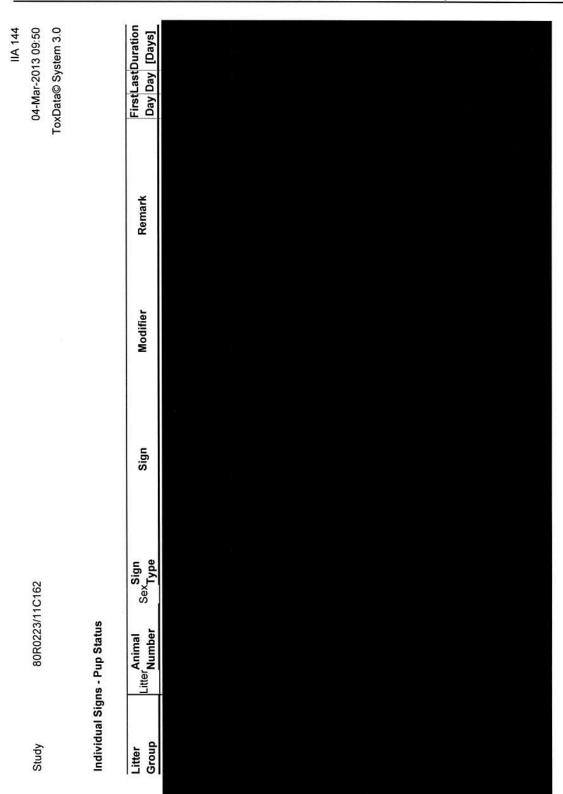




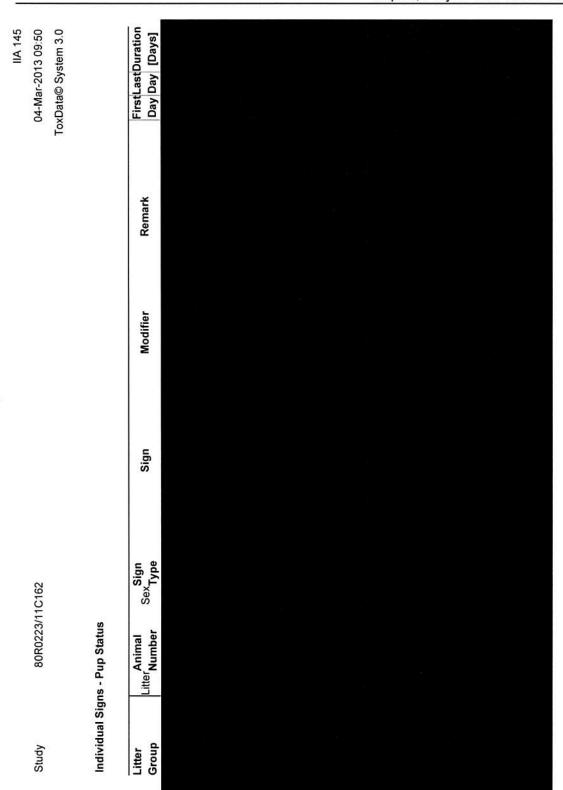
FirstLastDuration Day Day [Days] ToxData© System 3.0 04-Mar-2013 09:50 Remark Modifier Sign Sex_Type 80R0223/11C162 Individual Signs - Pup Status Animal Litter Number Group Study Litter

FirstLastDuration Day Day [Days] ToxData© System 3.0 04-Mar-2013 09:50 Remark Modifier Sign Sex Type 80R0223/11C162 Individual Signs - Pup Status Animal Litter Number Study Group Litter

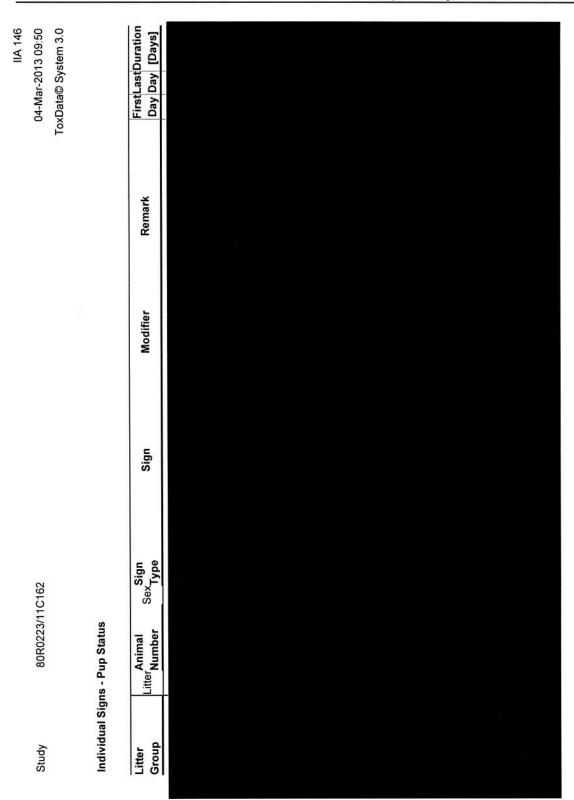




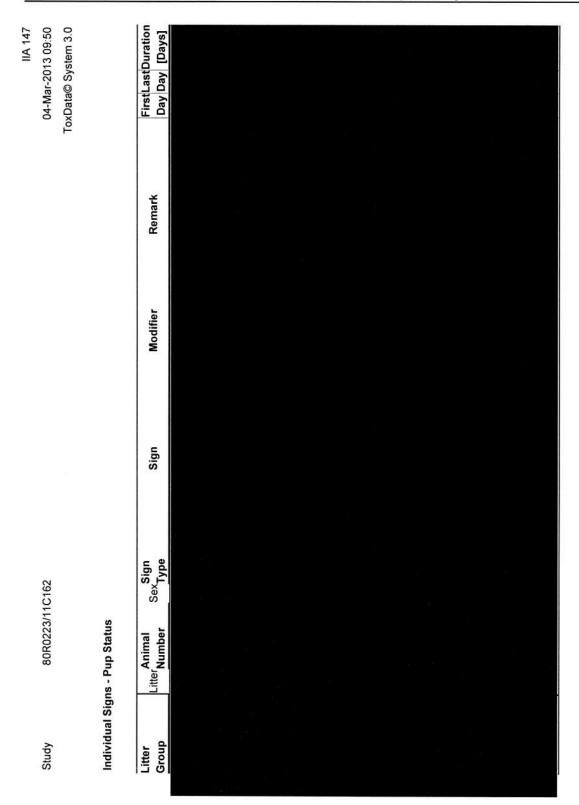




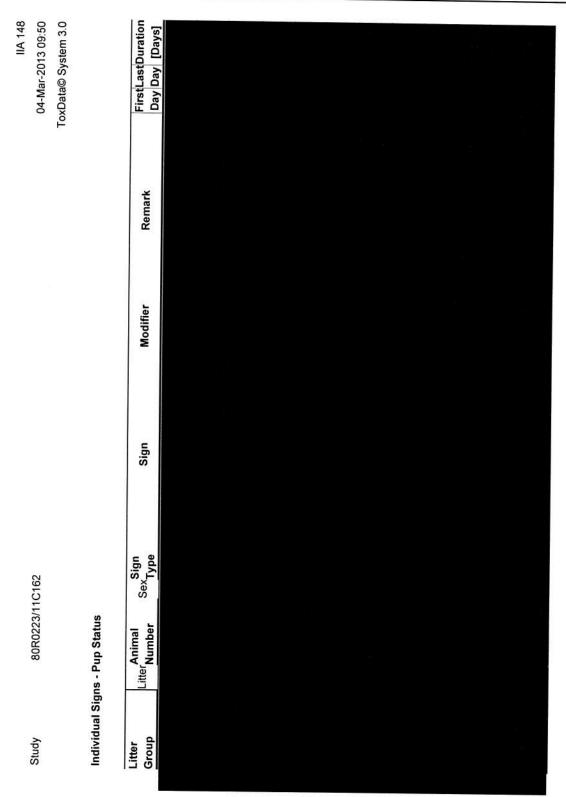


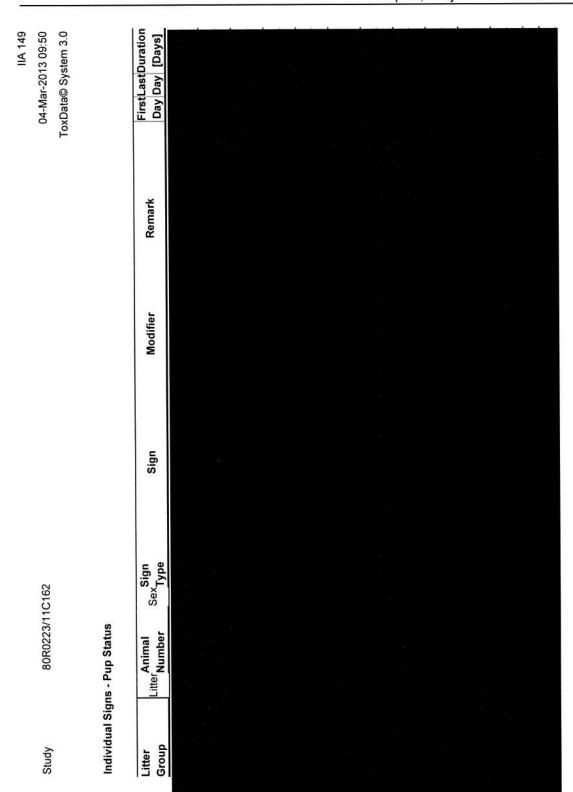








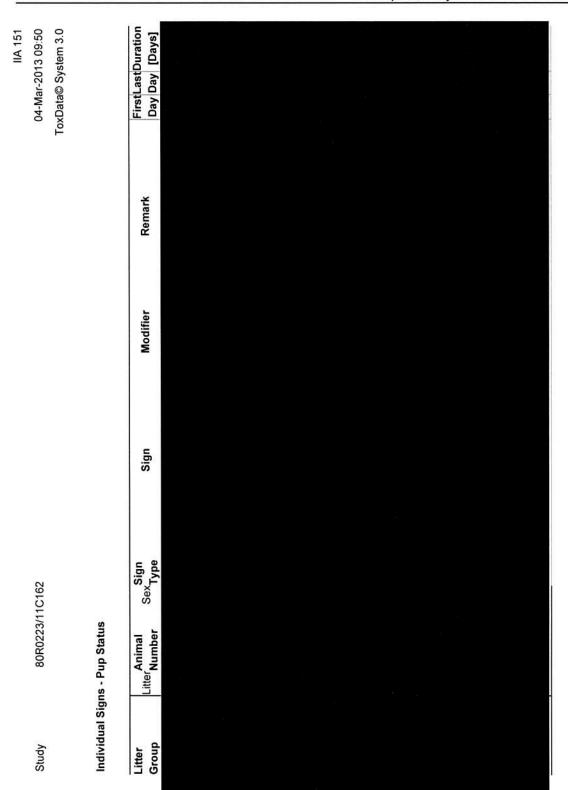


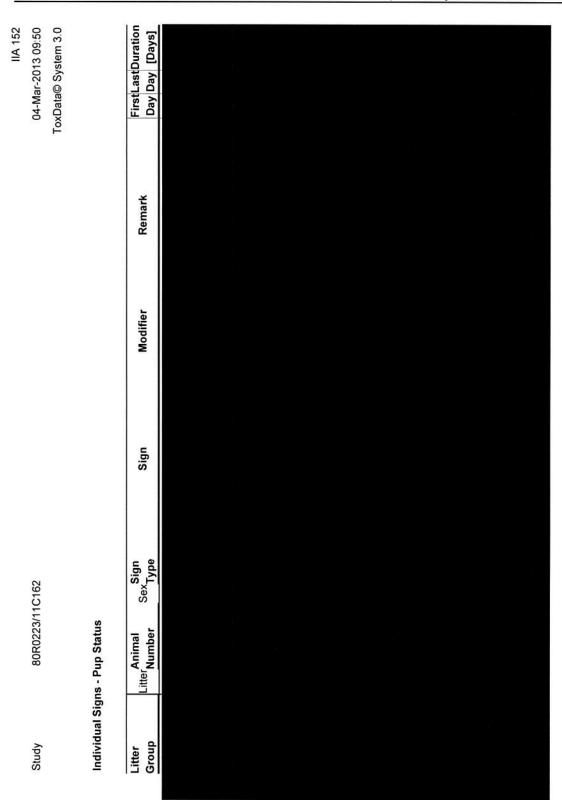




FirstLastDuration Day Day [Days] 04-Mar-2013 09:50 ToxData© System 3.0 Remark Modifier Sign Sex Type 80R0223/11C162 Individual Signs - Pup Status Animal Litter Number Group Study Litter



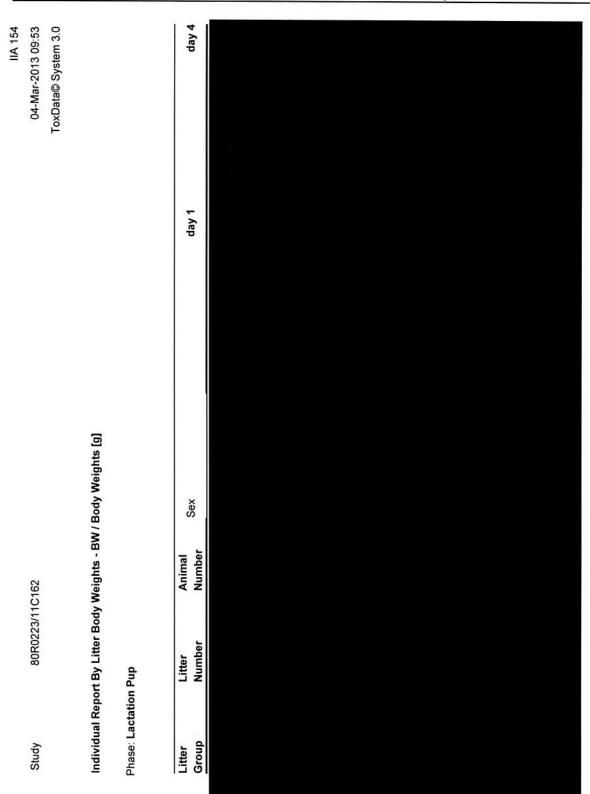






						IIA 153
Study	80R0223/11C162	1C162				04-Mar-2013 09:50 ToxData© System 3.0
vidual Siç	Individual Signs - Pup Status					
Litter Group	Litter Number	Sex Type	Sign	Modifier	Remark	FirstLastDuration Day Day [Days]

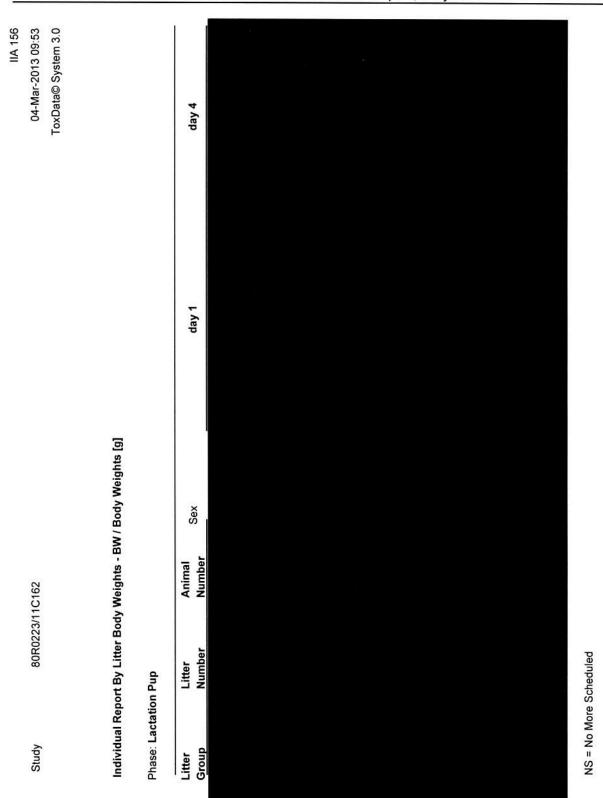


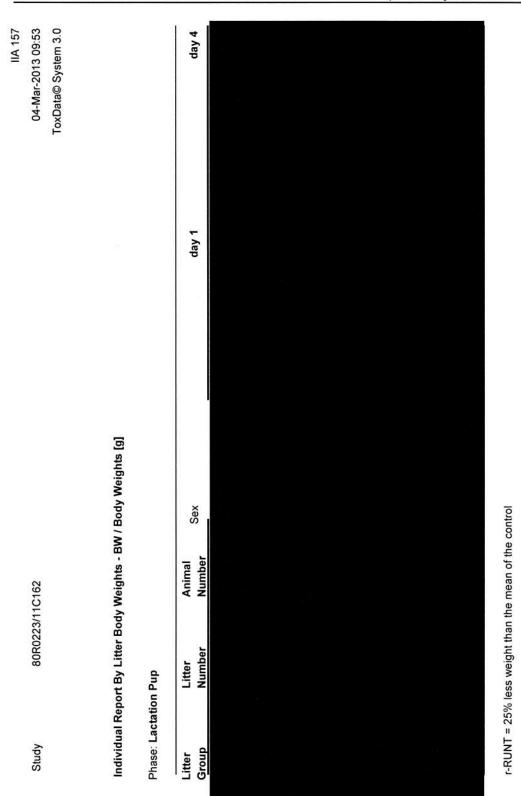




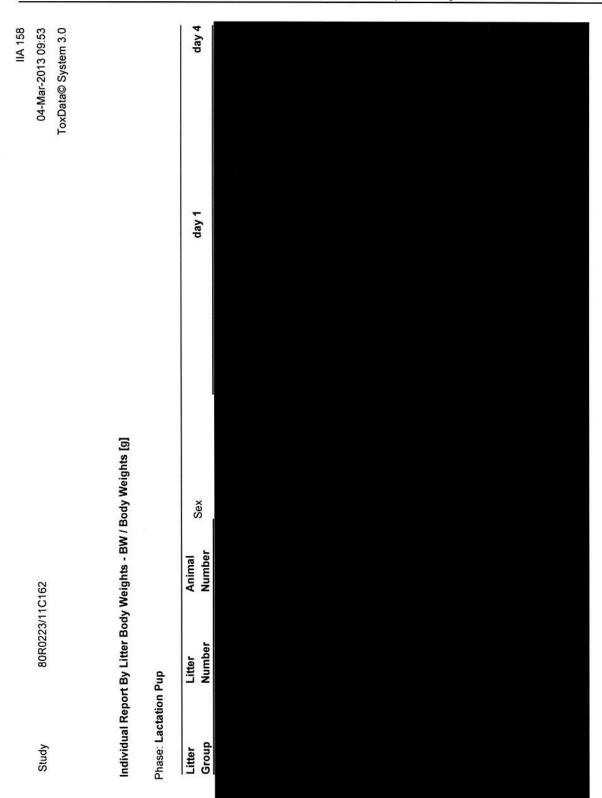
day 4 04-Mar-2013 09:53 ToxData© System 3.0 day 1 Individual Report By Litter Body Weights - BW / Body Weights [g] Sex Animal Number 80R0223/11C162 Litter Number Phase: Lactation Pup Litter Group Study

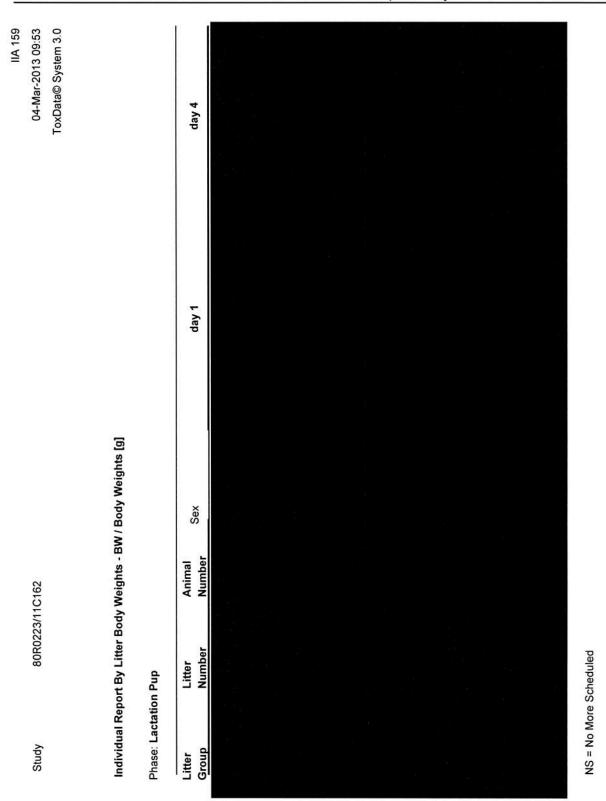




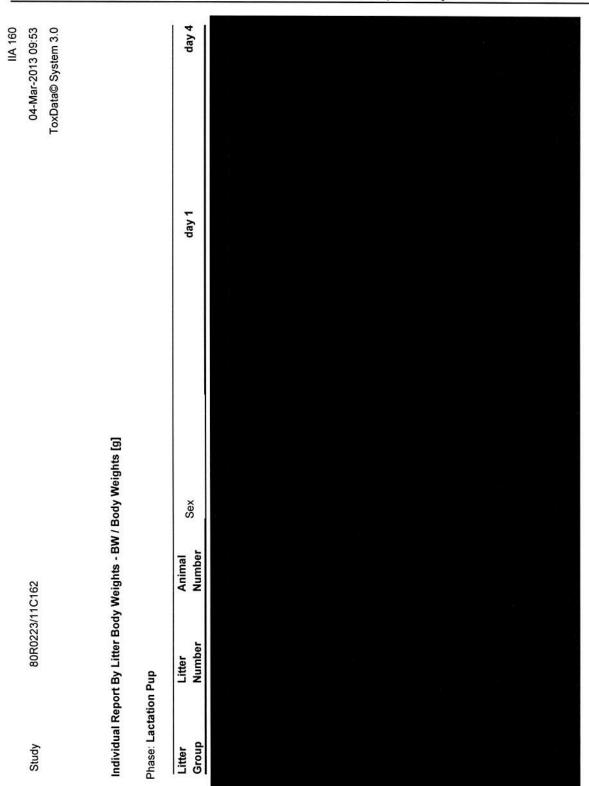


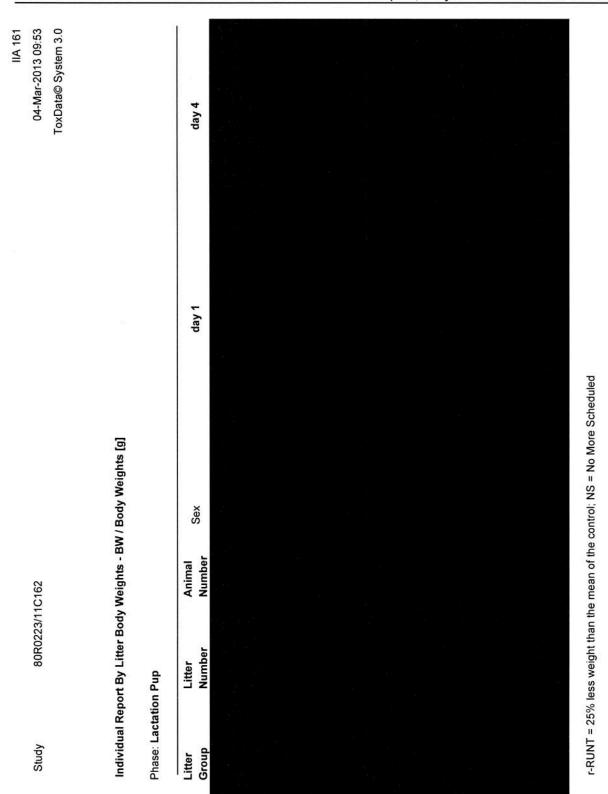


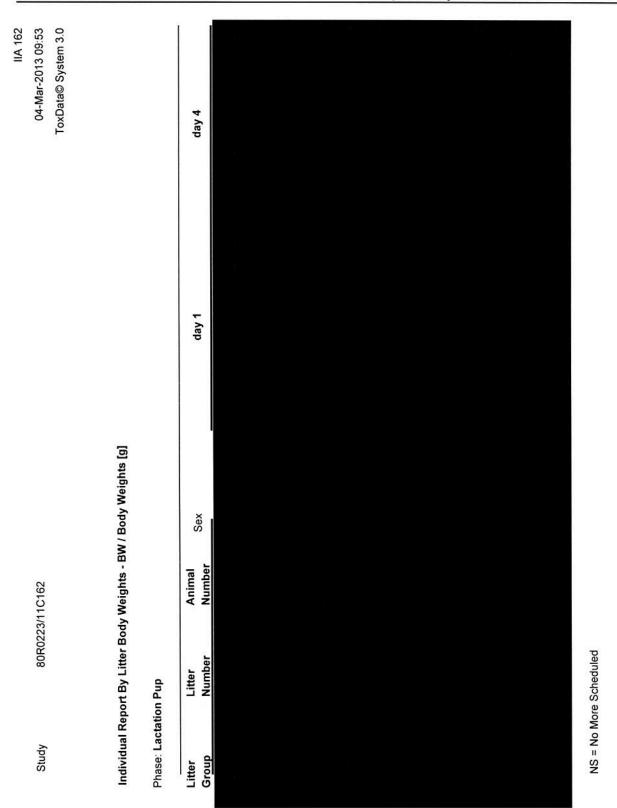




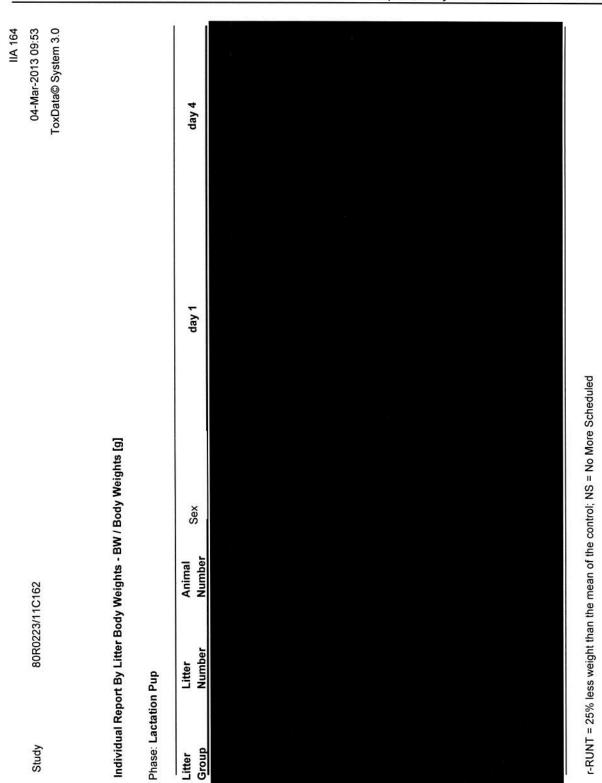


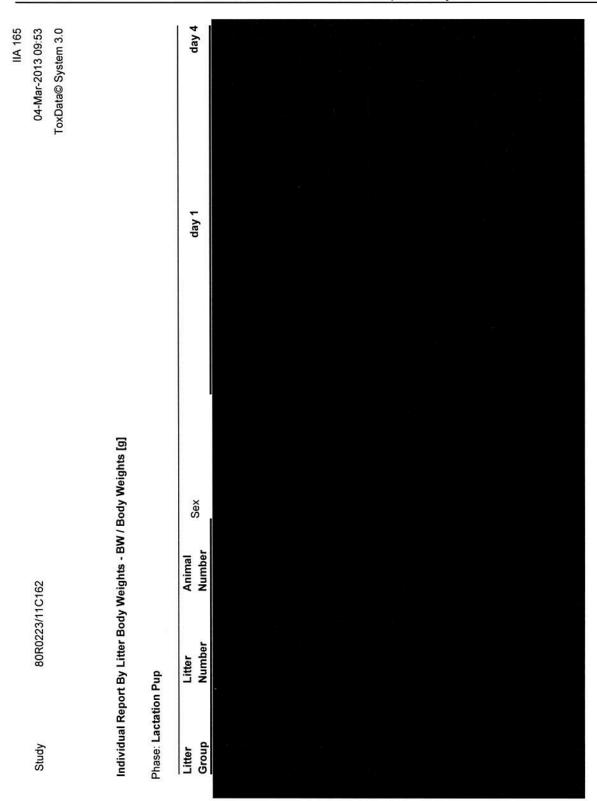




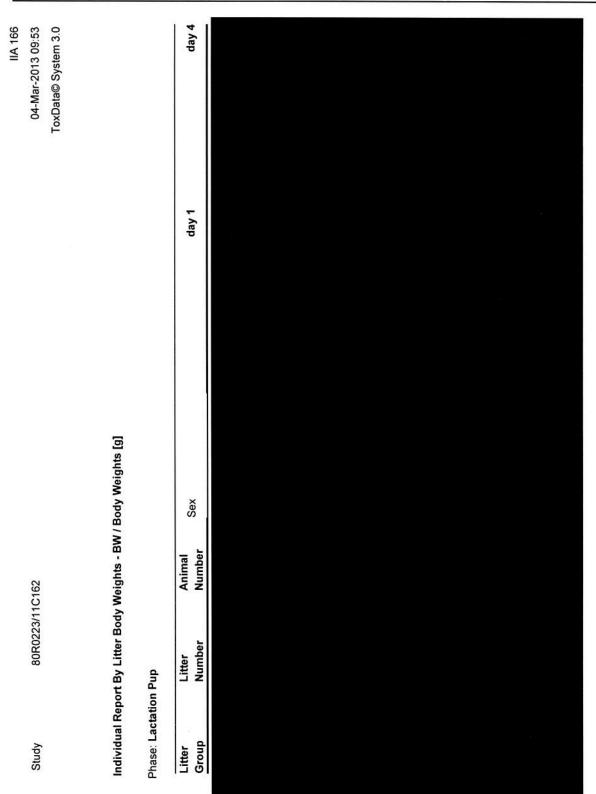


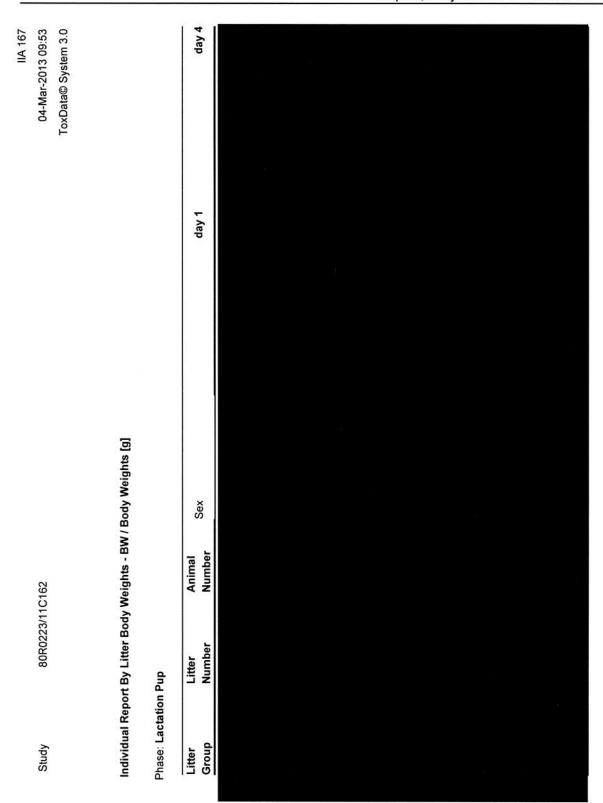
_		_			1 4	
IIA 163	04-Mar-2013 09:53	ToxData© System 3.0			day 4	
					day 1	
			Individual Report By Litter Body Weights - BW / Body Weights [g]		Sex	
	11C162		dy Weights - BW		Animal Number	
	80R0223/11C162		eport By Litter Boo	ıtion Pup	Litter Number	
	Study		Individual R	Phase: Lactation Pup	Litter Group	









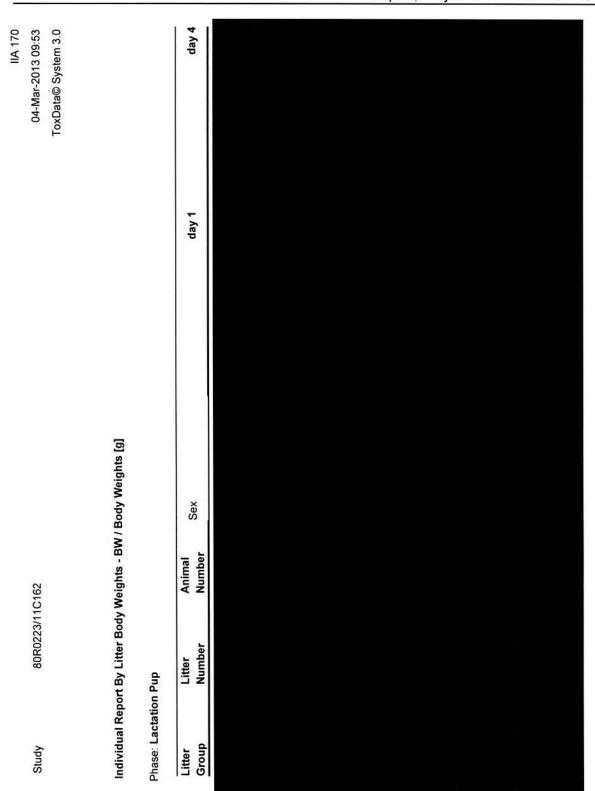




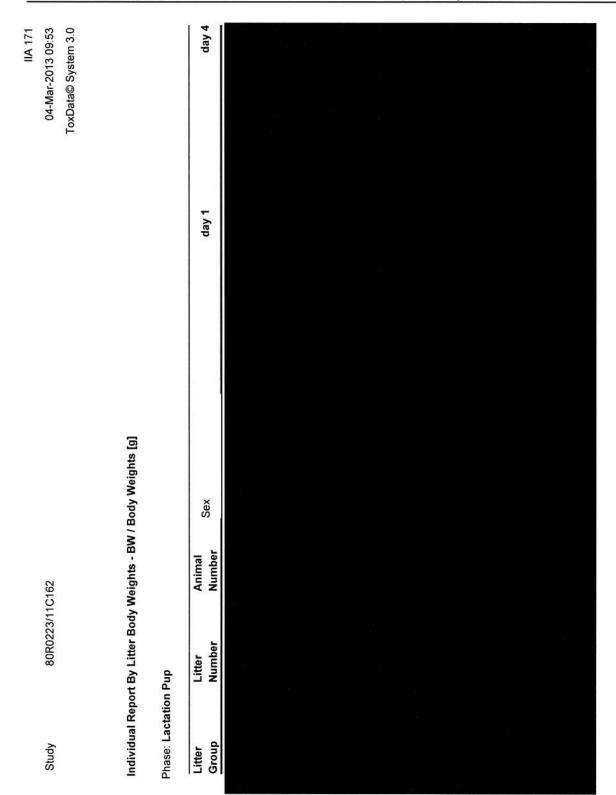
day 4 04-Mar-2013 09:53 ToxData© System 3.0 day 1 Individual Report By Litter Body Weights - BW / Body Weights [g] Sex Animal Number 80R0223/11C162 Litter Number Phase: Lactation Pup Study Litter Group

IIA 169	04-Mar-2013 09:53	ToxData© System 3.0			day 4	
					day 1	
			Individual Report By Litter Body Weights - BW / Body Weights [g]		Sex	
	11C162		dy Weights - BW		Animal Number	
	80R0223/11C162		eport By Litter Boo	tion Pup	Litter Number	
	Study		Individual R	Phase: Lactation Pup	Litter Group	

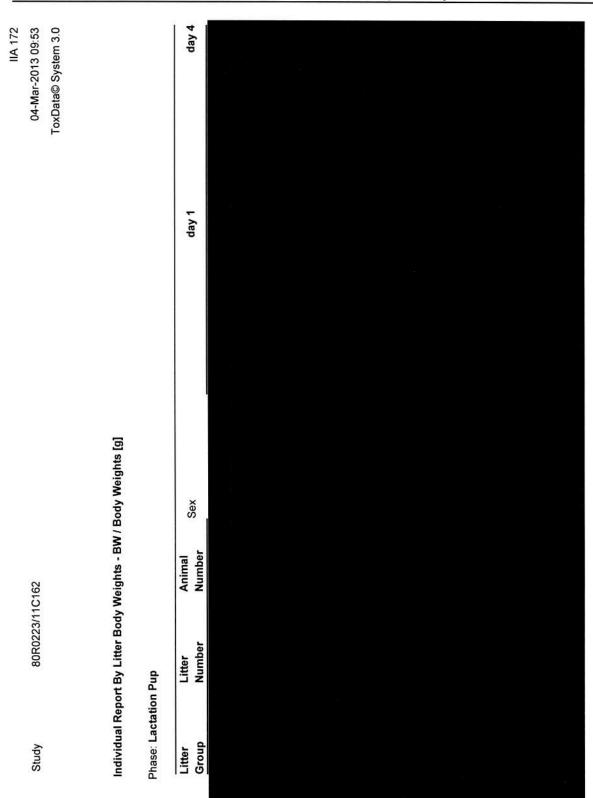


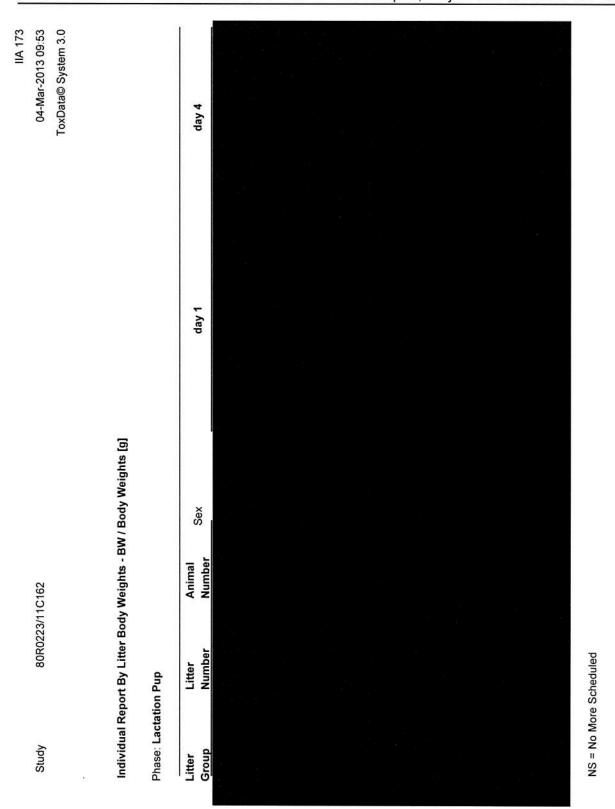




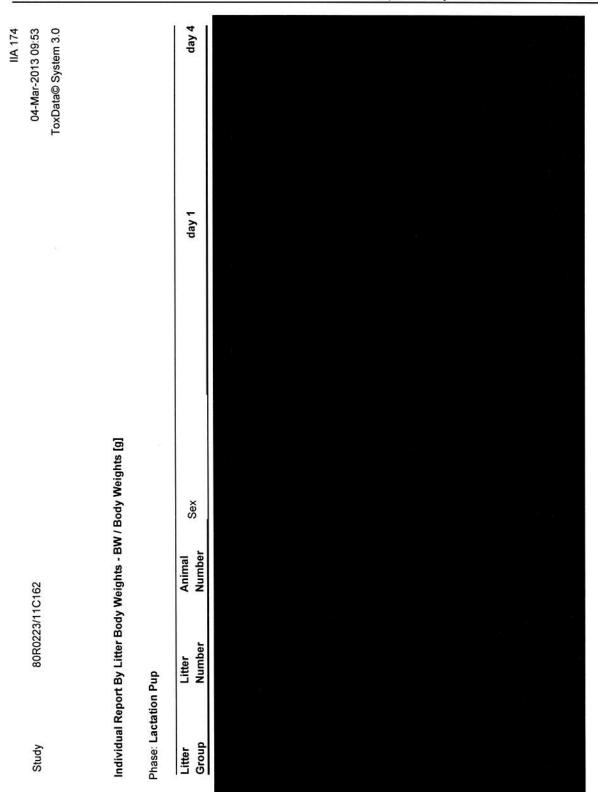


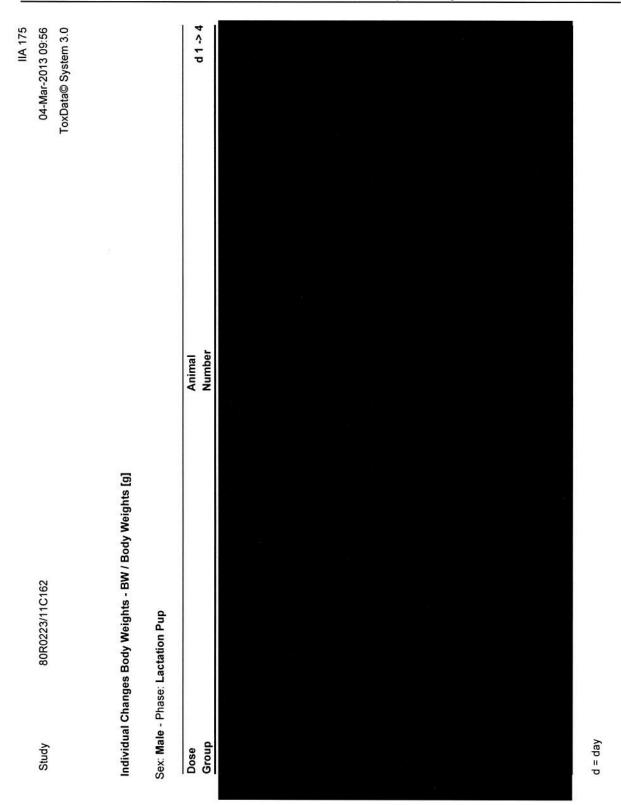


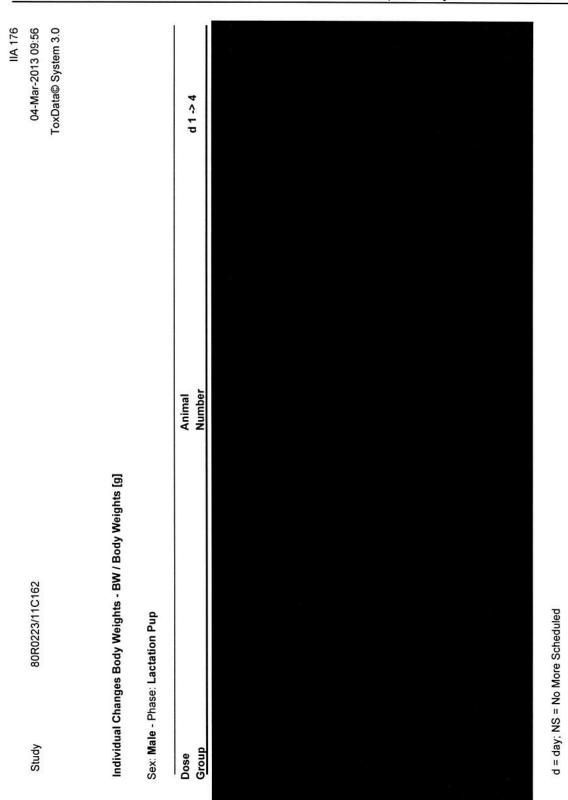




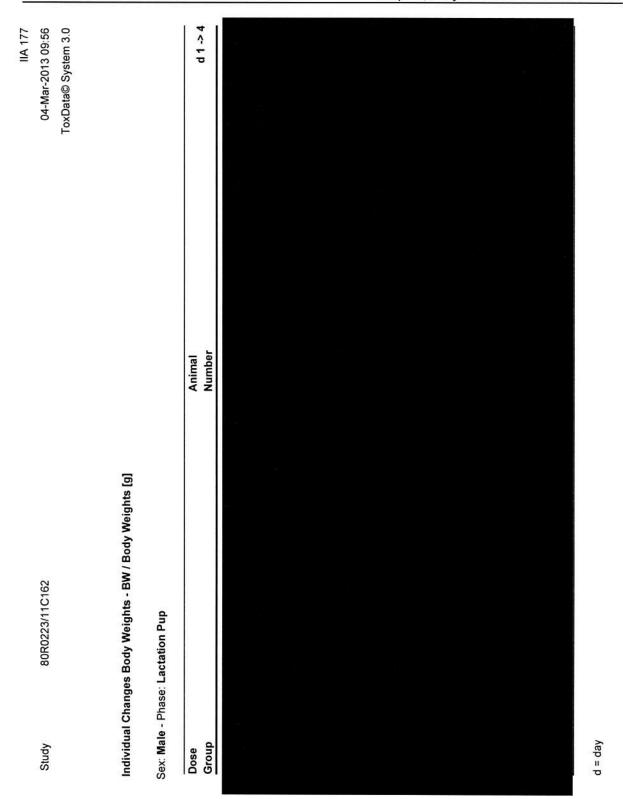




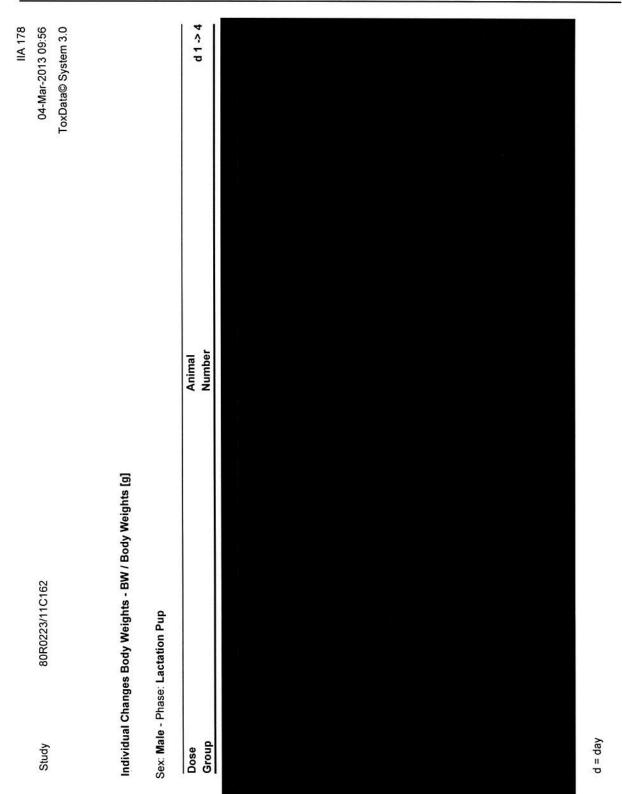


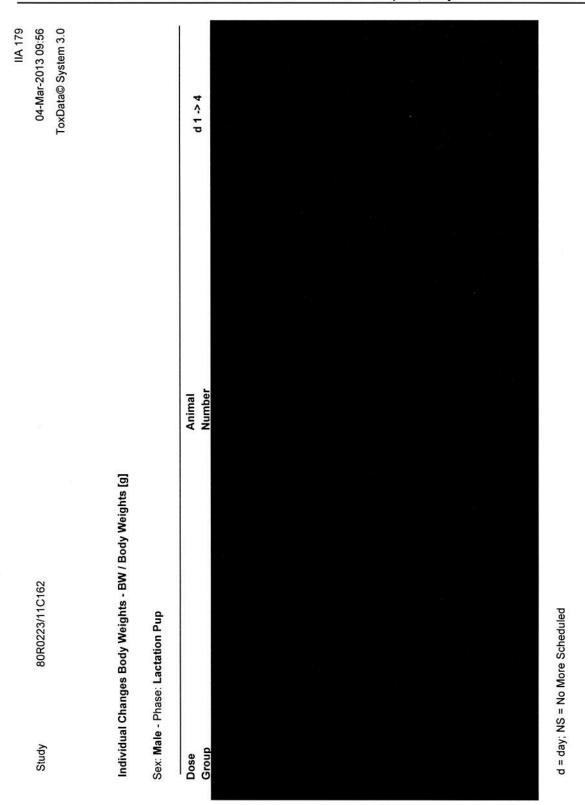


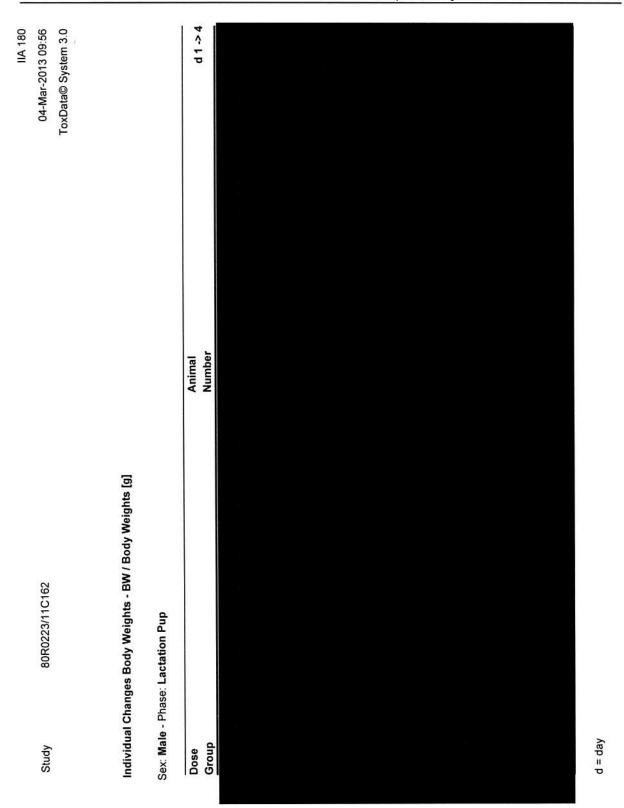


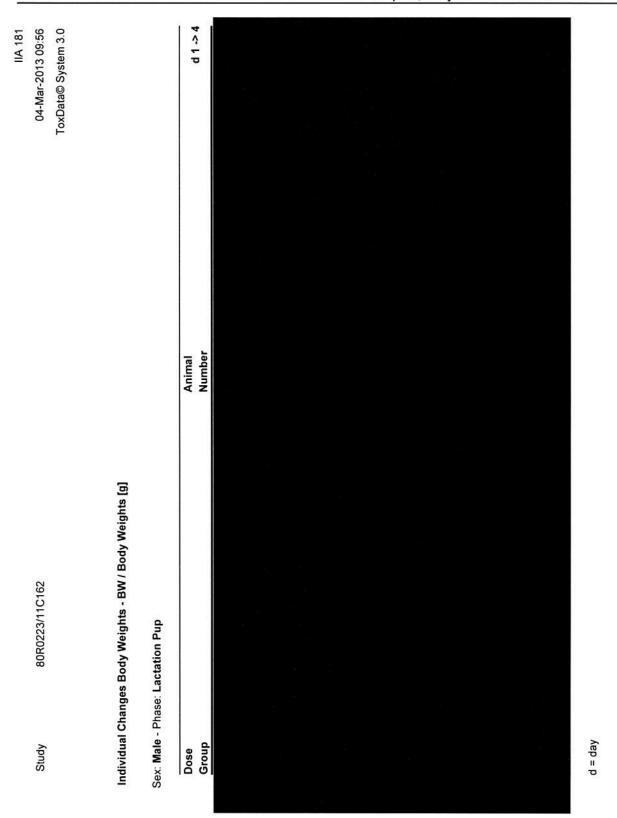




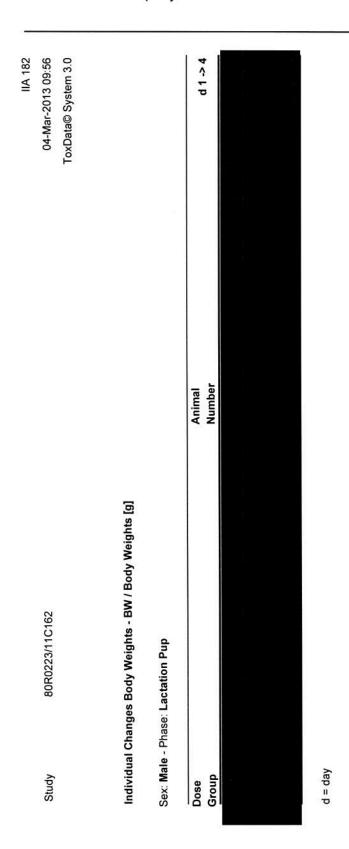


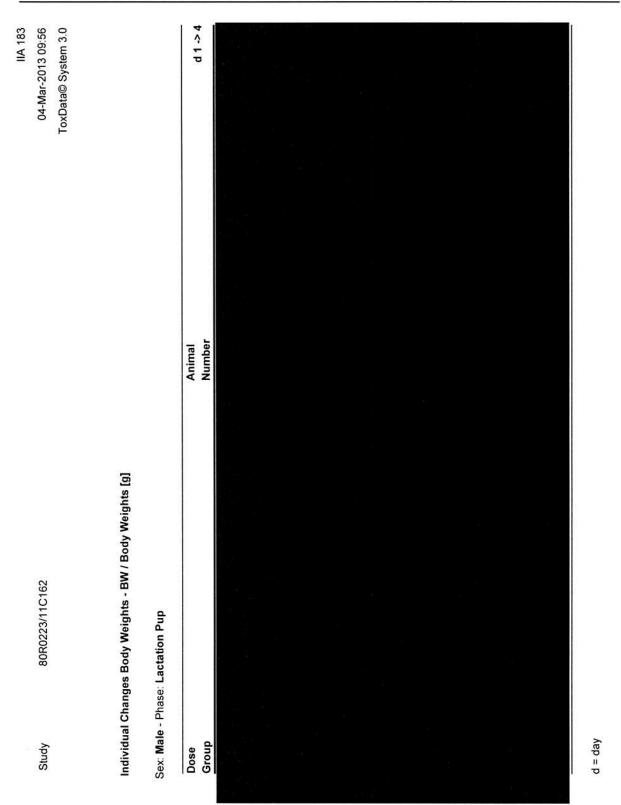


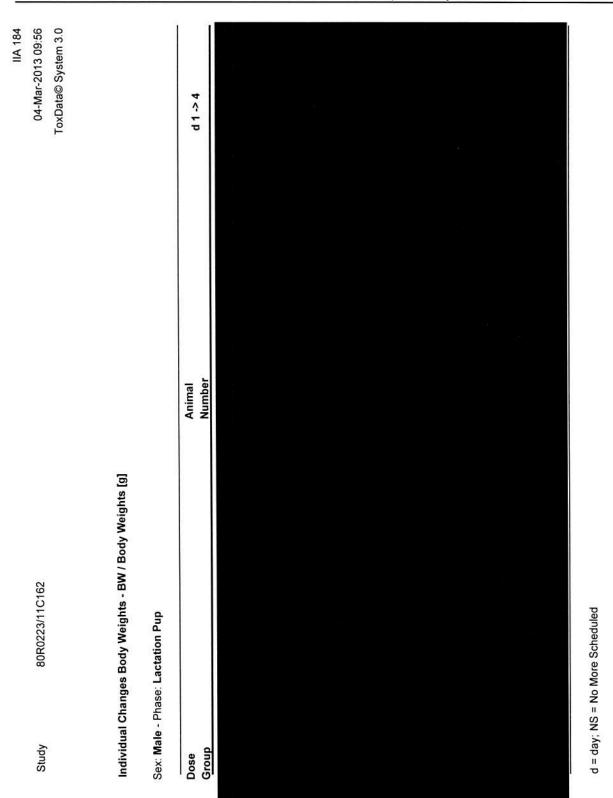


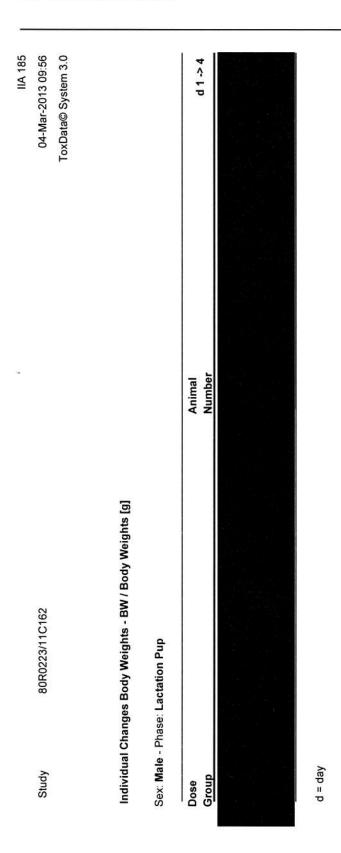


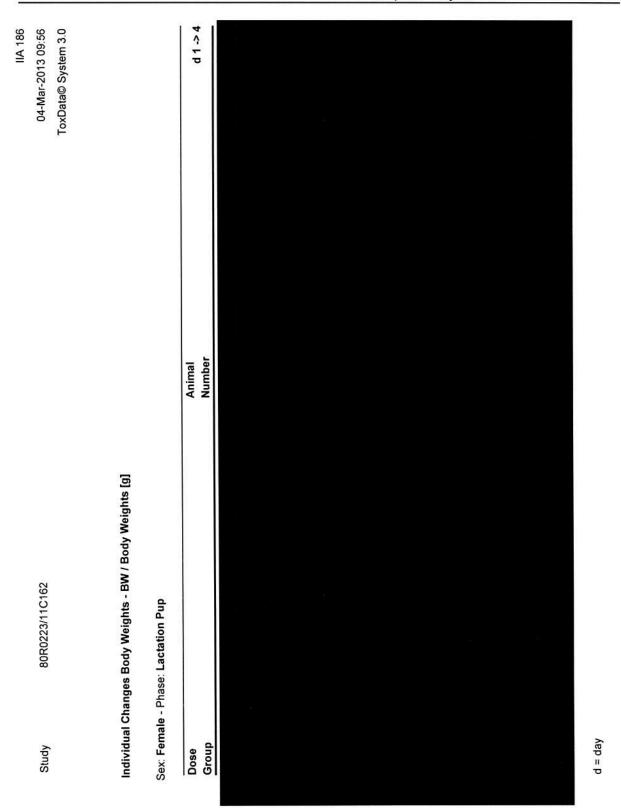


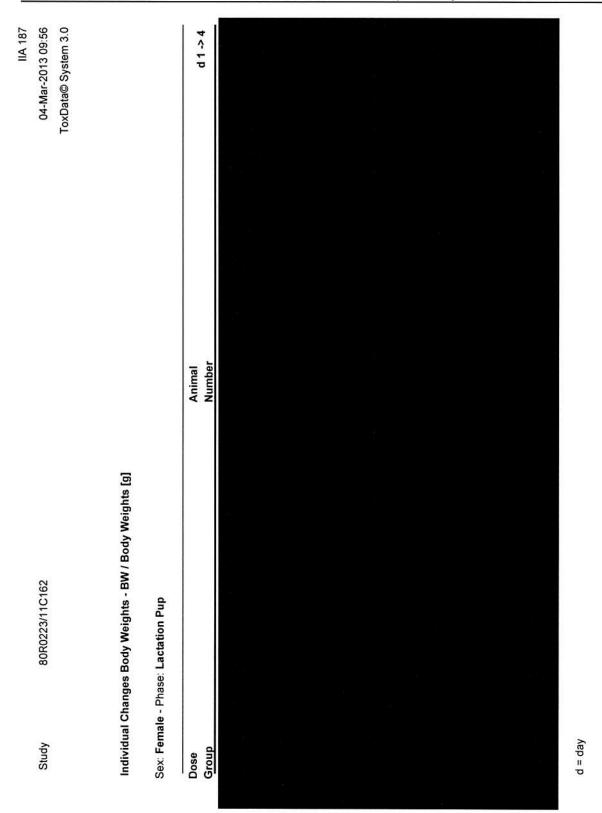


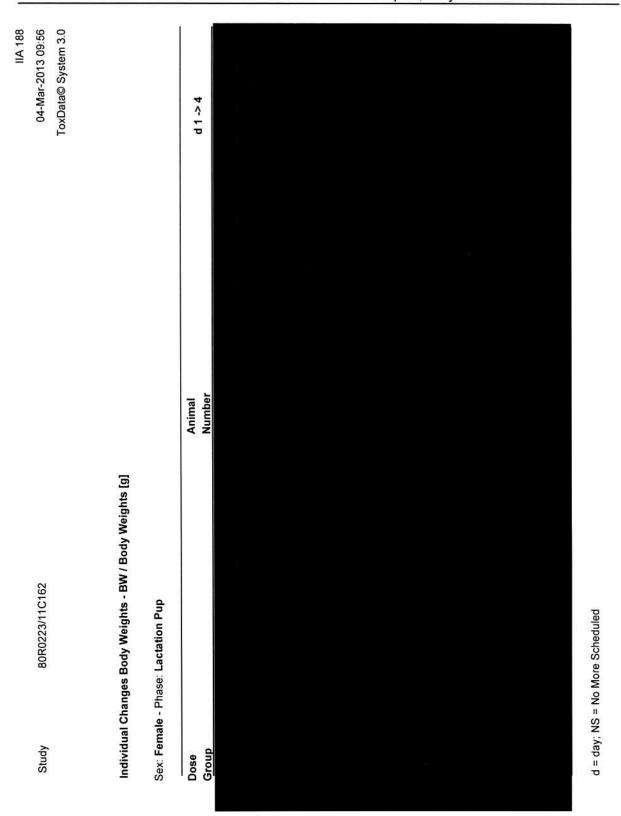


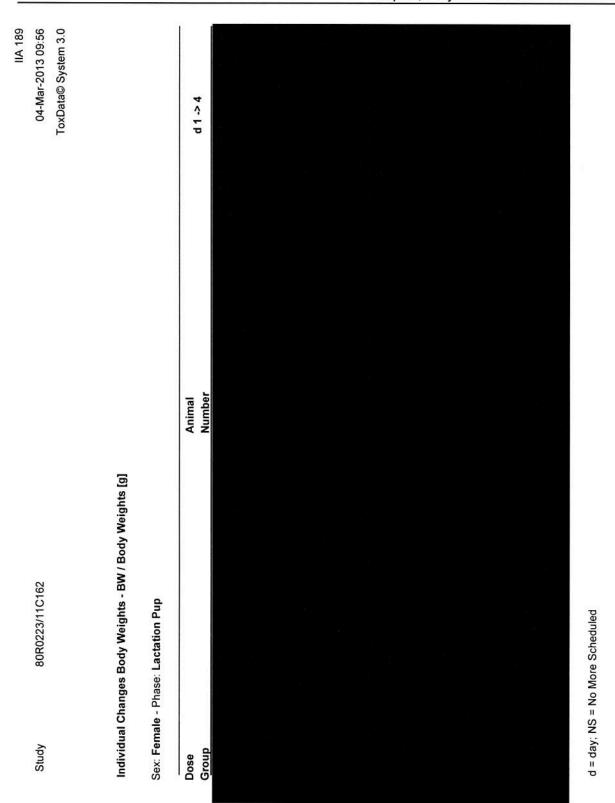






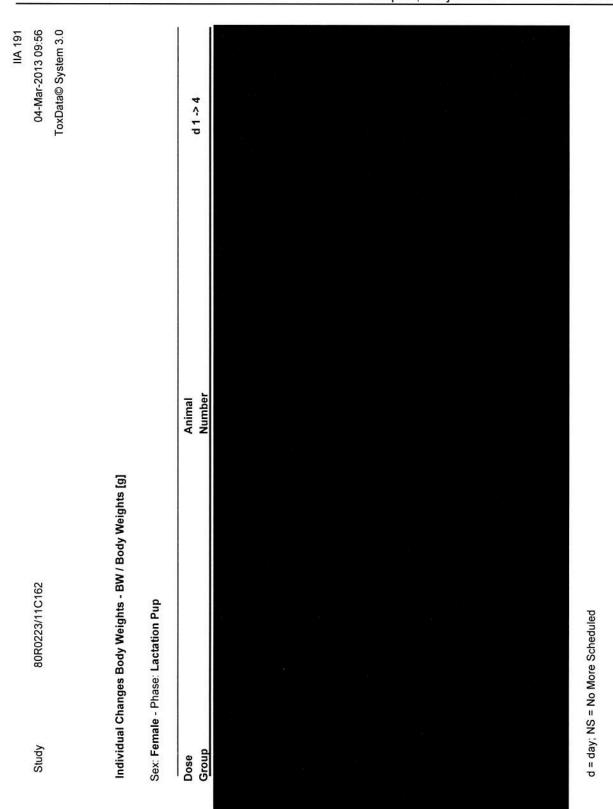




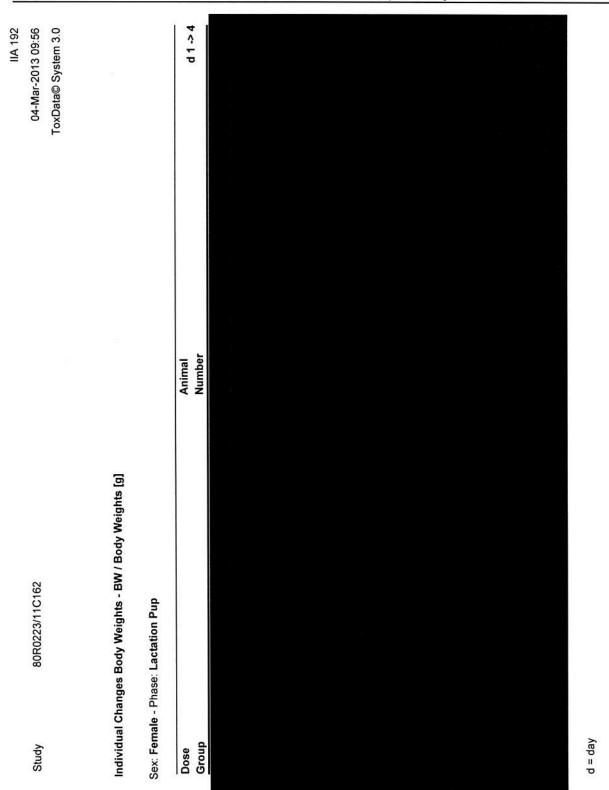




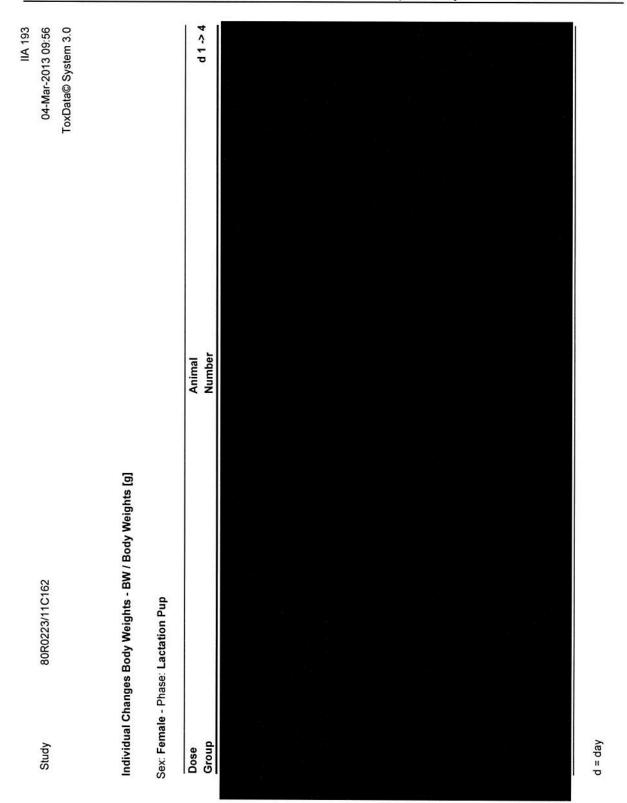
Study	80R0223/11C162	04-ME	11A 190 04-Mar-2013 09:56
on dividuo	Individual Changes Body Wainhte . PW / Body Wainhte In		
Sex: Female - Phase: Lactation Pup	Lactation Pup		
Dose Group		Animal Number	d1->4
d = day			



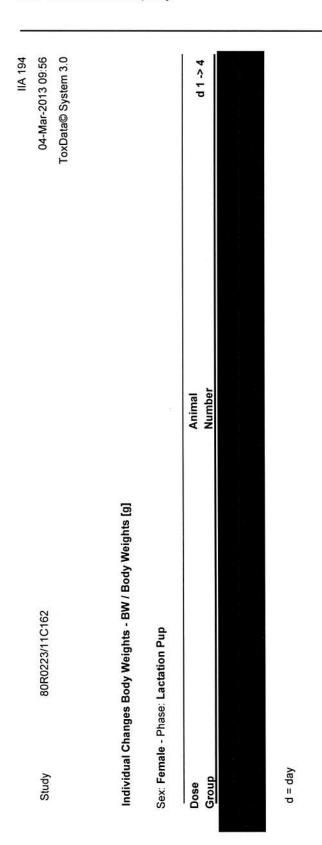








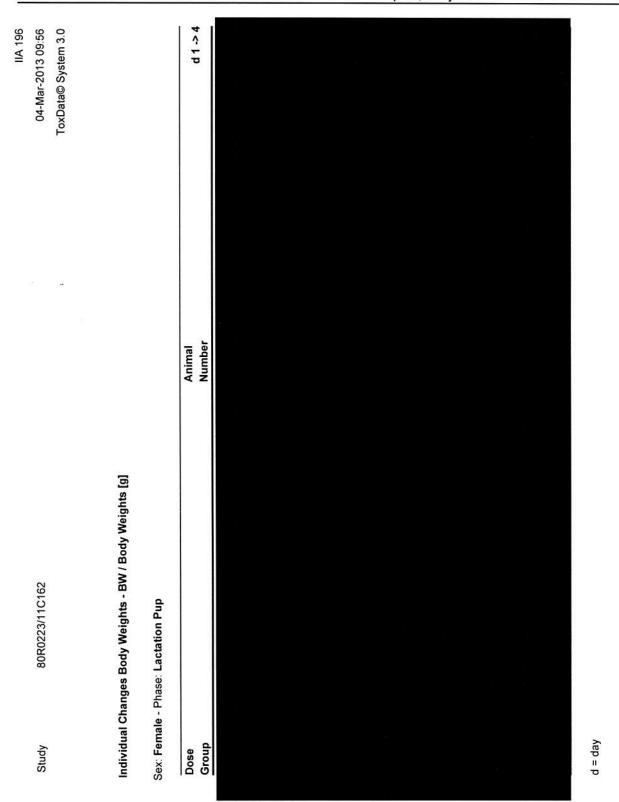


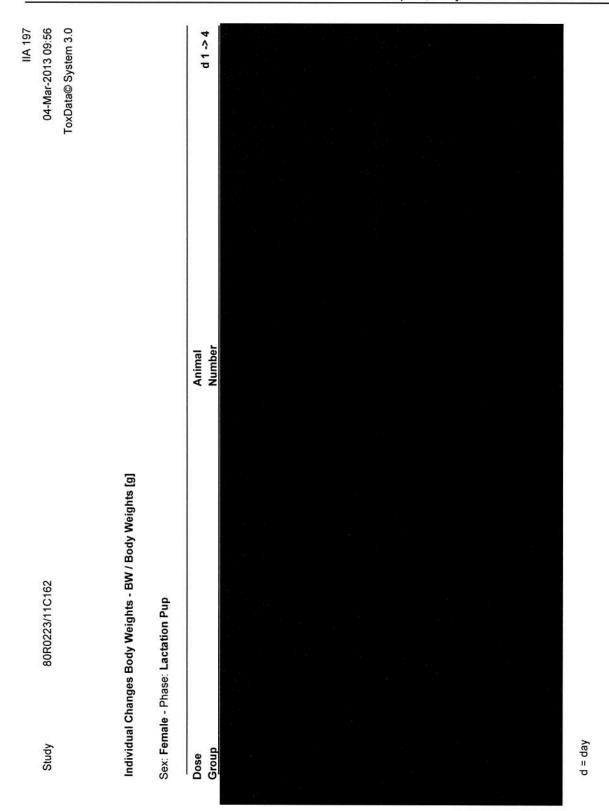




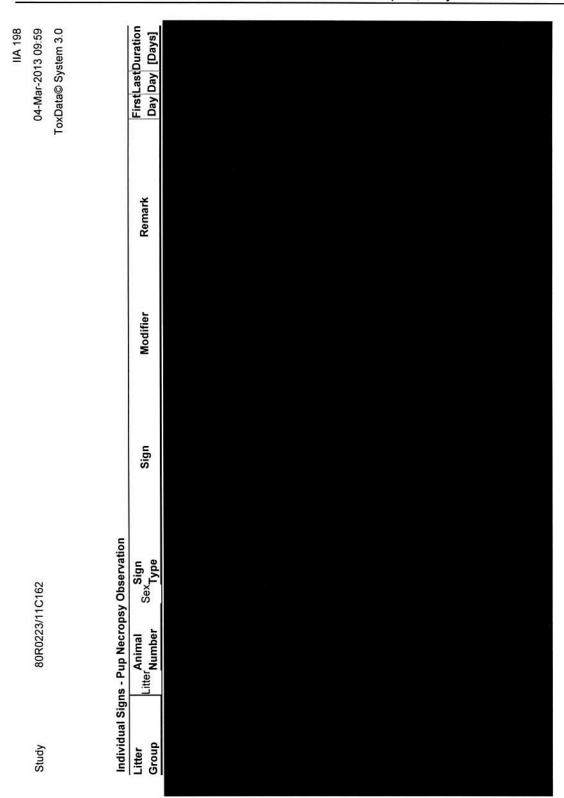
d1->4 ToxData© System 3.0 04-Mar-2013 09:56 Animal Number Individual Changes Body Weights - BW / Body Weights [g] 80R0223/11C162 Sex: Female - Phase: Lactation Pup d = day Dose Group



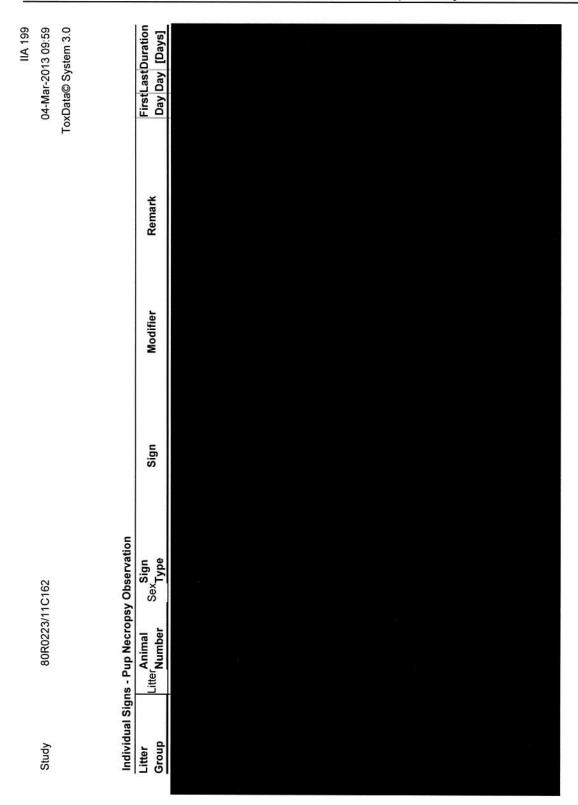






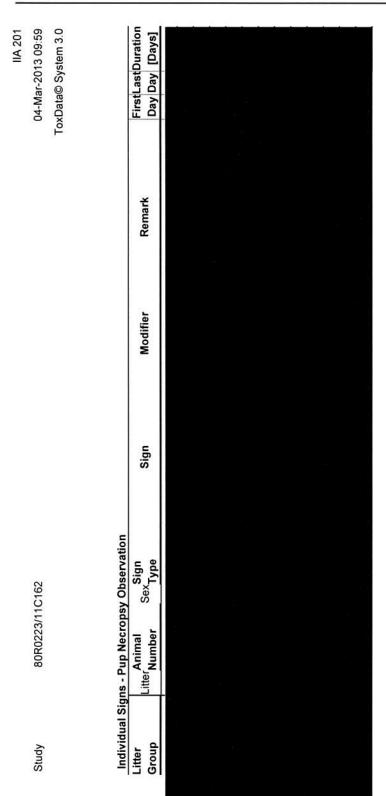








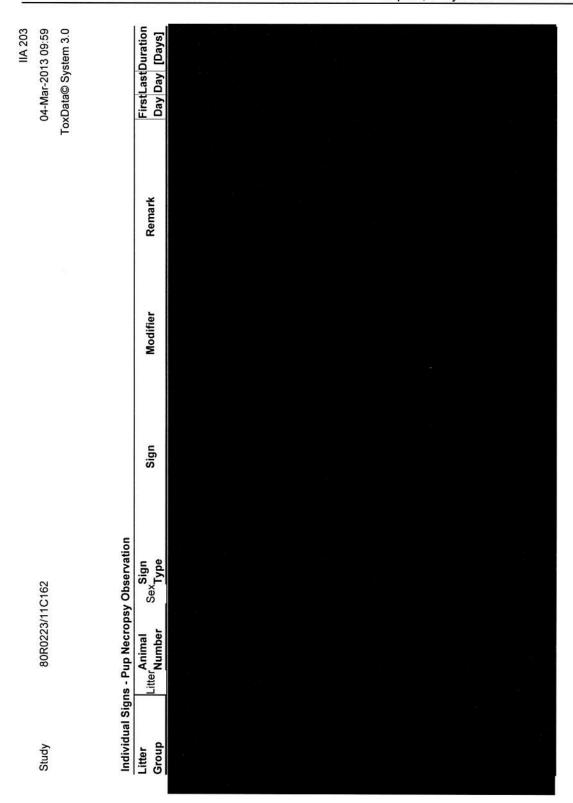
FirstLastDuration Day Day [Days] IIA 200 04-Mar-2013 09:59 ToxData© System 3.0 Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sex Type 80R0223/11C162 Animal Litter Number Group Study Litter



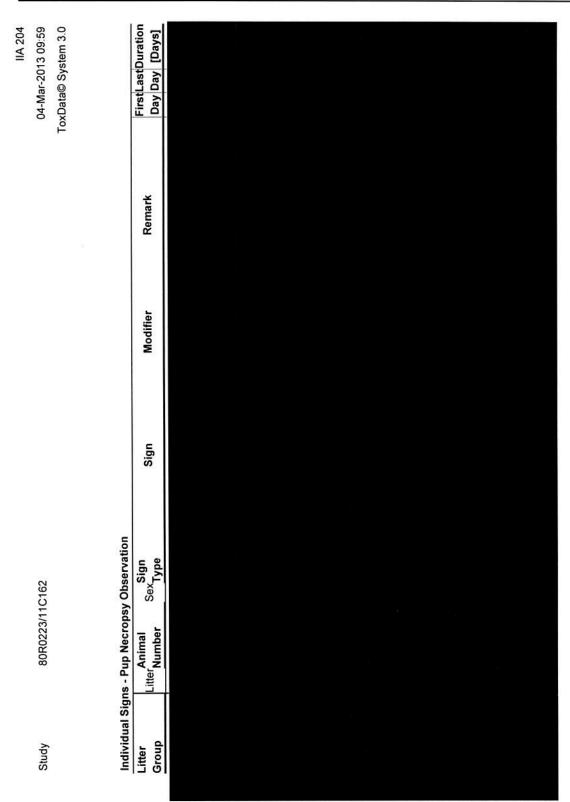


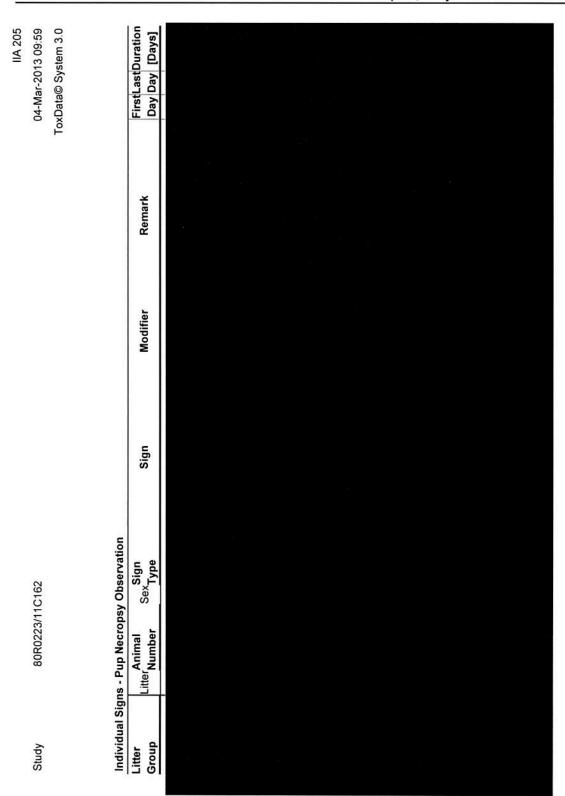
IIA 202 ToxData© System 3.0 FirstLastDuration 04-Mar-2013 09:59 Day Day [Days] Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sex_Type 80R0223/11C162 Animal Litter Number Group Study Litter



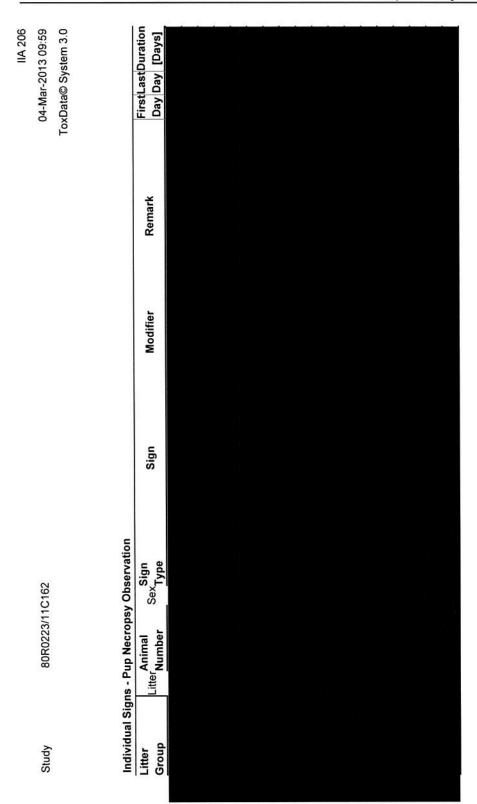












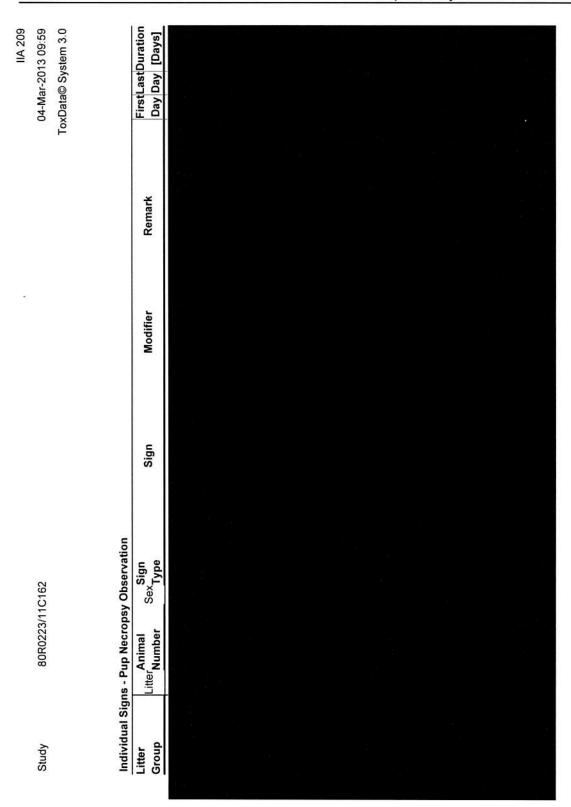


FirstLastDuration IIA 207 ToxData© System 3.0 04-Mar-2013 09:59 Day Day [Days] Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sex Type 80R0223/11C162 Animal Litter Number Group Study Litter

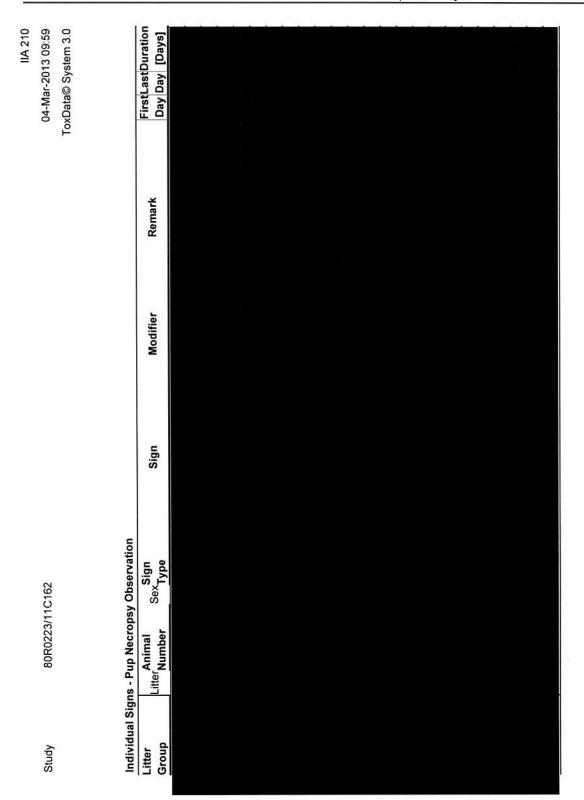


FirstLastDuration Day Day [Days] IIA 208 ToxData© System 3.0 04-Mar-2013 09:59 Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sex_Type 80R0223/11C162 Animal Litter Number Group Study Litter

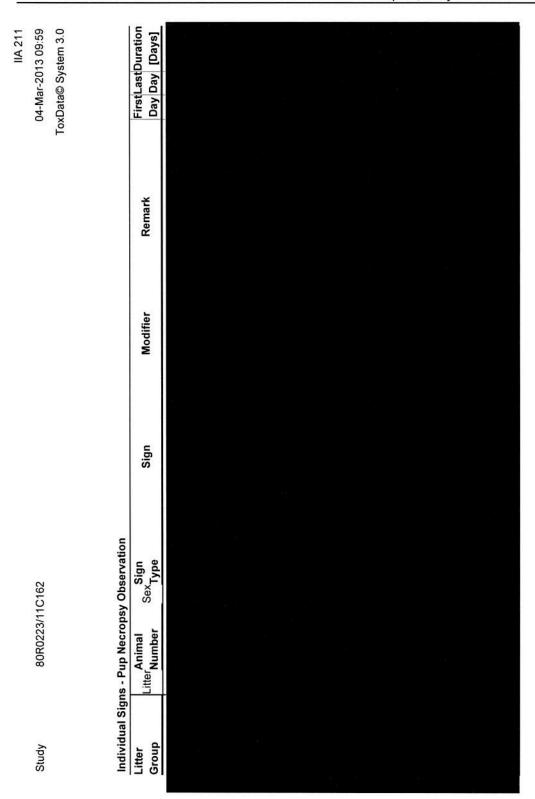












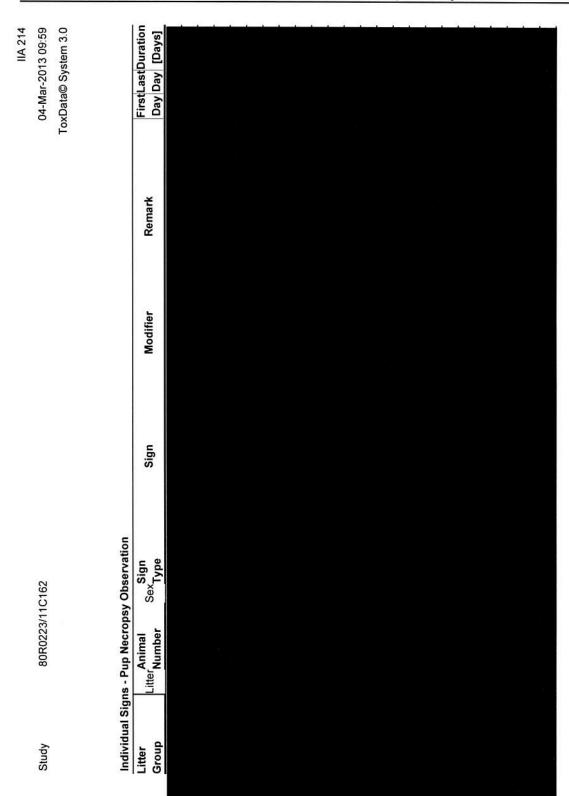


IIA 212 FirstLastDuration 04-Mar-2013 09:59 ToxData© System 3.0 Day Day [Days] Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sex Type 80R0223/11C162 Animal Litter Number Group Study Litter



IIA 213 04-Mar-2013 09:59 ToxData© System 3.0 FirstLastDuration Day Day [Days] Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sign 80R0223/11C162 Animal Litter Number Group Study Litter







IIA 215 04-Mar-2013 09:59 ToxData© System 3.0 FirstLastDuration Day Day [Days] Remark Modifier Sign Individual Signs - Pup Necropsy Observation Sex Type 80R0223/11C162 Animal Litter Number Study Group Litter



IIA 216 ToxData© System 3.0 FirstLastDuration 04-Mar-2013 09:59 Day Day [Days] Remark Modifier Sign Individual Signs - Pup Necropsy Observation
Litter Animal Sign Sex_Type 80R0223/11C162 Animal Litter Number Group Study



BASF	Р.	ATHOLOGY REPORT	IIB- 1/63 80R0223/11C162
Reproduction/Develop Rats - Oral Administ		ity Screening Test in Wi ge)	
ABSOLUTE WEIGHTS - I	NDIVIDUAL VA	LUES	
Sacrifice F1 Sex M Group 0			
Term. body weight	Epididy- mides	Testes	
g	g	g 	



BASF		E	ATHOLOGY REP	IIB- 80RO	2/63 223/11C162			
Reproduc Rats - (ction Oral	/Develo Adminis	pmental Toxio tration (Gava	city Screenin (ge)	g Test in	Wistar	16.0ct	.2012 SIBU
ABSOLUTI	E WEI	GHTS -	INDIVIDUAL VA	LUES				
Sacrific	ce	F1						
Sex Group		M 1						
	 Taum						• • • • • • • •	
,		body eight	Epididy- mides	Testes				
		g	g	g				



BASF	PA	ATHOLOGY REPOR	ľ	IIB- 80R02	3/63 23/11C162
Reproduction/Deve Rats - Oral Admin			Test in Wist		2012 SIBU
ABSOLUTE WEIGHTS	- INDIVIDUAL VAI	LUES			
Sacrifice F1 Sex M Group 2					
	Epididy-	Testes			
				•••••	



BASF				PATHOLOGY REPORT					175	IB- 80	R022	3/1:	4/63 LC162	
Reproduc Rats - 0	otion, Oral	/Develo Adminis	pmental To: tration (G	xicity avage)	Screening	Test	in	Wist	ar	1	6.0	ct.2	012	SIBU
	E WEI	GHTS -	INDIVIDUAL	VALUE	S									
Sacrific		F1												
Sex		М												
Group		3												
								· · · ·						• • • • •
		body eight	Epididy- mides	0.0	Testes									
		a	mides		a									
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7														



BASF	PATHOLOGY REPORT	IIB- 5/63 80R0223/11C162
Reproduction/Devel Rats - Oral Admini	opmental Toxicity Screening Test in Wistar stration (Gavage)	
ABSOLUTE WEIGHTS -	INDIVIDUAL VALUES	
Sacrifice F1 Sex F Group 0		
Term. body weight g		



BASF			OLOGY REPOR		IIB- 80R0223	6/63 /11C162	
Reproduct: Rats - Ora	ion/Developm al Administr	ental Toxicity ation (Gavage)	Screening	Test in W	istar	16.0ct.20	12 SIBU
		DIVIDUAL VALUE	s				
Sacrifice							
Sex	F						
Group	1						
		• • • • • • • • • • • • • • • • • • • •					
Ter	rm. body						
	weight						
	g						
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BASF PATHOLOGY REPORT IIB- 7/63
80R0223/11C162
Reproduction/Developmental Toxicity Screening Test in Wistar
Rats - Oral Administration (Gavage)

ABSOLUTE WEIGHTS - INDIVIDUAL VALUES

Sacrifice F1
Sex F
Group 2

Term. body
weight
g



BASF		PAT	HOLOGY REPO	IIB- 8/63 80R0223/11C162		
Reproduction Rats - Oral				Test in Wistar		
ABSOLUTE WEI	GHTS - INDI	VIDUAL VALU	ES			
Sacrifice	F1					
Sex Group	F 3					
Term.	body					
W	reight g					



BASF	PA	PATHOLOGY REPORT				9/63 /11C162
	elopmental Toxici nistration (Gavag		Test in	Wistar	16.0ct.201	L2 SIBU
	- INDIVIDUAL VAL	UES				
Term. bod weigh		Testes				

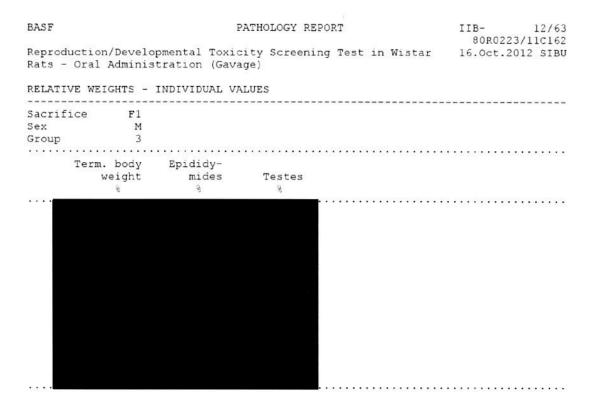


BASF	PA'	THOLOGY REP	ORT		IIB-	10/63 R0223/11C162	
Reproduction/De Rats - Oral Adr				g Test :	in Wistar		t.2012 SIBU
RELATIVE WEIGHT	rs - INDIVII	UAL VAL	JES				
Sacrifice Sex Group	F1 M 1						
Term. bo weig	0.71.5	.dy- .des	Testes				



BASF		PA	ATHOLOGY REPO	I	IIB- 11/63 80R0223/11C162 16.Oct.2012 SIBU		
		omental Toxici tration (Gavaç		tar 1			
	WEIGHTS - :	INDIVIDUAL VAI	LUES				
Sacrifice	F1						
Sex Group	M 2						
Te	rm. body	Epididy-					
	weight	mides	Testes				
	diam'r.						







BASF		PATH	OLOGY REPO	IIB- 13/63 80R0223/11C163						
	on/Development l Administrati		Screening	Test in	Wistar	16.0ct.2	2012 SIBU			
	EIGHTS - INDIV	IDUAL VALUE	S							
	F1 F 0									
Ter	m. body weight									



BASF Reproduction/Developmental Rats - Oral Administration				PATHOLOGY REPORT										IIB- 80R0223/											
			l To n (G	xici avag	ty e)	Scr	een	ing	Te	st	in	Wi	st	ar		1	6.0	oct	. 2	01	2	SI	BU		
RELATIV		GHTS -						5																	
Sacrifi		F1																							
Sex		F																							
Group		1																							
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BASF		PATH	OLOGY REPO		IIB- 80R	15/63 11C162		
	on/Development l Administrati		Screening	tar				
RELATIVE W	EIGHTS - INDIV		s 					
Sacrifice	F1			 				
Sex	F							
Group	2							
		• • • • • • • • • •		 				
Ter	m. body							
	weight							
	8							



BASF				PATHOLOGY REPORT										IIB- 80R0223								
Reproduction/Developmental Rats - Oral Administration							reen	ing	Te	st	in	Wi	sta	r		16	. Oc	t.:	20	12	SI	BU
RELATIVE WE			VIDU	AL V		s																
Sacrifice	F1																					
Sex	F																					
Group	3																					
								• • •			• • •			• • •	• • •	٠.		• •	٠.		٠.	• •
	. body																					
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	8																					
	1																					



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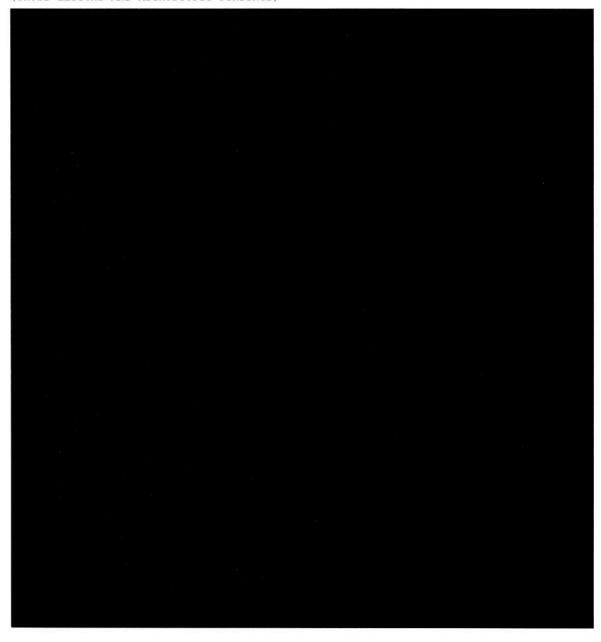
PATHOLOGY REPORT

IIB- 17/63

80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

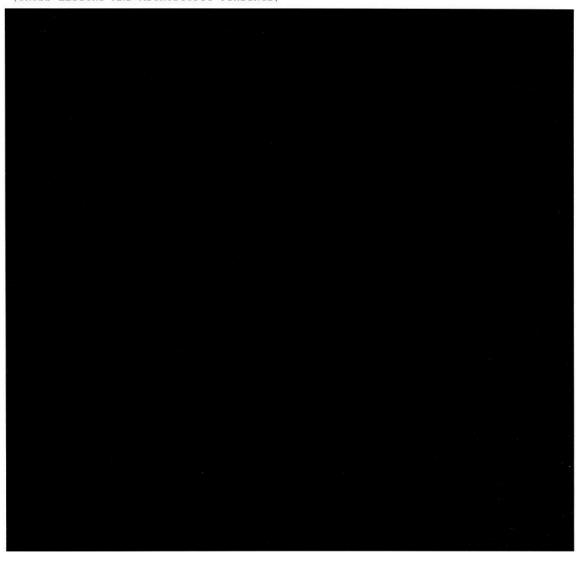




BASF PATHOLOGY REPORT

IIB- 18/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

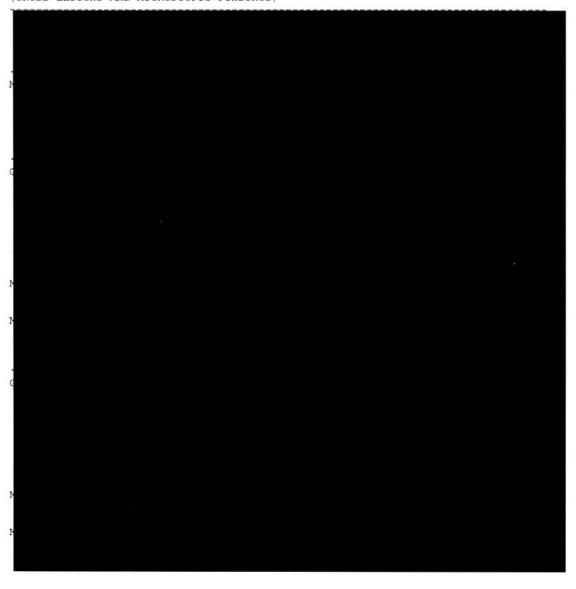




BASF PATHOLOGY REPORT IIB-19/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

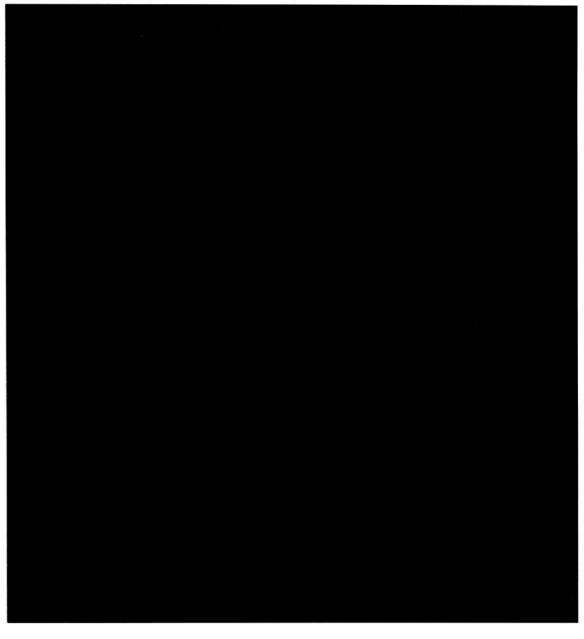




BASF PATHOLOGY REPORT IIB-20/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)





BASF

PATHOLOGY REPORT

IIB-21/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

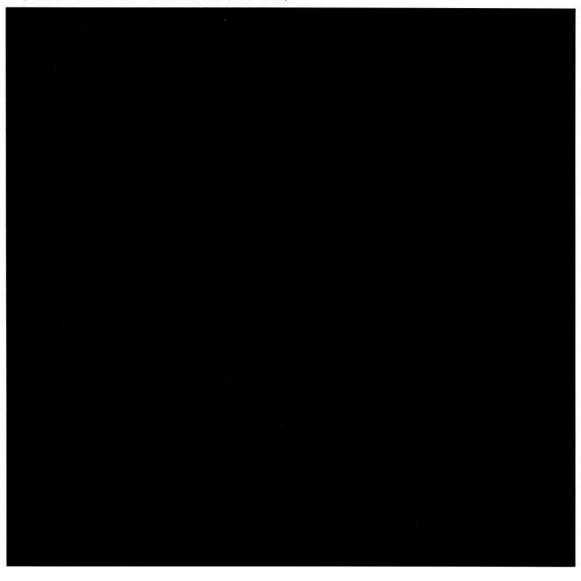
SINGLE ANIMAL SHEET





BASF PATHOLOGY REPORT IIB-22/63 80R0223/11C162

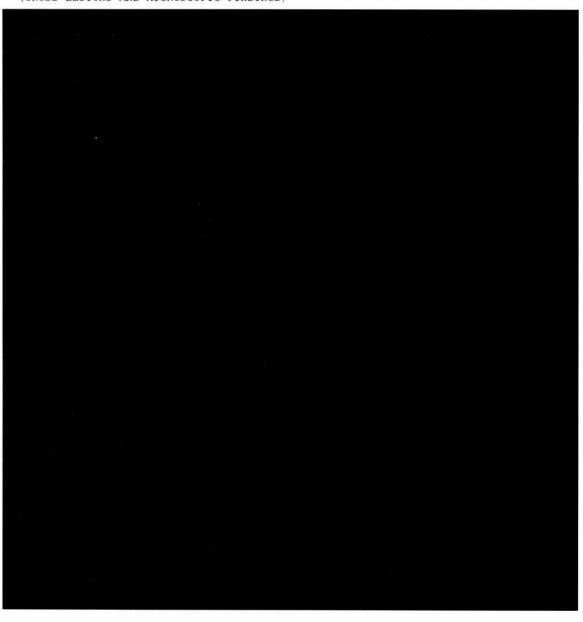
Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT IIB-23/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





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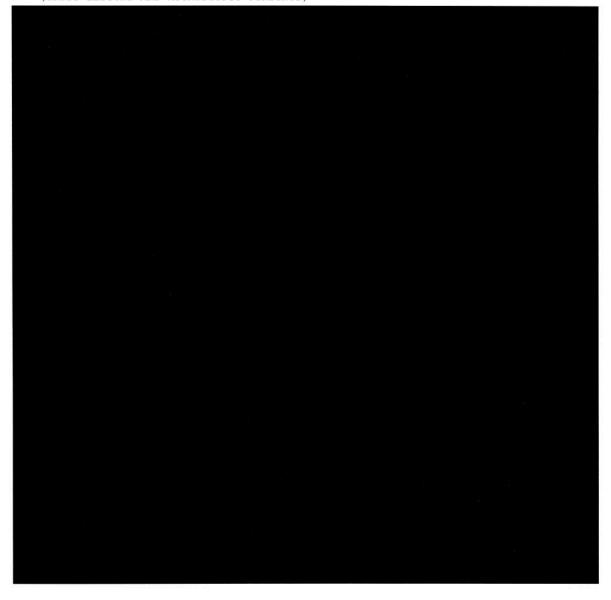
PATHOLOGY REPORT

IIB-24/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

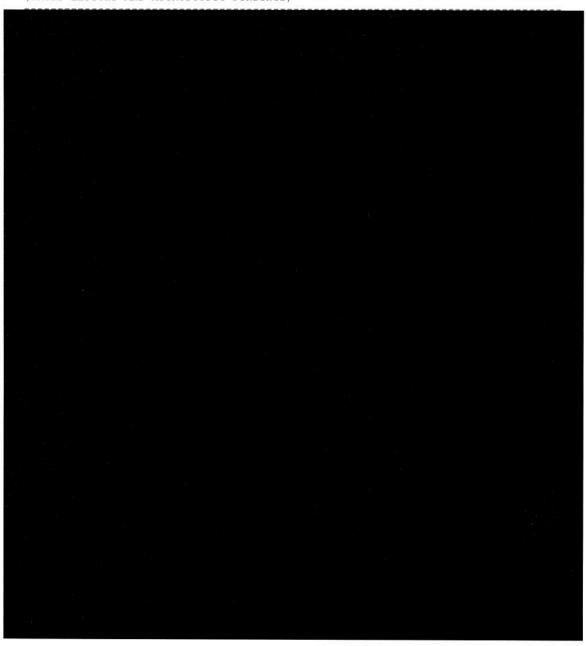
SINGLE ANIMAL SHEET





BASF PATHOLOGY REPORT IIB- 25/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

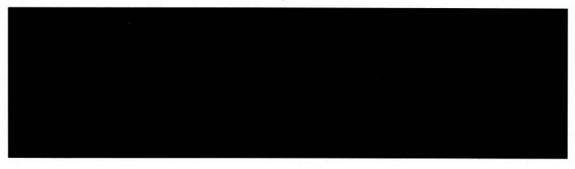




BASF PATHOLOGY REPORT IIB- 26/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

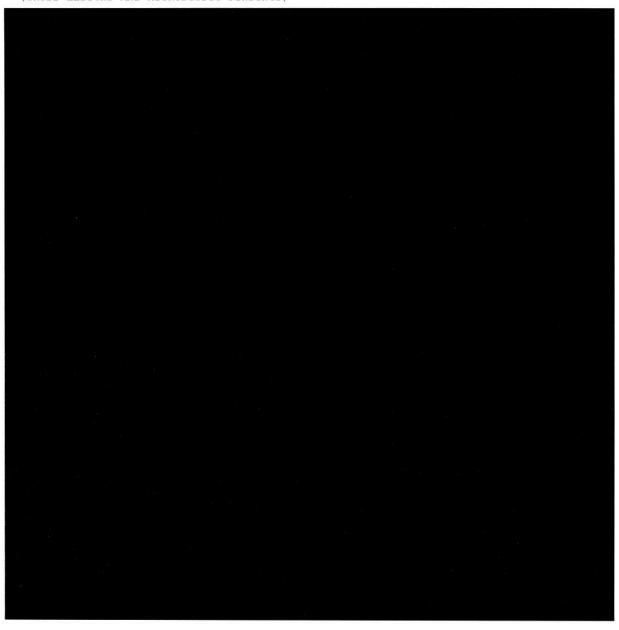




BASF PATHOLOGY REPORT IIB-

80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





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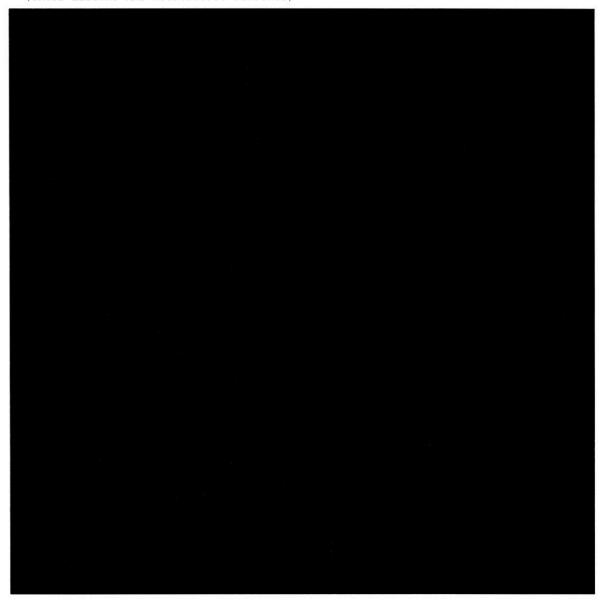
PATHOLOGY REPORT

IIB-28/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

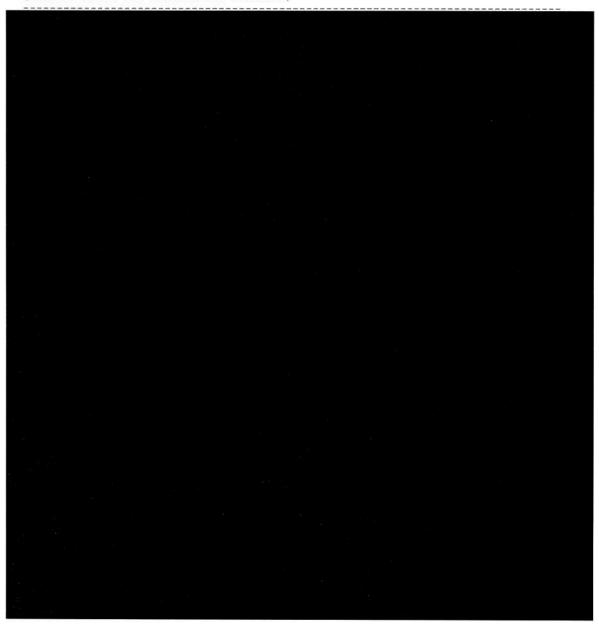




BASF PATHOLOGY REPORT IIB-29/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

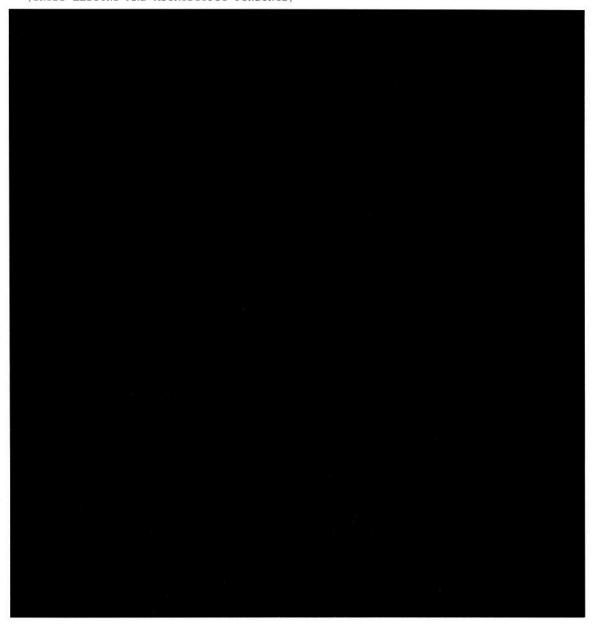
Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT IIB-30/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

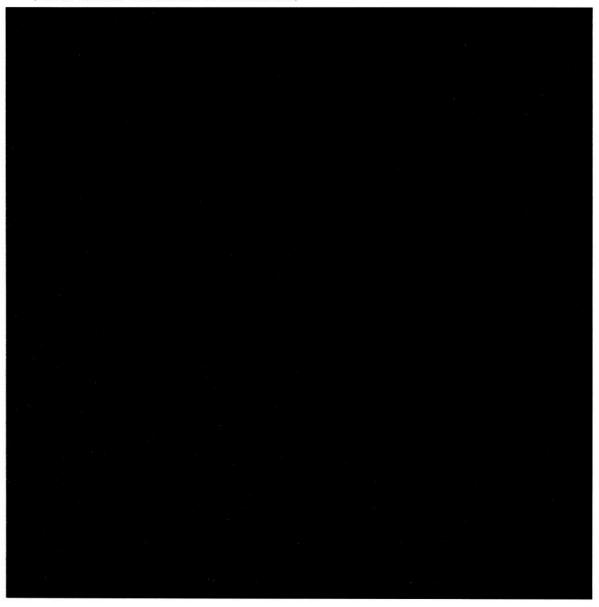




BASF PATHOLOGY REPORT

31/63 IIB-80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





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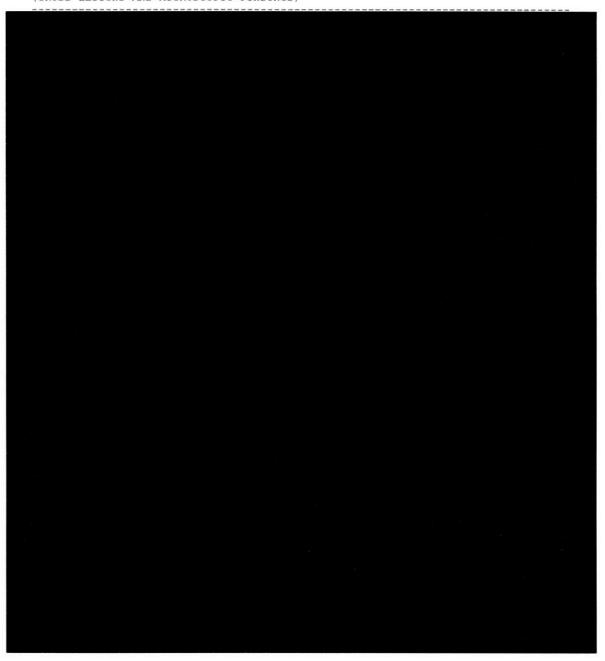
PATHOLOGY REPORT

IIB- 32/63

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

80R0223/11C162

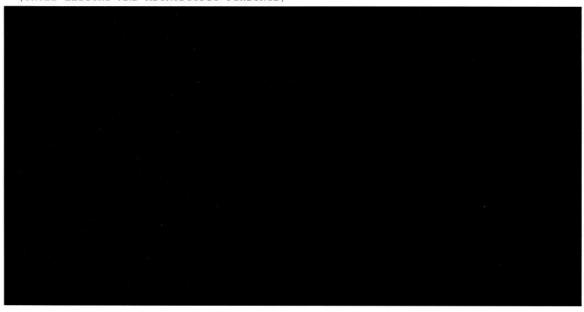
Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT 33/63 80R0223/11C162

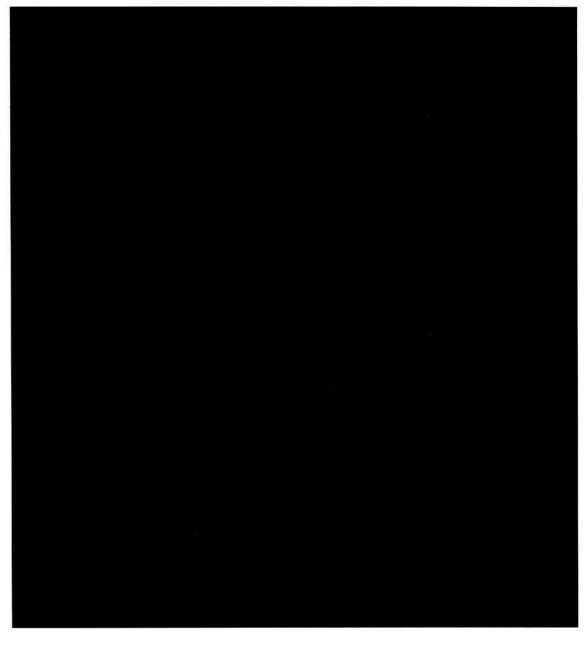
Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT IIB-34/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

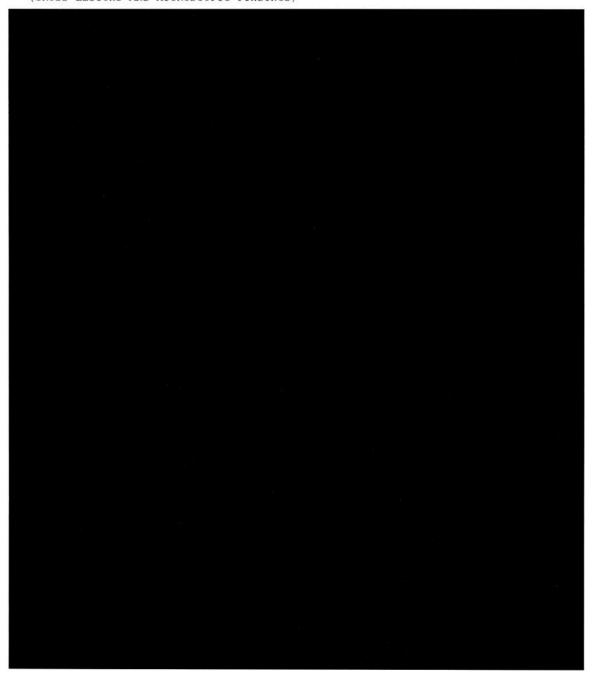




BASF PATHOLOGY REPORT IIB-35/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

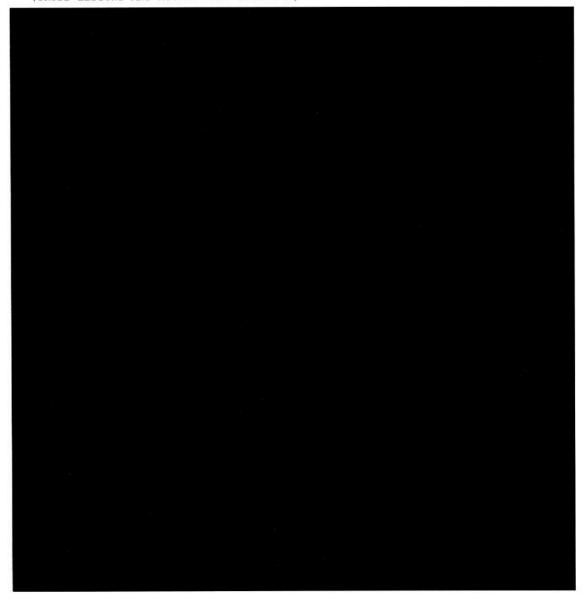




BASF PATHOLOGY REPORT IIB- 36/63 80R0223/11c162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET





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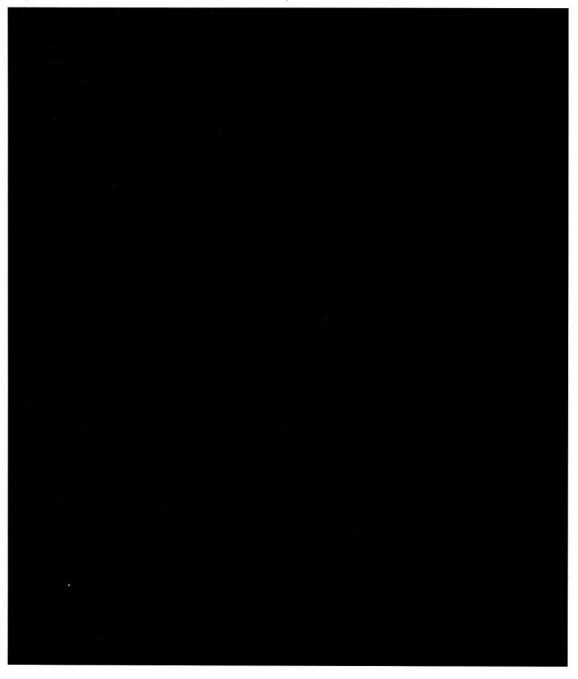
PATHOLOGY REPORT

IIB-37/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

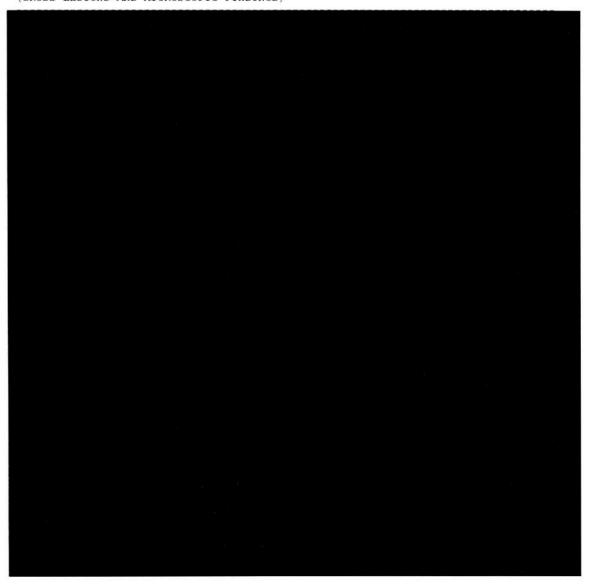




BASF PATHOLOGY REPORT IIB-38/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)





BASF

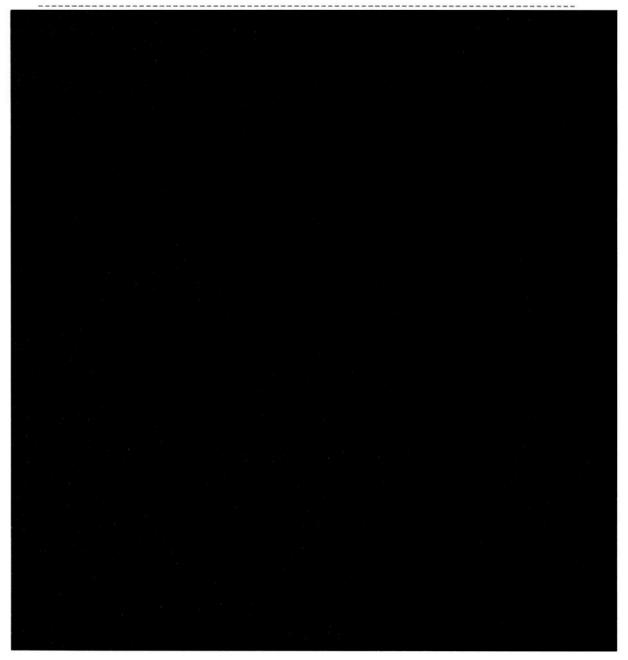
PATHOLOGY REPORT

IIB-39/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET





BASF

PATHOLOGY REPORT

IIB-40/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

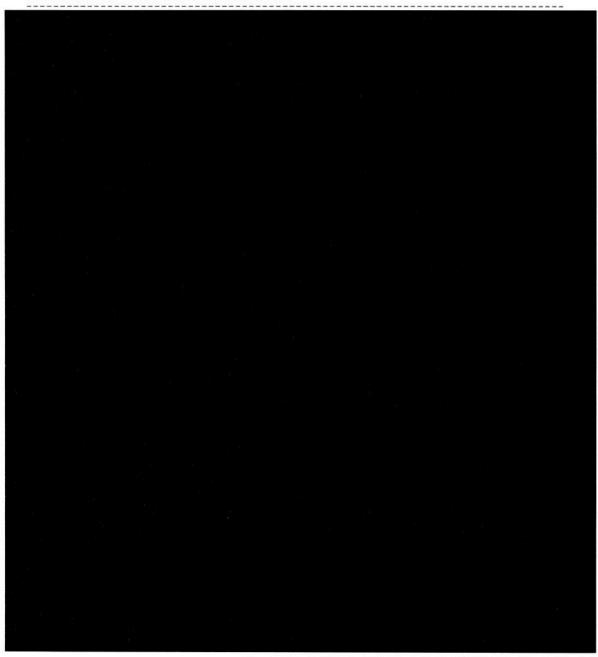




BASF PATHOLOGY REPORT IIB-41/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

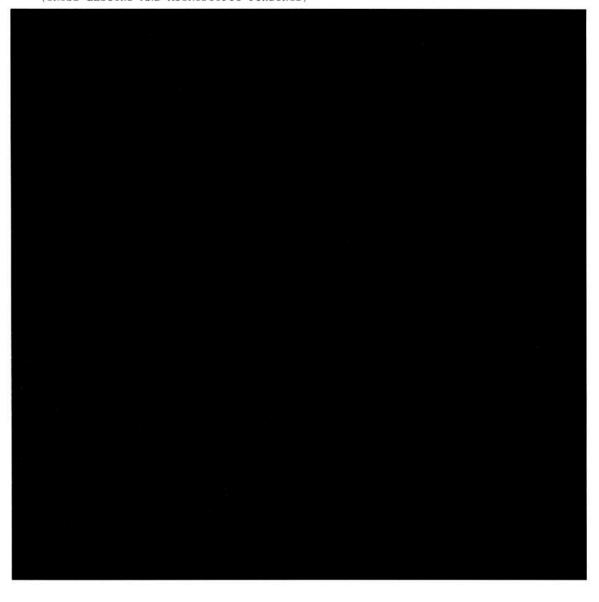




BASF PATHOLOGY REPORT IIB-42/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)



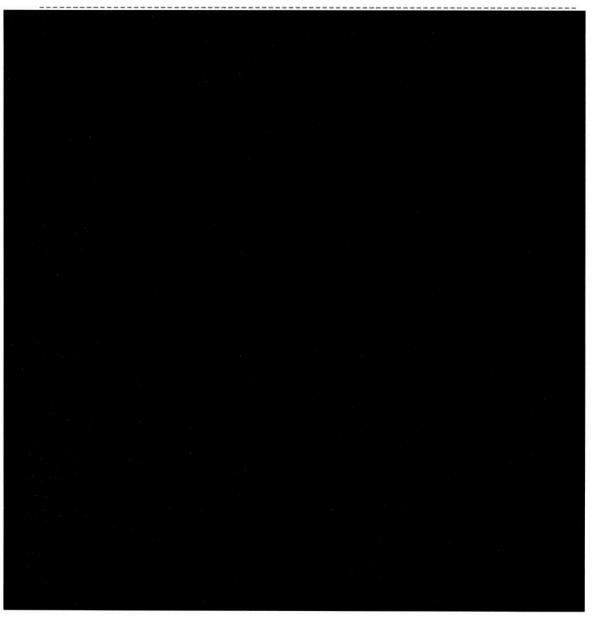


BASF PATHOLOGY REPORT IIB-43/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET





BASF PATHOLOGY REPORT

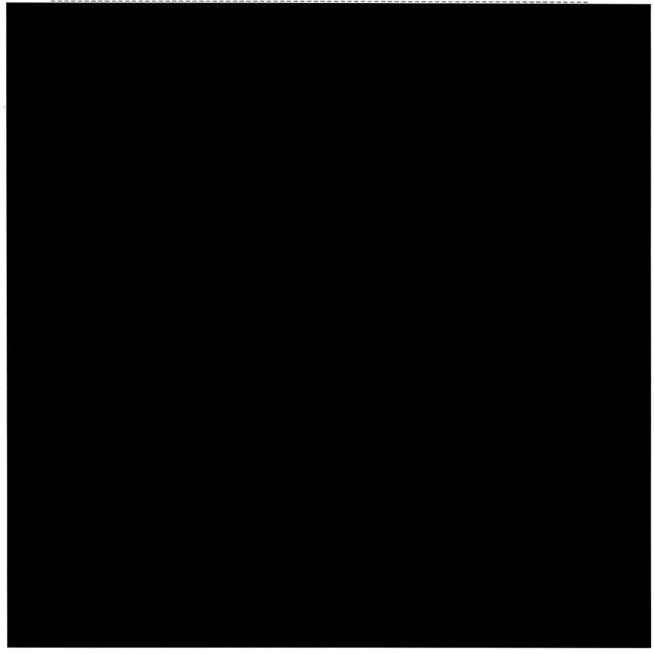
IIB- 44/63

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

80R0223/11C162

Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET





BASF PATHOLOGY REPORT IIB-80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.0ct.2012 SIBU Rats - Oral Administration (Gavage)

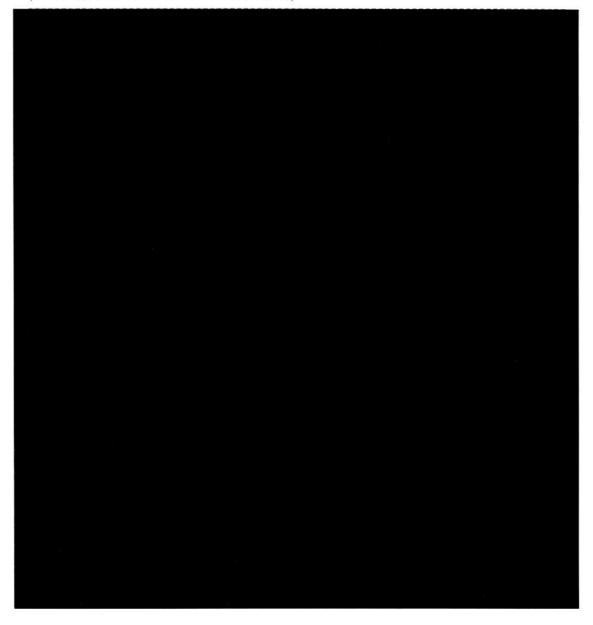




BASF PATHOLOGY REPORT IIB-46/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

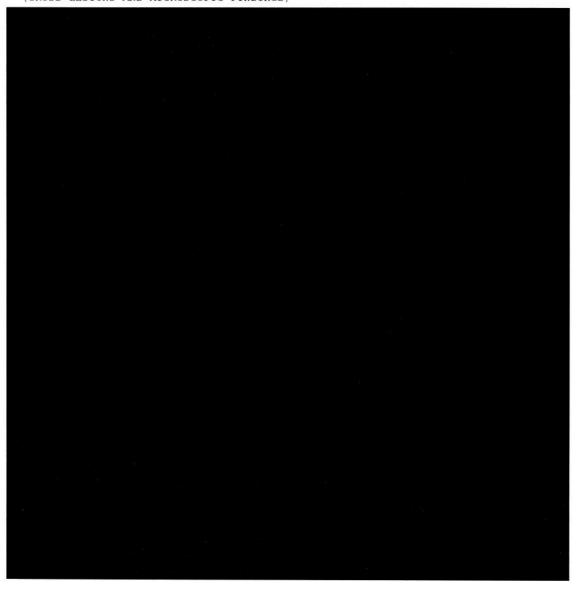
SINGLE ANIMAL SHEET





BASF PATHOLOGY REPORT IIB-47/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

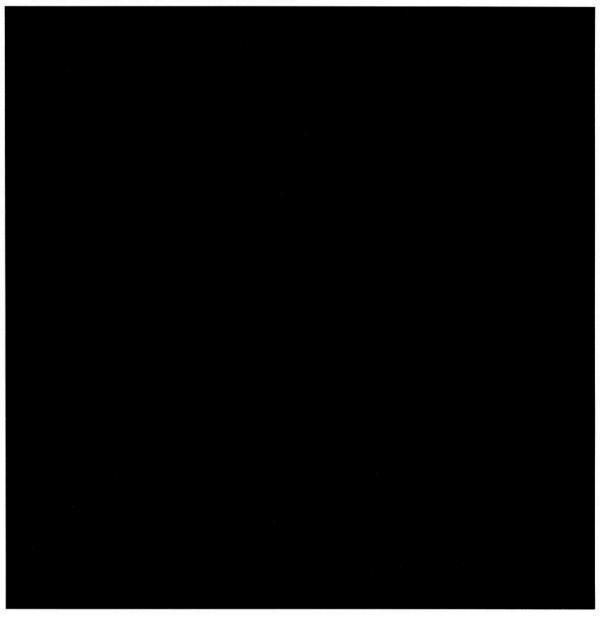




BASF PATHOLOGY REPORT IIB-48/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)



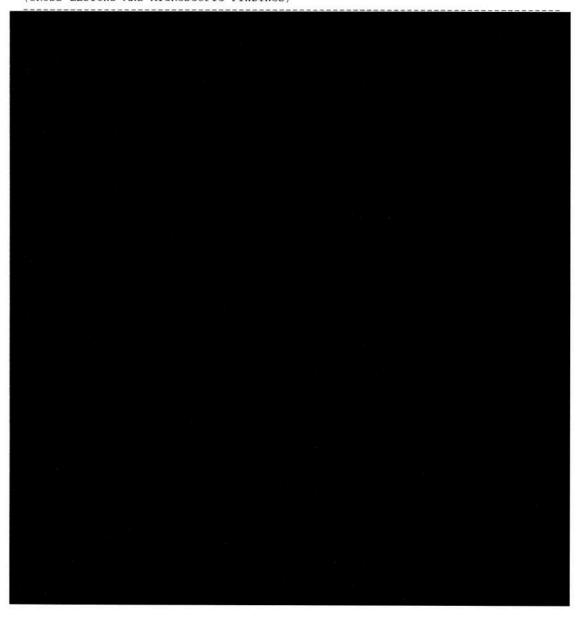


BASF PATHOLOGY REPORT IIB-49/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

(GROSS LESIONS AND MICROSCOPIC FINDINGS)

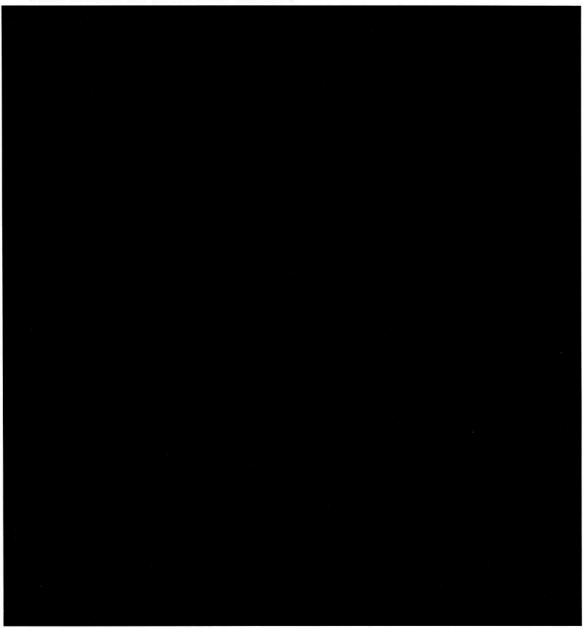




BASF PATHOLOGY REPORT

IIB- 50/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





BASF

PATHOLOGY REPORT

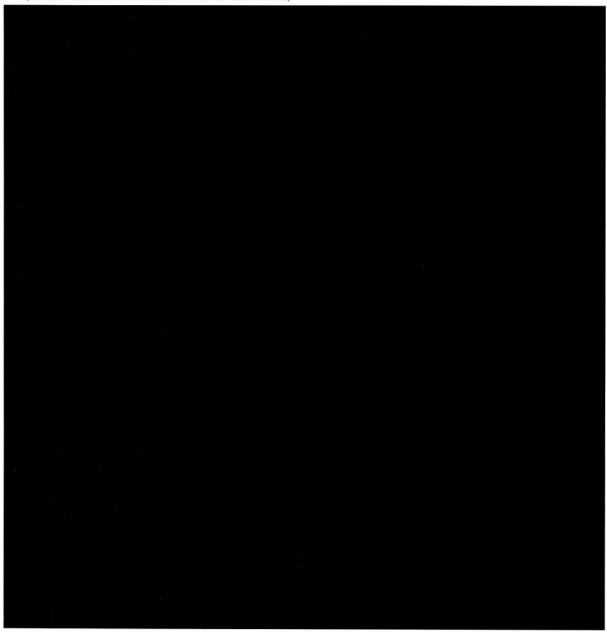
51/63 IIB-

80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

(GROSS LESIONS AND MICROSCOPIC FINDINGS)



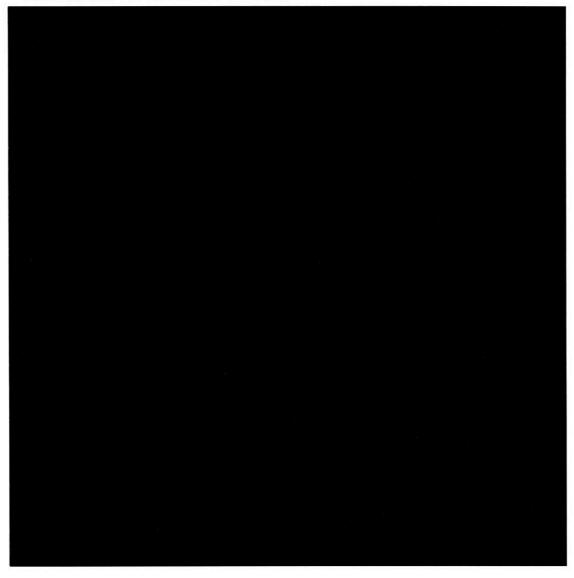


BASF PATHOLOGY REPORT

IIB- 52/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.0ct.2012 SIBU

Rats - Oral Administration (Gavage)

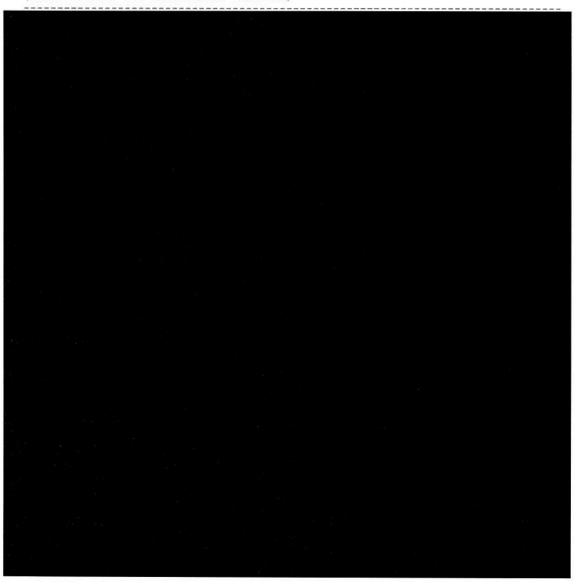




BASF PATHOLOGY REPORT

53/63 IIB-80R0223/11C162

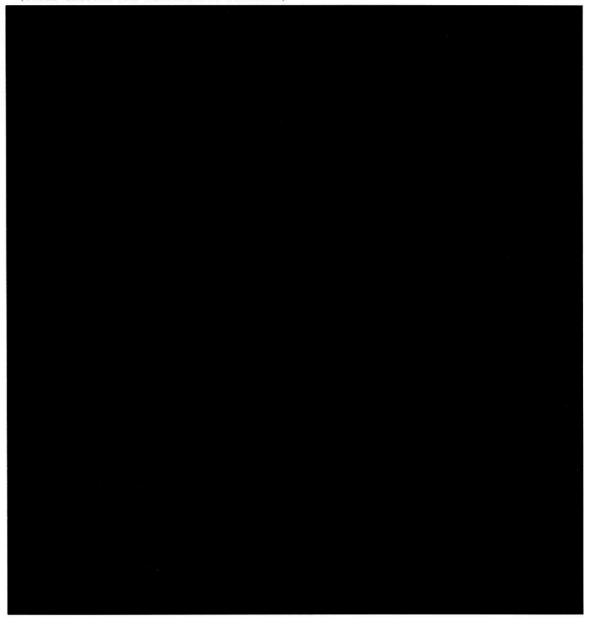
Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT IIB- 54/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)



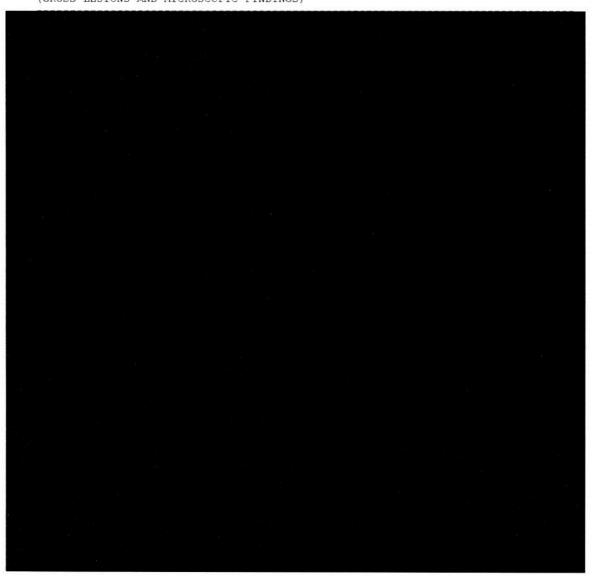


BASF

PATHOLOGY REPORT

55/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





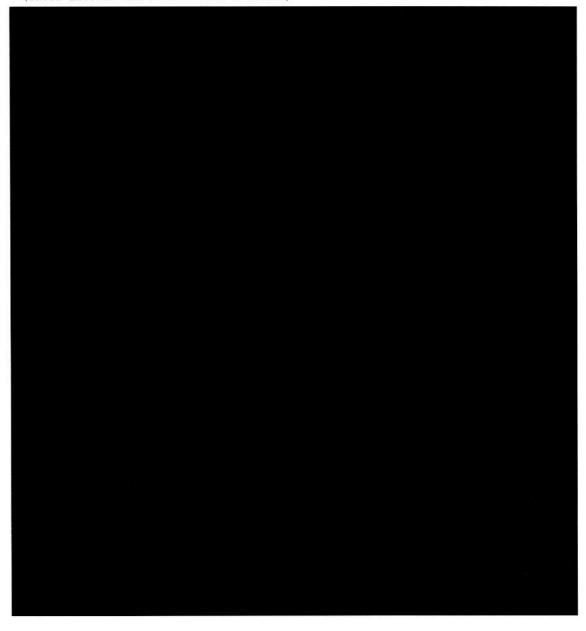
BASF PATHOLOGY REPORT IIB-56/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.0ct.2012 SIBU

Rats - Oral Administration (Gavage)

SINGLE ANIMAL SHEET

(GROSS LESIONS AND MICROSCOPIC FINDINGS)

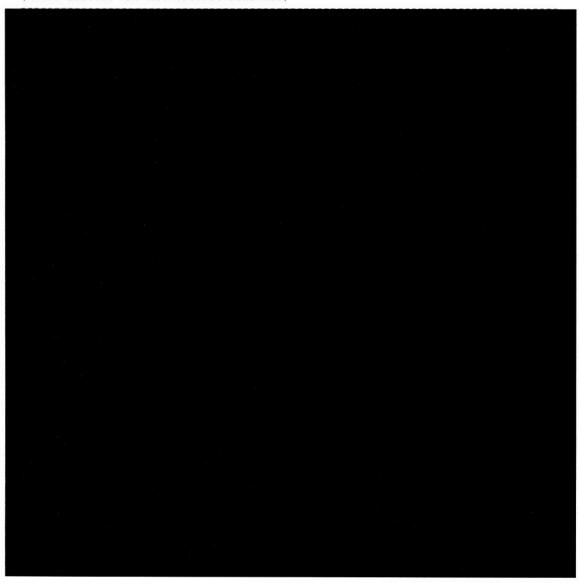




BASF PATHOLOGY REPORT

IIB- 57/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.0ct.2012 SIBU Rats - Oral Administration (Gavage)

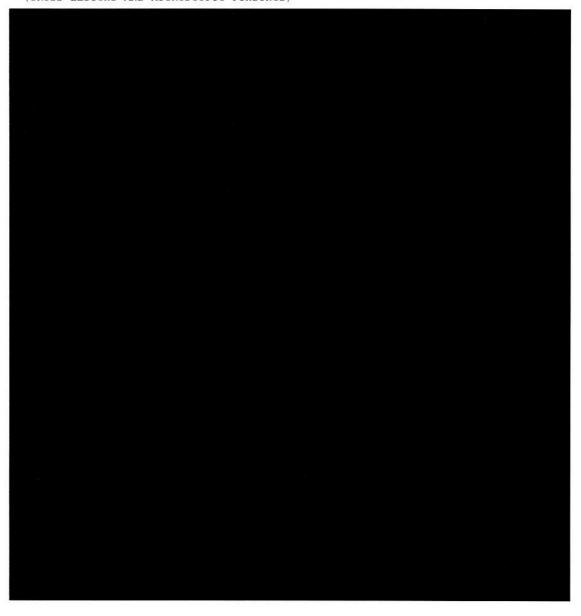




BASF PATHOLOGY REPORT

IIB- 58/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)



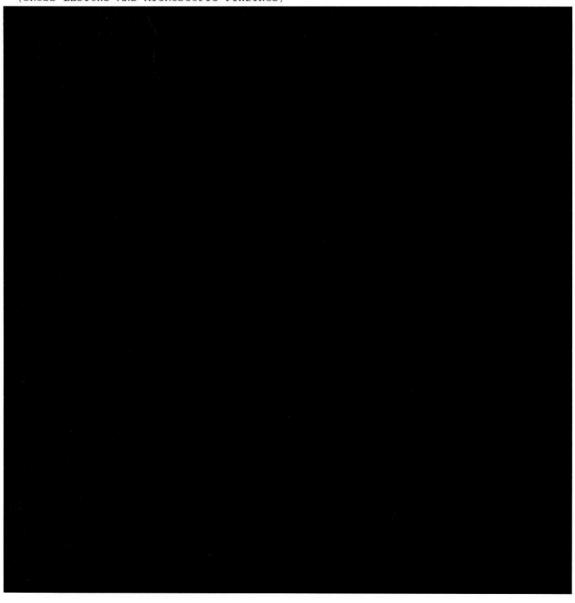


BASF PATHOLOGY REPORT

59/63 IIB-80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU

Rats - Oral Administration (Gavage)

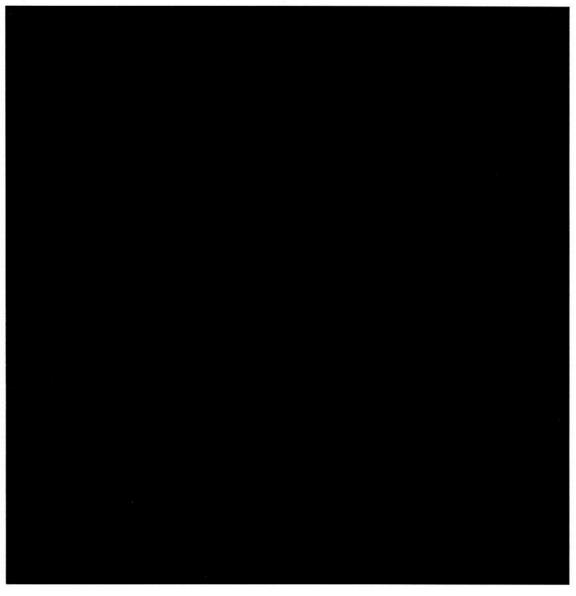




BASF PATHOLOGY REPORT IIB-60/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.0ct.2012 SIBU

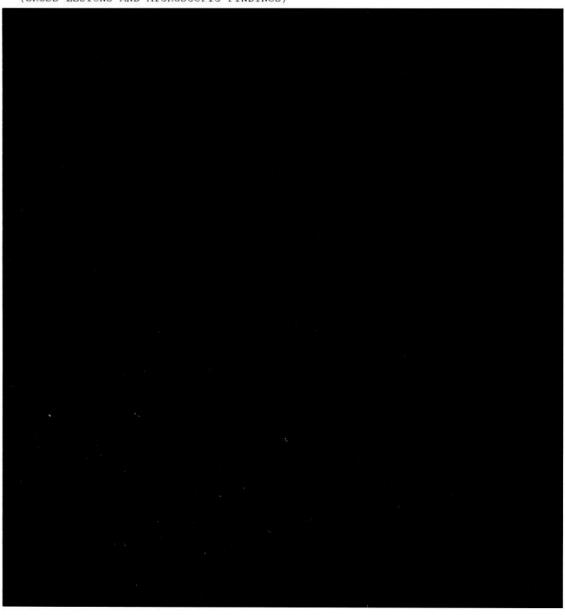
Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT IIB-61/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.0ct.2012 SIBU Rats - Oral Administration (Gavage)

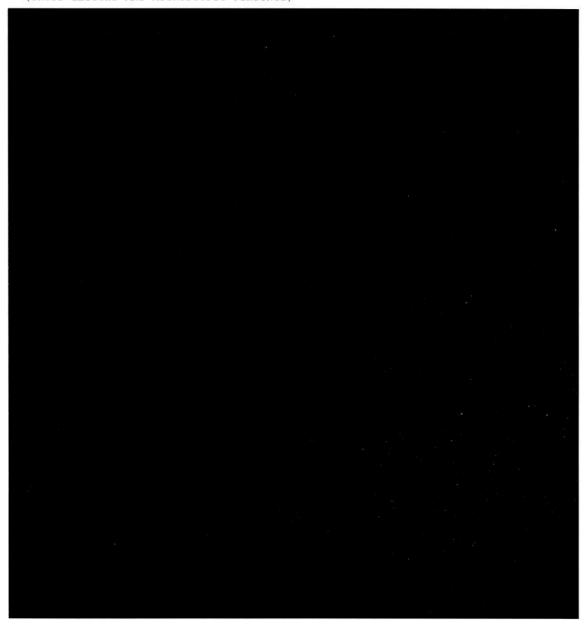




BASF PATHOLOGY REPORT

IIB- 62/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)





BASF PATHOLOGY REPORT IIB- 63/63 80R0223/11C162

Reproduction/Developmental Toxicity Screening Test in Wistar 16.Oct.2012 SIBU Rats - Oral Administration (Gavage)



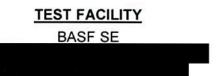


STUDY TITLE

Report

Paliogen Violet 5011

Reproduction/Developmental Toxicity Screening Test in Wistar Rats Oral Administration (Gavage)



TEST FACILITY PROJECT IDENTIFICATION

Project No. 80R0223/11C162

PART III OF III (SUPPLEMENT)

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- Summary delivery report

2. Analyses of the test substance and test substance preparations

- Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)
- Stability of "Paliogen Violet 5011" in "Trinkwasser" Study No. 11L00365 (confidential)
- Concentration control and homogeneity of "Paliogen Violet 5011" in "drinking water"
 Study No. 12L00270 (confidential)
- Concentration control of "Paliogen Violet 5011" in "drinking water" Study No. 12L00332 (confidential)

3. Historical control data

Historical control data for reproduction toxicity data



1. Tables and statistics



	80R0223/11C162				Z8-Feb-ZU13 13:40
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Summary Mating Report	_	Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
No. of females mated	z	10	10	10	10
- Inseminated	z	10 C+	10	10	10
Female mating index	%	100.0	100.0	100.0	100.0
Pregnant	z	± 8	6	6	6
Female fertility index	%	80.0	0.06	0.06	0.06
No. of males mated	z	10	10	10	10
- With inseminated females	Z	10 f+	10	10	10
Male mating index	%	100.0	100.0	100.0	100.0
 With pregnant females 	Z	± 8	o	o	6
Male fertility index	%	80.0	0.06	0.06	0.06
Females with defined Day 0 pc	0 pc N	10	10	10	10
Mating days until Day 0 pc	Mean	2.7 x+	2.9	3.1	3.2
	S.d.	1.3	7:	3.2	4.0
	P-Value	@0.6513	1.0000	1.0000	1.0000
Days 0 To 4	Z	10 f+	10	6	6
	%	100.0	100.0	0.06	0.06
Days 5 To 9	Z	to 0	0	0	0
	%	0.0	0.0	0.0	0.0
Days 10 To 14	z	t 0	0	_	
	%	0.0	0.0	10.0	10.0

Statistic Profile = Wilcoxon with Bonferroni-Holm (one-sided+), *p<=0.05, **p <=0.01, X = Group excluded from statistics, @ = Global test c=CHI-SQUARE, f=FISHER-EXACT; x=WILCOX



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		Test Group 0/ F 0 mg/kg bw/d	Test Group 1/ F 100 mg/kg bw/d	Test Group 2/ F 300 mg/kg bw/d	Test Group 3/ F 1000 mg/kg bw/d
No. of females mated	z	10	10	10	10
- Inseminated	Z	10 c-	10	10	10
Female mating index	%	100.0	100.0	100.0	100.0
Pregnant	Z	- 8 - F-	6	O	6
Female fertility index	%	80.0	0.06	0.06	90.0
No. of males mated	z	10	10	10	10
- With inseminated females	Z	10 f-	10	10	10
Male mating index	%	100.0	100.0	100.0	100.0
- With pregnant females	Z	-¥-8	o	o	6
Male fertility index	%	80.0	0.06	0.06	90.0
Females with defined Day 0 pc	Z	10	10	10	10
Mating days until Day 0 pc	Mean	2.7 x+	2.9	3,1	3.2
	S.d.	6.1	1.1	3.2	4.0
	P-Value	@0.6513	1.0000	1.0000	1.0000
Days 0 To 4	z	10 f-	10	6	6
	%	100.0	100.0	0.06	90.0
Days 5 To 9	z	-5 0	0	0	0
	%	0.0	0.0	0.0	0.0
Days 10 To 14	z	-5 0	0	-	-
	%	0.0	0.0	10.0	10.0

Statistic Profile = Wilcoxon with Bonferroni-Holm (one-sided+), *p<=0.05, **p <=0.01, X = Group excluded from statistics, @ = Global test c=CHI-SQUARE, f=FISHER-EXACT; x=WILCOX

Study

80R0223/11C162



ary Delivery Report male Test Group 0/ F Test Group 2/ F <t< th=""><th>Study</th><th>80R0223/11C162</th><th></th><th></th><th></th><th>0 28-Feb-2013 13:47</th></t<>	Study	80R0223/11C162				0 28-Feb-2013 13:47
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emate emate Test Group 0/ F Test Group 0/ F Test Group 1/ F Test Group 2/ F females at start N 10 10 10 females at start N 10 10 10 ant N 8 9 9 9 ant N 0 0 0 0 stregnant N 2 1 1 vering N 8 9 9 9 stregnant N 2 1 1 1 vering N 8 1 9 9 9 stoll index Mean 22.1 100.0 100.0 0 0 stoll index Mean 22.1 22.0 22.2 22.2 stoll index N 8 9 9 9 9 stoll born pubs N 8 9 9 9 9 9 <						
emale Test Group 0/F Test Group 0/F Test Group 2/F females at start N 10 10 10 ant N 10 10 10 ant N 8 9 9 ant N 2 1 1 remails mated N 0 0 0 ant delivery N 2 1 1 regand N 8 4 9 9 remainder N 8	Summary Delivery Re	port				
females at start N Test Group 0/F Test Group 1/F Test Group 2/F females at start N 10 10 10 females mated N 10 10 10 ant N 8 9 9 ant N 0 0 0 At delivery N 2 1 1 nant N 2 1 1 nant N 8 1 9 9 vering N 8 1 9 9 vering N 8 1 9 9 ion Index % 100.0 100.0 100.0 liveborn pups N 8 4 9 9 stillborn pups N 1 1 1 stillborn pups N 1 0 0 stillborn N 1 0 0 still pups stillborn N <	Sex: Female					
females at start N 10 10 10 females at start N 10 10 10 ant N 10 10 10 ant N 8 9 9 9 ant N 0 0 0 0 ant their string N 2 1 1 vering N 8 1 1 1 vering N 8 1 0			Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
females at start N 10 10 females mated N 10 10 ant N 8 9 ant delivery N 2 1 regnant N 2 1 vering N 8 1 9 vering N 8 1 9 liveborn pups N 8 1 9 sion Index % 100.0 100.0 stillborn pups N 8 9 stillborn pups N 8 9 stillborn pups N 1 1 1 stillborn pups N 1 1 9 stillborn pups N 1 9 9 stillborn pups N 1 1 1 1 stillborn pups N 0 0 0 0 still pups stillborn N 0 0 0 0			0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
females mated N 10 ant N 8 9 ant delivery N 2 1 nant N 2 1 regnant N 8 1 0 vering N 8 1 9 vering N 8 100.0 9 liveborn pups N 8 9 sion Index % 100.0 100.0 sion Index % 100.0 0 stillborn pups N 8 9 stillborn pups N 1 1 1 stillborn pups N 1 9 9 stillborn pups N 1 6 9 stillborn pups N 1 6 9 still pups stillborn N 0 0 still pups N 0 0 still pups 0 0 0 still	No. of females at start	z	10	10	10	10
ant N 9 A Long N 0 0 A Long N 2 1 A regnant N 2 1 vering N 8 ft 9 vion Index % 100.0 100.0 vion Index Mean 22.1 n 22.0 vion days Mean 22.1 n 22.0 S.d. 0.4 0.0 N 8 9 stillborn pups N 1 ft 3 All pups stillborn N 0 c+ 0 c+ All pups 0 c+ 0 c+ 0 c-	No. of females mated	z	10	10	10	10
Aut delivery N 0 0 and the stillborn N 2 1 regnant N 8 f+ 9 vering N 8 f+ 9 vering N 8 f+ 9 ition lndex N 8 f+ 9 ition lndex N 100.0 100.0 stillborn lndex N 0.4 0.0 stillborn pups N 8 9 stillborn pups N 12.5 33.3 all pups stillborn N 0.0 0.0	Pregnant	z	8	6	6	6
N 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Dead	Z	0	0	0	0
N 2 1 N 8 f+ 9 N 8 f+ 9 N 8 f+ 9 % 100.0 100.0 N 8 f+ 9 % 100.0 100.0 N 8 f+ 9 N 22.0 22.0 S.d. 0.4 0.0 N 8 8 9 N 1 f+ 3 N 0 c+ 0	Without delivery	z	2	-	-	-
N 8 f+ 9 N 100.0 100.0 N 8 f+ 9 N 8 f+ 9 N 22.1 n 22.0 S.d. 0.4 0.0 N 1 f+ 3 N 12.5 33.3 N 0 c+ 0	- Pregnant	z	0	0	0	0
N 8 f+ 9 % 100.0 100.0 N 8 f+ 9 % 100.0 100.0 Maan 22.1 100.0 S.d. 0.4 0.0 N 8 9 N 11.5 33.3 N 0.0 0.0 N	- Not pregnant	z	2	-	-	1
% 100.0 100.0 N 8 f+ 9 N 100.0 100.0 Mean 22.1 n 22.0 S.d. 0.4 0.0 N 8 9 N 12.5 33.3 N 0 c+ 0	Delivering	z		6	б	6
N 8 f+ 9 % 100.0 100.0 Mean 22.1 n 22.0 S.d. 0.4 0.0 N 8 9 N 1 f+ 3 N 12.5 33.3 N 0 c+ 0		%	100.0	100.0	100.0	100.0
% 100.0 100.0 Mean 22.1 n 22.0 S.d. 0.4 0.0 N 8 9 N 1 f+ 3 N 12.5 33.3 N 0 c+ 0	With liveborn pups	z		б	6	6
Mean 22.1 n 22.0 22 S.d. 0.4 0.0 0 N 8 9 N 1 f+ 3 N 0 c+ 0 N 0 c+ 0	Gestation Index	%	100.0	100.0	100.0	100.0
S.d. 0.4 0.0 0 N 8 9 N 1 f+ 3 % 12.5 33.3 11	Gestation days	Mean		22.0	22.2	22.0
N 1 f+ 3 N 12.5 33.3 11. N 0 c+ 0		S.d.	0.4	0.0	4.0	9.0
N 1 f+ 3 % 12.5 33.3 11 N 0 c+ 0		Z	8	6	6	6
% 12.5 33.3 11 N 0 c+ 0	With stillborn pups	z		က	_	-
O C+ O C C		%	12.5	33.3	11.1	11.1
000	With all pups stillborn		0 c+	0	0	0
0.0		%	0.0	0.0	0.0	0.0

Statistic Profile = Dunnett test (two-sided) + Fisher's exact test (one-sided+), * p<=0.05, ** p <=0.01, X = Group excluded from statistics f=FISHER-EXACT; n=DUNNETT, c=CHI-SQUARE



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Summary Delivery Report

80R0223/11C162

Study

Sex: Female

		Test Group 0/ F	Test Group 1/ F	Test Group 2/ F	Test Group 3/ F
		0 mg/kg bw/d	100 mg/kg bw/d	300 mg/kg bw/d	1000 mg/kg bw/d
No. of females at start	z	10	10	10	10
No. of females mated	Z	10	10	10	10
Pregnant	z	8	6	6	6
Dead	z	0	0	0	0
Without delivery	z	2		~	-
- Pregnant	z	0	0	0	0
- Not pregnant	Z	2	•	-	+
Delivering	z	-1 8	6	б	o
	%	100.0	100.0	100.0	100.0
With liveborn pups	z	-1 8	6	o	o
Gestation Index	%	100.0	100.0	100.0	100.0
Gestation days	Mean	22.1 n	22.0	22.2	22.0
	S.d.	0.4	0.0	4.0	0.5
	Z	8	6	6	6
With stillborn pups	z	-	9	•	•
	%	12.5	33.3	11.1	11.1
With all pups stillborn	z	-5 O	0	0	0
	%	0.0	0.0	0.0	0.0

Statistic Profile = Dunnett test (two-sided) + Fisher's exact test (one-sided-), * p<=0.05, ** p <=0.01, X = Group excluded from statistics f=FISHER-EXACT; n=DUNNETT, c=CHI-SQUARE



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2. Analyses of the test substance and test substance preparations



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Report; Project No.: 80R0223/11C162

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Final Report

Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)



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Test item "Paliogen Violet 5011"

Chemical identity Anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-1,3,8,10(2H,9H)-

Chemical structure Q

HN NI

Batch identification P 100012

Date of production (test item) Nov 18, 2010

Origin of test item

PSN 11/0223-1

CAS no. 81-33-4

Sponsor

Date of receipt of order Mar 18, 2011

Date of receipt of test item Mar 23, 2011

Testing facility Competence Center Analytics, BASF SE,

Study director

Storage cond. lest item Room temeprature

Test period April 12 – June 30, 2011

Storage of records GLP archives, Competence Center Analytics



Competence Center Analytics

BASF The Chemical Company

Final Report Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)

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Summary of results

Appearance and homogeneity

The test item was a black powder with different grain sizes.

Identity (IR spectroscopy)

The IR spectrum shows the bands expected for the test item.

Identity (UV/VIS spectroscopy)

The specific absorbances (A_{1%1cm}) and the specific absorptivities (ϵ ') are compiled in the table below.

Wavelength [nm]	A _{1%1cm} ⁽¹⁾	[lg'cm']
219	1245 ± 4.1	125 ± 0.4
246	1571 ± 4.8	157 ± 0.5
406	202 ± 0.3	20 ±< 0.1
551	1135 ± 3.7	114± 0.4
595	2070 ± 8.5	207 ± 0.9

(1) The specific absorbance $A_{1\%,1cm}$ is defined as the absorbance of a solution of the test item at a given wavelength, calculated for a concentration of 1.0 g / 100 ml and 1.0 cm pathlength using Beer's law.

Identity (NMR spectroscopy) The ¹H- and ¹³C-NMR spectra show the signals expected for the test

Identity (Mass spectrometry)

The MALDI-spectrum shows the expected signals for the test item. A signal with Mr = 371 is not assignable to the proposed structure.

Elemental analysis (content of C,H,N,O)

Element	Values calculated for anhydrous test item (1) [g/100 g]	Values found (2) [g/100 g]
С	73.9	72.3
Н	2.6	2.6
N	7.2	7.0
0	16.4	17.6

⁽¹⁾ Calculated for the pure, anhydrous test item C24H10N2O4, M = 390.353 g/mol

The values found for H and N are in good agreement with the calculated values. There are deviations for the values found for C (-1.6 g/100g) and for O (+ 1.2 g/100g)

⁽²⁾ Mean values of 2 determinations.



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Study No. 11L00104 (confidential)

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Appearance and homogeneity

Method Visual inspection at room temperature

Result The test item was a black powder with different grain sizes

It was apparently homogeneous

Date of test April 12, 2011

Head of laboratory

2 Identity (IR spectroscopy)

Method FTIR spectroscopy

Apparatus FTIR spectrometer Nicolet 6700

Reagents KBr (Merck, Darmstadt)

Sample preparation The test item was measured as KBr pellet.

Test parameters Measurement at room temperature; 32 scans; resolution: 4.0 cm⁻¹

Result The IR spectrum of the test item is displayed on page 10. It shows

the bands expected for the test item (for assignments see spectrum).

Date of test May 13, 2011

Head of laboratory

3 Identity (UV/VIS spectroscopy)

Method UV/VIS spectroscopy

UV/VIS spectrometer PerkinElmer Lambda 900 Apparatus

Sulfuric acid (95-97 %, Merck, Darmstadt) Reagents

Sample preparation For duplicate determination, approx. 1.1 mg and 1.7 mg of the test

item were accurately weighed into 25 ml volumetric flasks and dissolved in conc. sulfuric acid. Homogenization was achieved by treatment in an ultrasonic bath (approx. 2 min) prior to measurement.

Test parameters Cuvette: quartz, pathlength: 0.1 cm; data interval: 1.0 nm; slit width:

2.0 nm; scan speed: 125 nm/min; integration time: 0.44 s;



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reference: conc. H_2SO_4 ; measurement at room temperature (approx. 25 °C).

Result

The UV/VIS spectrum of the test item in H_2SO_4 is displayed on page 11. In the spectral range of 200-800 nm, 5 bands were detected. The specific absorbances ($A_{1\%1cm}$) and the specific absorptivities (ϵ ') are compiled in the table below.

Wavelength [nm]	A _{1%1cm} ⁽¹⁾	ε' Πα' cm'l
219	1245 ± 4.1	125 ± 0.4
246	1571 ± 4.8	157 ± 0.5
406	202 ± 0.3	20 ±< 0.1
551	1135 ± 3.7	114± 0.4
595	2070 ± 8.5	207 ± 0.9

(1) The specific absorbance A_{1%1on} is defined as the absorbance of a solution of the test item at a given wavelength, calculated for a concentration of 1.0 g / 100 ml and 1.0 cm pathlength using Beer's law.

Date of test

June 29, 2011

Head of laboratory

4 Identity (NMR spectroscopy)

Method

¹H- and ¹³C-NMR spectroscopy

Apparatus

NMR spectrometer Bruker DPX 399

Reagents

Solvent: D₂SO₄ (Euriso-top)

Frequency standard: hexamethyldisiloxane (HMDS, Merck)

Sample preparation

The test item was dissolved in D₂SO₄ containing HMDS.

Test parameters

Measuring frequencies: 400 MHz (¹H-NMR) and 101 MHz (¹³C-NMR); measurements at approx. 27 °C; for further parameters see spectra

on pages 12-13.

Result

The ¹H- and ¹³C-NMR spectra are displayed on page 12 and page 13, respectively. The spectra show the signals expected for the test item.

Date of test

May 04 - May 06, 2011

Head of laboratory



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Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)

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5 Identity (Mass spectrometry)

Method

Matrix-assisted laser desorption ionization mass spectrometry

(MALDI-MS)

Apparatus

Bruker Reflex III

Reagents

2,5-Dihydroxybenzoic acid (DHB, Bruker Daltonics)

H₂O Biochemica (Fluka)

Acetonitrile (Chromasolv, >99.9%, Sigma-Aldrich)

Formic acid (98-100 %, B. Kraft)

Reference materials:

Pepmix (containing 15 pmol/µl of Bradikinin fragment 1-7, 10 pmol/µl of Angiotensin I, 20 pmol/µl of Angiotensin II, 10 pmol/µl of Neurotensin and 20 pmol/µl of ACTH fragment 18-39, all

components: Sigma)

Sample preparation

Small quantities of the test item and DHB (matrix) were thoroughly

mixed in a mortar. For analysis, the mixture was transferred onto the

sample holder (target).

Calibration

Calibration was done using an external standard (Pepmix, dissolved

in an 49% acetonitrile / 50% water / 1% formic acid mixture).

For calibration 1 µl Pepmix was mixed with 1 µl DHB solution on a

spot of the target.

Test parameters

Ionization method	MALDI	
N ₂ laser	337 nm	
Polarity	Cationic	
Scan range (m/z)	100 - 4000	
Laser attenuation	75-90%	

Results

The MALDI-spectrum (see on page 14) shows the expected

signals for the test item.

A signal with Mr = 371 is not assignable to the proposed structure.



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Study No. 11L00104 (confidential)

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Mr ⁽¹⁾	proposed structure ⁽²⁾	
390	HN NH	

(1) Monoisotopic rel. molecular mass.

(2) The given structure was deduced from the molecular mass.

Date of test

June 03, 2011

Head of laboratory

6 Content of carbon, hydrogen and nitrogen

Method

Combustion of the test item in a stream of oxygen-containing helium,

reduction of NO_x to N₂; determination of N₂, CO₂ and H₂O using a

thermal conductivity detector (TCD).

Apparatus

Elementar vario EL cube

Reagents

Reaction gas:

O₂

Carrier gas:

He (approx. 230 ml/min)

Combustion catalyst: Reduction catalyst: CuO

Sample preparation

For duplicate determination, 2.17 mg and 3.57 mg of the test item were analyzed as obtained without further pre-treatment (no drying

prior to measurement).

Test parameters

Combustion temperature:

approx. 950 °C

Reduction temperature:

approx. 600 °C



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Characterization of "Paliogen Violet 5011" for REACH
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Results

Element	Values calculated for anhydrous test item (1) [g/100 g]	Values found (2) [g/100 g]
С	73.9	72.3
н	2.6	2.6
N	7.2	7.0

(1) Calculated for the pure, anhydrous test item C24H10N2O4; M = 390.353 g/mol

(2) Mean values of 2 determinations.

The values for H and N check well; the value found for C is

1.6 g/100 g too low.

Date of test June 24, 2011

Head of laboratory

7 Content of oxygen

Method Pyrolysis of the test item in a stream of helium, conversion to CO with

carbon black, separation of the resulting gas mixture by chromatography, measurement of the CO content using a thermal

conductivity detector (TCD).

Apparatus EuroVector EA 3000 equipped with an external high-temperature

oven

Reagents Carrier gas: He (approx. 130 kPa)

Pyrolysis contact: carbon black / granulated carbon

Combustion additive: mixture of Teflon® powder and anthracene

(4:1, m/m)

Sample preparation For duplicate determination, 2.19 mg and 3.20 mg of the test item

were analyzed as obtained without further pre-treatment (no drying

prior to measurement).

Test parameters Oven temperature: approx. 1450 °C

Cooling trap: liquid nitrogen Evaluation: external calibration



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Final Report Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)

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Result

Element	Value calculated for anhydrous test item ⁽¹⁾ [g/100 g]	Value found ⁽²⁾ [g/100 g]
0	16.4	17.6

(1) Calculated for the pure, anhydrous test item $C_{2a}H_{10}N_2O_4$; M = 390.353 g/mol. (2) Mean values of 2 determinations.

The value found is 1.2 g/100g too high.

Date of test

June 30, 2011

Head of laboratory

Oct 26, 2017 Date



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Characterization of "Paliogen Violet 5011" for REACH
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GLP Compliance Statement

This study was conducted in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act).



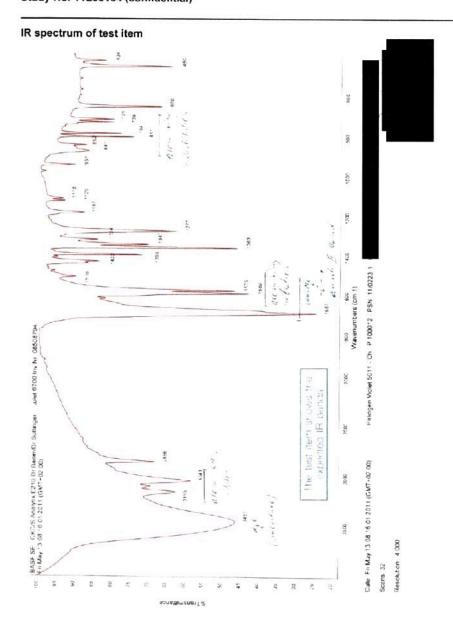


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Final Report Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)

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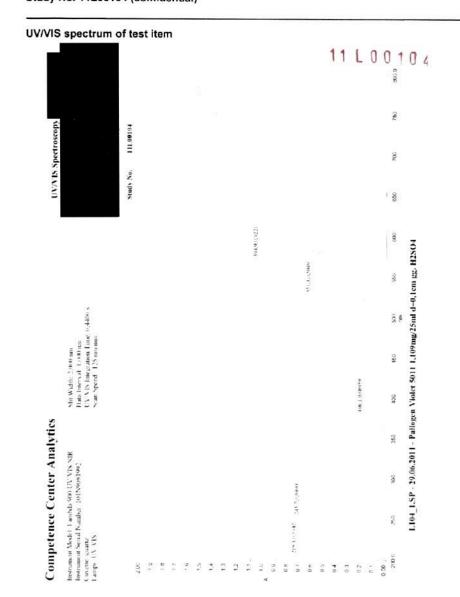


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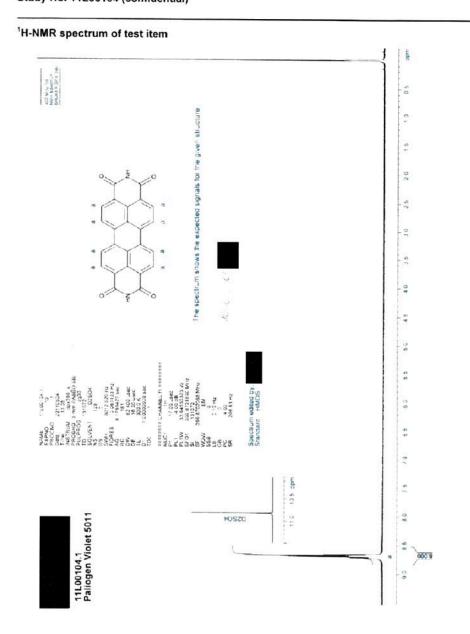
Report; Project No.: 80R0223/11C162

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Final Report Characterization of "Paliogen Violet 5011" for REACH Study No. 11L00104 (confidential)

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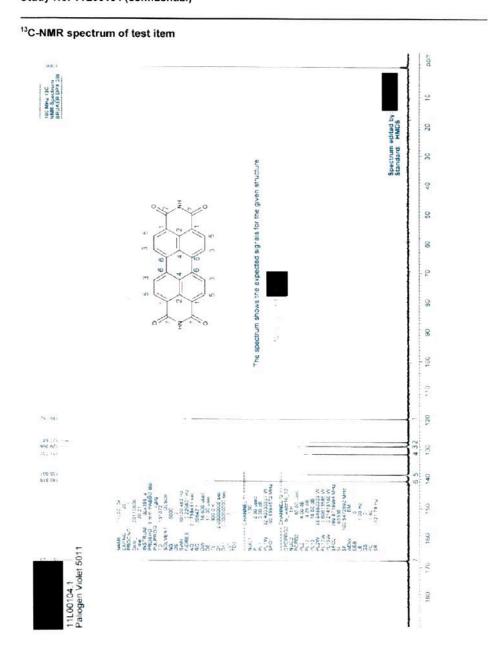


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Study No. 11L00104 (confidential)

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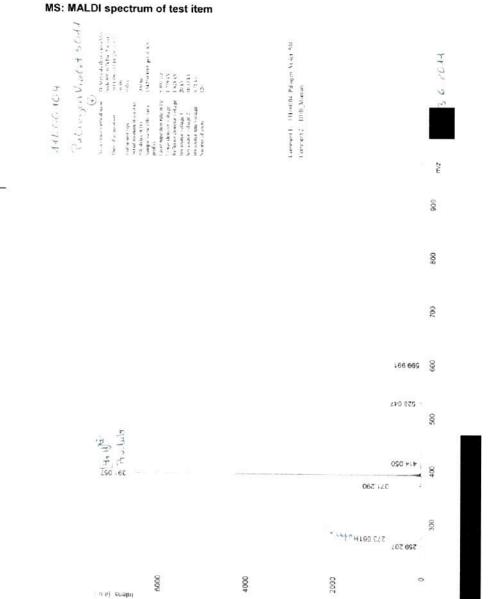
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Final Report
Characterization of "Paliogen Violet 5011" for REACH
Study No. 11L00104 (confidential)

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Study No. 11L00104 (confidential)

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STATEMENT OF THE QUALITY ASSURANCE UNIT

The Quality Assurance Unit inspects the laboratories of the department Competence Center Analytics in regular intervals. Besides these general inspections we inspected the following items of this study in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act). Findings are reported to study director and to management.

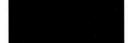
Verification of study plan:

Mar 29, 2011

Inspection of	Date of inspection	Reported to study director and management
Raw data:	Oct 05, 2011	Oct 05, 2011
Final report:	Oct 05, 2011	Oct 05, 2011

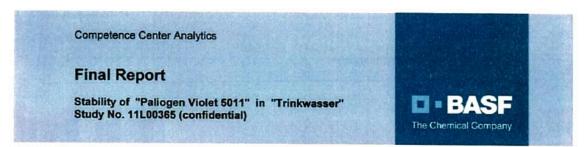
The final report reflects the raw data.

Ludwigshafen



Od 05, 2011





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Test item "Paliogen Violet 5011"

Batch identification P 100012

Date of production (test item) Nov 18, 2010

PSN 11/0223-1

Project no. Unknown

Vehicle "Trinkwasser"

Sponsor

Date of receipt of order Aug 30, 2011 Date of receipt of test item Aug 30, 2011

Testing facility Competence Center Analytics, BASF SE,

Study director

Storage cond. test item Room temperature Storage cond. vehicle Room temperature

Test period Dec 05 - 12, 2011

Storage of records Competence Center Analytics

Method UV/VIS spectroscopy

Apparatus UV/VIS spectrometer PerkinElmer Lambda 900

Reagents Drinking water (vehicle; supplied by

Sulfuric acid (95-97 %; Merck)



Competence Center Analytics

BASF The Chemical Company

Final Report Stability of "Paliogen Violet 5011" in "Trinkwasser"

Study No. 11L00365 (confidential)

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Sample preparation

A total of 8 suspensions containing approx. 100 mg /100 ml of the test item in the vehicle were prepared (duplicate determination for storage times of 0 h, 4 h, 4 d and 7 d). To this end, for each sample approx. 10 mg of the test item were suspended in 10 ml of the vehicle (drinking water) in a 100 ml round-bottom flask. After shaking, the resulting mixtures were analyzed immediately ("0 h") and after storage for 4 h, 4 d and 7 d at room temperature according to the following procedure: The samples were evaporated in vacuo to dryness using a rotary evaporator (60 °C). Each residue obtained was dissolved in 25 ml of conc. sulfuric acid. The resulting solutions were diluted with H₂SO₄ prior to measurement (2nd measurement at 0 h: 1:100 v/v, all other measurements: 1:50 v/v).

Test parameters

Cuvettes: quartz, pathlength 1.0 cm; reference: H2SO4; scan speed: 125 nm/min; data interval: 1.0 nm; slit width: 2.0 nm; integration time:

0.44 sec; measurements at room temperature.

Results

The specific absorbances (A_{1%1cm}) of the major bands at approx. 595 nm, 551 nm and 245 nm were evaluated. The values obtained are compiled in the table below. The UV/VIS spectra obtained from the samples at 0 h and 7 d are shown in Fig. 1 (page 4) and Fig. 2 (page 5), respectively.

Storage time	Sample name	A _{1%1cm} a) at 595 nm	A _{1%1cm} a) at 551 nm	A _{1%1cm} ^{a)} at 245 nm
0 h	Probe 1; 100 mg /100 ml; 0 h; RT Probe 2; 100 mg /100 ml; 0 h; RT	2178.1 2066.9	1190.7 1129.1	1647.4 1576.2
.70.13	Mean value	2122.5 ± 55.6	1159.9 ± 30.8	1611.8 ± 35.6
***	Probe 3; 100 mg /100 ml; 4 h; RT	2003.5	1091.1	1470.4
4 h	Probe 4; 100 mg /100 ml; 4 h; RT Mean value	2033.1 2018.3 ± 14.8	1110.5 1100.8 ± 9.7	1504.3 1487.4 ± 16.9
	Probe 5; 100 mg /100 ml; 4 d; RT	2020.2	1113.4	1539 4
4 d	Probe 6; 100 mg /100 ml; 4 d; RT Mean value	2042.6 2031.4 ± 11.3	1115.8 1114.6 ± 1.2	1545.2 1542.3 ± 2.9
7.1	Probe 7; 100 mg /100 ml; 7 d; RT	1966.8	1077.5	1492.4
7d	Probe 8; 100 mg /100 ml; 7 d; RT Mean value	1984.8 1975.8 ± 9.0	1086.8 1082.2 ± 4.7	1508.8 1500.6 ± 8.2

a) The specific absorbance (A_{1%1cm}) is the absorbance at a given wavelength calculated for a concentration of 1 % (m/v) and a pathlength of 1.0 cm using Beer's law. Mean values and deviations were calculated from the unrounded values.



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Final Report Stability of "Paliogen Violet 5011" in "Trinkwasser" Study No. 11L00365 (confidential)

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Discussion of results

The specific absorbances $(A_{1\% ton})$, as calculated from all measurements, yielded mean values of x = 2037.0 (595 nm), x = 1114.4 (551 nm) and x = 1535.5 (245 nm). The deviation of the results for each storage time (mean value of duplicate determination) with respect to x are as follows:

0 h: 4.2 % (595 nm), 4.1 % (551 nm) and 5.0 % (245 nm) 4 h: 0.9 % (595 nm), 1.2 % (551 nm) and 3.1 % (245 nm) 4 d: 0.3 % (595 nm), 0.0 % (551 nm) and 0.4 % (245 nm) 7 d: 3.0 % (595 nm), 2.9 % (551 nm) and 2.3 % (245 nm)

The deviations show no correlation with the storage time and are well within the repeatability of the duplicate determinations. Moreover, the comparison of the spectra recorded at the various storage times reveals no significant spectral changes over time (see Fig. 1 and 2 for storage times of 0 h and 7 d).

Hence, on the basis of the UV/VIS measurements reported in this study, the test item is stable in the vehicle for at least 7 days at room temperature.





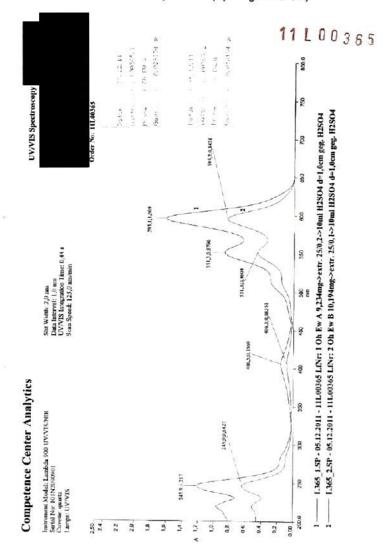
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Final Report Stability of "Paliogen Violet 5011" in "Trinkwasser" Study No. 11L00365 (confidential)

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Fig. 1. UV/VIS spectrum obtained after sample work-up (storage time: 0 h)



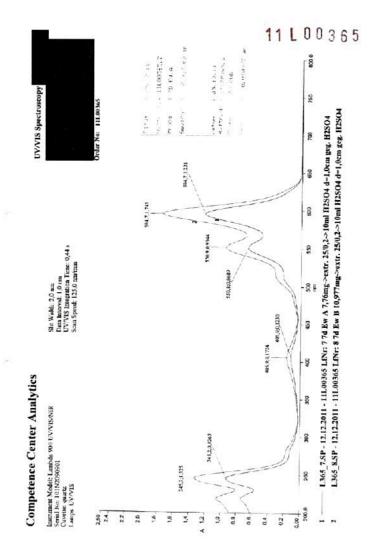
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Final Report Stability of "Paliogen Violet 5011" in "Trinkwasser" Study No. 11L00365 (confidential)

Fig. 2. UV/VIS spectrum obtained after sample work-up (storage time: 7 d)





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Final Report Stability of "Paliogen Violet 5011" in "Trinkwasser" Page 6 of 7

Study No. 11L00365 (confidential)

GLP Compliance Statement

This study was conducted in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act).





Competence Center Analytics



Final Report
Stability of "Paliogen Violet 5011" in "Trinkwasser"
Study No. 11L00365 (confidential)

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Statement of the Quality Assurance Unit

The Quality Assurance Unit inspects the laboratories of the department Competence Center Analytics in regular intervals. Besides these general inspections we inspected the following items of this study in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act). Findings are reported to study director and to management.

Verification of study plan:

Sep 14, 2011

Inspection of	Date of inspection	Reported to study director and to management
Raw data:	June 11, 2012	June 13, 2012
Final report:	June 11, 2012	June 13, 2012

The final report reflects the raw data.

Ludwigshafen



June 13, 2012



Competence Center Analytics

Final Report

Concentration control and homogeneity of "Paliogen Violet 5011" in "Drinking water"
Study No. 12L00270 (confidential)

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Test item	"Paliogen Violet 5011"

Date of receipt of test item

Jul 02, 2012



Storage cond. samples	Freezer
Storage cond. test item	Freezer
Storage cond. vehicle	Freezer



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Final Report Page 2 of 6

Concentration control and homogeneity of "Paliogen Violet 5011" in "Drinking water" Study No. 12L00270 (confidential)

1 Content of test item (dry residue)

Determination "Paliogen Violet 5011"

Method Determination of the dry residue at 105 °C

Apparatus Drying oven

Sample preparation Each sample was transferred into a platinum dish. Subsequently, the

vehicle was evaporated at 105 °C until a constant weight was achieved. The dish containing the dry residue was cooled down to

room temperature in a desiccator.

Test parameters Temperature: 105 °C

Results

Date of sample preparation	Date of sampling	Expected concentration [g/100 ml]	Value found [g/100 g]	Value found ⁽¹⁾ [g/100 ml]	Deviation [%]
Jul 02, 2012	Jul 02, 2012	1	0.99	1.03	3.0
Jul 02, 2012	Jul 02, 2012	1	0.99	1.03	3.0
Jul 02, 2012	Jul 02, 2012	1	0.99	1.03	3.0
Jul 02, 2012	Jul 02, 2012	3	2.94	2.97	-1.0
Jul 02, 2012	Jul 02, 2012	10	9.22	9.81	-1.9
Jul 02, 2012	Jul 02, 2012	10	9.15	9.86	-1.4
Jul 02, 2012	Jul 02, 2012	10	9.17	9.83	-1.7
	Jul 02, 2012 Jul 02, 2012	preparation sampling Jul 02, 2012 Jul 02, 2012 Jul 02, 2012 Jul 02, 2012	preparation sampling concentration [g/100 ml] Jul 02, 2012 Jul 02, 2012 1 Jul 02, 2012 Jul 02, 2012 1 Jul 02, 2012 Jul 02, 2012 1 Jul 02, 2012 Jul 02, 2012 3 Jul 02, 2012 Jul 02, 2012 10 Jul 02, 2012 Jul 02, 2012 10	preparation sampling concentration [g/100 ml] [g/100 g] Jul 02, 2012 Jul 02, 2012 1 0.99 Jul 02, 2012 Jul 02, 2012 1 0.99 Jul 02, 2012 Jul 02, 2012 1 0.99 Jul 02, 2012 Jul 02, 2012 3 2.94 Jul 02, 2012 Jul 02, 2012 10 9.22 Jul 02, 2012 Jul 02, 2012 10 9.15	preparation sampling concentration [g/100 ml] [g/100 ml] [g/100 ml] Jul 02, 2012 Jul 02, 2012 1 0.99 1.03 Jul 02, 2012 Jul 02, 2012 1 0.99 1.03 Jul 02, 2012 Jul 02, 2012 1 0.99 1.03 Jul 02, 2012 Jul 02, 2012 1 0.99 1.03 Jul 02, 2012 Jul 02, 2012 3 2.94 2.97 Jul 02, 2012 Jul 02, 2012 10 9.22 9.81 Jul 02, 2012 Jul 02, 2012 10 9.15 9.86

⁽¹⁾ The densities of the samples were each calculated using the sample masses determined in this study and the sample volumes of 3 ml each, as stated by the sponsor

the mass of the dry residues after evaporation of the vehicle, is in good agreement with the expected values (deviations ≤ 3 %). At a concentration level of 1 g/100 ml and 10 g/100 ml homogeneity was

proved by these measurements.

Date of test Aug 06 - 07, 2012

Head of laboratory



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Final Report

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Concentration control and homogeneity of "Pallogen Violet 5011" in "Drinking water"

Study No. 12L00270 (confidential)

2 Identity (IR spectroscopy)

Method

IR spectroscopy

Apparatus

IR spectrometer Nicolet Nexus equipped with a SmartOrbit diamond

ATR unit

Sample preparation

The samples (original test item and dry residues) were measured

without further preparation.

Test parameters

Measurement at room temperature; 32 scans; resolution: 4.0 cm⁻¹

Results

The IR (ATR) spectra of the dry residues obtained after evaporation of the vehicle contained in the samples were compared with the IR spectrum of the original test item in order to examine whether the evaporation process has resulted in decomposition of the test item. Exemplarily, the IR spectra of the original test item and of the dry residue obtained from sample no. 3 are depicted in Fig. 1 (page 4). The comparison of the spectra proves that the test item did not undergo a significant chemical change during the evaporation process. Hence, the determination of the content of the test item in

the samples by measuring the dry residues is feasible.

Date of test

Aug 15, 2012

Head of laboratory

Aug 22, 2012

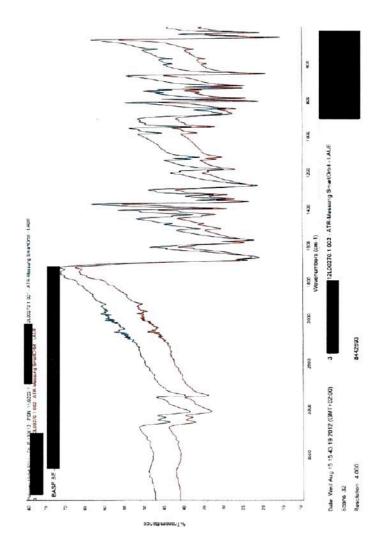


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Fig. 1. IR spectra of the original test item (blue) and dry residue (red) obtained from sample no. 3





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Concentration control and homogeneity of "Paliogen Violet 5011" in "Drinking water" Study No. 12L00270 (confidential)

GLP Compliance Statement

This study was conducted in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act).





Competence Center Analytics



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Statement of the Quality Assurance Unit

The Quality Assurance Unit inspects the laboratories of the department Competence Center Analytics in regular intervals. Besides these general inspections we inspected the following items of this study in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act). Findings are reported to study director and to management.

Verification of study plan:

July 24, 2012

Inspection of	Date of inspection	Reported to study director and to management
Raw data:	Aug 22, 2012	Aug 22, 2012
Final report:	Aug 22, 2012	Aug 22, 2012

The final report reflects the raw data.

Ludwigshafen



Sug 22 2012



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Final Report

Concentration control of "Paliogen Violet 5011" in "Drinking water" Study No. 12L00332 (confidential)



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Test item "Paliogen Violet 5011"

Batch identification P 100012

Date of production (test item) Nov 18, 2010

PSN 11/0223-1

Project no. 80R0223/11C162

Vehicle "Drinking water"

Sponsor

Date of receipt of order Aug 20, 2012

Date of receipt of test item Aug 20, 2012

Testing facility Competence Center Analytics, BASF SE,

Storage cond. samples Freezer

Study director

Storage cond. test item Freezer

Storage cond. vehicle Freezer

Test period Sep 04 - 19, 2012

Storage of records Competence Center Analytics



Competence Center Analytics



Final Report

Concentration control of "Paliogen Violet 5011" In "Drinking water"

Study No. 12L00332 (confidential)

Page 2 of 6

1 Content of test item (dry residue)

Determination

"Paliogen Violet 5011"

Method

Determination of the dry residue at 105 °C

Apparatus

Drying over

Sample preparation

Each sample was transferred into a platinum dish. Subsequently, the vehicle was evaporated at 105 °C until a constant weight was achieved. The dish containing the dry residue was cooled down to

room temperature in a desiccator.

Test parameters

Temperature: 105 °C

Results

Sample no.	Date of sample preparation	Date of sampling	Expected concentration [g/100 ml]	Value found [g/100 g]	Value found (1) [g/100 ml]	Deviation [%]
12	Aug 20, 2012	Aug 20, 2012	1	1.04	1.05	5.0
13	Aug 20, 2012	Aug 20, 2012	3	3.01	3.09	3.0
14	Aug 20, 2012	Aug 20, 2012	10	9.91	10.50	5.0

⁽¹⁾ The density of each of the samples was calculated from the individual sample weight cetermined in this study and the sample volume of 3 ml each, as stated by the sponsor.

Discussion of results

The content of test item in the samples, as measured by determining the mass of the dry residues after evaporation of the vehicle, is in

good agreement with the expected values (deviations ≤ 5.0 %).

Date of test

Sep 04 - 05, 2012

Head of laboratory

2 Identity (IR spectroscopy) of the dry residue

Method

IR spectroscopy

Apparatus

IR spectrometer Nicolet Nexus equipped with a SmartOrbit diamond

ATR unit



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Final Report

Concentration control of "Paliogen Violet 5011" in "Drinking water" Study No. 12L00332 (confidential)

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Sample preparation

The samples (original test item and dry residues) were measured

without further preparation.

Test parameters

Measurement at room temperature; 32 scans; resolution: 4.0 cm⁻¹

Results

The IR (ATR) spectra of the dry residues obtained after evaporation of the vehicle contained in the samples were compared with the IR spectrum of the original test item in order to examine whether the evaporation process has resulted in decomposition of the test item. Exemplarily, the IR spectra of the original test item and of the dry residue obtained from sample no. 14 (highest concentration) are depicted in Fig. 1 (page 4). The comparison of the spectra proves that the test item did not undergo a significant chemical change during the evaporation process. Hence, the determination of the content of the test item in the samples by measuring the dry residues

is feasible.

Date of test

Sep 19, 2012

Head of laboratory

Feb 19, 2013 Date



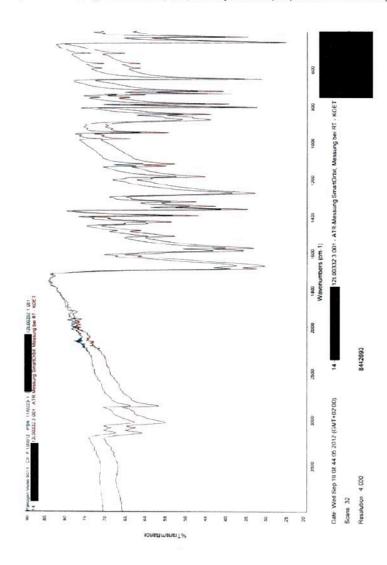
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Final Report
Concentration control of "Paliogen Violet 5011" in "Drinking water"
Study No. 12L00332 (confidential)

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Fig. 1. IR spectra of the original test item (blue) and dry residue (red) obtained from sample no. 14





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Final Report

Concentration control of "Paliogen Violet 5011" in "Drinking water" Study No. 12L00332 (confidential)

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GLP Compliance Statement

This study was conducted in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act).





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Final Report
Concentration control of "Paliogen Violet 5011" in "Drinking water"
Study No. 12L00332 (confidential)

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Statement of the Quality Assurance Unit

The Quality Assurance Unit inspects the laboratories of the department Competence Center Analytics in regular intervals. Besides these general inspections we inspected the following items of this study in accordance with the OECD Principles of Good Laboratory Practice and the GLP Principles of the German "Chemikaliengesetz" (Chemicals Act). Findings are reported to study director and to management.

Verification of study plan:

Aug 29, 2012

Inspection of	Date of inspection	Reported to study director and to management
Raw data:	Feb 19, 2013	Feb 19, 2013
Final report:	Feb 19, 2013	Feb 19, 2013

The final report reflects the raw data.

Ludwigshafen



7eb 19 2013



3. Historical control data

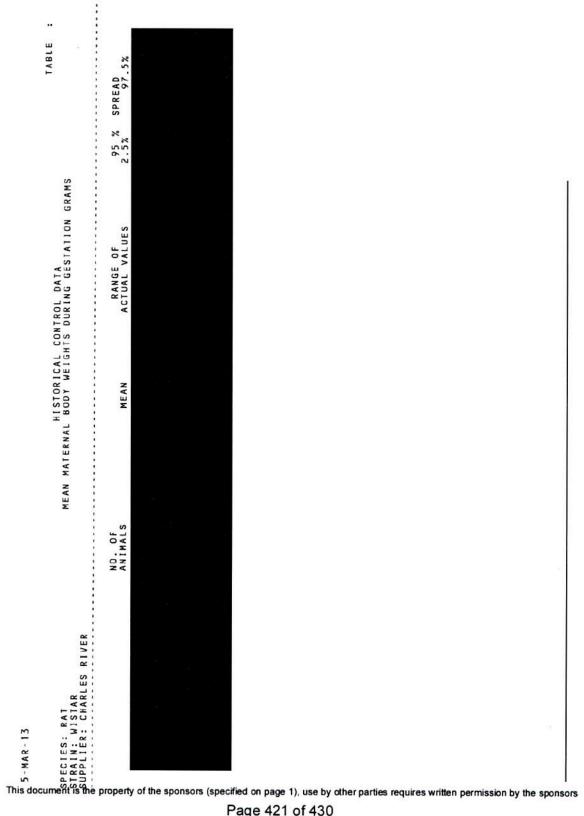
```
HISTORICAL CONTROL DATA
                                                                                                                                                                                                                                                                              Administration
                                                                                                                                                                                                                                                                                                                                            GAVAGE
                                                                                                                                                                                                                                                                                               End Date
2- MAR-13
5- MAR
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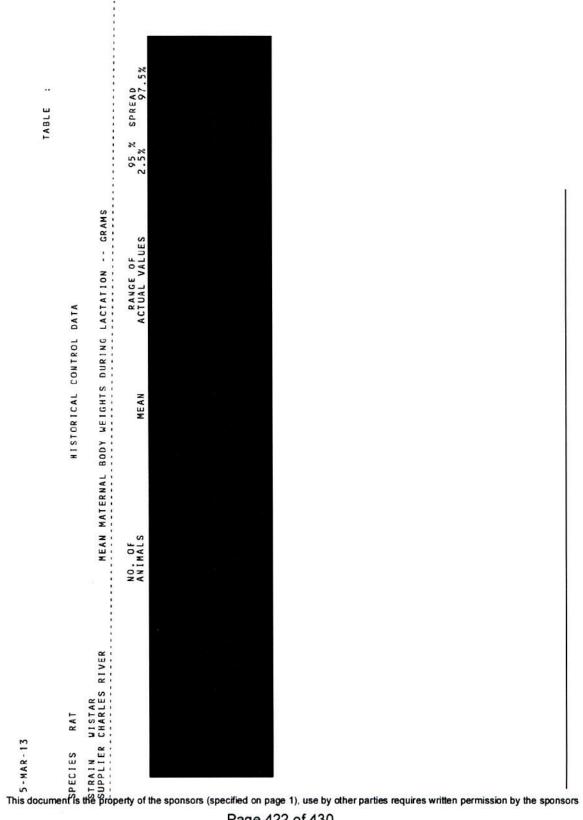
Page 419 of 430

TABLE HISTORICAL CONTROL DATA Route of Administration GAVAGE GAVAGE GAVAGE GAVAGE GAVAGE End Date Start Date 21-MAR-11 7-MAR-11 11-JUL-11 22-AUG-11 8-AUG-11 31-OCT-11 This document is the property of the sponsors (specified on page 1), use by other parties written permission by the sponsors

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REPRODUCTION AND LITTER DATA HISTORICAL CONTROL DATA

z																	Γ	-	
IMPLANTATION SITES [MEAN]	13.5	11.5	10.8	13.1	12.9	11.9	14.0	12.6	13.4	13.4	12.7	13.6	11.9	11.9	11.2	8.6	12.6	13.3	12.1
DURATION OF GESTATION [DAYS]	22.0	22.1	21.8	22.0	21.9	22.0	22.0	21.8	22.1	21.9	21.9	21.8	21.9	22.3	22.0	22.3	22.0	22.4	22.2
FEMALE FERTILITY INDEX [%]	100	100	06	100	100	100	100	100	06	100	100	92	100	78	06	06	80	100	100
MATING DAYS -0 P.C. [DAYS]	3.8	3.9	1.8	2.7	1.6	2.7	2.6	3.1	4.8	2.6	3.1	3.2	2.5	2.2	0.9	3.1	3.4	2.4	3.7
FEMALE MATING INDEX [%]	100	100	100	100	100	100	100	100	100	100	06	100	100	06	100	100	100	100	100
MALE FERTILITY FEMALE MATING INDEX [%] [%]	100	100	06	100	100	100	100	100	06	100	06	92	100	70	06	06	80	100	100
MALE MATING INDEX [%]	100	100	100	100	100	100	100	100	100	100	06	100	100	06	100	100	100	100	100
ÖN	11	F	F	F	F1	E	Ε	F	F	7	1	F1	F	F	F1	11	F	×	F
STUDY NO.	98R002	00140	01075	01195	01250	04028	04029	04052	04108	04C027	04R001	05031	05039	05117	05122	05R009	07061		07089
						_		_											



TABLE

HISTORICAL CONTROL DATA REPRODUCTION AND LITTER DATA

														_		_
IMPLANTATION SITES [MEAN]	13.0	14.1	14.4	13.6	11.6	11.4	11.8	12.0	13.5	11.7	10.9	12.7	11.9	14.2	11.8	129
DURATION OF GESTATION [DAYS]	22.1	22.2	22.0	21.9	22.1	21.9	22.0	22.0	22.2	21.8	22.0	21.6	22.2	22.0	22.0	22.2
FEMALE FERTILITY INDEX [%]	06	100	06	100	06	100	06	06	100	100	100	100	100	100	06	100
MATING DAYS - 0 P.C. [DAYS]	3.4	2.3	3.4	2.4	2.4	2.5	3.9	2.9	2.2	3.7	2.7	2.9	4.2	2.0	3.7	2.4
FEMALE MATING INDEX [%]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
MALE FERTILITY INDEX [%]	06	100	06	100	06	100	06	06	100	100	100	100	100	100	06	100
MALE MATING INDEX [%]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
STUDY NO.	07100 F1	07103 F1	07106 F1	07107 F1	07110 F1	07133 F1	07C029 L1	08042 F1	08065 F1	09035 F1	09048 F1	09052 F1	09061 F1	09066 F1	09067 F1	nanga F1



REPRODUCTION AND LITTER DATA HISTORICAL CONTROL DATA

SPECIES RAT STRAIN WISTAR SUPPLIER CHARLES RIVER

STUDY NO.	MATING INDEX [%]	MALE FERTILITY INDEX [%]	MALE FERTILITY FEMALE MATING INDEX [%] [%]	MATING DAYS - 0 P.C. [DAYS]	FEMALE FERTILITY INDEX [%]	DURATION OF GESTATION [DAYS]	IMPLANTATION SITES [MEAN]
09074 F1	100	80	100	3.2	80	22.0	13.0
09C003 L1	100	100	100	2.7	100	21.9	13.8
09C004 L1	100	06	100	3.1	06	22.2	13.8
09C017 L1	100	100	100	2.6	100	22.4	12.1
09R001 L1	100	100	100	3.1	100	22.2	10.6
09R002 L1	100	06	100	3.9	06	21.9	12.9
10C002 L1	100	100	100	2.6	100	22.2	12.7
10C071 L1	100	100	100	2.1	100	22.1	12.5
10S027 L1	100	06	100	3.2	06	22.1	13.0
10S073 L1	100	70	100	2.2	02	22.1	£.
10S086 L1	100	100	100	4.1	100	22.3	ţ-
10S114 L1	80	80	80	3.8	100	22.0	13.9
11C017 L1	100	06	100	2.6	06	21.9	12.3
11C032 L1	100	100	100	3.6	100	21.9	13.4
11S030 L1	100	06	100	3.8	06	22.1	11.2
11S058 L1	100	100	100	3.1	100	22.2	11.2
RANGE	80	70	80	1.6	02	21.6	10.6
Max.		100	100	0.9	100	22.4	14.4

1) No Data available



TABLE:

HISTORICAL CONTROL DATA

REPRODUCTION AND LITTER DATA

VIABILITY INDEX DAYS 0 TO 4 [%]	66	100	99	66	66	100	66	100	100	100	98	98	100	66	100	66	100	66	26
LIVE BIRTH INDEX [%]	100	66	66	66	66	98	86	100	94	100	66	100	66	66	100	66	100	100	96
PUPS STILLBORN [%]	0.0	6.0	1.2	1.0	0.8	4.6	1.5	0.0	6.1	0.0	6.0	0.0	0.8	1.3	0.0	1.2	0.0	0.0	4.2
PUPS DEL/DAM [MEAN]	12.0	10.7	10.3	12.4	12.1	12.1	13.2	11.6	12.8	11.9	12.3	12.9	11.0	11.3	10.7	9.2	11.6	12.6	13.1
GESTATION INDEX [%]	100	100	88	100	100	06	100	100	100	06	100	100	92	100	100	100	100	100	06
%POSTIMPLAN- TATION LOSS [MEAN]	10.7	6.8	4.7	5.9	6.0	14.5	5.6	8.0	5.4	18.3	2.2	5.5	9.9	5.4	4.7	5.0	8.1	5.5	11.6
STUDY NO.	98R002 L1	00140 F1	01075 F1	01195 F1	01250 F1	04028 F1	04029 F1	04052 F1	04108 F1	04C027 L1	04R001 L1	05031 F1	05039 F1	05117 F1	05122 F1	05R009 L1	07061 F1	×	07089 F1



TABLE

HISTORICAL CONTROL DATA REPRODUCTION AND LITTER DATA

VIABILITY INDEX DAYS 0 TO 4 [%] 8 5 9 100 9 5 5 66 66 66 66 66 97 83 98 LIVE BIRTH INDEX 100 100 100 100 9 100 66 66 66 93 5 8 8 8 5 PUPS STILLBORN [%] 6.0 6.9 5.1 0.0 0.0 0.0 0.0 0.0 3.7 PUPS DEL/DAM [MEAN] 13.6 13.5 10.6 11.6 11.9 13.0 11.0 12.4 14.1 12.4 10.6 11.5 13.5 11.0 12.1 12.1 GESTATION INDEX 100 100 100 100 100 100 % 9 100 100 100 100 100 9 5 5 88 %POSTIMPLAN-TATION LOSS [MEAN] 14.6 4.1 3.5 1.9 0.7 9.9 1.7 1.0 2.6 4.9 3.7 6.1 3.7 5.3 6.2 6.3 STUDY NO. F Ŧ Ŧ Ŧ Ŧ F 7 F Ŧ Ŧ F F E H F F 07C029 07133 08065 07100 07103 07106 07107 07110 08042 09035 09048 09052 09061 99060 89060 79060

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TABLE

HISTORICAL CONTROL DATA

REPRODUCTION AND LITTER DATA

VIABILITY INDEX DAYS 0 TO 4 [%]	66	100	96	66	100	86	100	66	100	66	100	66	66	66	100	66	83 100
LIVE BIRTH INDEX [%]	66	100	96	100	100	93	86	100	66	66	100	100	100	66	100	100	93 100
PUPS STILLBORN [%]	1.0	0.0	4.1	0.0	0.0	7.3	1.7	0.0	6.0	1.2	0.0	0.0	0.0	0.8	0.0	0.0	0.0
PUPS DEL/DAM [MEAN]	12.1	12.8	13.7	11.5	9.3	12.2	11.7	11.8	12.2	12.1	10.9	13.8	12.0	13.1	12.0	10.6	9.3 14.1
GESTATION INDEX [%]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	88	100	89 100
%POSTIMPLAN- TATION LOSS [MEAN]	6.8	7.8	0.8	4.3	12.6	5.6	9.3	5.4	6.1	t-	₽.	1.0	2.8	2.1	13.8	4.8	0.7
ON O	F	7	7	17	1	2	1	2	7	7	2	7	7	7	2	7	Min. Max.
STUDY NO.	09074	09C003	09C004	09C017	09R001	09R002	10C002	10C071	10S027	10S073	10S086	10S114	11C017	11C032	11S030	11S058	RANGE

1) No Data available

